

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
1 A new boost for jobs, growth and investment																
1.1 Agriculture and rural development																
1.1.a CAP implementation - develop efficient and innovative tools to implement agricultural legislation:																
4849 - MARS - CAPLand JRC.D.5	496 - GTCAP Guidance and Tools for CAP implementation	<p>GTCAP undertakes research activities to acquire knowledge and develop feasible methodologies relevant to the various inter-related schemes of the Common Agricultural Policy (CAP) regarding farmers' direct payments. This particularly concerns all aspects of the Integrated Administration and Control System of the CAP's Pillar I including the new 'greening' measures for biodiversity and climate benefits, and making appropriate links to harmonise with Pillar II, for example with regard to cross compliance.</p> <p>This work package develops in-house knowledge concerning:</p> <p>a) the conceptualisation, characterisation, identification, registration and quantification of the various types of agricultural land and agricultural practices,</p> <p>b) robust and reliable methodologies and procedures that allow these to be administrated, controlled and monitored from financial and environmental perspectives.</p>	JRC.D.5 Wim DEVOS	1.1.a	AGRI	JRC	DG AGRI Head of Units D3 D2, D1 and J3	CLIMA ENV GROW NEAR REGIO	CAP-AG - CAP subsidy paying agencies EU CC Agriculture - EU Candidate countries Competent Authorities for Agriculture EU MS Agriculture - EU Member States Competent Authorities for Agriculture	01/01/2017 31/12/2017	INS-RS	20171	IACS Community/Stakeholder platform	Organisation of several technical workshops (at least one for the LPIS + OTSC and GAEC + greening community) and one overall Annual GTCAP Conference to identify, discuss and develop technical issues and concerns as input to technical guidance documents and policy related initiatives.	22/12/2017	Conferences and workshops organized by the JRC
												20172	GTCAP IT services	The project develops several web applications (Mars, WikiCAP) and portals (LPIS QA, GAEC) made available through the JRC Science Hub. These support the other deliverables by collecting, distributing and disseminating information and data. They are also a principle method of data gathering and information sharing with the Member States agencies.	30/12/2017	Scientific information systems and databases
												20173	New developments and the CAP	Research on IACS agricultural land (land cover, land use), land identification and measurement and data management of such land, of applicable eligibility criteria relating to direct support schemes (including VCS, RDS measures under IACS) and of notification of commitments. This research also covers how these elements impact upon the error rates of the payment schemes. Ad hoc research will address relevant technologies that can serve efficient implementation from new rules and regulations.	31/12/2017	Science-for-policy reports
												20174	New options for image methods and supply	By reviewing new satellite data sources, other image sources (aerial, drones, ground) and faster access to data and processing, an assessment of options will be made regarding the application of CwRS. In the developing era of multiple data sources often of free and open access, options for MS to undertake controls themselves will be analysed, including such concepts as 'use any cloud free pixel'. The report may lead to a reflection on the current centralised (EU) supply of satellite data.	30/06/2017	JRC technical reports
4848 - MARS4CAST JRC.D.5	1016 - AGR4CAST Crop Production Monitoring and Forecasting	<p>AGR4CAST provides DG AGRI with timely, independent, and high-quality information and forecasts of crop development, agricultural yields and production in Europe and neighbouring countries. This is used for decision making in agricultural markets, implementing Article 22 of REG(2013) 1306 on Monitoring Agricultural Resources (MARS). The MARS Crop Yield Forecasting System (MCYFS), largely outsourced through a co-delegation from DG AGRI, operationally delivers tailored data and modelling capacities throughout the growing season. The JRC provides matching staff for agricultural analysts and experts producing monthly MARS bulletins for DG AGRI that are also well received by the public. AGR4CAST progressively refines and updates the MARS Crop Yield Forecasting System (MCYFS) and extends its activities with respect to regions and crops. The system contributes to the G20 Agricultural Market Information System (AMIS) and the transparency of global commodity markets. MCYFS and the Bio-physical Model Applications (BioMA) platform also serve as data and knowledge bases for various activities within the JRC. It contributes to the project objectives 1,2,3 and (to a lesser extent) 4.</p>	JRC.D.5 MAURITS VAN DEN BERG	1.1.a	AGRI	JRC	S. Boger, HoU C4, P. Londero, HoU E2	ENER ENV ESTAT REGIO	- ALTERRA - National Institute for Agricultural Research FAO - THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO) VITO - Flemish Institute for Technological Research EEA - European Environment Agency EFSA - European Food Safety Authority EU MS Agriculture - EU Member States Competent Authorities for Agriculture GEO - The Group on Earth Observations	01/01/2016 31/12/2020	INS-RS	2017D1	MARS Bulletins 2017	AGR4CAST will produce monthly MARS Bulletins on "Crop Monitoring in Europe" covering the EU-28 with timely information on the state of crop development and yield forecasts for the major crops in Europe. A COM-internal version of each bulletin will be produced for DG AGRI according to a pre-defined schedule, while a public version will be disseminated through the Internet, with usually more than 1,000 downloads within the first days of publication. Project objectives 1 and 2.	31/12/2017	Science-for-policy reports
												2017D2	Ad-hoc Analyses of Adverse Weather Situations 2017	A summary report including ad-hoc analyses of adverse weather situations and their impact on crop yield and production at European level given during 2017, based on specific requests from DG AGRI regarding situations of extreme weather in regions of Europe. Such scientific advice, provision of early warning, and objective assessments are typically requested by DG AGRI to evaluate MS requests and market decisions, and to brief the hierarchy (e.g. DG AGRI, Commissioner). Project objective 1.	31/12/2017	Science-for-policy reports
												2017D3	Crop monitoring system maintenance & update 2017	Maintenance, updating, and refinement of the MARS Crop Yield Forecasting System to ensure that the system corresponds to the state of the art by uptake of R&D results, including improved calibration and the incorporation of additional crops, improved simulation of the crop cycle for winter crops, enhanced statistical methods, refined meteorological interpolation and use of forecast data	31/12/2017	JRC technical reports
												2017D4	Data dissemination by AGR4CAST resource portal	Data, maps, and software are distributed to the public through the INSPIRE-compliant AGR4CAST resource portal. The portal is registered on the COM Open Data Portal. In addition, direct data exchange is established with customers such as ESTAT, ENER, EFSA as well as various groups within the JRC. A technical report summarises the data dissemination activities, customer feedback and consequent refinements of the portal throughout the year. Project objective 2.	31/12/2017	JRC technical reports
												2017D5	Uptake of R&D on the crop monitoring system	Uptake of research and development on the crop monitoring system such as crop calibration, soil-water models, statistical analysis, remote sensing methodologies for crop monitoring with the goal to develop strategies for implementation the operational system. Input from WP CROPMOD and METHOD4CAST.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												2017D6	MARS Explorer & 25th anniversary of MARS Bulletin	Exploiting further the assets of the MARS Crop Yield Forecasting System for public use, a MARS Explorer website will be launched in the first semester of 2017 that provides the public with timely information on crop growing conditions in Europe, complementary to the monthly JRC MARS Bulletin in its 25th year of publication. At this occasion a high-level science-policy conference will be organized to review the system's development and current state, but also discussing the future challenges.	31/10/2017	Scientific information systems and databases
												2018D1	MARS Bulletins 2018	AGR4CAST will produce monthly MARS Bulletins on "Crop Monitoring in Europe" covering the EU28 with timely information on the state of crop development and yield forecasts for the major crops in Europe. A COM-internal version of each bulletin will be produced for DG AGRI according to a pre-defined schedule ("Bulletin calendar"), while a public version will be disseminated through the Internet, with usually more than 1'000 downloads within the first days of publication.	31/12/2018	Science-for-policy reports
												2018D2	Ad-hoc Analyses of Adverse Weather Situations 2018	A summary report including ad-hoc analyses of adverse weather situations and their impact on crop yield and production at European level given during 2018, based on specific requests from DG AGRI regarding situations of extreme weather in regions of Europe. Such scientific advice, provision of early warning, and objective assessments are typically requested by DG AGRI to evaluate MS requests and market decisions, and to brief the hierarchy (e.g. DG AGRI, Commissioner).	31/12/2018	Science-for-policy reports
												2018D3	Crop monitoring system maintenance & update 2018	Maintenance, updating, and refinement of the MARS Crop Yield Forecasting System to ensure that the system corresponds to the state of the art by uptake of R&D results including improved calibration and the incorporation of additional crops, improved simulation of the crop cycle for winter crops, enhanced statistical methods, refined meteorological interpolation and use of forecast data	31/12/2018	JRC technical reports
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2018D5	R&D of the crop monitoring system	Uptake of research and development on the crop monitoring system such as crop calibration, soil-water models, statistical analysis, remote sensing methodologies for crop monitoring with the goal to develop strategies for implementation the operational system. Input from WP CROPMOD and METHOD4CAST.	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)												
4848 - MARS4CAST JRC.D.5	3522 - LandSense Engaging citizens in the sensing of land use, land cover and changes	The LANDSENSE project aims to build a citizen observatory for the monitoring of land cover, land use and changes. The LandSense citizen observatory will combine active data collection from citizens in both rural as well as urban areas through targeted case studies related to land	JRC.D.5 Marijn VAN DER VELDE	1.1.a	AGRI	RTD	Pierluigi LONDERO	ENV		01/09/2016 01/09/2020	CON-IA	201801	First year activities and future actions	This deliverable will report on the first year's discussions and planned activities within the LandSense project. Operational crop monitoring can greatly benefit from a better monitoring of the phenological development of crops across different countries and for different crops. Combining different and new data sources (Sentinel, targeted farm-sourced data) in a smart way can lead to improve our capacity to track key-phenological dates more dynamically in the future.	01/12/2017	JRC technical reports

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4849 - MARS - CAPLand JRC.D.5	3889 - CAPISA CAP Implementation Support Activities	From the introduction of 'controls with remote sensing' in 1993, the original methods have innovatively developed leading to fully documented procedures, validated area measurement methodologies and operational IT services. The R&D work described in WP 496 contributes fundamentally to these activities and critically relies on feedback from them. This work package deals with the more operational components of this support and involves 3 sub packages: 1. The delivery of dedicated satellite imagery for use within the 'On The Spot Checks' (OTSC) of direct payment claims and for the LPIS Quality Assurance (QA) 2. Technical guidance on the direct payment process involving a strong technical component of geographic data handling including the provision of	JRC.D.5 Wim DEVOS	1.1.a	AGRI	AGRI	JONES Owen (D3 HoU), SCHEELE Martin (H1 HoU)		CAP-AG - CAP subsidy paying agencies EU CC Agriculture - EU Candidate countries Competent Authorities for Agriculture EU MS Agriculture - EU Member States Competent Authorities for Agriculture	01/01/2017 31/12/2017	CON-AA	20171	Image handling	Planning, delivery and monitoring of VHR and HR imagery for 600+ Control with Remote Sensing CwRS zones. This follows a very tight timescale from November of the previous	31/12/2017	Datasets
												20172	Methodologies and technical guidance documents	Updated technical specifications for the management and coordination of annual image acquisition campaign and for the implementation and monitoring of the IACS and LPIS. This covers OTSC, CwRS (as Common Technical Specification CTS), LPIS, LPIS QA (TG MTS + TG ETS) and their use within the Integrated Administration and Control System (IACS). It also covers a number of dedicated technical guidances that offer best technical practices.	22/12/2017	JRC technical reports
												20173	IACS data processing and services	This includes reviewing and contributing technical content of DG AGRI guidance documents (not to be confused with the technical guidance documents above authored by DGJRC), operating the LPIS QA portal for the sampling and the collection of inspection records, supporting DG AGRI for the evaluation of the assessment reports and related remedial action plans given by MS, and undertaking the detailed technical screening of these records in support to clearance of the accounts.	22/12/2017	JRC technical reports
												20174	Reports - Areas of Natural Constraints	Assessment of the biophysical criteria implemented by Member States in their ANC submission to the Commission, and follow-up of dossiers to verify technical compliance and seek solutions in areas of difficulty.	22/12/2017	JRC technical reports
4848 - MARS4CAST JRC.D.5	4911 - CROPMOD Crop Growth Modelling for Estimating Crop Yield and Production	The CROPMOD work package underpins the existing MARS Crop Yield Forecasting System in use within the AGRI4CAST work package of the MARS4CAST project through Research and Development in crop growth modelling. Crop models in use will be extended to incorporate explicitly the impact of climatic extreme events such as frost kill, droughts, or heat waves that reduce yield expectations. In addition, while the current system assesses yield in terms of quantity, aspects of yield quality, such as e.g. the sugar content become more important, also in light of a future climate more in favour of pests and diseases. The aim for 2017 is to make a first step of new underpinning research to accommodate quality aspects in the system. Recent advances within the international scientific community of crop modelling will be evaluated and tested for use within JRC. The crop model engine currently in place within the MCYFS will be benchmarked against international crop model implementations e.g. within the Agricultural Model Intercomparison and Improvement Project (AgMIP). The Biophysical Models Application platform (BioMA), c-developed at JRC with an international consortium, includes crop growth models and various other tools and enables model reuse	JRC.D.5 Stefan NIEMEYER	1.1.a	AGRI	JRC	Pierluigi LONDERO	CLIMA ENV RTD SANTE	FAO - THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO) INRA France - Institut National de la Recherche Agronomique (INRA), France UNI MI - Università degli Studi di Milano - University of Milan	01/01/2017 31/12/2020	INS-UR	D201701	Crop Model Intercomparison	Scientific reports and publications on the performance of the crop growth models in use within the MARS Crop Yield Forecasting System, including intercomparison and benchmarking against external model of the international scientific community within the Agricultural Model Intercomparison and Improvement Project (AgMIP).	15/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index
												D201702	BioMA Modelling Platform	Technical report on the enhanced and further developed BioMA modelling platform and its tools and components; newly composed BioMA modelling solutions for various scenario-model simulation studies; technical documentation and tutorials, as e.g. for the Optimized tool.	15/12/2017	JRC technical reports
												D201703	Crop Model Improvements	Scientific publications and reports on improved and extended capabilities of the crop models in use at MARS4CAST within the BioMA modelling platform (such as the WOFOST model) with special regard to simulating frost kill and impacts of other extreme events (e.g. droughts, heat).	30/11/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												D201704	Integrated Modelling in Agriculture	Progress reports on the integration of crop growth models, farm-level models, and agro-economic models in agriculture as available within the agricultural units of the JRC; Special focus will be put on a consistent representation of agro-management options throughout the models.	15/12/2017	JRC technical reports
												D201705	Assessment of sugar content of sugar beet in EU	Report on how sugar production and yield forecasts - extending the current sugar beet yield and production forecasts - can be operationalized within the MARS Crop Yield Forecasting System in place at the AGRI4CAST work package of CROPMOD.	30/11/2017	JRC technical reports
4848 - MARS4CAST JRC.D.5	4912 - METHOD4CAST Exploring novel approaches and improving current methods for crop forecasting	METHOD4CAST is focused on the exploration of new forecast approaches as well as on the improvement of current methodologies in the MARS4CAST project. The overall aim is the general improvement of crop yield forecasts. Improvements of the current methodologies need to be underpinned by an accuracy assessment of the crop yield forecasts to identify which aspects of the implemented forecast methodology need to be addressed. On one side, these improvements will depend greatly on an increased capacity of indicators (crop model outputs, Earth Observation-based indicators) to explain past yield variability. On the other side, novel approaches will be explored. These approaches could have the potential to improve the quality of the forecasts and to extend their spatio-temporal range. This includes for instance exploring the capacity long-range meteorological ensemble forecasts and on a better understanding of the predictability of weather extremes.	JRC.D.5 Marijn VAN DER VELDE	1.1.a	AGRI	JRC	Pierluigi LONDERO	TRADE	FAO - THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO)	01/01/2017 31/12/2020	INS-UR	D1	Quality assessment	This deliverable will present progress on the quality assessment of the MARS Crop Yield Forecasting System. This includes assessing performance of last year as well as investigations of the development of the forecasting accuracy from 1993-2015.	01/12/2017	JRC technical reports
												D2	Climate indicator variability and crop impact	This deliverable will evaluate the amount of variability in crop yield that is explained by the model and agro-meteorological indicators that are used and can be developed for the MARS Crop Yield Forecasting System to improve the description of extreme weather impacts on crops.	01/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												D3	Crop forecasts with long-range weather forecasts	This deliverable will report on the potential of seasonal crop yield forecasts using long-range weather forecasts.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
4849 - MARS - CAPLand JRC.D.5	5806 - PAXTECUM Permanent grassland - farming	The project has the overarching goal to help European agriculture to fulfil (and strengthen) its	JRC.D.5 Wim DEVOS	1.1.a	AGRI	RTD	tbc	ENV		01/10/2017 30/09/2022	CON-IA	202205	JRC contributions to reports of the consortium	JRC contributions to reports of the consortium	30/09/2022	JRC technical reports
1.1.b environmental needs - develop methods and tools for the integrated assessment of agriculture, rural development and the economic impact of taking into account the environment at farm and regional level (so that CAP instruments can be tailored to environmental needs);																
156 - IMAP JRC.D.4	922 - AgriFarm - FoodChain Agricultural economics, food supply chain and policy analyses at micro and regional scale	The main objectives of this WPk are to provide policy support in areas of farm level economic and environmental impacts of agricultural policies in EU and selected non-EU countries and the economics of EU food supply chains. This WPk is part of the yearly policy support provided to DG AGRI based on the IMAP9 and IMAP10 administrative arrangements which will last until the end of 2020. This WPk includes three main areas of policy support: - Farm level policy analyses - Food supply chain analyses - Ad-hoc policy support 1) Farm level policy analyses are performed primarily using farm level models, IFM-CAP and CAPRI-FARM, that allow studying policy effects	JRC.D.4 PAVEL CIAIAN	1.1.b	AGRI	JRC	Pierluigi Londero, HoU AGRI.E.2	DEVCO		29/06/2013 31/12/2020	INS-RS	1	CAP policy impact analyses at farm/regional level	Farm level CAP policy impact simulations. Report related to modelling impacts of ex-ante selected CAP measures at farm-household level, through the IFM-CAP and CAPRI-FARM	29/12/2017	Science-for-policy reports
												2	Agricultural policy analysis in Western Balkans	Report related to monitoring of agricultural policies and farm-household level quantitative analysis in Western Balkan countries. This analysis contributes towards providing evaluation of the Western Balkans' approximation process with the EU acquis in agriculture and rural development and helps to better design and improve IPARD assistance pre-accession programmes. This deliverable is part of the regular policy support provided to DG AGRI based on the IMAP9 administrative arrangement.	29/12/2017	Science-for-policy reports
												3	Farm-level analysis of dairy food supply chain	Micro agro-economic analysis in selected EU regions. Report related to analyses of vertical coordination, market power and unfair trade practices in the dairy sector based on the on farm survey data collected in selected EU regions. This deliverable is part of the regular policy support provided to DG AGRI based on the IMAP9 administrative arrangement.	31/03/2018	Science-for-policy reports
												6	Integrated modelling and policy impact analysis	Development of methodology for policy impact assessment and empirical application	30/12/2018	Science-for-policy reports
702 - NC-Soil JRC.D.3	2204 - LANDMARK Land Management Assessment, Research, Knowledge Base	LANDMARK provides the scientific evidence base to support the development of land based policies. Specifically, the project outcomes will include: 1) an on-farm Decision Support Tool (DST) for cost-effective soil management practices; 2) a schema for monitoring of soil quality and soil functions and 3) the ex- post and ex-ante assessments of existing and potential policy instruments, respectively.	JRC.D.3 Arwyn JONES	1.1.b	AGRI	RTD	Annette SCHNEEGANS	ENV RTD	- University of Copenhagen - University of Antwerp - UNIVERSITY OF ULSTER - Szent István University - WAGENINGEN UNIVERSITY ETH Board - The Board of the Swiss Federal Institutes of Technology INRA France - Institut National de la Recherche Agronomique (INRA), France	01/05/2015 31/10/2019	CON-IA	1	LANDMARK Strategic Research Agenda	The Strategic Research Agenda for LANDMARK, based on a structured assessment of the relevant research questions. These will be defined as those questions which have been identified by stakeholders for which data are available (as determined by WP2) but that have not yet been answered in the literature, as identified Task 1.3. (D1.4)	31/03/2017	JRC technical reports
												4	Quantification of the supply of soil functions	This task will quantify the potential supply of soil functions at EU level through the application of the diagnostic features (WP2) to the pan-EU soil datasets (ESDAC) and a spatial assessment of each soil function based on their relationship with the diagnostic features. The result will be a spatially aggregated estimate of the 'supply' and spatial variation of each of the soil functions across Europe. (D4.1)	31/05/2018	Datasets
		ENV4AGRI provides assessment of the agri-environmental conditions in Europe. This covers the										201702	Mid term review of EU Biodiversity strategy	To define a methodology to assess the change in status and condition of ecosystems, the role of the agricultural policy contributing to maintenance and restoration of biodiversity and natural capital, following the work of Working Group GIIR (Green Infrastructure Implementation and Restoration).	15/12/2017	JRC technical reports

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4850 - MARS AGRIENV JRC.D.5	2210 - ENV4AGRI Environmental evaluation, tools and Indicators for Agriculture	Development of methodologies for the evaluation of agricultural impacts on the environment including the provision of indicators at different levels (regional, farm). This work package also includes the assessment of Member States' designations of Areas with Natural Constraints (ANC), the development of nitrogen budget tools, the assessment of ecosystem services delivered by agriculture and the linking of agri-environmental indicators to agro-economic models for policy scenario assessments	JRC.D.5 Jean TERRES	1.1.b	AGRI	JRC	PL Londero (HoU AGRI.E2), M Scheele (HoU AGRI.H1), S Leiner (HoU ENV.D2), C Wirtz (HoU ESTAT.E1)	ENV ESTAT	EEA - European Environment Agency EU MS Agriculture - EU Member States Competent Authorities for Agriculture	01/01/2015 31/12/2018	INS-RS	201703	indicators and tools for agri-environment	Improving linkages between agro-economic and biophysical models: (i) disaggregation of model outputs, provision of required spatial data sets; (ii) development of biophysical modules to quantify biophysical flows and processes relevant for environmental assessment; (iii) Development / validation of high resolution agricultural map of crop shares, and improve the functionality for the nitrogen balance. MoU Agri-Environmental indicators	15/12/2017	Article contribution to periodicals or to conference proceedings listed in SCOPUS
												201704	Supporting the Task Force on Reactive Nitrogen	Development and application of nitrogen tools in support of the Task Force on Reactive Nitrogen (UN-ECE CLRTAP) and the International Nitrogen Initiative (INI). In particular chairing the Expert Panel on Nitrogen and Food and contribution to the TFRN Expert Panel on Nitrogen Budget (e.g. Guidebook on National Nitrogen Budgets). Document to the Parties of the Convention on Long Range Transboundary Pollution identifying technical and other options for reducing emissions	15/12/2017	JRC contributions to standards
4850 - MARS AGRIENV JRC.D.5	2302 - Sustans Sustainable Food and Nutrition Security in the EU	Metrics, Models and Foresight for European Sustainable Food and Nutrition Security. The project will propose the scientific standard for defining, assessing, and forecasting sustainable diets for European citizens, based on a solid conceptual underpinning, a sound evidence-base and advanced and interconnected modelling tools. To account for future developments in science and policy, this standard will be designed to flexibly incorporate future metrics and data when appropriate.	JRC.D.5 Adrian LEIP	1.1.b	AGRI	RTD	Emanuela Marinelli (REA), Koen Dillen (AGRI E2), Miroslav Bozic (AGRI H5)	DEVCO ENV RTD		01/04/2015 31/03/2019	CON-IA	1	Post-farm food chain for environmental metrics	Literature study on the biomass streams in the post-farm food chain with relevance for environmental sustainability metrics. Information and data on on post-farm gate biomass streams and emissions will be systematically compiled as a basis for strengthening of the food chain representation in CAPRI (D3.3).	31/03/2017	JRC technical reports
												2	Strengthening the food-chain side in CAPRI	The current state-of-the art economic simulation model and CAPRI, will be improved by incorporation of food losses and waste along the food supply chain (based on D1). This allows for a more accurate projection of food and nutrients consumed (D9.4).	30/11/2017	JRC technical reports
												4	Improving the CAPRI-spatial database	Informed by the results of the yield gap analysis of Task 4.1, a concept to better estimate sub-regional farm input-output relationships will be developed. The statistical disaggregation procedure will be extended to simultaneously account for crop growth based relations between input and output as well as available spatial data on irrigation. This allows a consistent comparison of the actual situation with hypothetical scenarios assuming any level of intensification (D4.5).	31/03/2017	JRC technical reports
156 - IMAP JRC.D.4	4916 - AgriMarkets Perspectives and resource challenges for global agricultural markets	This work package focuses on prospective work regarding EU agricultural commodity markets. It includes work necessary to develop and expand the model used for the Medium-term prospects for EU agricultural markets and income 2015-2025, namely the Aglink-Cosimo model. Aglink-Cosimo is a global recursive-dynamic model developed by the OECD and the FAO in joint collaboration. The EU Commission is an official model user, and provides the OECD on a yearly basis a hard view on the most-likely developments of EU agricultural markets. Within this WP relevant model developments are provided, such as the provision of a module for the stochastic analysis of agricultural markets (i.e. to cover the main uncertainties around model assumptions), the	JRC.D.4 Ignacio PEREZ DOMINGUEZ	1.1.b	AGRI	JRC	Pierluigi LONDERO	CLIMA ENV	LandbouwEconisch Instituut B.V. FAO - THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO) OECD - Organisation for Economic Co-operation and Development (OECD)	01/01/2017 31/12/2020	INS-RS	ID1	EU Market Outlook and scenario analysis	The Aglink-Cosimo model is further developed in order to assess the EU-Outlook work (institutional contribution to WPK3349 "IMAP-9") by performing scenario analysis, both from a deterministic and stochastic view point. This includes going into new areas of work such as (non-exhaustive list): environmental indicators, medium to long term analysis of agricultural markets, dietary patterns and weather anomalies.	31/12/2017	Scientific information systems and databases
												ID2	AGMIP Project	Analysis of climate change impacts in agriculture in a long-term horizon. This work implies working together with the international community working on climate change adaptation most notably the AGMIP consortium. The IPTS contribution to this project is analysis for different long-term scenarios (with and without climate change) with the CAPRI model.	31/12/2017	JRC technical reports
												ID3	EU Market Outlook and scenario analysis	The Aglink-Cosimo model is further developed in order to assess the EU-Outlook work (institutional contribution to WPK5000 "IMAP-10") by performing scenario analysis, both from a deterministic and stochastic view point. This includes going into new areas of work such as (non-exhaustive list): environmental indicators, medium to long term analysis of agricultural markets, dietary patterns and weather anomalies.	31/12/2018	Scientific information systems and databases
156 - IMAP JRC.D.4	5020 - AgriRegio Territorial aspects of agriculture in the EU	The analysis of agricultural policies requires taking into consideration all other policies that impact the resources used by agriculture including land, water and soil. For this integrated analysis the level of detail in modelling becomes a key driver for the quality and relevance of the results. Therefore a regional agricultural model with the capacity to provide spatial disaggregation of modelling results is key. Within the model platform of IMAP CAPRI plays that role. In the context of the continuous improvements of CAPRI this WPK will provide specific applications of the CAPRI model to policy areas such as biomass, water and soil. Moreover, together with its farm type module can evaluate the distributional impacts of policies to see insofar these contribute to a fairer distribution of impacts and resources across regions and farm types.	JRC.D.4 Jesus BARREIRO HURLE	1.1.b	AGRI	JRC	Pierluigi Londero			01/01/2017 31/12/2020	INS-UR	1	Stable Release	This report will document the process towards the creation of a stable release process within the CAPRI modelling system. The stable release process aims at developing a coherent and not changing version of the CAPRI model that covers a well-defined set of model features and runs and provides the same results and functionality independent of hardware configuration. This deliverable will allow a more reliable representation of market outlooks at member state level.	31/12/2017	JRC technical reports
												2	Model ad-hoc versions	The CAPRI core model be modified in order to link the agricultural modelling platform to other policy domains such as water, erosion and biomass. In addition the necessary fixes and alterations for the synchronous development of the model chain with other models within the IMAP Modelling Platform will be developed an implemented. In particular the latter will apply during 2017 to the support to DG AGRI for the anticipation of the post 2020 CAP.	31/12/2017	Scientific information systems and databases
												3	Model ad-hoc versions	The CAPRI core model be modified in order to link the agricultural modelling platform to other policy domains such as water, erosion and biomass. In addition the necessary fixes and alterations for the synchronous development of the model chain with other models within the IMAP Modelling Platform will be developed an implemented. In particular the latter will apply during 2017 to the support to DG AGRI for the anticipation of the post 2020 CAP.	31/12/2018	Scientific information systems and databases
4849 - MARS - CAPLand JRC.D.5	5050 - URDD Digital Dossier	As from 2018, MS authorities are required to provide for all farmers beneficiaries of CAP in framework of the Integrated Administration and Control System (IACS), and especially in its Land Parcel Identification System (LPIS) subsystem, very detailed spatial data is being collected on annual basis. In most cases the IACS datasets of the Member States are exclusively used for supporting the implementation of the Common Agricultural Policy (CAP). Reusing these datasets in other domains (environment, climate, energy, etc.) would represent an added value. The purpose	JRC.D.5 Marco BERTAGLIA	1.1.b	AGRI	JRC	Owen JONES		01/01/2017 31/12/2017	INS-UR	Report	GSAA and the digital farm dossier	Report on findings regarding opportunities and constraints to collect environmental data via the geo-spatial aid application form	31/12/2017	JRC technical reports	
4849 - MARS - CAPLand JRC.D.5	5052 - IACSspatial IACS spatial data reuse	In framework of the Integrated Administration and Control System (IACS), and especially in its Land Parcel Identification System (LPIS) subsystem, very detailed spatial data is being collected on annual basis. In most cases the IACS datasets of the Member States are exclusively used for supporting the implementation of the Common Agricultural Policy (CAP). Reusing these datasets in other domains (environment, climate, energy, etc.) would represent an added value. The purpose	JRC.D.5 Katalin TOTH	1.1.b	AGRI	JRC	Owen JONES	ENV		01/01/2017 31/12/2017	INS-UR	ID1	Cases for reusing IACS spatial data	This report explores potential applications where spatial data managed in an existing IACS system can be reused in other domains. In addition to text descriptions, the applications will be formally documented specifying the required work- and information flows	29/06/2017	JRC technical reports
												ID2	IACS data reuse from an information point of view	In this WPK, schema mapping between the IACS/LPIS subsystem and a selected information model of an environmental application (use case) will be performed. Potential technical constraints such as semantic interoperability, information gaps, spatial representation as well as the success factors for mapping will be clarified. Finally, an information model will be proposed that demonstrates how a task in the environmental (or other) domain can be solved using IACS data.	30/12/2017	Scientific information systems and databases
4850 - MARS AGRIENV JRC.D.5	5069 - FLT4CAP Farm Level Tools for the CAP	FLT4CAP provides underpinning research to activities of other WPK of the Unit (ENV4AGRI, GTCAP). The activities has three main components: 1) the identification of key points and the preparation of a conceptual framework for a revision of the system of subsidies under the CAP (centred on a paradigm shift from direct income support to payments based on the level of performance), including specifically the supply of public goods to society; 2) the specification for benchmarked farm level tools to assess farms	JRC.D.5 Maria-Luisa PARACCHINI	1.1.b	AGRI	JRC	AGRI.E1, AGRI.D2	ENV		01/01/2017 31/12/2018	INS-UR	02	Standards for Farm Level Tools	Farm level tools (FLT) are promising instruments to assess farm contributions to policy targets. To be effective, FLT should be built on a common set of objective criteria and standard acknowledged methodologies. The deliverables aims at providing input to defining common benchmarking criteria. This includes the meta-review of the	31/12/2017	JRC technical reports
												03	Copernicus data for agri-environment:pilot studies	Pilot analysis on the usability of Copernicus land services (HRL) to monitor specific land cover classes in the EU in particular grassland, tree crown cover and changes from agricultural and natural areas to impervious. Statistical aspects of validation of Copernicus land services with photo-interpreted samples and LUCAS data Support to Eurostat to better tune the LUCAS 2018 sample For 2018 this may be extended to linear elements and CAP Ecological Focus Areas on the basis of LUCAS transects.	31/12/2017	JRC technical reports
4850 - MARS AGRIENV JRC.D.5	5807 - LIFT Low Input Farming and Territories:	The LIFT WPK aims at assessing the link among ecological approaches in farm management,	JRC.D.5 Maria-Luisa PARACCHINI	1.1.b	AGRI RTD	RTD	AGRI.E1, AGRI.D2	ENV		01/03/2018 28/02/2022	CON-IA	201801	JRC contribution to Work Packages 1 and 6	Definition of farm typologies, policy analysis	31/12/2018	Science-for-policy reports
1.1.c resource efficiency and climate change - model soil, water and ecosystem dynamics in order to improve their sustainable management in agricultural systems, and make a better use of the potential of bioeconomy. Study the effects of climate change on the agricultural sector, assess the potential of climate change mitigation and adaptation strategies;																
702 - NC-Soil JRC.D.3	2214 - ISOAPER Interactive Soil Quality Assessment in Europe and China for Agriculture and	Agricultural soils occupy around 45% in Europe and 55% in China. Given importance of these soils for crop and livestock production as well as other	JRC.D.3 Gergely TOTH	1.1.c	AGRI	RTD	Philippe ROUMANS, Antonio PEREZ-RENDON (REA)	ENV RTD		01/05/2015 30/04/2020	CON-IA	201701	Soil productivity	This deliverable will produce a soil productivity assessment within the various pedoclimatic zones of Europe. Pedoclimatic zones are established in the ISOAPER project. Statistical data on yields, biomass and livestock information will be collected to characterize	30/06/2017	JRC technical reports
702 - NC-Soil JRC.D.3	3706 - SOILCARE Soil care for profitable and sustainable crop production	European crop production is facing the challenge to remain competitive, while at the same time reducing negative environmental impacts. Currently, production levels in some cropping systems are maintained by increased input (e.g. nutrients and pesticides) and technology, which masks losses in productivity due to reduced soil quality. Such increased use of agricultural inputs may reduce profitability due to their costs, while also negatively affecting the environment. The	JRC.D.3 Arwyn JONES	1.1.c	AGRI	RTD	Agnieszka ROMANOWICZ	ENV RTD		01/03/2016 01/03/2021	CON-IA	1	Data management	Support in building the project database so that it fulfills requirement for transfer of it to the ESDC. At the end of the project support in transferring data and making them publicly available via ESDC.	28/02/2021	Datasets
												2	Analysis of the project results and upscaling to t	Support in analysis of the project results and it upscaling to the EU level including policy analysis. This deliverable will include also policy advice i.e. possible alternative ways to support soil-improving techniques.	28/02/2021	Science-for-policy reports
												3	Dissemination and communication	Support in developing an advanced and easy accessible SOILCARE information Hub and in development of a suite of dissemination products from the research outputs suited to different categories of stakeholders at Study Sites, national and European levels.	28/02/2021	Public information documents
												22	Implementation of the crop-oriented NPP model	Technical report describing the solutions implemented to adapt the NPP model constructed at site-level to a continental-level product to monitor agricultural biomass. The key aspects covered will be strategies to cope with aggregated crops signal in EO-	30/05/2017	JRC technical reports

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
4848 - MARS4CAST JRC.D.5	4210 - AGBIO EO data-driven modelling of agricultural biomass production in Europe	The objective of this Exploratory Project is investigating the feasibility of an advanced, added-value Earth Observation (EO)-driven Net Primary Production (NPP) model specifically oriented for a quantitative assessment of crops and grasslands production. The new model will represent an important advancement in the application of EO-based technologies in biomass production models for crops, simulating the allocation of assimilated carbon into different plant organs through the incorporation of a biomass partitioning module. The project encompasses three main tasks: the development of the concept of crop-oriented NPP model using experimental data; the implementation of that concept at European scale and production of an historical archive of agricultural biomass in Europe from 1998; and the assessment of the model results with official statistics of crop production and yields, and data on biomass potentials available from different studies.	JRC.D.5 Marijn VAN DER VELDE	1.1.c	AGRI	JRC	Mauro POINELLI	CLIMA ENER ENV GROW RTD SG		01/05/2016 30/04/2018	INS-ER	23	Historical archive of agricultural biomass	Historical product archive from 1998 to 2013 based on Copernicus product GIO-IPAR V2 (SPOT-VEGETATION platform) and ECMWF climate data. Two versions will be produced: a preliminary, after the first assessment in Deliverable 3.2, and a consolidated one, once the model is updated.	28/02/2018	Scientific information systems and databases
												24	Scientific paper on EU-level NPP model	This paper will describe the modelling approach adopted to produce the NPP model at European scale and will include a quantitative assessment based on field measurements (flux towers) and statistical data and observations.	31/10/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												32	Scientific paper in the use of EO-based monitoring	Scientific paper in the use of EO-based monitoring of biomass supply in the estimation of biofuel production at EU level. This paper will explore the added-value of using the proposed NPP model at European level to compute biofuels production scenarios against existing studies on the matter, discussing the strengths and limitations of the selected approach	30/04/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												40	Final report	Final report summarizing the main results from the project.	30/04/2018	JRC technical reports
702 - NC-Soil JRC.D.3	5044 - AGSOL Soil: the foundation of agriculture	While soil is the essential natural resource for domesticated animal- and plant-based food production systems, it faces strong pressures partly owing to inappropriate agricultural practices and overuse. In many cases, farming practices associated with the production of biomass cause soil degradation and a loss of associated functions such as carbon sequestration, water retention, nutrient cycling and habitat. As functional soils are central to agriculture and bioeconomies, this WPK is well placed to contribute to policy debate on how farming can contribute to land degradation neutrality targets and SGD goals. The WPK will contribute to the evaluation of the 2014-2020 CAP (mid-term review) through the maintenance and development of policy relevant indicators and	JRC.D.3 Panagiotis PANAGOS	1.1.c	AGRI	JRC	Gesa WESSELER	CLIMA ENV ESTAT	- Colorado State University - UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN - WAGENINGEN UNIVERSITY - AL TERRA - UNIVERSITY OF BASEL - Catholic University of Leuven FAO - THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO) EEA - European Environment Agency KUL - Katholieke Universiteit Leuven OECD - Organisation for Economic Co-operation and Development (OECD)	01/01/2017 30/12/2020	INS-RS	1	Condition of agricultural soil	This deliverable provides the DG AGRI indicator and fact sheet on soil erosion (by water and wind). It consists of an overview of recent data, complemented by all information on definitions, measurement methods and context needed to interpret them correctly.	31/12/2017	JRC contributions to policy documents
												2	Optimising agricultural soil functions	This deliverable aims to better understand, monitor and measure the specific effects of agricultural activities and farming systems on soils and its associated productive and ecosystems functions by preserving and/or optimising its biological, chemical and physical properties. This will include measures that increase soil carbon content as well as soil biodiversity and reduce soil erosion. Tools will be developed to test the impact of farming systems on soil resources.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												3	Evaluation of the CAP from a soil perspective	Through analysis of LUCAS Soil data from 2009, 2012 and 2015, this deliverable will contribute to the mid-term review evaluation of the 2014-2020 CAP by assessing the changes in soil condition under agricultural management.	31/05/2018	Science-for-policy reports
442 - AGFORCC JRC.D.5	5084 - Mitigatech Technological Options for Climate Change Mitigation in Agriculture	Within the AGFORCC project, Mitigatech work-package aims to analyse the adoption, economic impacts and GHGs reduction potential of different technological options for mitigation of Climate Change in EU Agriculture. This is done by mainly focusing on the end-users (i.e. EU farmers) of the technological options which allows policy-makers to understand the incentives needed to boost their adoption and maximize the GHGs reduction in a cost-effective manner. The final purpose is to establish a reliable and up-to-date EU reference database on mitigation technological options that	JRC.D.4 Manuel GOMEZ BARBERO	1.1.c	AGRI	JRC	Mauro POINELLI	CLIMA ENV	FAO - THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO) UN FCCC - UN Framework Convention on Climate Change (UN-FCCC)	01/01/2017 31/12/2019	INS-RS	1	Interim database mitigation options	Interim version of dataset on technological GHG emissions mitigation options for the agriculture sector including their adoption, mitigation potential and costs of uptake. The purpose is to serve the Partial Equilibrium Model CAPRI to perform analysis of climate change policy options as well as the JRC EU-wide individual farm-level model (IFM-CAP). The dataset will be accompanied documentation describing its structure and will hold data as much as possible to operate the mentioned models.	30/12/2017	Datasets
												2	Study of technological mitigation options adoption	Study of technological climate change mitigation options for the EU agriculture sector. Several mitigation options will be analysed from the angle of their current and potential adoption, costs related to the adoption, driver and barriers for their dissemination in EU agriculture and mitigation potential. The drivers analysis will include supporting tools to farmers within the Common Agricultural Policy (e.g. subsidies). This study will feed with empirical database described in D1 and D3.	30/06/2018	JRC technical reports
1.1.d agricultural market, trade and food security - carry out economic analysis of the competitiveness and trade relations of the European agri-food sector, the performance of European agri-food systems (including the food chain) and their linkages to jobs and growth as well as contribution to European and global food security.																
156 - IMAP JRC.D.4	113 - FOODSECURE Exploring the future of global food and nutrition security	The FOODSECURE project aims to design effective and sustainable strategies for assessing and addressing the short- and long-term challenges of food and nutrition security. The project provides a variety of analytical tools to	JRC.D.4 Robert MBAREK	1.1.d	AGRI	RTD	Marie RAMOT, RTD.B	DEVCO FISMA RTD TRADE		01/03/2012 28/02/2017	CON-IA	3	Report	Report	28/02/2017	JRC technical reports
156 - IMAP JRC.D.4	795 - AgriTrade Agriculture, trade and the global economy	AgriTrade assesses the impacts of agricultural, climate and trade policies on the EU and global agricultural market. The assessments are based on comprehensive databases, advanced economic modelling tools (mainly Computable General Equilibrium models - CGE) and statistical methods, supporting in particular the main customer DG AGRI (also financed via administrative arrangement, see WPK3349). General equilibrium models link all economic sectors, allowing to connect different priorities on Agriculture, Natural Resources, Energy, Environment, Climate Change, Circular Economy and Development. Within the WPK databases and tools of the agro-economic platform IMAP (mainly the GTAP database, the MAGNET and STAGE models and multipliers techniques) are updated, further developed and used. AgriTrade focuses on several issues related to agriculture and food sectors. In particular, the WPK analyses shocks on agricultural trade (free trade agreements, bans, world price change) and its possible impacts on jobs and growth in the EU. The WPK deals with environmental and climate policies (GHG emission, biofuel, food waste...) and impacts of these changes in policies on agriculture sector and its growth. Moreover, the WPK deals with the EU food value	JRC.D.4 EMANUELE FERRARI	1.1.d	AGRI	JRC	P. Londero, AGRI.E.2	CLIMA DEVCO ENER RTD	- LandbouwEconisch Instituut B.V.	01/01/2014 31/12/2020	INS-RS	1	DataM – open agricultural, economic and trade data	The JRC DataM information system for scientific support, is a data-hub of global datasets and models for the agro-economic sector, trade, bioeconomy, and food security. Through its easily accessible data portal, JRC and DG customers (AGRI, DEVCO, RTD, JRC HQ) get updated databases for analysis. This deliverables coordinates the different technical and content related issues to serve the wide range of customers and explores new ways to analyse and visualise model results through QlikSense.	30/12/2017	Scientific information systems and databases
												2	Jobs&growth in the agri-food chain and bioeconomy	Using the in-house developed AgroSAM database, structural patterns in disaggregated agri-food and bio-based sectors on MS level are analysed wrt jobs & growth opportunities. Multiplier analysis (backward and forward linkages) techniques give an easily understandable input on the role of agri-food and bioeconomy in the EU. Employment multipliers (new jobs generated per million€ of additional output/export value) ascertain employment effects from increases in output/exports within agri-food sectors.	30/12/2017	Science-for-policy reports
												4	Trade, climate change, food security - global CGE	The CGE MAGNET and its database need permanent updates of the baseline (trade flows, tariff measures, GHG emission, macro projections) to perform analysis of emerging questions such as EU domestic support, international trade agreements, climate policies, food security, nutrition. To better model of trade issues, food value chain (and its fairness) and structural change, an imperfect competition version of MAGNET will be developed together with enhancements in modelling of climate policies.	30/12/2017	Science-for-policy reports
												5	Agricultural Baseline: Improvement of parameters	AGRILIFE engaged in contributing to the GTAP consortium the EU domestic support component of the GTAP database employing the Clearance Audit Trail System (CATS) database for cataloguing EU domestic support payments by member state. This component allows a better modelling of the EU CAP within the global database. This deliverable will keep the database updated and translate the database into a consistent agricultural baseline from the global CGE MAGNET based on DG AGRI current figures on support.	29/12/2017	Datasets
482 - Food & Nutrition Sec JRC.D.5	1060 - SIGMA Stimulating Innovation for Global Monitoring of Agriculture and its Impact on the Environment	SIGMA is a FP7 Project supporting the GEO-Global Agricultural Monitoring (GEOGLAM). It combines agricultural monitoring (crop land mapping and Land use change) and modeling approaches (present yield and yield gap) to assess the potential impacts in various regions of the world of various scenarios and agricultural production increase, by intensification and/or crop land expansion.	JRC.D.5 Olivier LEO	1.1.d	AGRI	RTD	Eric WILLEMS , Deputy HoU C4; PierLuigi LONDERO HoU E2	DEVCO GROW		01/11/2013 30/04/2017	CON-IA	1	Contribution in SIGMA Dissemination events	Contribution by the D05 Food Security Unit in the WP 6 (workshop and seminar) and WP7 (outreach event) of the SIGMA project who is expected to organize with FAO regional dissemination events - In Europe - in neighborhood countries - or in Sub-Saharan Africa.	30/04/2017	Training
												2	Contribution in Final SIGMA Reporting	Contribution in the final Reporting by SIGMA project and in particular on the Land Cover mapping (WP 3.2) on cropland and Agricultural Statistics (WP 3.3) and Yield assessment and yield gap analysis (WP 4.3)	30/04/2017	External study reports
68 - Food Forensics JRC.F.4	2020 - OLEUM Advanced solutions for assuring authenticity and quality of olive oil at global scale	The overall objective of this project in response to the Horizon 2020 call SFS-14-2014/2015, is to better ensure olive oil quality and authenticity, improving detection methods and supporting the prevention of fraud in the olive oil sector. Four main areas will be addressed through research and development, i.e. legislative and regulatory aspects, analytical methodology, harmonisation and coordination, and consumer science and market confidence. JRC will be involved in work	JRC.F.4 Alain MAQUET	1.1.d	AGRI	RTD	Jesus ZORRILLA TORRAS, AGRI.DDG2.C.2, jesus.zorrilla@ec.europa.eu	SANTE TAXUD	FAO - THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO)	01/09/2016 31/08/2020	CON-IA	3	OLEUM - 2018 Annual report	A JRC Technical Report describing the outcome of the activities carried out by the JRC in the frame of the OLEUM project during the second year of the project.	31/12/2018	JRC technical reports
												D1	OLEUM - 2017 Annual report	A JRC Technical Report describing the outcome of the activities carried out by the JRC in the frame of the OLEUM project during the first year of the project.	31/12/2017	JRC technical reports
												D2	OLEUM Databank	A databank will be created, established and maintained to store the results of the different work packages of the OLEUM projects, in particular on analytical solutions for quality and authentication issues, and of networking and technological transfer.	30/12/2018	Scientific information systems and databases

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
156 - IMAP JRC.D.4	3349 - IMAP-9 Integrated Modelling Platform for Agro-economic Commodity and Policy Analysis	has developed into a cornerstone of the JRC economic and environmental modelling capacity. Since eight years it receives key funding from DG Agriculture and Rural Development. The IMAP administrative arrangements take account of DG AGRI being an important user of	JRC.D.4 Robert MBAREK	1.1.d	AGRI	AGRI	Pierluigi Londero HoU DG AGRI E.2	CLIMA ENV		01/06/2016 31/05/2017	CON-AA	3	D3 Final report	This report shall summarise the activities of the modelling platform under this contract with clear reference to maintenance, development and use of models.	31/05/2017	Science-for-policy reports
												4	D4 Scenar2030	This report presents an analysis of the social, economic and environmental impacts of several options for the next CAP employing the IMAP platform models MAGNET, CAPRI and IFM-CAP in an integrated manner at different spatial scales (global, EU, MS, NUTS2 individual farm).	30/04/2017	Science-for-policy reports
156 - IMAP JRC.D.4	5000 - IMAP-10 Integrated Modelling Platform for Agro-economic Commodity and Policy Analysis	The JRC Agro-Economic Modelling Platform IMAP has developed into a cornerstone of the JRC economic and environmental modelling capacity. Since nine years it receives key funding from DG Agriculture and Rural Development. The IMAP administrative arrangements take account of DG AGRI being an important user of quantitative economic analysis based on modelling tools, both for its market analysis and for its domestic and trade policy analysis. The use of models has now become an indispensable tool in the preparation and negotiation of policy decisions (e.g. Common Agricultural Policy (CAP) reform, bilateral/multilateral negotiations, environmental and rural development analysis, climate change discussions etc.). On the one hand, validated economic models are crucial for providing a scientific basis for the evaluation and further design of EU policies. On the other hand, databases provide the necessary input to ensure the reliability and consistency of modelling tools employed for agricultural policy analysis. The 10th edition of the AA with DG AGRI (IMAP-10) will cover three and a half years, allowing for a better planning and execution of the agreed work	JRC.D.4 Robert MBAREK	1.1.d	AGRI	AGRI	Pierluigi LONDERO	CLIMA ENV		01/06/2017 31/12/2020	CON-AA	01	D1 Report "Work Programme"	This report will present the detailed work programme, to be undertaken for each of the models (with specific attention on the maintenance and development activities and domains of simulation). This report should serve, after the approval of DG Agriculture and Rural Development, as reference document for the project and specify policy simulations to be prepared during the AA.	15/06/2017	JRC technical reports
												02	MARS EU neighbourhood Bulletins 2017	The WP will produce MARS Bulletins "Crop Monitoring in the EU neighbourhood " covering Russia, Belarus, Ukraine, Kazakhstan and Northern Africa with timely information on the state of crop development and yield forecasts for the major crops.	31/12/2017	Science-for-policy reports
												03	Interim Report No 1	The work carried out consists in the maintenance, development and use of three economic models AGLINK-COSIMO and CAPRI as well as AGMEMOD, the general equilibrium model (MAGNET) as well as the farm model IFM-CAP. The operational back-up to DG AGRI for economic and policy analysis in its multiple dimensions (e.g. country, commodity coverage, geographical resolution, policy instruments) includes the impact of agriculture on jobs and growth; on environment and climate change; on commodity markets.	31/03/2018	JRC technical reports
												04	Interim Report No 2	The work carried out consists in the maintenance, development and use of three economic models AGLINK-COSIMO and CAPRI as well as AGMEMOD, the general equilibrium model (MAGNET) as well as the farm model IFM-CAP. The operational back-up to DG AGRI for economic and policy analysis in its multiple dimensions (e.g. country, commodity coverage, geographical resolution, policy instruments) includes the impact of agriculture on jobs and growth; on environment and climate change; on commodity markets.	30/09/2018	JRC technical reports
												05	MARS EU neighbourhood Bulletins 2018	The WP will produce MARS Bulletins "Crop Monitoring in the EU neighbourhood " covering Russia, Belarus, Ukraine, Kazakhstan and Northern Africa with timely information on the state of crop development and yield forecasts for the major crops.	31/12/2018	Science-for-policy reports
68 - Food Forensics JRC.F.4	5761 - ERC-CWS 2017 European Reference Centre for Control in the Wine Sector 2017	Regulation (EC) No 555/2008 mandates JRC to host and manage the EU Wine Databank. As a requirement, JRC will organise proficiency tests. The new online database developed in 2016 will be extended with application tools. Several analytical methods will be evaluated with the collaboration of the Member State Designated Laboratories (MSDLs) network for wine authentication. In addition, JRC will chair the DG AGRI expert board in monitoring water content in poultry meat.	JRC.F.4 Alain MAQUET	1.1.d	AGRI	AGRI	Antoine MICHOTTE RENIER	SANTE	MS EU - Member states EU	01/01/2017 31/12/2017	CON-AA	10	Water content in Poultry meat activities	A report will be produced summarising the activities coordinated by the Board of Experts in Monitoring Water Content in Poultry Meat for the network of NRLs.	31/12/2017	JRC technical reports
												20	ERC-CWS 2017 Yearly report	The report will summarise the outcomes of the annual work programme including the minutes of the meetings, feasibility study of several analytical methods (e.g. DNA fingerprinting, NMR, High Resolution Mass Spectrometry, Spectroscopy) suitable to identify the geographical origin of wine and the variety identification, the design of a database to store the results, the extension of the current EU wine databank for the isotopic measurement of wines produced in third countries	31/12/2017	JRC technical reports
												30	Accreditation of the IRMS methods	A certificate delivered by the audit organism	31/12/2017	Technical systems
												40	2017 Report on the proficiency testing (PT)	A report on the assessment and documentation of the reliability of the data produced by the MSDLs network demonstrating competence to the customers and to the accreditation bodies	31/12/2017	JRC technical reports
												50	Review in peer-reviewed journal	The existing approaches of authenticating wines according to geographical and varietal origin will be reviewed with a special emphasis whether requirements for taking regulatory actions have been considered.	30/09/2017	Article contribution to periodicals or to conference proceedings listed in SCOPUS
1.2 Education, culture, youth and sport																
1.2.a education and training systems - monitor trends under EU policy strategies (e.g. Europe 2020 and ET2020) and provide evidence of the successful implementation and development of such policy frameworks;																
150 - Education & Skills JRC.B.4	4979 - EffectiveEdu-2: FIT EffectiveEdu-2: Facilitating Innovation in Teaching	PB 150 (Education&Skills) researches the area of education and skills with emphasis on the socio-economic implications and the way the wide scale uptake of digital technology affects the everyday life of Europeans. This AA (WPK 4979) is a continuation of the long-standing work JRC B4 has been undertaken on ICT for Learning and Skills as to provide scientific and policy support on modernising and innovating Education and Training (E&T) in Europe with the aim to improve learning outcomes and provide wider and more inclusive access to education. The aim of the study is to collect evidence and	JRC.B.4 Yves PUNIE	1.2.a	EAC	EAC	Jan Pakulski	CNECT EMPL		01/01/2017 31/12/2018	CON-AA	1	Literature review on Teacher CPD in Europe	This report will scope out innovative, new or emerging Continuous Professional Development (CPD) practices in Europe.	11/12/2017	JRC technical reports
												2	Literature review on Innovative Assessment	This report will document and conceptualise how both formative and summative assessment in education and lifelong learning can be designed so as to adequately capture complex, real-life competences and thus support more holistic and innovative teaching and learning strategies.	18/12/2017	JRC technical reports
												3	Final report on innovative forms of CPD	This report will bring together results from case studies with the aim to better understand the innovative aspects of teacher CPD (Continuous Teacher Professional Development)	03/12/2018	Science-for-policy reports
												4	Case studies on training in Higher Education	This report will document results from case studies on how Training and Development of innovative lecturing practices in Higher Education are developed.	19/11/2018	JRC technical reports
												5	PISA 2015 on ICT familiarity and learning outcomes	This report will analyse the PISA 2015 ICT Familiarity Questionnaire and its link with learning outcomes, updating the OECD report "Students, Computers and Learning: Making the Connection".	12/03/2018	Science-for-policy reports
5016 - EDESPA JRC.B.4	5017 - CRELL-IX Centre for Research on Education and Lifelong Learning	CRELL has been funded by DG EAC. The first AA started on November 1st 2004; since then there have been various AAs till the last CRELL 8. This 9-th CRELL AA with DG EAC (CRELL IX) has been already signed by both parties for 12 months (officially starting from 1st January 2017), and it covers the following main domains of activities: 1. Technical support to EAC's monitoring capacity, contributing to the Education and Training Monitor 2017; adopting and further improving the Joint Assessment Framework; and participating, as necessary, in Indicator Expert Groups (IEGs), ET 2020 Working Groups (WGs) and the Standing Group on Indicators and Benchmarks (SGIB). 2. A set of technical reports and technical briefs, based on the needs previously outlined by EAC, profiting from CRELL's competitive advantage and taking into account the complementary work of other actors. 3. A Symposium and/or other presentations for EAC staff and additional stakeholders, with the objective to enhance the visibility of CRELL output to increase the potential use of CRELL output in EAC's policy coordination, and to receive further feedback that can improve the usefulness (and visibility) of subsequent CRELL deliverables.	MARIA ESPERANZA VERA TOSCANO	1.2.a	EAC	EAC	JAN PAKULSKI	EMPL		01/01/2017 31/12/2017	CON-AA	D1	Science career plans of adolescents	So far most studies of gender and STEM career expectations originate from the USA and use single-country data which is mostly cross-sectional. Therefore, this project will investigate patterns and trends in youth vocational interests related to STEM in the pooled PISA 2000, 2006 and 2015 data from all European countries.	30/11/2017	Science-for-policy reports
												D2	Analysis of regional PISA data	This research will analyse the regional data available for Italy and Spain of the new PISA data. The objective is to understand why PISA scores differ inside the same country widely. Once success factors are understood, general policy lessons on how to improve the European school system will be derived.	31/10/2017	JRC technical reports
												D3	Joint Assessment Framework (JAF)	Quantitative analysis of indicators and benchmarks of ET 2020 are produced on a yearly basis, jointly with related charts. CRELL will also suggest possible methodological improvements.	30/06/2017	JRC technical reports
												D4	Civic and Citizenship Education	The IEA ICCS 2016 study will provide valuable data on students' knowledge, values and attitudes towards citizenship. Seen together with the Eurydice leaflet on the Paris declaration, a both broad and deep understanding of citizenship education emerges. This deliverable will develop a comprehensive policy note on citizenship education that goes beyond the mostly descriptive IEA ICCS 2016 European Report.	31/10/2017	Science-for-policy reports
												D5	Students mobility in tertiary education	This study will investigate why international students choose a certain destination and the associated universities. This briefing will analyze the extent to which the institutional factors (teaching and research university orientation) and regional attractiveness (such as economic conditions) are the most influential factors affecting students mobility at tertiary level.	30/11/2017	Science-for-policy reports
												D6	Quality of Teaching and Learning	Research question: Which factors associated with instructional practices and school learning environment are related to Science achievement in EU MS? In order to examine how much of the variation in Sciences achievement is associated with teaching practices and school learning environment, we will undertake a multi-variate statistical analysis for each EU MS, controlling for background student variables likely to impact results, such as gender and socio-economic status. This analysis offers insights on the combined aspects that may influence students' achievement in the different EU MS.	30/11/2017	Science-for-policy reports
												D8	Efficiency in tertiary education	The research will build on the report written under CRELL 8 on efficiency in compulsory education. The technical brief will focus on efficiency in the EU university systems, where the main methodological problem is the selection of relevant measurement variables: inputs, outputs and contextual variables.	30/09/2017	JRC technical reports

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Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category	
5016 - EDESPA JRC.B.4	5018 - KNOW-2 KNOW - Human Capital for prosperity and sustainable growth in Europe	Investments in education and skills, as well as research and innovation in human capital development are major sources of economic prosperity. To achieve a better understanding of the importance of human capital for growth, KNOW - Institutional uses the multidisciplinary expertise of a team of researchers to develop empirical analysis on human capital formation over the life-cycle and across EU countries.	JRC.B.4 Giuseppe MUNDA	1.2.a	EAC	JRC	JAN PAKULSKI	EMPL GROW		01/01/2017 31/12/2017	INS-RS	D1	Basic Skills in Literacy	Research question:How do students' achievement in reading vary or is similar between the PIRLS and PISA surveys? An analysis of PIRLS 2011 and for the most recent PISA 2015 would identify mean performance changes and changes in the percentage of low achievers in reading. This, in turn, would offer relevant indicators to measure literacy achievement from primary to secondary school and contribute to identify the point in time when investment in skills formation as a form of human capital is needed.	31/12/2017	Article contribution to a monograph or other periodicals	
												D2	Education for Resilient Societies	The aim is to adapt the concept of resilience – originally developed to describe individuals' capacity to overcome adversity – to societies, to be able to examine how European societies have responded to the risk to social cohesion posed by international migration. In this framework attitudes and dispositions are considered as outcome measures and education is conceived as a possible protective factor. The work would involve large scale comparative surveys.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in SCOPUS	
												D3	Regional human capital and its evolution	Human capital is an important factor for economic and social development. A range of contributions has focused on the international evolution of human capital over the last decades and beyond. However, the regional dimension of human capital in Europe remains insufficiently explored, particularly in a long-run perspective. For this reason, this research addresses this gap in the literature and highlights the regional evolution of human capital in Europe by using numeracy, literacy and educational attainment proxies	20/12/2017	Article contribution to periodicals or to conference proceedings listed in SCOPUS	
												D4	Human capital and market access in the EU regions	Recent scientific evidence highlights that remoteness represents a penalty that gives disincentives to invest in human capital. This research will test the persistence of this effect at the regional level in a long run setting. The hypothesis to be tested is that market access has a significant positive influence on human capital. OLS, Tobit and IV regression models will be used for this aim	23/12/2017	Article contribution to periodicals or to conference proceedings listed in SCOPUS	
1.2.b innovative education - carry out research on policyrelevant themes such as efficiency and equity in education investment, role of (higher) education for regional development and smart specialisation, education and societal wellbeing, integrating vulnerable groups such as migrants, refugees and other minorities into the education system, and early childhood learning; study the impact of digitisation on education and training																	
150 - Education & Skills JRC.B.4	3280 - EffectiveEdu Effective use of digital technologies in E&T	PB 150 (Education&Skills) researches the area of education and skills with emphasis on the socio-economic implications and the way the wide scale	JRC.B.4 Yves PUNIE	1.2.b	EAC	EAC	Jan Pakulski	CNECT EMPL		01/01/2016 31/12/2017	CON-AA	2	Socio-economic impact of ICT in Education	Report on the socio-economic impact of the use of digital technologies in education	27/11/2017	Science-for-policy reports	
150 - Education & Skills JRC.B.4	3284 - Edu&Skills INST Education and Skills in the Digital Society - INST	Project 150 consist of research and policy support on modernising and innovating Education and Training (E&T) in Europe and on addressing the 21st century skills challenges faced in Europe, so as to achieve more effective and relevant use of digital technologies to improve learning outcomes, tackle skills mismatches and provide wider and more inclusive access to education. WPK 3284 covers all institutional work needed to expand research capacity, foster coherence and collaboration in the area of Education and Skills in the Digital Society. It will also cover for additional scientific publications based on deliverables from competitive projects	JRC.B.4 Yves PUNIE	1.2.b	EAC	JRC	Bodo RICHTER	CNECT EMPL		01/01/2016 31/12/2017	INS-RS	2	Policy brief: Synthesis JRC research on education	This policy brief will provide a synthesis of relevant JRC research on education bringing together evidence from different competitive and institutional JRC projects on the digital transformation of education.	11/12/2017	Project management related documents/reports identified as outputs of the JRC Work	
												4	Policy brief: Synthesis JRC research for DG EMPL	This policy brief will provide a synthesis of relevant JRC research on skills and qualifications bringing together evidence from different competitive and institutional JRC projects on the digital transformation of skills.	04/12/2017	JRC contributions to policy documents	
												5	The impact of Digital Technologies in Education	Article bringing together evidence from JRC studies on the impact of ICT in Education	29/05/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)	
												6	Computational thinking	Article reporting on the institutional exploratory research on computational thinking as a new competence to be thought in obligatory schooling. Results from research conducted in 2016.	26/06/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)	
148 - LAGREG JRC.B.3	4320 - HESS Higher Education for Smart Specialisation	This work package will analyse how higher education is contributing to the implementation of smart specialisation strategies. This will include monitoring of the European Structural and Investment Funds. It also aims to build capacity in selected European regions, for Higher Education Institutions to take a greater role in the innovation	JRC.B.3 JOHN HUW EDWARDS	1.2.b	EAC	EAC	Denis CROWLEY	REGIO		01/03/2016 28/02/2017	CON-AA	1	Final Report first phase	Final report on activities up to February 2017	28/02/2017	Project management related documents/reports identified as outputs of the JRC Work Programme	
402 - EUPolicyLab JRC.I.2	5160 - FOR-EDU 2030 Foresight for Education and Training 2030	This workpackage is meant to be transformed into an Administrative Arrangement in January 2017. DG EAC has put aside 300kEuro in their Erasmus+ 2017 work programme.	JRC.I.2 Fabiana SCAPOLO	1.2.b	EAC	JRC	JAN PAKULSKI			02/01/2017 29/06/2018	INS-RS	1	Foresight on Education and Training 2030	The report will describe the vision for the future of education and training in 2030. It will define the drivers of change and the challenges and opportunities for future policy actions in the field of education, implications for future skills and employment. The methodological approach of the study will also be described.	01/06/2017	Science-for-policy reports	
												2	Final report second phase	Final report on activities up to February 2018	27/02/2018	JRC technical reports	
148 - LAGREG JRC.B.3	5701 - HESS II Higher Education for Smart Specialisation II	This work package will analyse how higher education is contributing to the implementation of smart specialisation strategies. This will include	JRC.B.3 JOHN HUW EDWARDS	1.2.b	EAC	EAC	Denis CROWLEY			01/03/2017 28/02/2018	CON-AA	1	Policy brief on HEIs and smart specialisation	This policy brief will present the results of the case studies from phase 1 of the project as well as preliminary results from phase 2	30/06/2017	Science-for-policy reports	
													2	Final report 2018	Final report on activities up to February 2018	27/02/2018	JRC technical reports
1.2.c cultural and creative sectors - develop evaluation tools to measure and monitor cultural activities and creativity at city level to assess the impact of specific culture-oriented initiatives on economic and social development (see also section 11.1.c)																	
603 - CC-ME JRC.I.1	3940 - CC-ME.EAC Competence Centre on Microeconomic Evaluation - EAC	Studying, training and gaining work experience abroad has become an important and common phenomenon in the last two decades, also thanks to EU's Erasmus+. This WP, developed in conjunction with DG EAC, aims at measuring the causal impact of these programs on labour market and social outcomes as required in Article 21.2 of the Erasmus+ legal base, hence allowing to judge its effectiveness and to provide future directions for policy implementation. In particular, the WP will focus on the causal impact of higher education student mobility on a variety of graduates' outcomes. Documenting the causal relationship between mobility and the subsequent labour market career of graduates is	JRC.I.1 SYLKE SCHNEPF	1.2.c	EAC	JRC	Dalibor MLADENKA	JRC		01/01/2017 30/06/2018	INS-RS	1	Evaluating impact of higher education student mobi	This activity will assess whether participation in higher education mobility improves career prospects of graduates in a cross-national context. This will be carried out by means of three counterfactual analyses on the impact of higher education student mobility for graduates in three countries: Italy, UK and Germany. Each analysis will be based on data that is representative for the population of graduates in the country of interest.	30/06/2018	JRC technical reports	
												2	The causal effect of parents' schooling	This paper estimates the causal effect of parental education on children's education in thirteen European countries using data from the Survey of Health, Ageing and Retirement in Europe (SHARE). To solve the endogeneity problem we propose a novel instrumental variable approach, contributing to the economic literature in several aspects.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)	
1.3 Environment																	
1.3.1 Protecting and enhancing our natural capital																	
1.3.1.a the freshwater and marine environment - assess water resources and wateruse efficiency, floods and droughts (linked to key orientation 9.1.1.a); provide hydro-economic modelling and assessment of implementation scenarios for the Water Framework Directive and related directives; provide integrated analyses of water allocation across economic sectors for Europe and other regions of the world (water-energy-food)																	
341 - Reference Materials JRC.F.6	654 - EnvRM Environmental Reference Materials	Judgments of the resilience of our natural capital to pollution are often based on monitoring data. The quality of this data is crucial for sound decision taking. Directive 2009/90/EC requires water monitoring laboratories in the EU to use reference materials to ensure the reliability and comparability of their monitoring data. This workpackage will develop certified reference materials (CRMs) for pollutants in water, including seawater, and related biota and sediments.This concerns CRMs for	JRC.F.6 Andrea HELD	1.3.1.a	ENV	JRC	Helen CLAYTON, ENV C.1			01/01/2014 31/12/2018	INS-RS	10	Publications	Results and findings of the research conducted within this WPK are published in peer reviewed journals.	31/12/2018	Article contribution to periodicals or to	
												7	Release of a CRM for Hg in fish	Release of a new Certified Reference Material of fish, certified for mercury and other trace elements, support the Water Framework Directive and related legislation.	31/12/2017	Reference Material	
												8	Release of a sea water CRM	Release of a Certified Reference Material for seawater, certified for trace elements, supporting the implementation of the Water Framework Directive, the Marine Strategy Framework Directive and related legislation.	31/12/2017	Reference Material	
												9	Release of a sediment CRM	Release of a sediment Certified Reference Materials, certified for it content of flame retardants. This material supports the implementation of the Water Framework Directive.	31/12/2018	Reference Material	
													201701	Improving soil awareness, education and outreach	The EU Soil Thematic Strategy aims to improve the appreciation of the value and relevance of soil by all levels of civil society. The JRC will continue to expand these elements by developing strategies for communicating soil-related issues to the wider community through mechanisms such as policy briefings, the JRC Soil Atlas series (peat/Asia), 2nd Global Soil Biodiversity Conference and public engagement events (e.g. ESOF 2018, Salone Dei Gusti 2018, EDD, European/Global Soil Partnership).	21/12/2018	Conferences and workshops organized by the JRC

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Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
702 - NC-Soil JRC.D.3	899 - SOIL-NACA Securing SOIL as NATural CApiital	SOIL_NACA provides the soil-centric framework required to support the EU's Soil Thematic Strategy while contributing to other policy areas (e.g. CAP, Climate and Energy Strategy, SDGs, EU Biodiversity Strategy, UNCDB, UNCCD) that depend on the cross-sectorial aspects of soil and the land-based services it sustains. The WPK assesses soil functions in relation to pressures (e.g. erosion, pollution, organic matter decline, sealing) due to competition for land and climate change. The WPK contributes to policy development through its support to the EU Soil Expert Group Global, the European Soil Partnership (as Secretariat, and involvement in technical working groups), the Global Soil Partnership (the JRC chairs the Intergovernmental Technical Panel on Soils - ITPS), the Common Forum on Contaminated Land, the Global Soil Biodiversity Initiative and through high interaction with Member State institutions (both scientific and policymaking) through networking (ESBN, EIONET SOIL, ENSA, ELSA, EU Danube Strategy) at European and global levels. The WPK generates value-added knowledge for assessments of the security of soil as a resource, by generating novel data that underpin policy-relevant indicators and support scenario and trend analyses. Data are derived through the harmonisation of national sources (both EU and internationally), through in-house modelling and from the analysis of primary data (e.g. LUCAS). In response to formal requests from a number of Commission services, this WPK coordinates the LUCAS Soil Module which will deliver policy-relevant reports on soil conditions across the EU in relation to agriculture, climate change mitigation and ecosystem services. The WPK also contributes to the planning of the 2018 LUCAS survey, which will include a novel soil biodiversity component. The WPK provides active support to soil awareness-raising initiatives, by developing strategies to better communicate soil-related issues to policymakers and the wider community through mechanisms such as targeted policy briefings, the continued development of the the JRC Soil Atlas series (e.g. for Asia) and EC public engagement events where soil is a major theme. There is high demand for collaboration from several EC agencies (EEA – e.g. State of European Environment Report, EFSA – e.g. pesticide residue assessment) and UN bodies (FAO – Global Soil Partnership, CBD/IPBES – Regional Assessments, UNCCD – land degradation).	JRC.D.3 Arwyn JONES	1.3.1.a	ENV	JRC	Jacques Delsalle (ENV B.1)	AGRI CLIMA DEVCO ECHO ESTAT GROW OP REGIO RTD SANTE	- Soil Survey and Land Research Centre - WAGENINGEN UNIVERSITY - Soil Science and Conservation Research Institute - V.V. Dokuchaev Soil Science Institute - CRANFIELD UNIVERSITY - Soil Science Department (Agronomic Veterinary Institute Hassan II) EGS - Eurogeosurveys FAO - THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO) EEA - European Environment Agency EFSA - European Food Safety Authority IAEA - International Atomic Energy Agency (IAEA) ICL - International Consortium on Landslides (ICL) ISRIC - World Data Centre for Soils OECD - Organisation for Economic Co-operation and Development (OECD) UN CBD - UN Convention on Biological Diversity UNCCD - United Nations Convention to Combat Desertification (UNCCD)	01/01/2016 30/12/2020	INS-RS	201702	Soil biodiversity	As a partner in the Global Soil Biodiversity Initiative, the JRC will start developing a global soil biodiversity database which will support policy debate and assessments about ecosystem function to global biodiversity response in relation to global change and land use dynamics. A key element is the harmonisation of disparate input data and the generation of policy-relevant indicators. This deliverable will integrate data collected by the FP7 EcoFINDERS Project in ESDAC.	22/12/2017	Datasets
												201703	Soil ecosystem services indicators	Indicators are critical to monitor the impact of EU land-based policies and progress towards SDGs. Quantitative methodologies will be developed to integrate information derived from the LUCAS Topsoil Survey and other data within the European Soil Data Centre to improve indicator performance and to enable regular monitoring. Updated assessments will be provided to customer DGs particularly on the valuation of soil ecosystem services and economics of land degradation. Support to MAES-SOIL.	22/12/2018	JRC contributions to policy documents
												201704	LUCAS 2015 Soil Module	Coordination of external laboratory analysis of samples collected in 2015 for EU-28 and Western Balkan States (external lab analysis funded through cross sub-delegation agreement with ENV, AGRI and CLIMA). Value-added assessments of results, including comparative analysis with data from 2009 and 2012 surveys. The final deliverable will be policy reports supported by a fully updated LUCAS soil database.	22/12/2017	Science-for-policy reports
												201705	Towards a global assessment of soil erosion	Adaption of the EU RUSLE2015 model to develop the first global soil erosion assessment. This deliverable will contribute to the ITPS 2020 Status of the World's Soil Resources Report, and provide a benchmark for soil degradation considerations in EU development policies.	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												201706	Support to EU Soil Expert Group	While the legislative proposal for a Soil Framework Directive was withdrawn in 2014, the 7th EAP still recognises the need for effective measures to reduce soil degradation and enhance the delivery of soil functions. In this context, the Commission has established a formal Expert Group (E03336) to reflect with Member States on how soil quality issues could be addressed using a targeted and proportionate risk-based approach within a binding legal framework. This deliverable supports this process.	31/12/2017	JRC contributions to policy documents
												201707	European Soil Data Centre (ESDAC)	Maintenance of a permanent repository of EU soil data and information by policy-relevant data collection (e.g. soil monitoring systems, citizen science, EO) and harmonisation, quality control and distribution to Commission Services & other parties. Coordination of formal data requests to Member States will be carried out through the EIONet-Soil network and thematic networks. Metadata and access to data will be provided to the ESDAC/JRC OpenData Portal. Support to the EU Danube Strategy.	21/12/2018	Scientific information systems and databases
												201708	Soil contamination	Develop, manage and improve knowledge on EU data flows for contaminated sites, their remediation and diffuse soil pollution (e.g. PPP residues, heavy metals, nutrient overloading, emerging pollutants) through LUCAS. Continue the revision of indicator for management of contaminated sites in Europe (LSI003) and contribute to SDG-3 in collaboration with ENV/EEA. Investigate feasibility of a database of contaminated/remediated sites & platform to access national soil contamination registers.	31/12/2017	JRC technical reports
												201709	Soil for IPBES Assessment	The IPBES performs regular and timely assessments of knowledge on biodiversity and ecosystem services and their inter-linkages at the global level. This deliverable contributes to the 2018 assessment by providing a perspective on soil status and trends with regard to biodiversity and ecosystem services, as well as the impact of soil biodiversity and ecosystem services on human well-being and the effectiveness of responses to protect soil biodiversity.	31/12/2017	JRC contributions to policy documents
												201801	LUCAS SOIL 2018	Technical, scientific and logistical support to ESTAT in the planning and coordination of the soil module of LUCAS 2018, including a novel soil organics component. Development of harmonised protocol for sampling and analyses for DNA extraction, amplification and bioinformatic analysis. Management of tendering processes for an external laboratory to undertake analysis of samples (analysis funded through cross sub-delegation agreement with DGs ENV, AGRI and CLIMA).	31/12/2018	JRC technical reports
												201803	Support to Global Soil Initiatives	In line with the goals of the EU Soil Thematic Strategy, the European Commission has pledged to support the Global Soil Partnership (GSP) and its regional implementation as the European Soil Partnership (ESP). The JRC provides scientific support to the work of the ITPS, the implementation of action plans for each GSP Pillar and as the Secretariat of the ESP. It will also initialise the coordination of the ITPS 2020 Status of the World's Soil Resources Report and liaise with IPCC/UNCCD.	31/12/2018	JRC contributions to policy documents
												201804	Soil Atlas of Asia	The 7th EAP calls for assessments of the global environmental impact of EU consumption of natural commodities. As in other parts of the world, soil degradation is a significant issue in Asia, with notable economic consequences. This deliverable will establish the scientific network to provide policy support options on soil-related issues in Asia and the knowledge/data base to underpin the development of the JRC's Soil Atlas of Asia. Consideration will be given to peat and palm oil.	31/12/2018	Books and monographs with JRC editorship
												201805	Soil and land modelling indicators	Erosion, landslides and sealing are global environmental issues as they decrease key soil ecosystem services. Through the development of process-based models, this activity will assess soil erosion by wind and water, landslide vulnerability and land take with respect to land use and climate change scenarios in support of EU policy development, state of environment reporting at EU and global level (and in particular in the context of SDGs).	21/12/2018	Scientific information systems and databases
												201806	Global assessment of threats to soil biodiversity	The JRC's Global Soil Biodiversity Atlas presented a preliminary assessment of potential threats to soil biodiversity at the global scale. This assessment will be carried out by means of a regionalised knowledge-based approach through the establishment of a global network of soil biodiversity experts. Final results will provide policymakers with concrete actions that aim to protect organisms living below-ground, together with associated ecosystem services. Contributes to EU Biodiversity Strategy.	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												201807	Soil contamination	a) Update indicator 'Progress in the management of contaminated sites in Europe (LSI003)' and support continued development of EU contribution to SDG target 3.9 (deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination), and Goal 12 Target (environmentally sound management of chemicals and all wastes throughout their life cycle) b) improve knowledge on diffuse soil pollution (e.g. PPP residues, heavy metals, nutrient overloading), especially through LUCAS	31/12/2018	Science-for-policy reports
201701	Support to the Water Framework Directive review	The report will provide a review of availability and suitability of practical bioassays for assessing chemical mixtures in surface and marine waters. It will summarise existing standardised methods and their applicability for testing the effects of chemical compounds in water.	31/12/2018	JRC technical reports												
201702	Harmonisation of nutrient standards	Harmonisation and mapping of nutrient standards for inland freshwaters, coastal and transitional waters, through the CIS ECOSTAT working group, for region-specific evaluation of the ecological impacts of agriculture and other sources. Development of criteria for a common framework required for understanding the impacts associated with nutrient pressures.	31/12/2017	JRC contributions to policy documents												
		Scientific leadership and support for the management of water quality for societal and														

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703 - NC-Waters JRC.D.2	905 - Water4you Water quality for human consumption and use	ecosystem resource benefit under the European directives (Water Framework Directive-WFD, Drinking Water Directive-DWD and Bathing Water Directive-BWD). Water4you is dealing with the complexity of chemical substances by implementing effect-based assays (bioassays), and harmonisation of nutrient standards (ECOSTAT Working Group). These are key challenges for the WFD revision, with the final goal to improve the assessment of risk to humans and aquatic life. It provides scientific expertise and coordination for the Watch List mechanism, and investigates the contribution of water, as a reservoir of antibiotics, to microbial resistance and the route of exposure, e.g. drinking and bathing water. It provides a harmonised science-based approach in the implementation and review of the key directives dealing with microbial water quality, thus improving coordination across directives, and anticipates the need to consider climate-change events such as algal blooms and release of toxins. Acting as a centre for the assessment and certification of alternative methods for the microbiological monitoring foreseen in the DWD and the BWD, it contributes to the standardisation of best practices and innovative methods for the detection of pathogens.	JRC.D.2 Teresa LETTIERI	1.3.1.a	ENV	JRC	Bettina Doerer (ENV C1); Matjaz Malgaj (ENV C2)	CLIMA GROW SANTE	- WORLD HEALTH ORGANIZATION REGIONAL OFFICE FOR EUROPE ECHA - European Chemicals Agency (ECHA) EEA - European Environment Agency EFSA - European Food Safety Authority EMA - European Medicines Agency (EMA) ENV EU - Environmental authorities of the Member States and Candidate Countries	01/01/2016 31/12/2018	INS-RS	201703	Chemical complexity and bioassay implementation	Report on a EU-wide campaign to compare the sensitivity and feasibility of using existing and innovative bioassays for monitoring the effects of chemical mixtures in surface, coastal zones and marine waters.	31/12/2018	JRC technical reports
												201704	Microbial resistance in water	The report/paper will describe the potential contribution of water as reservoir of antibiotics to antimicrobial resistance (surface, recreational and drinking water, and agricultural runoff) and the route of exposure carrying the resistances. Collaboration with WHO for drinking water and bathing waters. The studies are also linked to the Watch List Mechanism under the WFD.	30/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												201705	Alternative methods for BWD	Publication on the JRC's European Microbiology Expert Group (EMEG) portal of the alternative methods implemented by Member States (MS) for bathing water quality assessment. According to the Bathing Water Directive art. 3, MS can use alternative methods but need to show their equivalence with the methods described in the Directive and then inform the Commission. The JRC is also in charge of the public dissemination of alternative methods for the Drinking Water Directive. Collaboration with EMEG.	31/10/2017	Scientific information systems and databases
												201801	Outcome of the first Watch list	The report will provide the results obtained by Member States in the implementation of the first Watch List under the Water Framework Directive. The JRC will evaluate the monitoring datasets from 2015-2017 provided by the European Environmental Agency. The outcome of the report will contribute to the first analysis of the substances, their concern for water quality and eventually extension of their monitoring programme.	30/03/2018	JRC contributions to policy documents
												201802	Validated analytics for WFD Implementation	Technical report on the validation of analytical methods for the quantification of Priority Substances and/or Watch List Substances of the Water Framework Directive and fulfilling the requirements stemming from the Commission Directive 2009/90/EC laying down technical specifications for chemical analysis and monitoring of water status. The support provided foresees also training of staff from national water reference laboratories to achieve the required performances.	31/12/2018	Validated methods, Reference methods and measurements
												201803	Algal bloom, toxin release and economic impact	Algal blooms are increasingly frequent phenomena which have a strong socio-economic impact (tourism) as well as consequences on human health and ecosystem resources. The report provides parameters for detection of microorganisms as an early warning system. These parameters can also be incorporated into modelling (link to exploratory project BIOCL4CRISMA) for forecast risk reduction and for support to crisis management systems.	30/10/2018	JRC technical reports
703 - NC-Waters JRC.D.2	959 - MICROCOKIT Microbial Community-based sequencing linked to anthropogenic	MicroCokit, a close collaboration of academic groups with pan-European governmental laboratories and leading private enterprise, has SEACOAST assists in implementing the environmental objectives of Directive 2008/56/EC (Marine Strategy Framework Directive - MSFD), as the environmental pillar of the EU's Integrated Maritime Policy. The Work Package also supports the cyclic review and revision of the MSFD technical annexes, and the assessment of Member State implementation status of (and compliance with) MSFD, ensuring continuity and coherence of approach as well as independent, robust scientific and technical advice to Commission and Member States, also through the continuous development of the MSFD Competence Centre (MCC). It also assists in the process of policy cross-compliance and integration in relation to all legislation connected to MSFD (e.g. Common Fisheries Policy, Water Framework Directive, Birds and Habitat Directive, EU Regulation on Invasive Alien Species), including work beyond Europe in the shared seas.	JRC.D.2 Teresa LETTIERI	1.3.1.a	ENV	RTD	Giuliana DONINI (REA)	- RESEARCH EXECUTIVE AGENCY - AGENCE	01/06/2013 31/03/2017	CON-IA	3	Verification of indicators for water quality	Description of the verification of the microbial community-based indicators by analyzing their presence in different water samples such as those from the Joint Danube Survey campaign (JDS3).	30/10/2017	JRC Technical reports	
703 - NC-Waters JRC.D.2	1081 - SEACOAST Monitoring, modelling and assessment of the environmental status of marine and coastal waters	SEACOAST contributes as well to the development and exchange of marine knowledge and assessment of the marine environment through targeted modelling and monitoring activities. In particular, comprehensive ecosystem modelling, including higher trophic level, contributes to the further development of criteria, methodological standards, specifications and standardised methods for monitoring and assessment of GES (Good Environmental Status) descriptors in accordance with Articles 9 and 11 of the Directive while developing scenarios that anticipate the effects of policy implementation on the achievement of GES targets in EU regional seas. SEACOAST activities and products support the objectives of the Blue Growth agenda, and the development of Marine Information Systems at large, as well as efficient and sustainable management of activities to be achieved through Maritime Spatial Planning and Integrated Coastal Management, thus effectively contributing to strengthen the economic resilience of EU coastal communities, support adequate food supply from marine resources and maintain/develop the provision of ecosystem services against pressure from human activities and climate changes.	JRC.D.2 Francesca SOMMA	1.3.1.a	ENV	JRC	Matjaz.MALGAJ, DG ENV- C2	DEVCO MARE NEAR RTD	BSC - COMMISSION ON THE PROTECTION OF THE BLACK SEA AGAINST POLLUTION EEA - European Environment Agency HELCOM - Baltic Marine Environment Protection Commission/ Helsinki Commission (HELCOM) ICES - International Council for the Exploration of the Sea OSPAR - Commission for the Protection of the North-East Atlantic Oso-Paris Convention (OSPAR) UNEP MAP - Barcelona Convention for the Protection of the Mediterranean Sea Against Pollution (United Nations Environment Programme for the Barcelona Convention)	01/01/2016 31/12/2018	INS-RS	201701	Scientific support to biological descriptors	Report on the support to the WG GES, on the work on biodiversity descriptors, liaison with Regional Sea Conventions, ICES and other relevant institutions; maintenance of the MSFD Competence Center; support to MSFD descriptor D2 (non-indigenous species).	31/12/2017	JRC technical reports
												201702	Marine litter and contaminants	Report on the support to the MSFD regarding marine litter and contaminants, interlinking with relevant policies such as the WFD, Circular Economy and the EU Research Agenda. Provide science-based advice to MSFD CIS needs through established Technical Group/Expert Groups. Provide support to the derivation of monitoring methods and the development of MSFD Programs of Measures. Linked to the MSFD AA 2016-2018.	31/12/2017	JRC technical reports
												201703	Impacts of measures on the Mediterranean Sea	Coupled hydrodynamic and ecosystem models for multi-year simulations of past and future socio-economic and climate scenarios in the Mediterranean Sea (including basic higher trophic level modelling, linked to project AA MSFD2016-18) will be delivered. These tools will support the MSFD implementation by assessing baselines and impacts of policy measures on Good Environmental Status and on provision of ecosystem services at different time and regional scales.	31/12/2017	Science-for-policy reports
												201704	Black Sea modelling	Coupled hydrodynamic and ecosystem lower trophic level models for multi-year simulations of past and future socio-economic and climate scenarios in the Black Sea (including the development of a Black Sea specific ecosystem model) will be delivered to support GES assessment and ecosystem service provision at regional scale.	31/12/2017	JRC technical reports
												201705	Harmonizing marine monitoring in EU Neighbourhood	Collaboration with Barcelona Convention and Black Sea Commission on the alignment of EU marine environmental monitoring approaches with neighbouring and associated countries; support to the DG NEAR EMBLAS II Black Sea project; identification of necessary steps towards harmonization of data provision on marine contaminants and litter at international scale and the development and harmonization of new monitoring approaches (MARE, NEAR).	31/12/2017	JRC technical reports
												201706	Marine Information Systems	Harmonization of Marine Information Systems approaches (DG MARE, DG ENV, DG RTD) and support to MSP Directive implementation (linked to AA MARATLAS) and platforms available for Blue Growth enterprises; support to the development of EMODnet portal of portals, WISE-marine infrastructure, and related initiatives by Regional Marine Conventions, including the harmonization of new scientific data visualization approaches.	31/12/2017	JRC technical reports
												201801	Scientific support to the MSFD GES descriptors	Reports on the support to the MSFD Good Environment Status (GES) descriptors, interlinking with relevant policies such as the CFP, WFD, Circular Economy and the EU Research Agenda. Provide science-based advice to MSFD CIS needs through established Technical Group/ expert groups. Provide support to the derivation of monitoring methods, assessment and development of MSFD Programs of Measures. Report on the identification of emerging challenges. (Links to MSFD AA 2016-2018)	31/12/2018	JRC technical reports
												201802	Mediterranean and Black Sea modelling	The coupled hydrodynamic, ecosystem models for multi-year simulations of past and future socio-economic and climate scenarios in the Mediterranean and Black Sea (including validated higher trophic level modelling, linked to project AA MSFD 2016-18) will be delivered. These tools will support MSFD implementation by assessing the impact of policy measures on GES and on provision of ecosystem services at different time and subregional scales.	31/12/2018	JRC technical reports
568 - WEF Nexus JRC.D.2	1720 - EARTH2OBSERVE Global Earth Observation for integrated	Earth2Observe will integrate available global earth observations (EO), in-situ datasets and models	JRC.D.2 Arie DE ROO	1.3.1.a	ENV	RTD	Gilles OLLIER (RTD I4); Peter GAMMELTOFT (ENV)	CLIMA ECHO	01/01/2014 31/12/2017	CON-IA	52	Tier2 version global 0.1 hydrological reanalysis	Tier2 version of JRC global 0.1 degree hydrological model reanalysis 1950-2012	28/02/2018	Scientific information systems and	
568 - WEF Nexus JRC.D.2	1727 - MARS Managing Aquatic ecosystems and water Resources under multiple Stress	Supporting managers and policy makers in implementing the Water Framework Directive (WFD), related legislation and the Blueprint to Safeguard Europe's Water Resources by conducting new research and synthesising existing	JRC.D.2 Ana CARDOSO	1.3.1.a	ENV RTD	RTD	B. Doerer (ENV C.1), F. Nogara (RTD.I.3)		01/02/2014 31/01/2018	CON-IA	201701	Reports on stressor classification and effects	MARS deliverable 5.1, including the JRC contributions on multi-stressors on surface water and effects on ecological status; multi-stressors on groundwater and effects on ecological status and reports on stressor classification and effects at the European scale; Impact of multi-stressors on ecosystem services and on their monetary value	31/01/2017	JRC technical reports	
565 - IPChEM-NextGen JRC.F.2	1734 - SOLUTIONS Solutions for present and future emerging pollutants in land and water resources management	Aims to produce consistent solutions for the large number of legacy, present and future emerging chemicals posing a risk to European water bodies with respect to ecosystems and human health. It will deliver a conceptual framework for evidence.	JRC.D.2 Bernd GAWLIK	1.3.1.a	ENV	RTD	Bettina DOESER (ENV.C.1)	SANTE	01/10/2013 30/09/2018	CON-IA	2	Integrated Data Portal for SOLUTIONS	The Integrated Data Portal hosts the knowledge-base of the entire consortium and ensures the linkage between compound and structure-specific (UFZ), site-specific geo-referenced (EI), receptor-specific (species traits, species interactions), and spatial data (population and demography, land-use pattern, geology, soil types, hydrology, climate etc.) (Deltaris). While sectoral aspects need to be embedded into a database, it is key.	30/09/2018	Scientific information systems and databases	
568 - WEF Nexus JRC.D.2	1742 - BEWATER Making society an active participant in water adaptation to climate change	BeWater uses an iterative process of mutual learning, participatory techniques and a bottom-up approach to ensure that stakeholders play an	JRC.D.2 Cesar CARMONA MORENO	1.3.1.a	ENV	RTD	Birgit de BOISSEZON (RTD I.3), Bettina DOESER (ENV.C.1)	ECHO ENV	01/10/2013 31/03/2017	CON-IA	1	Final report	Final evaluation of the methodology and implementation process: This report will include the in depth evaluation of the project methodology and implementation process with the contributions of all the actors involved in the project. (WP8 D8.1)	31/05/2017	Scientific and policy reports	
												112	Evaluation of uncertainties and hydro. indicators	Qualitative evaluation of uncertainties and hydrological indicators in 007 Ecosystems valuation and stakeholders perception	31/01/2017	Scientific information systems and databases

JRC 2017- 2018 WORK PROGRAMME																	
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category	
568 - WEF Nexus JRC.D.2	1756 - GLOBAQUA Managing the effects of multiple stressors on aquatic ecosystems under water scarcity	GLOBAQUA is seeking the understanding of stressors interactions, species interactions, species-stressor-relationships and impacts on the ecological functioning, stability and resilience of the aquatic ecosystems in order to implement water policy and optimal decision making in water resources management under complex multiple stress conditions.	JRC.D.2 Alberto PISTOCCHI	1.3.1.a	ENV	RTD	Peter GAMMELTOFT (ENV)	CLIMA		01/02/2014 31/01/2019	CON-IA	113	Indicators	D11.3 Indicators which are sensitivity and correlation to biodiversity and water scarcity on different scales communicated as maps and tables In: 011 Linking the effects of chemical quality and environmental stressors on biodiversity	31/07/2017	Scientific information systems and databases	
												114	Optimum of alternative management strategies	D11.4 Optimum of alternative management strategies communicated as maps and tables In: 012 Policy recommendations	31/01/2018	Scientific information systems and databases	
												115	Evaluation and upscaling	D11.5 Evaluation of Indicators of biodiversity and water scarcity as results of a 5x5km resolution upscale to an pan-European scale in comparison with results from the case study basins In: 016 Final integrated models at the basin scale	31/07/2018	Scientific information systems and databases	
568 - WEF Nexus JRC.D.2	2321 - NITRATES DIRECTIVE Ad-hoc support for the assessment of Nitrates Vulnerable Zones (NVZ) in the EU	Implementation of the Nitrates Directive and associated Vulnerable Zones	JRC.D.2 Fayçal BOURAOUI	1.3.1.a	ENV	ENV	Alia Alitar de la Fuente; Andrea Vettori (ENV B1)	RTD		17/03/2015 16/03/2018	CON-AA	201701	Second year reports	Del 1.1: Ad-hoc updates based on new designations in MS; Del 2.1: Assessments of NVZ designation; Del 3.1: Updated FATE map; Del 3.2: Ad-hoc maps and tables of	16/03/2017	JRC Technical reports	
												201801	Final Report	Final report covering the work under Del 1.1: Refitted and updated multi-layered ArcGIS viewer producing maps and automatic reports with layers description; Del 1.2: Comparative viewer on the monitoring networks of MS in the framework of the monitoring exercises implemented; Del 2.1: Assessments of NVZ designation; Del 3.1: Updated FATE map including NVZ layers based on datarfiles on NVZ provided by MS; Del 3.2: Ad-hoc maps and tables of designations in specific areas	16/03/2018	Scientific and policy reports	
703 - NC-Waters JRC.D.2	2750 - RIMMEL Riverine and Marine floating macro litter Monitoring and Modelling of Environmental Loading	The RIMMEL project will quantify floating macro-litter loads through rivers to marine waters, by collecting existing data, developing a European observation network, deploying a camera system and using the resulting data to build a statistical inverse model of litter loading based on the characteristics (flows, population, economic factors) of the catchments upstream of the observation points. This is the first-ever European-scale quantification of loads of floating litter to the European seas.	JRC.D.2 Georg HANKE	1.3.1.a	ENV	JRC	Matjaz MALGAJ (ENV.C.2)	RTD	ICPDR - International Commission for the Protection of the Danube River BSC - COMMISSION ON THE PROTECTION OF THE BLACK SEA AGAINST POLLUTION HELCOM - Baltic Marine Environment Protection Commission/ Helsinki Commission (HELCOM) ICPER - International Commission for the Protection of the Elbe River ICPOR - International Commission for the Protection of the Odra River against Pollution (ICPO) OSPAR - Commission for the Protection of the North-East Atlantic Oslo-Paris Convention (OSPAR) UNEP - United Nations Environment Programme (UNEP) UNEP MAP - Barcelona Convention for the Protection of the Mediterranean Sea Against Pollution (United Nations Environment Programme for the Barcelona Convention)		01/11/2015 31/10/2017	INS-ER	2	Dataset riverine floating litter input to E. seas	Database of monitoring results after 1 year of data collection. Available data from dams and gates, data from the observation network through the tablet computer application and includes consideration of variability estimates through the Riverlittercam.	16/07/2017	Scientific information systems and databases
													3	Monitoring riverine litter input to marine env.	Scientific publication of the European scale monitoring system set-up and the quantification of riverine macro litter emission into the European Seas.	16/07/2017	Article contribution to conference proceedings published in a periodical listed in the ISI Science Citation Index Expanded and/or Social Science Citation Index
													4	European Maps of FML emission factors and loads	Raster maps (indicative resolution 1 km2) relating emission o FML to land use, population socioeconomic indicators etc. as identified by the model. Raster maps of the loads along the stream network and to the seas estimated with these emission factors. Maps are described in the scientific paper on FML model and will be available for visualization and download and will be disseminated through the Water Portal of Unit H01 and/or JRC data portals and spatial data infrastructure.	15/10/2017	Scientific information systems and databases
													5	Inverse modelling of riverine litter in Europe	A scientific journal paper describing the model concept, parameterization, and verification against the pan-European datasets derived from the monitoring activities of the project.	15/10/2017	Article contribution to conference proceedings published in a periodical listed in the ISI Science Citation Index Expanded and/or Social Science Citation Index
													6	Riverine Litter in Europe - Proposed Guidance	Riverine Litter in Europe - Proposed Guidance for EU Member States The report compiles the findings of the project and provides a proposal guidance for EU Member States on the monitoring and implementation of measures against the emission of riverine litter for submission to the MSFD CIS.	15/10/2017	Scientific and policy reports
													402 - EUPolicyLab JRC.I.2	3678 - FORENV Foresight on emerging opportunities and risks for environmental policy-making	While widely acknowledged as a ground-breaking and positive piece of EU legislation, the Water Framework Directive (2000/60/EC - WFD) has been experiencing implementation difficulties in many Member States. Simultaneously, water	JRC.I.2 Laurent BONTOUX	1.3.1.a
703 - NC-Waters JRC.D.2	3880 - MSFD 2016-2018 Implementation of GES and other aspects of Directive 2008/56/EC (MSFD)	The work package will further develop the MSFD Competence Centre with particular reference to the knowledge brokerage and the modelling framework modules, the latter based on intensive in-house modelling work providing concrete output accessible to both Commissions Services and Member States. It aims to ensure the continuity of the work of the Working Group on Good Environmental Status (WG GES) and to support the Commission in the cyclic review of policy. The work package provides technical and scientific assistance to the Commission in: i) the assessment of Member States implementation status of (and compliance with) MSFD; ii) the process of policy integration, cross-compliance and efficient reporting in relation to all related legislation (Habitat and Birds Directives, Common Fisheries Policy, etc.), e.g. under the principle "report once, use many". JRC prominent role will ensure continuity and coherence of approach as well as independent, robust scientific and technical advice in the process of further implementation and assessments of the Directive.	JRC.D.2 Francesca SOMMA	1.3.1.a	ENV	ENV	Matjaz MALGAJ, DG ENV-C2	MARE RTD	BSC - COMMISSION ON THE PROTECTION OF THE BLACK SEA AGAINST POLLUTION HELCOM - Baltic Marine Environment Protection Commission/ Helsinki Commission (HELCOM) OSPAR - Commission for the Protection of the North-East Atlantic Oslo-Paris Convention (OSPAR) UNEP MAP - Barcelona Convention for the Protection of the Mediterranean Sea Against Pollution (United Nations Environment Programme for the Barcelona Convention)		01/09/2016 31/12/2018	CON-AA	11	Reporting on meeting participation	Reporting on meeting participation (MSFD related, WFD expert groups, RSC, projects, etc.).	31/12/2018	Project management related documents/reports identified as outputs of the JRC Work Programme
													12	Two expert workshops	Organise at least two expert workshops to discuss and develop the guidelines for setting threshold values / reference levels.	30/04/2018	Conferences and workshops organized by the JRC
													13	Recommendations on standardised monitoring	Report(s) with recommendations on standardised methods for monitoring for descriptors 1, 22, 5, 7, 8, 9 and 103 to be considered for future revision of the Commission Decision on GES covering requirements of MSFD Art. 11.4.	31/12/2017	JRC technical reports
													14	Methodological standards for GES	Report(s) with guidelines/recommendations for common agreed methodological standard and rules for setting threshold values for GES criteria (where relevant) for descriptors 1, 22, 5, 7, 8, 9 and 103 to be considered in future revision of the Commission Decision on GES covering requirements of MSFD Art 9.3.	31/07/2017	JRC technical reports
													21	Litter baselines and reference values	Report on litter baselines and reference values, including (to the extent possible) baselines and proposed reference levels for quantities of litter at the appropriate geographical level.	31/12/2018	JRC technical reports
													31	Latest version of the modelling framework	Technical report including an inventory and description of all necessary technical installations, of data and programme files and their location.	31/12/2018	JRC technical reports
													32	Coordinated outreach	Coordinated outreach aiming at further developing the modelling framework as identified in the roadmap under sub-task 3.a, and involving the MEME network, in the form of at least one workshop or other suitable format per year.	31/05/2018	JRC internal reports
													33	Report on modelling	Publicly available documentation of the modelling work carried out under Task 3(a)-(h) in the form of reports, covering all development work and model runs and their results presented in a form appropriate for policy makers, a deck of slides on the same issues, and other means of presenting the outcome where agreed with DG ENV, such as map layers in suitable online mapping interfaces including the European Atlas of the Seas.	31/12/2018	JRC technical reports
													34	Documented safekeeping	Safekeeping of appropriate documentation and data linked to model runs in a way that enables access for at least three years, and that is sufficient to enable further modelling work by the JRC or other actors (e.g. further sensitivity runs on existing model runs), consistent with Deliverable 3.1.	31/12/2018	JRC internal reports
35	Impact of Member States POMS	A specific technical report will be produced summarising the potential impacts of MS programs of measures on key environmental parameters including a gap analysis in relation to the targets set by each MS. An interim report will establish progress and solicit feedback, and a final report will be produced at the end of the AA.	31/12/2018	JRC technical reports													

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Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
												41	Interim report	Interim report for implementation of AA including the relevant activities under all tasks at the end of month 15th of the AA.	31/12/2017	Project management related documents/reports identified as outputs of the JRC Work Programme
												42	Final report	Final report for implementation of AA including the relevant activities under all tasks at the end of the AA.	31/12/2018	Project management related documents/reports identified as outputs of the JRC Work Programme
568 - WEF Nexus JRC.D.2	3922 - WIRE Water reuse for Irrigation and aquifer RECharge	The part of the work to be conducted shall result into a final (technical) report proposing: • the technical requirements for minimum quality requirements for water reuse in agricultural irrigation and aquifer recharge, in a format that will allow an easy transcription into Commission recommendations or a legal instrument; • technical and scientific justifications for these requirements, including a description of the relevant scientific and technical references and of the experts' consultation process; • a draft mandate to the	JRC.D.2 Bernd GAWLIK	1.3.1.a	ENV	ENV	Bettina Doeser DG ENV C1	AGRI REGIO		04/05/2016 03/02/2018	CON-AA	2017012	Activity report on support to Impact Assessment	An activity report on the technical support provided to the Impact Assessment is to be delivered. This report shall summarise the main inputs, list eventual data collections or summarise other work conducted as support to the IA.	31/12/2017	JRC contributions to policy documents
												201703	Best practice guide on nutrient standards	Best practice guide on setting and applying nutrient boundaries covering technical aspect of setting, using and checking parameters used within a MS. The aim of this work is to achieve consistent and comparable nutrient boundaries across Europe. This work includes the reviewing the MS ecological assessment methods and their intercalibration process (or justification for not using specific Biological Quality Elements).	31/12/2017	JRC contributions to policy documents
703 - NC-Waters JRC.D.2	3924 - CHEMISS Chemical issues to address under Water Framework Directive	Water Framework Directive (WFD) is the European directive which final goal is to protect the European waters by achieving the good water quality either for ecological or chemical status. Chemiss is dealing with the chemical status and provides scientific support to the review of Watch List, a mechanism aims to provide high-quality monitoring information on the concentrations of polluting substances in the aquatic environment across the EU and support the identification of priority substances for regulation under the WFD. Furthermore to the light of the new scientific evidences, it reviews the availability and suitability of practical effect-based assays for assessing chemical mixtures, develops effect-based assay and Environmental Quality Standard (EQS). The project will also provide scientific support to the review of the WFD foreseen in 2019.	JRC.D.2 Teresa LETTIERI	1.3.1.a	ENV	ENV	Bettina Doeser Bettina.DOESER@ec.europa.eu; Helen CLAYTON, Helen.CLAYTON@ec.europa.eu; Jorge RODRIGUEZ-ROMERO, Jorge.RODRIGUEZ-ROMERO@ec.europa.eu.	GROW SANTE	ECHA - European Chemicals Agency (ECHA) EEA - European Environment Agency EFSA - European Food Safety Authority	01/01/2017 31/12/2018	CON-AA	1	Watch List	Report on the first data set of the watch list, taking into account other existing data, and including recommendations for the next watch list. The report will include the data reported by MS for the watch-list substances, i.e. the substances monitored, number of sites, mean concentrations and the STE analysis.	30/09/2017	Science-for-policy reports
												2	Identification of marker groups and trigger values	Report on the current priority substances which could be assessed in "marker groups" and "effect groups", or only as individuals, and identifying other pollutants that could be included in such groups based on the mode of action to determine the effect-trigger value.	30/10/2017	JRC technical reports
												3	Development/Refinement of the Effect-based Assays	Report on the development/refinement of effect-based assays, including on their relationship to chemical analysis and the trigger values, and on the inter-laboratory comparison. The report will provide a list of bioassays recommended for the identified effect groups based on in-house experimental data in collaboration with European and International groups as well from literature data.	30/06/2018	JRC technical reports
												4	Id new substances with the effect-based approach	Report on the approaches recommended for identifying the substances contributing most significantly to effects detected using the effect-based assays.	30/10/2018	JRC technical reports
												5	Summary report on effect-based assays	Summary of the report on the effect-based methods and the recommendations for the review of the WFD. The report should provide advantages and limitation of these methods highlighting the strengths and weaknesses for their potential inclusion in the regulatory process.	31/12/2018	JRC technical reports
568 - WEF Nexus JRC.D.2	4040 - AMBER Adaptive Management of Barriers in European Rivers	AMBER develops innovative solutions to river fragmentation in Europe through an integrated adaptive barrier management approach. Main outputs are the first global atlas of stream barriers in Europe, accessible by all citizens via an online web portal, and a toolkit for solving problems of barrier effects.	JRC.D.2 Wouter VAN DE BUND	1.3.1.a	ENV	RTD	Lourdes ALVARELLOS, ENV C.1			01/06/2016 31/05/2020	CON-IA	1	Compilation of country-specific reports	Report on data availability in the 33 EEA countries that will be covered by the atlas; with data collated by experts from the 11 participant AMBER countries, and national experts contracted by JRC in the other 22 countries. They will compile the available information on stream barriers from existing national and regional databases.	31/01/2017	JRC technical reports
703 - NC-Waters JRC.D.2	4260 - SIMSEA (MC) Scenario simulations of the changing Black Sea ecosystem	The main purpose of the project is to implement an advanced ecosystem model for the complex Black Sea ecosystem based on the validated JRC hydrodynamic model to generate future scenario simulations considering different policy options and climate change scenarios. The data generated from these scenario simulations will be thoroughly analysed using state of the art statistical methods like singular spectrum analysis and breakpoint detection methods. The results of this work will be broadly disseminated not only to the scientific community but it will be ensured that various	JRC.D.2 Adolf STIPS	1.3.1.a	ENV	RTD	Matjaz MALGAJ (ENV.C.2)	MARE	BSC - COMMISSION ON THE PROTECTION OF THE BLACK SEA AGAINST POLLUTION	16/06/2015 15/06/2017	CON-IA	3	Data from scenario simulations	Data from scenario simulations	16/03/2017	Scientific information systems and databases
												4	Scientific publications	Scientific publications	15/06/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
568 - WEF Nexus JRC.D.2	4900 - WEF-2030 Water-Energy-Food interactions under current and future climate and socio-economic conditions	The objective is to contribute to the WEF-Nexus project by providing modelling-based estimations of the baseline conditions and interactions of water quantity, water quality, energy production and food production. Furthermore, the impacts of several solutions options, such as the ones suggested in the WEF-Solutions and WEF-AFRIMED Work Packages will be simulated. The aim is to identify water management, energy and food production strategies that result in overall benefits to the economy and society at broad, with a more balanced water demand and availability, especially in water-stressed areas. It is important to analyze these strategies using linked modelling systems - to become reference models -, such that various feedback mechanisms are taken into account properly. The focus will be on Europe for 2017, with envisaged expansions to full Mediterranean, Africa and Global applications in 2018 and beyond. The added value of this crosscutting project is that state-of-the-art model estimations (CAPRI, Dispa-SET, EPIC, LISFLOOD and BIOMA) of water, food and energy production are done in a coordinated way. Interactions between water-energy - building on the WaterFlex exploratory research -, water-food, and food-energy are elaborated, with the various feedback mechanisms for the first time embedded in the various models. This enables a more thorough analysis of the constraints and a sound evaluation through modelling of proposed measures for their joint impact on water quantity and quality, food production, and energy production. Several time windows will be examined.	JRC.D.2 Arie DE ROO	1.3.1.a	ENV	JRC	Bettina DOESER ENV C.1, Matjaz MALGAJ	AGRI CLIMA DEVCO ENER ESTAT REGIO	- United States Department of Energy ICPDR - International Commission for the Protection for the Danube River EEA - European Environment Agency UN ECE - UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE	01/01/2017 31/12/2018	INS-RS	201701	Danube Water Nexus simulations 2010-2050	Danube Water Nexus baseline 2010 and outlook until 2050, using the updated LUISA landuse data 2010-2050, updated soils data from Danube Nexus project, and updated meteorological (DanubeClim) and CORDEX climate change runs. This work is part of the JRC contribution to the Danube Strategy, is in support to the Danube (ICPDR) and Sava (ISRBC) river basin commissions, and is a test-area of the Water-Food-Energy nexus calculations.	31/05/2017	Science-for-policy reports
												201702	Integrated European water resources modelling	Europe-Mediterranean LISFLOOD water resources simulations in support of the DG ENV Integrated Water Modelling initiative, including high flows (floods) & low flows (droughts), including LUISA land use 2050 projections, bias-corrected CORDEX climate scenarios, embedded irrigation estimates, and updated sectorial water demand functions, while respecting a minimum flow requirement for environmental reasons. Estimations of urban runoff supporting WEF-Solutions. Also linked to PESETA 3 and 4.	31/12/2017	Science-for-policy reports
												201703	Building JRC water-energy-food modelling baseline	Report on challenges of further integrating the JRC Water-Energy-Food nexus models to obtain consistent water-food-energy projections for policy support, using identical input data and model assumptions. This report will be used to define the work of 2018 and beyond, in which a full integrated and streamlined modelling is foreseen, with fully developed feedback loops, and enhanced model integration.	30/11/2017	JRC technical reports
												201705	First-gen crop yield simulations for waterscenarios	With the models currently in place at H01 and H04, crop yield simulations for Europe will be run within the BioMA platform at H04 with scenarios of water availability for agriculture derived from the LISFLOOD model in H01. Impacts of limited water for irrigation on crop yield will be evaluated in a model-chaining approach.	30/09/2017	JRC technical reports
												201706	African Water Nexus baseline simulation 1990-2050	Pan-African simulation of water resources availability versus demand under current and future climate, using updated input data coming from WEF-AFRIMED, using the new JRC MWSEP global merged satellite precipitation dataset, and the JRC Global Surface Water dataset	31/12/2017	JRC technical reports
												201707	Global Water Exploitation & Dependency	Global Water Dependency, Water Exploitation, Water Security; also contributing to The World In 2050 project (TWI2050) using the JRC LISFLOOD 5arcmin resolution model, the JRC Global Surface Water dataset, and the JRC MWSEP global precipitation dataset. The work also contributes to the WEF-AFRIMED. This work builds on the global hydrological modelling work done in the Earth2Observe competitive project	31/10/2017	Datasets
												201708	Integration of LISFLOOD and EPIC model	Pan-Europe linking of the LISFLOOD-EPIC models including EPIC rerun, test simulation runs for crop yield, nitrogen and phosphorous. This enables including feedback mechanisms of water scarcity, irrigation water shortages on crop yield, leaching and consequent effects on water quantity and fluxes of N and P in an integrated system, which are effects not captured by individual models, especially when simulating climatic changes.	31/12/2017	Technical systems

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Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
		<p>- Time-horizon 2017-2020: Immediate effects of measures on water, food and energy availability under present conditions – which are for example relevant for the Water Framework Directive (WFD) and Floods Directive (FD).</p> <p>- Time-horizon 2030: Intermediate effects of measures on water, food and energy availability, taking into account socio-economic changes, land use and climate projections until 2030, with an embedding of the agricultural policies.</p> <p>- Time-horizon 2050: Mid-term effects, including socio-economic changes, land use and climate projections until 2050, embedding climate mitigation measures implemented following the Paris agreement, and of relevance for the 'The World In 2050 (TWI2050) initiative and the fulfillment of several of the Sustainable Development Goals.</p> <p>WEF-2030 will lead to an integrated Water-Energy Food toolbox ready for policy support.</p>										201709	Groundwater depletion estimates for Europe	LISFLOOD model estimation of groundwater depletion in Europe 1990-2015 and estimates for 2020, 2030 and 2050 as indicators of water pressure, contributing to WEF-Solutions	30/04/2017	JRC technical reports
												201710	Updated calibration of LISFLOOD reference model	Updated calibration of the Europe-Mediterranean setup of the LISFLOOD model, taking into account new data (water demand, Global Surface Water dataset). Also an update of the LISFLOOD documentation & manuals will be done	31/12/2017	Technical systems
												201801	Water-limited CAPRI simulations Europe until 2030	CAPRI simulations of agricultural areas at NUTS2, fertilizer use, crop yields, farmer income, including various water limiting conditions, for current conditions, 2025 and 2030	31/12/2018	JRC technical reports
												201802	Extending Dispa-SET to non-European Mediterranean	Geographic extension of Dispa-SET to non-European Mediterranean countries, including one country-case study. This allows energy-water calculations for the entire Europe-Mediterranean domain and provide a full picture of the Water-Energy-Food Nexus.	31/08/2018	Technical systems
												201803	Fully coupled crop yield - water model	Adapted and tested crop yield simulation model, based on BioMA, to account for feedback loops with LISFLOOD (water availability) and CAPRI (economic impacts) at run time.	30/09/2018	JRC technical reports
												201805	Water-Energy bottlenecks	Using the water requirement outputs of the improved version of the Dispa-SET power system model (obtained in the Waterflex project) and the available water resources outputs from the LISFLOOD model, a pan-European overview will be generated of potential sites with water shortage issues, which might lead to energy production losses.	31/08/2018	JRC technical reports
												201806	Effects of water efficiency and desalination	LISFLOOD model estimations of changing European water resources under various scenarios of water efficiency, water re-use and desalination, based on the principles developed in the WEF-Solutions workpackage	30/06/2018	JRC technical reports
568 - WEF Nexus JRC.D.2	4901 - WEF-Solutions The Water-Energy-Food Nexus: Solutions for effective management of European river basins	<p>Achieving the objectives of the EU water legislation requires massive investments in river basins by the EU Member States. Investments need to be effective, ensure equality in the access to resources for all European citizens, and help create jobs and sustain economic growth by creating opportunities for the European water industry and all sectors that receive benefits from healthy water ecosystems. WEF-Solutions investigates management solutions for efficient water resources use and protection, while improving energy security and maintaining agricultural productivity in Europe.</p> <p>WEF-Solutions will first map pressures related to energy, agriculture and urban uses and their impacts on surface waters at the EU scale, providing a baseline of the key problems to address.</p> <p>It will then analyse region-specific targets for the reduction of those pressures, seeking trade-offs between costs of measures, losses from limitations to energy production and agriculture, and benefits in terms of environmental objectives and ecosystem services. The analysis will focus particularly on point and diffuse pollution from agriculture and urban areas, as well as morphological and flow regime alterations caused by hydropower and infrastructures.</p> <p>At both steps it will apply integrated frameworks combining biophysical and socio-economic evidence, environmental simulation and hydro-economic optimisation models at the European scale. It will leverage institutional processes such as the Water Framework Directive (WFD) Common Implementation Strategy working groups, co-chaired by the JRC, and aim at mainstreaming water-energy-food nexus concepts in the review of the WFD and its coordination with agriculture (e.g. DG AGRI-DG ENV Task Force on water-agriculture) and energy policies.</p> <p>Finally, it will evaluate the potential for certain types of investments in Europe to deliver multiple benefits along the energy and agriculture dimensions while contributing to the reduction of pressures on waters. Particular focus will be on the options of wastewater reuse, sustainable desalination, and nature-based urban water solutions. Potential will be mapped through environmental, socio-economic and technical indicators for these investments, based on knowledge of key technologies and opportunities for the relevant European business sectors elicited through workshops with sectoral experts.</p>	JRC.D.2 Alberto PISTOCCHI	1.3.1.a	ENV	JRC	Bettina DOESER, Matjaž MALGAJ	AGRI CLIMA ENER REGIO	EGS - Eurogeosurveys ICPDR - International Commission for the Protection of the Danube River EIB - European Investment Bank ENV EU - Environmental authorities of the Member States and Candidate Countries OECD - Organisation for Economic Co-operation and Development (OECD) WSSTP - Water supply and sanitation Technology Platform	01/01/2017 31/12/2018	INS-RS	201701	Energy-agriculture water pressures baseline	Benchmarking of JRC pressure indicators reflecting energy and agriculture production as well as other pressures (hydrological and morphological alteration, point and diffuse pollution) with water bodies' status and pressures reported under the WFD. JRC indicators address hydrological alteration, dams, floodplain and coastal land use, nutrients (GREEN model), chemicals, urban runoff and combined sewer overflow, groundwater pollution and depletion, and use output from WEF-2030 (LISFLOOD).	30/12/2017	JRC contributions to policy documents
												201702	Targets for hydropower and river hydromorphology	Identification of targets for the effective hydromorphological restoration of rivers at the European scale, in the perspective of the energy-agriculture-water nexus, through the WFD Common Implementation Strategy (CIS) task group on Hydromorphology. Harmonisation of hydromorphological assessment in ecological status/potential classification, and guidance on mitigation measures for hydropower and other hydromorphological pressures.	31/12/2017	Science-for-policy reports
												201703	Innovative wastewater treatment: investment cases	In the context of JRC support to the EUSDR, development of two feasibility studies in the lower Danube through "synthesis centres" of academia involving local communities, industry and government, to seek socio-economically sustainable treatment solutions with energy/materials recovery, reuse of water, and other benefits for collected, untreated wastewater. In the Lower Danube region, this is a major pressure on water bodies. Explore possible upscaling of the studies to the whole Danube region.	31/12/2017	JRC technical reports
												201704	Investment potential in sustainable desalination	Mapping the costs of deploying desalinated seawater in Europe and the Mediterranean region. The cost will consider different desalination technologies, will compare the use of conventional and renewable energies (solar, wind, bioenergy, etc.) for processing and pumping, and will discount revenues from energy and materials recovery from the processes. Consensus-building/awareness raising workshop with municipal stakeholders to increase the societal uptake of innovative solutions.	31/12/2017	Scientific information systems and databases
												201801	Targets for agriculture and water quality	Application of hydro-economic optimisation models to identify region- and sector-specific reduction targets for the emission of nutrients and pollution from agriculture and other sources, in order to minimise the impact on fresh- and marine water bodies considering scenarios of agricultural practice as well as mitigation of point and diffuse emissions. Support to DG ENV's modelling needs and the Agriculture-Water Task force on coordination of agriculture and water policies (DG AGRI and DG ENV).	29/06/2018	JRC technical reports
												201802	Investment in green urban water solutions	Identification of green, nature-based, multi-purpose water-related urban infrastructure measures (like green roofs, urban farming or rainwater harvesting) that increase the water, food and energy security of cities in a sustainable way. Quantification of the potential of selected measures for representative European cities. Organization of a workshop through the Dubrovnik Declaration network, to identify challenges and opportunities for investments.	30/12/2018	Science-for-policy reports
												201803	Potential for investment in wastewater	Mapping the potential for deploying treated wastewater for irrigation in Europe and the Mediterranean region, based on topography, land and water use and the characteristics of wastewater treatment plants. The analysis will consider different treatment technologies and will discount revenues of bioenergy from sludge, and use of nutrients recovered from the processes as well as other materials, also in support to the Circular Economy Package.	31/12/2018	Scientific information systems and databases
												201804	Tradeoffs in e-flows and water availability	Baseline analysis of the theoretical water availability for economic usages allowed by the environmental flow (e-flow) regulations in place in different European countries. The analysis addresses the impact of adopting specific e-flow rules on economic water use possibility, vis-a-vis the level of ecological protection.	31/12/2018	JRC technical reports
												201805	A review of WEF Nexus and business opportunities	A review of the business investment opportunities in water resources protection, including securitization of water across the supply chain; response to risks deriving from increased regulatory burdens under water limitations; competitive gains from improved efficiency and productivity of water use; reputational gains from sustainable management of water; new business models related to innovative water usage.	31/12/2018	JRC technical reports
568 - WEF Nexus JRC.D.2	5111 - Blue2 Modelling of biophysical and economic impacts of EU water policy implementation scenarios	The purpose of this AA is to support the development of a Commission capacity for an integrated policy assessment, to be used in connection with the Commission's task to oversee the evaluation, implementation, and possible review	JRC.D.2 Arie DE ROO	1.3.1.a	ENV	ENV	Bettina Doeser ENV C1	AGRI ENV MARE	EEA - European Environment Agency ENV EU - Environmental authorities of the Member States and Candidate Countries	01/02/2017 31/01/2019	CON-AA	201701	A database of measures	Conversion of measures data and measures database into GIS layers of measures that can be used for modelling the impacts	30/11/2017	Datasets
												201801	Baseline scenarios	Establishment of a baseline scenario and a full implementation scenario in the form of data layers that can be used by the various models	31/05/2018	JRC technical reports
703 - NC-Waters JRC.D.2	5124 - Antibiotic4you (MC) Antibiotics in aquatic environment: understanding microbial resistance	Use of antibiotics has increased greatly in the last years while the discovering of novel antibiotics has slowed drastically. Meanwhile bacteria and pathogens have evolved mechanisms to become more resistant to antibiotics, a problem now highlighted as one of the most concern. Although	JRC.D.2 Teresa LETTIERI	1.3.1.a	ENV	RTD	Bettina Doeser	SANTE		01/01/2017 31/12/2018	CON-IA	201701	Indicators for microbial resistance in water	The report will provide set of indicators for the characterization of the water sample as potential reservoir of resistant pathogens and mobile transfer material to facilitate the resistance to other microorganisms.	30/09/2017	JRC technical reports
												201801	Antibiotic threshold in microcosm studies	Report will describe the studies performed on environmental scenario in the laboratory, so called microcosm to simulate the aquatic environment to identify the minimum concentration of antibiotics to generate the resistance in microbes.	15/03/2018	JRC technical reports
703 - NC-Waters JRC.D.2	5460 - SeaDataCloud SeaDataCloud - Further developing	The SeaDataCloud project focuses on the management and availability of marine and maritime knowledge, in Europe and beyond. It aims at building upon and expanding the achievements of the existing SeaDataNet infrastructure, with the following main objectives: (1) to enhance and innovate the SeaDataNet	JRC.D.2	1.3.1.a	ENV	RTD	MATJAŽ MALGAJ			01/01/2017	CON-IA	012017	Scientific Committee report	(1)improve understanding and meeting requirements of lead user communities, such as science community, EMODnet, Copernicus Marine Environmental Monitoring Service (CMEMS), and international scientific programmes; (2) tune the specifications and developments of SeaDataCloud services from a user perspective.	15/12/2017	Science-for-policy reports

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Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
JRC.D.2	the pan-European infrastructure for marine and ocean data managemen	developed standards, products and services, offered to an expanded multi-disciplinary community; (2) to promote the adoption of the protocols and standards developed for interoperability to other key downstream initiatives in the marine/maritime field, with a perspective to	VITOON BRUXELLES							31/12/2020				Report with objective to: (1)improve understanding and meeting requirements of lead user communities, such as science community, EMODnet, Copernicus Marine Environmental Monitoring Service (CMEMS), and international scientific programmes; (2) tune the specifications and developments of SeaDataCloud services from a user perspective.	14/12/2018	Science-for-policy reports
1.3.1.b biodiversity, forests and soils - support the implementation of the EU biodiversity strategy, notably by assessing ecosystem services and natural capital accounting in the context of the environmental knowledge community, the green infrastructure, the invasive alien species information system, global biodiversity monitoring and the sustainable supply and demand of biomass for all uses. Analyse and model forest resources,																
702 - NC-Soil JRC.D.3	80 - CASCADE CAtastrophic Shifts in drylands: how CAN we prevent ecosystem DEgradation?	Aims to obtain a better understanding of sudden ecosystem shifts that may lead to major losses in biodiversity & ecosystem services and defines measures that can be used to prevent such shifts. CASCADE focus on drylands (most threatened ecosystems in Europe). CASCADE	JRC.D.3 Panagiotis PANAGOS	1.3.1.b	ENV	RTD	Birgit de BOISSEZON (RTD I.3.), Patrick WEGERTD (ENV E1)	AGRI	- WAGENINGEN UNIVERSITY - STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK - ALTERRA - UNIVERSITA DEGLI STUDI DELLA BASILICATA	01/01/2012 30/06/2017	CON-IA	1	CASCADE Database	Management and storage of all the CASCADE field data in a central database to be hosted at the JRC. The JRC will develop an inventory of the land cover/land use, soil, vegetation and rainfall data, as well as administrative datasets for the six European Mediterranean sites. The JRC will develop data protocols to be followed for correct insertion of data from the data providers into a central CASCADE database	30/06/2017	Scientific information systems and databases
4844 - NATCAPES JRC.D.3	546 - OPENNESS Operationalisation of natural capital and ecosystem services from concepts to real-world application	OpenNESS aims to translate the concepts of Natural Capital (NC) and Ecosystem Services (ES) into operational frameworks that provide tested, practical and tailored solutions for integrating ES into land, water and urban management and decision-making. It examines how the concepts link	JRC.D.2 JOACHIM MAES	1.3.1.b	ENV	RTD	Birgit de BOISSEZON (RTD I.3.), Patrick Murphy, Anne Teller (ENV B.2); Arnoldas Milukas (HoU RTD.I.3)	REGIO		01/12/2012 31/05/2017	CON-IA	1	A benefit-cost assessment of Green Infrastructure	This deliverable assesses the benefits and costs of ecological restoration measures in Europe based in order to support the prioritization of green infrastructure development.	01/02/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index
701 - NC-Forest JRC.D.1	927 - FISE APPS Forest Information System for Europe Applications	The overall goal of FISE Applications is to contribute to the further development of the Forest Information System of Europe by creating harmonised Europe-wide information on the multifunctional role of forests and forest resources and integrating diverse information systems and data platforms (e.g. EFDAC) into a dynamic modular system that combines data and models into applications. Applications on forest disturbances (including pests in Europe and the detection and quantification of potentially irregular logging activities in forests protected by Natura 2000), forest and the bioeconomy, forest and climate change and forest and ecosystem services will be developed. FISE-APPS will support the EU Forest Strategy (for forests and the forest-based sector), the communication on protective measures against pests of plants, the EU Bio economy Strategy ("Innovating for Sustainable Growth: A Bioeconomy for Europe) and the implementation of Horizon 2020 by contributing to strengthening the methodological framework for more accurate and harmonized information derived from forest inventories and monitoring systems, able to feed into the EU information systems, e.g. the European Forest Data Centre.	JRC.D.1 PIETER BECK	1.3.1.b	ENV	JRC	Claudia OLAZABAL and Ernst SCHULTE (ENV B.1)	SANTE	EEA - European Environment Agency EFSA - European Food Safety Authority	01/01/2017 31/12/2018	INS-RS	422017 432017 452017 472017 495017	Pest vulnerability and spread modeling framework Assessing forest resources Scientific publications Restoration modeling framework Logging detection application	Forest are increasingly pests exposed, partly due to growing volumes and reach of global trade/travel. Furthermore, climate change is likely to affect pest organisms/hosts in different ways, leading to new spatio-temporal patterns in pest outbreak dynamics. The task is to develop a framework to model the vulnerability of forest/tree crops to the ecosystem and services, by developing knowledge base to enhance forest condition and the provision of forest private and public services. This is in support to the implementation of the forest related requirements within the Biodiversity strategy and related EU initiatives. Scientific publications Development and updating of generic methodologies designed for the assessment and monitoring of land cover state and dynamics. These tools will be applied towards fragmentation, connectivity and restoration studies related to the monitoring and assessment of forested landscapes and disturbances (e.g. deforestation). Development and updating of generic methodologies for the detection and quantification of potentially irregular logging activities in Natura 2000 protected forests. These tools will be designed for monitoring of forests in Natura 2000 sites and providing DG ENV with evidence for infringement cases.	30/12/2017 17/12/2017 30/12/2017 14/12/2017 30/12/2017	Scientific information systems and databases JRC contributions to policy documents Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI) Scientific information systems and databases Scientific information systems and databases
702 - NC-Soil JRC.D.3	1693 - RECARÉ Preventing and Remedialing degradation of soils in Europe through Land Care	Develops effective prevention, remediation and restoration measures using an innovative trans-disciplinary approach, actively integrating and advancing knowledge of stakeholders and scientists in 17 Case Studies, covering a range of soil threats in different bio-physical and socio-economic environments. The current state of degradation and conservation will be assessed using a new methodology based on the World Overview of Conservation Approaches and Technologies (WOCA) mapping procedure.	JRC.D.3 Panagiotis PANAGOS	1.3.1.b	ENV	RTD	Birgit de BOISSEZON (RTD I.3.), Jacques Delsalle (ENV B.1)	AGRI	- WAGENINGEN UNIVERSITY - CYPRUS INTERNATIONAL INSTITUTE OF MANAGEMENT LIMITED - Norwegian Institute for Agricultural and Environmental Research - SLOVAK UNIVERSITY OF TECHNOLOGY IN BRATISLAVA - Umweltbundesamt GmbH - UNIVERSIDAD POLITÉCNICA DE VALENCIA	01/11/2013 31/10/2018	CON-IA	2 3	Quality check manual Mapping Chemical Soil properties	Well defined data protocol describing the rules on the data collection and the data quality check methods for the RECARÉ database. Mapping Chemical Soil properties based on LUCAS survey (pH, CaCO ₃ , N, P, K, CEC)	30/10/2017 31/10/2018	JRC Technical reports Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
4850 - MARS AGRIVNU JRC.D.5	2301 - PEGASUS Public Ecosystem Goods And Services from land management -	Focusing on the provision of public goods by EU agriculture and forestry, PEGASUS will develop ways of making public good and ecosystem	JRC.D.5 Maria-Luisa PARACCHINI	1.3.1.b	ENV	RTD	Gaeten DUBOIS, AGRI H5	AGRI		01/03/2015 28/02/2018	CON-IA	52	D5.2 - Final version of the operational framework	To aid decision making processes on land management requirements to optimise the provision of public goods in agriculture and forestry in different bio-geographic, economic and social contexts in the EU (M35)	28/02/2018	JRC technical reports
4844 - NATCAPES JRC.D.3	2341 - Esmeralda Enhancing ecosystem services mapping for policy and decision making	To deliver a "flexible methodology" that can simultaneously provide innovative building blocks for pan-European national and regional ecosystem service mapping and assessment. Contributes to ensuring timely delivery of action 5 of the European Biodiversity Strategy and local assessments as required for spatial planning, agriculture, climate, water and nature policy.	JRC.D.3 JOACHIM MAES	1.3.1.b	ENV	RTD	Anne Teller (ENV B.2)			01/02/2015 31/07/2018	CON-IA	2 3 4	On-line database and support mechanisms Guidance Report Multifunctional assessment methods & map analysis	Establishment of an operational on-line database and support mechanisms for EU MS authorities. This deliverable will report on the progress made to develop national networks and communities of practice across the EU in order to enhance mapping and assessment of ecosystem and their services. Guidance Report on how to apply the Multi-tiered flexible methodology for mapping ecosystem services integrating the three value domains (social, economic and biophysical). This deliverable will assess the current state of ES mapping in the EU and to develop a multi-tiered flexible ES mapping methodology to integrate the three value domains of ES (biophysical, economic and social) at different spatial and temporal scales Report on multifunctional assessment methods and the role of map analysis. This will develop an integrated and consistent assessment framework in which different mapping approaches and techniques can be embedded.	30/03/2017 31/07/2018 31/07/2018	JRC technical reports JRC technical reports JRC technical reports
569 - BIOECONOMY JRC.D.1	3626 - ALTERFOR Improved forest management models	The forests of Europe are expected to generate a range of ecosystem services (ES), so that their management complies with European Union policies in the domains of environment, energy and rural development. Those objectives must be met despite increasing risks and uncertainty associated with anthropogenic climatic change, and interlinked	JRC.D.1 Andrea CAMIA	1.3.1.b	ENV	RTD	DORU-LEONARD IRIMIE	AGRI CLIMA ENER GROW	MCPFE - Ministerial Conference for the Protection of Forests in Europe (MCPFE) UN ECE - UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE	01/04/2016 30/09/2020	CON-IA	1 2	Scientific publications Analysis of European forest scenarios	Peer reviewed scientific papers Analysis of EU prospective forest scenarios and forest management models (FMM) on the basis of EFDAC and GFTM	31/12/2018 15/12/2018	Article contribution to periodicals or to conference proceedings listed in SCOPUS JRC technical reports
701 - NC-Forest JRC.D.1	3783 - FISE - Pro Forest Information System Prototyping	Availability of a FISE prototype (including its underlying systems and modules) which is ready for public access. Transfer of the FISE to the future host - to be selected by DG ENV - based on a sound concept paper and business plan jointly developed and agreed upon by all relevant parties.	JRC.D.1 Peter VOGT	1.3.1.b	ENV	ENV	Peter Loeffler	SANTE	FAO - THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO) Fo Fi Serv - Forest and forest fire services in the MS MCPFE - Ministerial Conference for the Protection of Forests in Europe (MCPFE)	01/01/2017 31/12/2017	CON-AA	201701 201702 201703 201704 201705	FISE developer FISE Platform FISE concept paper FISE FWC FISE EFDAC	Provide a front end developer to validate, modify, update and correct the FISE web pages, on the request of ENV.D1, up to a maximum of 200 working days. Requests for modifications will be submitted directly from ENV.D1 to the editor who implements them within 10 working days in general. ENV.D1 will validate all modifications of FISE pages (except small corrections) before final publication. Build a reporting function into FISE to provide monthly web statistics reports on FISE. These should contain at least the following data: •Total number of unique visitors, repeat visitors, visits, and page views for the whole month •Number of visits and page views per day •Traffic sources (direct visitors, search visitors, referral visitors) •Bounce rate and exit pages Pages visited and top pages Contribute to the drawing up of a FISE development paper and concept note by DG ENV. It will determine, inter alia: the main FISE users, objectives and added value (to be defined by ENV); the system architecture and design; the hard and software aspects; the planning of necessary resources for operation and foreseen deliverables; the future FISE governance structures and processes (who decides on/steers what and how; to be defined by ENV), and the operation and maintenance procedures. lead: ENV Provide access to DG ENV to the Framework contract with the National Forest Inventories to launch specific contracts for EU forest related parameters requested. Following the INSPIRE Directive provide DG ENV and the potential future host access to all datasets within the European Forest Data Centre EFDAC	31/12/2017 01/04/2017 15/06/2017 15/06/2017 15/09/2017	JRC technical reports Scientific information systems and databases Training Training Training

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
												201706	FISE expert	Provide a dedicated JRC expert with responsibility for the FISE transfer and who acts as a contact point for DG ENV and the potential future host during the transition phase. Provide also the IT expertise and capacity necessary for the system transfer. Periodically, this will require daily contacts between JRC and the potential future host. Throughout 2017 (depending on the signature of this Administrative Agreement and the related recruitment procedure)	31/12/2017	Training
4844 - NATCAPES JRC.D.3	3803 - ASPEN Alien Species Monitoring to Protect European Nature	Alien Species (AS) are organisms unintentionally or deliberately introduced through human activities into regions far beyond their natural range. Some of these, the Invasive Alien Species (IAS) are the main cause of biodiversity loss worldwide, a condition that severely affects Europe, where the damages cost an estimated 12 billion euro every year. The overall objective of the WPK is to improve the scientific network to acquire, assess, generate and disseminate the scientific knowledge required for an early warning of the introduction of alien species presenting significant risk to Europe's natural capital. Scientific analysis of AS distributions, and for their management. A centralised and updated research network, managing and generating information on AS (e.g. assessment of species introduction pathways, impact, distribution), based on multiple tools (e.g. internet scanning, citizen science, dedicated expert networking) can assist in the implementation of European policies on biodiversity in light of changes caused by human activities, considering also the current trend in climate change, which exposes citizens to emerging risks (e.g., economic loss due to damaged production, loss of habitats of high value, worsened living conditions; disease vectors such as mosquitos and ticks; exposure to chemicals used to control the spread of alien species). ASPEN aims to contribute to the prevention and management of IAS, supporting also the implementation of the EU Regulation 1143/2014 by: gathering and reviewing scientific information on AS and developing the EASIN information platform to handle official MS notifications, Editorial Board discussions and horizon scanning exercises; contributing to the development of scientific knowledge in collaboration with MS, scientific communities and	JRC.D.2 Ana CARDOSO	1.3.1.b	ENV	JRC	Spyridon Flevaris, DG ENV-C2	AGRI DEVCO REGIO SANTE TRADE	EEA - European Environment Agency	02/01/2017 31/12/2018	INS-RS	201701	Citizen-Science in Alien Species Early Warning	Organization of a dedicated workshop on the development of a European Citizen Science model for Invasive Alien Species; sharing experience on data validation, engaging citizen. The recently developed EASIN MYGEOSS smartphone APP on EU invasive Alien Species will benefit from the workshop conclusions. JRC-COST MoU, in collaboration with COST	31/07/2017	Conferences and workshops organized by the JRC
												201702	Modelling to assess freshwater IAS exposure risk	Scientific Report on the risk exposure of European freshwaters to IAS, through the use of modelling framework; integration of freshwater invasive alien species potential distribution and their cumulative impacts. Collaboration with WPK WEF-SOLUTIONS.	30/09/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												201703	Assessment of selected groups of Alien species	Scientific Report on bacteria, viruses and marine plankton; groups of species with recent outbreaks (e.g. virus, toxic alien algal blooms) in Europe, causing severe socio-economic effects. An analysis on their biological invasion traits, such as pathways of introduction, impacts, and distribution in Europe will be included, based on the use of the EASIN tools and web services.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												201704	Baseline for new Union Concern IAS	A science for policy report on the revised and updated distribution, status and biological invasion traits (e.g. pathways of introduction, impacts, time trends) of the species added to the list of IAS of Union Concern under art. 4 of the EU Regulation 1143/2014. This baseline will be a key element for the assessment of the Member States implementation of the IAS Regulation.	31/12/2017	Science-for-policy reports
												201805	Citizen observations of alien species	Technical Report on the development of a validation system of alien species observations (focusing on IAS of Union Concern) coming from Citizen Scientists, reported through the EASIN MYGEOSS smartphone APP. Evaluation and assessment of data, including recommendations for future improvements: citizens engagement, linkage of the relevant information in the context of the EU Regulation (1143/2014).	31/12/2018	JRC technical reports
												201806	Development of training material on IAS	Creation of online tutorials on Invasive Alien Species of Union Concern (Regulation 1143/2014) on how to identify and report these species within Europe.	31/07/2018	Training
												201807	Invasive Alien Species Horizon Scanning	Science for policy report on Horizon Scanning exercise for Invasive Alien Species, aiming at prioritizing prevention efforts for species presenting a high risk for the European environment.	31/12/2018	Science-for-policy reports
4844 - NATCAPES JRC.D.3	4160 - INCA INCA: Integrated system for Natural Capital Accounting	The work package INCA is the JRC contribution to KIP-INCA. KIP-INCA is a Knowledge Innovation Project on Integrated Natural Capital and Ecosystem Services Accounts. KIP-INCA is a collaboration between DG ENV, DG RTD, ESTAT, EEA and JRC under the framework of Environmental Knowledge Communities established under the 7th Environmental Action Plan. KIP-INCA operates under the umbrella of the MAES initiative (Action 5 on Mapping and Assessment of Ecosystems and their Services). After a design phase (2015-2016) KIP-INCA starts with an implementation phase which includes the development of experimental ecosystem accounts. The agreed role of JRC is the development of EU wide physical and monetary ecosystem services accounts. This work package will therefore produce experimental and pilot flow accounts for a selection of ecosystem services, while	JRC.D.3 JOACHIM MAES	1.3.1.b	ENV	JRC	Stefan Leiner (ENV.B.2)	ESTAT RTD	EEA - European Environment Agency	01/01/2016 31/12/2020	INS-RS	4160201704	Concept for experimental ecosystem accounts	This deliverable describes the concept and the practical set up of experimental ecosystem accounts. It includes a review of the present ES accounts and presents the data and model basis for the accounts. It describes the necessary data architecture that needs to be set up for making pilot accounts available.	30/04/2017	JRC technical reports
												4160201712	Experimental ES accounts No 1	This deliverable is the first of a series of reports which will describe an EU wide system of natural capital accounts on ecosystem services. The experimental nature of the accounts is inline with the SEEA-EEA (the united nations system of environmental economic accounts, experimental ecosystem accounts). The report will describe the development of physical accounts for a selected set of services. This report is a contribution to KIP-INCA	15/12/2017	JRC technical reports
												4160201806	Pilot ecosystem accounts (data platform)	One of the tasks of JRC under KIP-INCA is to operationalise the experimental ecosystem accounts so that they can be used by external users. These prototype accounts will be made available first by JRC before final accounts can be transferred to Eurostat. This deliverable is linked to an on-line data infrastructure to publish experimental ecosystem accounts.	30/06/2018	Scientific information systems and databases
												4160201811	Experimental accounts No 2	This deliverable is the second of a series of reports which will describe an EU wide system of natural capital accounts on ecosystem services. The report contains a consolidated set of physical accounts and will include monetary accounts for a selected set of services. This report is a contribution to KIP-INCA	30/11/2018	JRC technical reports
4844 - NATCAPES JRC.D.3	4968 - EASIN 4 Technical support to the implementation of the European Regulation on Invasive Alien Species	The overall aim of the WPK is to further develop EASIN research network and assist DG ENV in the implementation of the requirements of the Regulation 1143/2014 on IAS. The WPK supports the objectives of target 5 of the EU Biodiversity Strategy: "By 2020, invasive alien species and their pathways are identified and prioritized, priority species are controlled or eradicated, and pathways are managed to prevent the introduction and establishment of new invasive alien species", and thus to the protection of biodiversity.	JRC.D.2 Ana CARDOSO	1.3.1.b	ENV	ENV	Spyridon Flevaris	AGRI MARE REGIO SANTE TRADE	ENV EU - Environmental authorities of the Member States and Candidate Countries	01/01/2017 31/03/2018	CON-AA	201701	Interim Report	An account of the progress achieved on all tasks: 1) updates of the EASIN catalogue and geodatabase; 2) new data partnerships; 3) NOTSYS upgrades; and 4) brief summary of system documentation.	30/09/2017	JRC technical reports
												201702	Final Report	Report with description of work achievement on all tasks: 1) all updates of the EASIN catalogue and geodatabase; 2) all new data partnerships; 3) progress achieved with the re-engineering of the EASIN "Search and Mapping" tools; 4) EASIN RESTful web service for extraction of information in the EASIN catalogue and; 5) NOTSYS upgrades.	30/03/2018	JRC technical reports
												201803	EASIN system documentation	Report on full documentation of EASIN/ NOTSYS/ EB system describing the capabilities, limitations, design, operation, and maintenance (software and hardware).	31/03/2018	JRC technical reports
4844 - NATCAPES JRC.D.3	5099 - MAVES Mapping, Assessment and Valuation of Ecosystem Services	The work package MAVES contributes to the knowledge base for the EU Biodiversity Strategy to 2020. MAVES is organized along three main strands: (1) technical support to the working group MAES which oversees the implementation of Action 5; (2) technical support to Action 6; and (3) contribution to the final review of the Strategy: (1) Action 5 under Target 2 asks Member States, with the assistance of the Commission, to map and assess the state of ecosystems and their services in their national territory by 2014, assess the economic value of such services, and promote the integration of these values into accounting and reporting systems at EU and national level by 2020. MAVES will continue the JRC support to Action 5 by assessing the relation between ecosystem condition and ecosystem services with special relevance for urban ecosystems and species and habitats reported under Article 17 of the Habitats Directive.	JRC.D.3 JOACHIM MAES	1.3.1.b	ENV	JRC	Stefan LEINER	RTD	EEA - European Environment Agency	01/01/2017 31/12/2019	INS-RS	201701	Scientific publications	Scientific articles which reports the main outcomes of MAVES	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												5099201702	Options for the post 2020 biodiversity policy	A perspective article describing how EU biodiversity policy could be organised for the period 2020-2030 based on lessons learned from REFIT, the article 17 reporting, the inclusion of ecosystem services and experiences in other policy areas such as water policy and climate and energy policy	30/06/2017	Article contribution to a monograph or other periodicals
												5099201703	Unpacking ecosystem service bundles	Unpacking ecosystem service bundles: towards predictive mapping of synergies and trade-offs between ecosystem services. This deliverable critically assesses the strengths and limitations of current approaches for explaining and or predicting the distribution of spatial associations between multiple ecosystem services	01/07/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)

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	Ecosystems and their services	(2) MAVES gives dedicated policy support to the further implementation of EU Biodiversity Strategy to 2020 with a particular emphasis on target 2, which aims for the restoration of 15% of degraded ecosystems and the deployment of green infrastructure. This will be done by setting the reference point against which progress towards the 15% restoration target should be measured (improving the the EU 2010 Biodiversity Baseline).										5099201704	Indicators for urban ecosystems and their services	Scientific article which reports the main outcomes of the MAES urban pilot: an indicator framework of urban ecosystems and their services.	30/10/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
		5099201709										Revised methodology for ecosystem condition	Revised methodology for mapping and assessing the condition (habitat extent, structure and function) of ecosystems and habitats included within the scope of the nature directives by making use of the Article 17 reporting. This deliverable is a request from the main client (ENV) and requires discussion and collaboration with the EEA and the topic center on biodiversity.	17/12/2017	JRC technical reports	
		5099201810										Restore urban ecosystems	Following the publication of the 4th MAES report on urban ecosystems, this deliverable develops a methodology to map and assess urban ecosystems based on high resolution data (from earth observation). It will be used to enable an EU wide assessment of urban ecosystems and make proposals for restoration projects based on nature-based solutions. It will assess the role of Natura 2000 sites as key element for urban regeneration.	31/10/2018	JRC technical reports	
4844 - NATCAPES JRC.D.3	5101 - EnRoute Enhancing Resilience Of Urban Ecosystems through Green Infrastructure	EnRoute is an Administrative Agreement between DG Environment and the JRC, with a view to implement a European Parliament Pilot Project on Urban Green Infrastructure.	JRC.D.3 JOACHIM MAES	1.3.1.b	ENV	ENV	Stefan LEINER		EP - European Parliament	01/12/2016 31/12/2018	CON-AA	5101201701	Development of a rolling roadmap for the project	This deliverable will present a roadmap for the project. This is an EP project with the aim to include many stakeholders at various policy levels which need to be consulted. The deliverable needs to deliver a list of cities which can be engaged in the project.	31/01/2017	JRC technical reports
		5101201712										Annual report	Annual report with the main findings of the project so far including the published policy briefs under the rotating Presidencies, a plan for the city labs (which includes a call for new potential candidate cities to join the testing, going beyond the cities who took part in the MAES urban pilot), a plan for dedicated workshop on how MAES can help Green Infrastructure Strategy in cities, a plan for a workshop on natural capital accounting in urban contexts.	30/12/2017	JRC technical reports	
		5101201812										Urban GI ecosystem assessment	This deliverable reports an EU wide ecosystem assessment at city scale. It will test the MAES urban ecosystems indicator framework which is developed during the MAES urban pilot. The deliverable may be part of the MAES report series.	31/12/2018	JRC contributions to policy documents	
1.3.2 A circular, green and competitive low carbon economy																
1.3.2.a sustainable consumption and production and the circular economy - elaborate criteria and measures for the implementation of product policy and facilitate information exchange on best practice. Determine best available techniques and develop indicators for waste management, and assess how to optimise energy recovery from waste in line with the EU waste hierarchy. Support the management of the EU raw materials																
228 - ETV II JRC.C.7	235 - ETV II ETV Pilot Programme	Provide DG Environment with scientific and technical assistance to support the implementation of the EU Environmental Technology Verification pilot programme (ETV), which links with the EU eco-innovation action plan adopted in December 2011, through, among others, setting-up and running 3 technical groups on i) water treatment and monitoring, ii) energy technologies and iii) materials, waste and resources; and supporting DG ENV in the coordination of ETV.	JRC.C.7 Jean-Pierre SCHOSGER	1.3.2.a	ENV	ENV	HENRY Pierre (ENV)			01/09/2012 31/12/2017	CON-AA	10	Other JRC contributions to ETV implementation	This deliverable concerns the following outputs that are foreseen in the AA: - Update of the Work Programme for the TWGs - Minutes of TWG meetings - Presentations to the Steering Group meetings - Report in participation in information events and forums - Mission reports of the TWG/ISO meetings	30/12/2017	JRC technical reports
												6	ETV II Final report	Report with an overview of implementation of ETV pilot programme and recommendations on the follow-up to the ETV pilot programme, as a contribution to the evaluation of the pilot programme and its follow-up.	31/12/2017	Science-for-policy reports
												9	Written contributions to standardisation activity	This deliverable will outline the JRC contributions to the ETV-related ISO work	31/12/2017	JRC technical reports
160 - Product Policies JRC.B.5	267 - SUSTIM Sustainable Production and Consumption Policies - Implementing	SUSTIM supports the Circular Economy Action Plan through providing techno-economic and scientific analysis for the development and	JRC.B.5 Oliver WOLF	1.3.2.a	ENV	ENV	Hugo SCHALLY	ENER GROW		18/12/2012 17/12/2017	CON-AA	20	Reference document for a priority sector	Reference document on best environmental management practice for a priority sector	16/12/2017	Science-for-policy reports
161 - EIPPCB JRC.B.5	557 - EIPPCB European Integrated Pollution Prevention and Control Bureau (EIPPCB)	The European IPPC Bureau (EIPPCB) discharges the obligation put on the Commission in Article 13(1) of the Industrial Emissions Directive (IED, 2010/75/EU) to 'organise an exchange of information between Member States, the industries concerned, non-governmental organisations promoting environmental protection and the Commission' in order to draw up, review and, where necessary, update BAT reference documents, the so-called BREFs. A series of 32 BREFs covering the main EU industrial activities has been drawn up and the IED sets the demanding objective to review each of these BREFs every 8 years. Each of the 32 BREF documents are drawn	JRC.B.5 Serge ROUDIER	1.3.2.a	ENV	JRC	Ian Hodgson / Chris Allen / Aneta Wilems (ENV.C.4)	AGRI CLIMA ENER GROW SANTE	ADB - African Development Bank MIN Env EU MS - Environment Ministries EU Member States MS EU - Member states EU WB - World Bank	01/01/2013 31/12/2018	INS-RS	10	Final Draft revised Waste Treatment (WT) BREF	Produce the Final Draft (FD) of the revised Waste Treatment (WT) BREF in order to receive a formal opinion of the IED Article 13 forum	31/12/2017	JRC contributions to policy documents
												12	Published revised Large Volume Organic Chem. BREF	Produce and publish the revised Large Volume Organic Chemicals (LVOC) BREF taking into account the IED Article 13 forum opinion and the IED Article 75 Committee vote	31/12/2017	Science-for-policy reports
												13	Draft 1 revised Surface Treatment (STS) BREF	Produce the First Draft (D1) of the revised Surface Treatment using Organic Solvents (STS) BREF for comments of the Technical Working Group (TWG)	31/12/2017	JRC contributions to policy documents
												14	Draft 1 revised Ferrous Metals Processing BREF	Produce the First Draft (D1) of the revised Ferrous Metals Processing (FMP) BREF for comments of the Technical Working Group (TWG)	31/12/2018	JRC contributions to policy documents
												15	Final Draft revised Food, Drink&Milk (FDM) BREF	Produce the Final Draft (FD) of the revised Food, Drink and Milk (FDM) BREF in order to receive a formal opinion of the IED Article 13 forum	30/06/2018	JRC contributions to policy documents
												16	Published revised Waste Treatment BREF	Produce and publish the revised Waste Treatment (WT) BREF taking into account the IED Article 13 forum opinion and the IED Article 75 Committee vote	31/12/2018	Science-for-policy reports
568 - WEF Nexus JRC.D.2	1737 - DEMEAUMED Demonstrating Integrated Innovative technologies for an optimal and safe closed water cycle in Medit	The aim of demEAUMed project is the involvement of industry representatives, stakeholders, policy-makers and diverse technical and scientific experts in demonstrating and promoting innovative technologies, for an optimal and safe closed water	JRC.D.2 Bernd GAWLIK	1.3.2.a	ENV	RTD	Birgit de BOISSEZON (RTD I.3.), Dagmar KALJARIKOVA (ENV C1)			01/01/2014 30/06/2017	CON-IA	2	Policy-makers workshop proceedings	Final Conference (open doors) when all results and objectives are achieved. The conference will be addressed in particular to the main stakeholders and target users with a special focus on cooperation in defining the needed plans for enhancing technology transfer between research and industries, both SMEs and Large enterprises.	30/06/2017	Monographs with JRC editorship
4862 - LCM-IABR&SM JRC.D.1	1738 - EFME2 Environmental Footprint and Material Efficiency 2	Further development of the AA on Footprint and Material Efficiency (33046). Overall objective of this AA (33446) is in line with Recommendation 2013/179/EU: to further improve the Product Environmental Footprint (PEF) and the Organisation Environmental Footprint (OEF) methods by updating Life Cycle Impact Assessment (LCIA) methods related to resource use, land use, water scarcity and respiratory inorganics; to finalise the development of PEF Category Rules (PEFCRs) and OEF Sector Rules (OEFSRs); to develop a method to further aggregate the EF results for up to 15 impact categories into a more condensed information that the 'mining waste BREF' will be revised because techniques have evolved since the first version was published. The 'mining waste BREF' will be revised because techniques have evolved since the first version was published. The 'mining waste BREF' will be revised because techniques have evolved since the first version was published.	JRC.D.1 Rana PANT	1.3.2.a	ENV	ENV	Maria-Hugo SCHALLY, ENV A.1; Desk Officers: Michele Galatola, Ferenc Pekar	- EUROPEAN COPPER INSTITUTE FAO - THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO) ACE AISBL - THE ALLIANCE FOR BEVERAGE CARTONS AND ENVIRONMENT AISBL L ALLIANCE CARTON ET L'ENVIRONNEMENT ACE EAA - European Aluminium Association EUROFER - European Confederation of Iron and Steel Industries (EUROFER)		12/12/2013 10/12/2017	CON-AA	201701	Continued support of JRC led PEFCR and OEFSRs	Previous Deliverable 4 of the AA. This task covers the continuation of the 3 PEFCR and OEFSR pilots for which JRC-IES has the function as the lead or co-lead of the Technical Secretariat, i.e. the OEFSR on the copper cathode production, and the PEFCRs on olive oil and intermediate paper.	30/06/2017	JRC technical reports
												201702	Revision of PEF and OEF guides	Previous Deliverable 5 of the AA. This task covers the evaluation of the 3 PEFCR or OEFSR pilots for which JRC-IES has the (co-)lead of the Technical Secretariat and the revision of the PEF and OEF methods based on those learnings and also from the other pilots for which the evaluation – as far as finished - was conducted by the technical helpdesk established by DG ENV.	30/11/2017	JRC contributions to policy documents
												201703	Weighting method for Environmental Footprint	Previous Deliverable 6 of the AA. In the context of an approach towards integrated assessment methods, starting from the work on weighting conducted in the context of the life cycle indicators, a method for weighting of the Environmental Footprint Impact Assessment categories according to their relevance for the overall environmental problems in the EU will be developed.	30/11/2017	JRC technical reports
159 - Waste Management JRC.B.5	1749 - MiningWasteBREF Review of the mining waste BREF		JRC.B.5 Peter EDER	1.3.2.a	ENV	ENV	Jose RIZO MARTIN			01/12/2013 31/12/2017	CON-AA	3	Final BREF	Final BREF	31/12/2017	Science-for-policy reports
160 - Product Policies JRC.B.5	2051 - Efficient Buildings Resource Efficiency Assessment in		JRC.B.5 Oliver WOLF	1.3.2.a	ENV	ENV	Anna LINDBLOM	GROW		01/01/2015 30/06/2017	CON-AA	3	Deployment of the developed framework	D.1.1 – A guidance manual on the hands-on implementation of the proposed assessment methodology (month 30)	30/07/2017	JRC technical reports
160 - Product Policies JRC.B.5	2052 - PPS 2015 Product Policy Support 2015	PPS2015 supports the Circular Economy Action Plan through providing environmental, techno-economic and scientific analysis for the development and implementation of environmental product policies. Based upon work packages #169 and #267 IPTS will develop new or revise existing Ecolabel criteria for a number of product groups, supporting DG ENV in preparing the draft legal proposals for interservice consultation and voting in regulatory committee, and give scientific support to DG ENV during interservice consultation and regulatory committee.	JRC.B.5 Oliver WOLF	1.3.2.a	ENV	ENV	Hugo SCHALLY	ENER GROW		01/01/2015 30/06/2018	CON-AA	6	Ecolabel criteria Copying & Graphic Paper	For the product group Copying and Graphic Paper: Draft legal proposal for Ecolabel criteria for interservice consultation and regulatory committee voting, together with the accompanying scientific background report.	31/12/2017	Science-for-policy reports
												7	GPP criteria Copying & Graphic Paper	Product sheet for Green Public Procurement criteria for the product group Copying and Graphic Paper, together with the accompanying scientific background report.	31/05/2018	Science-for-policy reports
												8	Ecolabel criteria Lubricants	For the product group Lubricants: Draft legal proposal for Ecolabel criteria for interservice consultation and regulatory committee voting, together with the accompanying scientific background report.	31/12/2017	Science-for-policy reports
												9	Ecolabel user manuals for 5 product groups	Ecolabel user manuals for applicants and member states for up to 5 product groups	31/05/2018	JRC technical reports
488 - TERMOD_INVEST JRC.B.3	2144 - BlueSCities Blueprints for Smart Cities	The project Blueprints for Smart Cities aims to develop the methodology for a coordinated approach to the integration of the water and waste	JRC.D.2 Bernd GAWLIK	1.3.2.a	ENV	RTD	Valerie BENARD, EASME Unit B2	REGIO		01/02/2015 28/02/2017	CON-IA	201701	Deliverable 6.5 under Work Package 6(JRC lead)	Final conference proceedings	01/02/2017	JRC Technical reports

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160 - Product Policies JRC.B.5	2921 - GPP 2015 Green Public Procurement 2015	GPP2015 supports the Circular Economy Action Plan through providing environmental, techno-economic and scientific analysis for the development and implementation of environmental product policies. Based upon previous work (#169).	JRC.B.5 Oliver WOLF	1.3.2.a	ENV	ENV	ROBERT KAUKIEWITSCH	ENER GROW		01/06/2015 31/05/2018	CON-AA	5	Draft GPP criteria Street Lighting	Draft criteria to be discussed with stakeholders for the product group Street Lighting (incl. updates of the technical report), to be further developed for the Interservice Consultation	31/12/2017	JRC technical reports
												7	Draft criteria Imaging Equipment	Draft criteria to be discussed with stakeholders for the product group Imaging Equipment (incl. updates of the technical report) to be further developed for the Interservice Consultation.	30/05/2018	JRC technical reports
4862 - LCM-IABR&SM JRC.D.1	3060 - EFME3 Support for Environmental Footprint and Life Cycle Data Network	Ongoing further development based on the AA on Environmental Footprint and Material Efficiency (33446). Overall objective of this AA (33909) is in line with Recommendation 2013/179/EU: to further improve the Product Environmental Footprint (PEF) and the Organisation Environmental Footprint (OEF) methods by updating Life Cycle Impact Assessment (LCIA) methods for toxicity related categories, e.g. for freshwater eco-toxicity and human toxicity both cancer and non-cancer; to further develop the European Platform on Life Cycle Assessment (EPLCA) with focus on providing information and training material related to the Life Cycle Data Network (LCDN) to facilitate larger uptake by external stakeholders and attracting more datasets and nodes to become available online.	JRC.D.1 Rana PANT	1.3.2.a	ENV	ENV	Maria-Hugo SCHALLY (Hugo-Maria.Schally@ec.europa.eu), ENV.A.1; Michele GALATOLA (michele.galatola@ec.europa.eu), ENV.A.1		- EUROPEAN COPPER INSTITUTE FAO - THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO) ACE AISBL - THE ALLIANCE FOR BEVERAGE CARTONS AND ENVIRONMENT AISBL L ALLIANCE CARTON ET L'ENVIRONNEMENT ACE EAA - European Aluminium Association EUROFER - European Confederation of Iron and Steel Industries (EUROFER) FEFCO - EUROPEAN FEDERATION OF CORRUGATED BOARD MANUFACTURERS	09/04/2015 08/04/2018	CON-AA	2	D2a report eco-toxicity	The JRC-IES will review Life Cycle Impact Assessment (LCIA) methods for freshwater eco-toxicity. The review will lead to the identification of necessary updates of the recommended LCIA methods for the EF and the provision of characterization and normalisation factors.	30/06/2017	JRC technical reports
												3	D2b report human toxicity cancer	The JRC-IES will review Life Cycle Impact Assessment (LCIA) methods for human toxicity cancer. The review will lead to the identification of necessary updates of the recommended LCIA methods for the EF and the provision of characterization and normalisation factors.	30/10/2017	JRC technical reports
												4	D2c report on human toxicity non-cancer	The JRC-IES will review Life Cycle Impact Assessment (LCIA) methods for human toxicity non-cancer. The review will lead to the identification of necessary updates of the recommended LCIA methods for the EF and the provision of characterization and normalisation factors.	28/02/2018	JRC technical reports
												7	D4 Final Technical Report	The Final Technical Report will consist of around 4 pages and describe major achievements and potential follow up actions to be taken.	08/04/2018	Project management related documents/reports identified as outputs of the JRC Work Programme
159 - Waste Management JRC.B.5	3630 - REPAIR Resource management in peri-urban areas: going beyond urban	A shift towards a more circular economy is crucial in order to achieve more sustainable and inclusive growth. The core objective of REPAIR is to provide local and regional authorities with an innovative	JRC.B.5 Peter EDER	1.3.2.a	ENV	RTD	Julius LANGENDORFF	CLIMA ENV GROW	- Delft University of Technology	01/09/2016 31/08/2020	CON-IA	1	Territorial metabolism	Developing and implementing territorial metabolism based on representation and process models	31/12/2017	JRC technical reports
												2	Impact and evaluation models	Developing and implementing impact and evaluation models	31/12/2018	JRC technical reports
160 - Product Policies JRC.B.5	3870 - EcoDesign4Circular Eco-design and other product policies for Circular Economy	As further development of the AA 070307/2012/ENV.C1/635340 and 07.0307/ENV/2013/SI2.668694/A1, the overall objective of this AA is to further develop and improve the REAPro method for the setting of potential requirements on material / resource efficiency within EU product policies (in Ecodesign but also in EU Ecolabel and Energy Labelling), and apply it to relevant product groups. The assessment method and associated product criteria will concentrate on waste prevention (e.g. lifetime, durability, re-usability), material recycling (e.g. recycled content, recyclability rates) and/or development of non-toxic material cycles (e.g. substitution, restriction, extraction). It also aims at contributing to related standardization activities when developing standardized product criteria on circularity that can be easily measured and hence verified. The AA also links to the Life Cycle Indicators activities through the development of basket of products for appliances.	JRC.B.5 Oliver WOLF	1.3.2.a	ENV	ENV	Ferenc PEKAR (ENV.A.1), Cesar Santos Gil (GROW.DDG1.C.1)	ENER GROW	- European Consumers' Organisation - EUROPEAN COPPER INSTITUTE CEN - European Committee for Standardization CENELEC - European Committee for Electrotechnical Standardization (CENELEC) EAA - European Aluminium Association EUROFER - European Confederation of Iron and Steel Industries (EUROFER) ORGALIME - European Engineering Industries Association PlasticsEurope - Association of Plastics Manufacturers (PlasticsEurope) Tech Serv - Member States and their Technical Services/type approval authorities	01/01/2016 31/12/2018	CON-AA	201701	Interim technical report	This report will describe major achievements and action steps to be taken.	15/06/2017	JRC technical reports
												201702	Report on Basket of Products (BoP) indicators	This report will summarize the application of the Basket of Product (BoP) indicators to other product groups, including television, washing machine, dishwasher machine, refrigerator, mobile phone, laptop, etc. The list of appliances covered in the Basket of Products indicators will be selected in agreement with DG ENV aiming at strengthening the link with several product policies, allowing comparison of baseline scenarios and eco-innovations and - where relevant-consumer behaviour scenarios.	20/12/2017	JRC technical reports
												201801	Report on resource efficiency analyses & criteria	This report will summarise the analysis of resource efficiency of two product groups from various perspective (e.g. recyclability/recoverability, content of relevant materials and substances of concern, durability, reparability), using the REAPro. JRC/IES will also calculate benefits and impacts of identified options for potential material efficiency requirements for these product groups in new Ecodesign and Energy Labelling measures/revisions. The product groups to be analysed will be agreed.	30/11/2018	JRC technical reports
												201802	Durability of products	The report will summarize the knowledge and know-how developed to enhance the future adoption of durability criteria in the context of the Ecodesign and Energy Labelling Directives. In particular, based on previous results, this task will propose further refinement of the testing method, potentially standardized, concerning the durability of washing machines, based on additional testing campaigns on exemplary products.	30/11/2018	JRC technical reports
												201803	Reparability of products	The report will develop further the knowledge and know-how needed to enhance the future adoption of reparability criteria in the context of the Ecodesign Directive. Based on previous work (e.g. on dishwashers and washing machines), the task will develop further assessment method to calculate benefits and impacts concerning reparability scenarios, including ways to identify relevant components in products. It will also develop and test metrics that could be used to assess reparability of products.	15/06/2018	JRC technical reports
												201804	CEN/CENELEC activities on material efficiency	Since 2014, JRC/IES has been representing DG ENV and DG GROW This task aims at ensuring continuous support of JRC/IES within the 'Resource efficiency' Task Force (TF4 of the CEN/CENELEC 'Eco-design Coordination Group', in strict cooperation with DG ENV and DG GROW. This task could also involve the preparation of some technical input to Technical Committees that will be formed when the standardization mandate on material efficiency is accepted.	15/12/2018	Oral presentation
												201805	Investigating alignment and potential synergies	The report will analyse how synergies could be exploited and if appropriate alignment achieved between Ecodesign and these other policies. It will also consider Product Environmental Footprint (PEF). The process and results of the Administrative Arrangement between JRC-IES and DG ENV on Indicators and assessment of EU consumption LCIND RE2 will also be considered in this task.	30/11/2018	Science-for-policy reports
												201806	Final technical report	This report will describe major achievements and potential follow up actions to be taken.	15/12/2018	JRC technical reports
159 - Waste Management JRC.B.5	4840 - CEBEST Circular economy best practices and benchmarking	This work package supports policy making and circular economy policy implementation by - facilitating the exchange of information and benchmarking of best practices in waste management (including of mining waste) and other	JRC.B.5 Peter EDER	1.3.2.a	ENV	JRC	Hugo SCHALLY	GROW	Tech Serv - Member States and their Technical Services/type approval authorities	01/01/2017 31/12/2019	INS-RS	1	CE benchmarking and best practices report	Circular economy and Sectoral Reference Documents: lessons learnt from the use of the recently adopted EMAS sectoral reference documents	31/12/2017	Science-for-policy reports
												2	Policies to support industrial leadership	Innovative policy instruments stimulating the adoption of a circular economy, based on industrial leadership, benchmarking and the exchange of best practices, will be proposed and explored.	31/12/2018	Science-for-policy reports
703 - NC-Waters JRC.D.2	5960 - DK-D-L CP Market Analysis: Detection kit for dioxin-like chemical pollutants	The aim of this project is to analyse the market for the in-house detection kit developed under the project Proof of Concept " Generation of a detection kits for chemical pollutants using competitive binding assay for the Aryl Hydrocarbon	JRC.D.2 Teresa LETTIERI	1.3.2.a	ENV	n/a	HELEN CLAYTON	SANTE		15/02/2017 15/02/2018	INS-PC	01	Report on the market analysis	This report will provide the analysis on the potential market for this kit covering the field of application i.e. environment, potential income of the size for demand and supply. Analysis of the competitors available on the market. The profile analysis of the competitors will help to evaluate a better strategy for the market allocation of the AhR detection system.	30/01/2018	JRC technical reports
1.3.2.b environmental knowledge, information and indicators - develop environmental indicators and lifecyclebased methods for incorporating environmental considerations into other policies, e.g. via the better regulation toolbox, and for the roadmap to a resource-efficient Europe. Contribute to the Environment Knowledge Community (EKC) as a better way to generate, plan and share environmental knowledge, including through																
484 - INSPIRE JRC.B.6	265 - MORSE INSPIRE Maintenance and Operational Setting	The subject matter of this AA is the operations of the INSPIRE Geportal and the maintenance of the INSPIRE IR. The objectives of the project are as follows: This work package (WP) involves the overall technical coordination of the implementation of the INSPIRE Directive in the Member states aiming to develop the European Spatial Data Infrastructure (SDI). The WP reflects a new INSPIRE strategy that addresses various challenges that emerged in the INSPIRE REFIT, the recommendations made by the Commission in the Report to Parliament and Council, the new INSPIRE Maintenance and Implementation Work Programme 2016-2020 (MIWP), the Fitness Check for environmental monitoring and reporting, the alignment with new Commission initiatives and priorities (e.g. Digital Single Market, Better Regulation, eGovernment Action Plan.). The WP will provide technical coordination and knowledge management to several activities: - The evaluation of the INSPIRE technical and legal framework in function of rendering the implementation requirements and guidelines easier and more feasible to implement and better fit for use in broad end-user applications.	JRC.B.6 Freddy FIERENS	1.3.2.b	ENV	ESTAT	Hugo De Groof ENV D.4	AGRI CNECT DIGIT ESTAT	CC EU - Candidate Countries EL EEA - European Environment Agency MS EU - Member states EU	17/12/2012 16/12/2017	CON-AA	550	Final report	Report on the INSPIRE Maintenance and operations.	16/12/2017	Scientific and policy reports
484 - INSPIRE JRC.B.6	1052 - INSPIRE-TC INSPIRE Technical Coordination		JRC.B.6 Michael LUTZ	1.3.2.b	ENV	JRC	Robert KONRAD	AGRI CNECT DIGIT ESTAT GROW	CC EU - Candidate Countries EU EEA - European Environment Agency MS EU - Member states EU	01/01/2015 31/12/2019	INS-RS	201701	Updated Technical Guidelines & Legal Acts	Updated Technical Guidelines and/or draft amendments to legal acts based on implementation experiences in the Member States and priority actions in the Maintenance and Implementation Work Programme (MIWP) 2016-2020 agreed between the Commission and the Member States. In particular, the updated guidelines and legal acts will reflect the outcomes of the MIWP actions on INSPIRE fitness for purpose and end user applications (incl. environmental and INSPIRE monitoring and reporting).	22/12/2017	JRC contributions to policy documents
												201702	INSPIRE infrastructure sustainability	Report on possible options and feasibility for the long-term management and operation of the INSPIRE infrastructure components currently being developed and operated by the JRC. The report will investigate e.g. the feasibility of migrating the INSPIRE Geportal into the pan-European (Open) Data Portal and propose options for the operation of the INSPIRE Registry Service.	27/10/2017	JRC technical reports
												201801	Updated Technical Guidelines & Legal Acts	Updated Technical Guidelines and/or draft amendments to legal acts based on implementation experiences in the Member States and priority actions in the Maintenance and Implementation Work Programme (MIWP) 2016-2020 agreed between the Commission and the Member States. In particular, the updated guidelines and legal acts will reflect the outcomes of the MIWP actions on INSPIRE fitness for purpose and end user applications (incl. environmental and INSPIRE monitoring and reporting).	14/12/2018	JRC contributions to policy documents
												201802	Update of the INSPIRE knowledge base	The update will reflect user needs collected directly in the on-line INSPIRE knowledge base as well as further integration, based on the common content data model, of the individual components and tools.	30/11/2018	Scientific information systems and databases

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
		- The adaptation/simplification of the infrastructure to support new business opportunities, development of new innovative applications and services e.g. streamlining the monitoring and reporting under the environmental acquis including the INSPIRE Directive itself. - The alignment with national, EU and international policies and standardization initiatives: The development of a structured approach towards										201803	Scientific articles on geospatial interoperability	Scientific articles in peer-reviewed journals and/or conferences documenting the JRC's work in INSPIRE and the ELISE ISA2 action on improving geospatial interoperability.	30/11/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
484 - INSPIRE JRC.B.6	1740 - GEOPS INSPIRE Geoport Operations	The subject matter of this Administrative Arrangement is the daily operation of the INSPIRE Geoport. Objectives: 1. To host the INSPIRE Geoport in a fully operational environment. 2. To continuously adapt the Geoport and its infrastructure in order to optimize performance.	JRC.B.6 Freddy FIERENS	1.3.2.b	ENV	ESTAT	Hugo De Groof ENV D.4	AGRI CNECT DIGIT ESTAT GROW	CC EU - Candidate Countries EU EEA - European Environment Agency MS EU - Member states EU	29/11/2013 28/11/2018	CON-AA	201701	Operational service of the INSPIRE EU Geoport	Operational service offering the EU INSPIRE Geoport, allowing Member States to publish their INSPIRE metadata and services in a central portal and allowing users to discover and access Member States' INSPIRE data through a single point of access	20/12/2017	Scientific information systems and databases
												201801	Operational service of the INSPIRE EU Geoport	Operational service offering the EU INSPIRE Geoport, allowing Member States to publish their INSPIRE metadata and services in a central portal and allowing users to discover and access Member States' INSPIRE data through a single point of access	01/12/2018	Scientific information systems and databases
484 - INSPIRE JRC.B.6	2123 - INSPIRE SEIS EREP INSPIRE SEIS and e-Reporting	INSPIRE SEIS EREP (together with the other AAs with DG ENV) supports DG Environment in addressing various challenges that emerged in the Fitness Check for environmental monitoring and reporting under the environmental acquis including the INSPIRE Directive itself.	JRC.B.6 Freddy FIERENS	1.3.2.b	ENV	ENV	Hugo DE GROOF, Joeri ROBBRECHT	AGRI ESTAT MARE NEAR	EEA - European Environment Agency MS EU - Member states EU Reg Aut Env - Candidate Countries / Members States regulatory authorities	27/05/2014 25/05/2018	CON-AA	201801	Final Management Report	Final Management Report summarizing all activities and deliverables during the implementation of WPK/AA.	25/05/2018	Project management related documents/reports identified as outputs of JRC Technical reports
4862 - LCM-IABR&SM JRC.D.1	2307 - LCIND 2 Indicators and Assessment of the	The aim of this project is to develop and apply a life cycle framework for assessing the	JRC.D.1 SERENELLA SALA	1.3.2.b	ENV	ENV	Hugo-Maria SCHALLY, ENV B.1 Head of Unit, Jiannis	ESTAT	EEA - European Environment Agency	09/04/2015 08/10/2018	CON-AA	3	Draft final report	Summary of the development of the LCA based assessment framework for assessing relevant consumption and eco-innovation policies. The methodology assesses	09/08/2017	JRC Technical reports
484 - INSPIRE JRC.B.6	3062 - INSPIRE Imp & Evol Implementation and Evolution of INSPIRE	INSPIRE Imp & Evol (together with the other AAs with DG ENV) supports DG Environment in addressing various challenges that emerged in the	JRC.B.6 Freddy FIERENS	1.3.2.b	ENV	ENV	Hugo DE GROOF, Joeri ROBBRECHT	AGRI ESTAT MARE	EEA - European Environment Agency MS EU - Member states EU Reg Aut Env - Candidate Countries /	21/04/2015 19/04/2019	CON-AA	201901	Final Report	The final report will summarise all activities and outcomes of the tasks performed under this AA.	19/04/2019	Project management related documents/reports identified as outputs of JRC Technical reports
484 - INSPIRE JRC.B.6	3785 - INSPIRE-BR INSPIRE for better regulation	This Administrative Arrangement (AA) supports DG Environment in addressing various challenges and new priorities defined in the new INSPIRE strategy reflected also in the new INSPIRE Maintenance and Implementation Work Programme 2016-2020 (MIWP). The AA provides also the necessary resources to execute the INSPIRE MIWP 2016-2020 covering activities in the following main working areas:	JRC.B.6 Freddy FIERENS	1.3.2.b	ENV	ENV	JOERI ROBBRECHT	AGRI ESTAT MARE NEAR REGIO	MS EU - Member states EU Reg Aut Env - Candidate Countries / Members States regulatory authorities on Environment	29/06/2016 28/06/2019	CON-AA	201701	Status Report on INSPIRE for Better Regulation 1	This interim report will summarise the activities carried out under the AA up to the date of the report and evaluate how INSPIRE has been contributing to better regulation. The report will cover activities related to the following working areas defined in the INSPIRE maintenance and implementation work programme 2016-2020: (1) Fostering "Fitness for	31/08/2017	Project management related documents/reports identified as outputs of JRC Work Programme
												201801	Status report on INSPIRE for Better Regulation 2	This interim report will summarise the activities carried out under the AA up to the date of the report and evaluate how INSPIRE has been contributing to better regulation. The report will cover activities related to the following working areas defined in the INSPIRE maintenance and implementation work programme 2016-2020: (1) Fostering "Fitness for purpose", (2) End user applications and (3) Continued support to implementation	31/08/2018	Project management related documents/reports identified as outputs of JRC Work Programme
4862 - LCM-IABR&SM JRC.D.1	3813 - BE SMART-LCA Bio and green Economy in the Single Market: supporting better Regulation through environmental LCA	The transition towards sustainable economies requires integrated assessment methodologies for ensuring reduction of environmental burdens associated to innovation and solutions. The "better regulation" toolbox associated to COM(2015)215 explicitly mentioned life cycle analysis as a tool for supporting impact assessment of policies. Hence, several deliverables of this WP will support the development of competence (through training and guidance), towards the use of life cycle based methods for policy impact assessment. Specifically, BE SMART-LCA supports the implementation of life cycle analysis into the Better Regulation package, focusing primarily on key elements of a green bio economy, by providing the life cycle-based methods and indicators for mainstreaming environmental and sustainability issues into a broader range of policy areas such as a sustainable bioeconomy, a circular economy (CE) and the Single Market. It also is designed to support the implementation of the Bioeconomy Action Plan, section 9, supporting "(...) the future development of an agreed methodology for the calculation of environmental footprints, e.g. using life cycle assessments (LCAs)". Resource efficiency requires integrated assessment methodologies and indicators geared towards sustainable solutions. SMART-LCA focuses on developing indicators and assessing solutions for improving environmental sustainability at various levels: micro scale (eg. products, services), meso scale (e.g. industrial sectors) or macro scale (e.g. EU wide policy options). Life cycle thinking and assessment are applied to help avoid the shifting of burdens from one stage to another (e.g. from mining to end of life) or from one environmental issue to another. Improved methods for carrying out environmental impact assessment will help provide a more holistic and evidence-based decision support in the context of the Better Regulation package and tools to complement social economic assessments towards a more competitive and resilient sustainable European Market.	JRC.D.1 Rana PANT	1.3.2.b	ENV	JRC	HUGO SCHALLY - HoU,	AGRI CLIMA ENER GROW SANTE SG	- European Aluminium Association - European Consumers' Organisation - EUROPEAN COPPER INSTITUTE - EUROPEAN FOREST INSTITUTE - World Wide Fund for Nature - European Policy Office DTU - Technical University of Denmark - Danmarks Tekniske Universitet EEB - European Environmental Bureau FAO - THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO) ACE AISBL - THE ALLIANCE FOR BEVERAGE CARTONS AND ENVIRONMENT AISBL L ALLIANCE CARTON ET L'ENVIRONNEMENT ACE EUROFER - European Confederation of Iron and Steel Industries (EUROFER) Food SCP - European Food Sustainable Consumption and Production Round Table INRA France - Institut National de la Recherche Agronomique (INRA), France ORGALIME - European Engineering Industries Association PlasticsEurope - Association of Plastics Manufacturers (PlasticsEurope) Tech Serv - Member States and their Technical Services/type approval authorities UNEP - United Nations Environment Programme (UNEP) WBCSD - World Business Council for Sustainable Development (WBCSD)	01/01/2016 31/12/2018	INS-RS	20171	Training on LCA supporting Better Regulation -2	A further module of training for using LCA in the impact assessment of policy will be built based on experiences gained during 2016 training. This includes the Better Regulation toolbox, which foresees LCA as a model to support policy impact assessment. The training will consider an enlarged target audience from a more diverse set of policy partner DGs and on the new policy agenda of the Commission. Specific examples will be provided, focusing on bio economy and green economy domains.	31/12/2017	Training
												20172	Life cycle indicators for bio- and green economy	This deliverable is an analysis of the potential to use the life cycle indicators to support monitoring the environmental dimensions of sustainable supply chains, including contribution to Global Environmental impacts and the overcoming of Planetary Boundaries. The focus is primarily on sustainable intensification of primary production for bio and green economy. In fact, Life cycle indicators provide information at the EU scale of the amounts of raw materials consumed, including through trade.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												20173	Environmental impact assessment models for LCA -1	Update the recommendations of the International Reference Life Cycle Data System (ILCD) Handbook via the European Platform on Life Cycle Assessment (EPLCA) for environmental models and methods to be used in the impact assessment phase of Life Cycle Assessments, step 1: Feasibility study on an update model based on key factors influencing the impact of primary production with a specific focus on abiotic and biotic resource and their dissipation.	31/12/2017	JRC technical reports
												20174	Organisational Environmental Footprint- Ispra site	In cooperation between the Institute for Environment and Sustainability and the Ispra Site Management (ISM), the existing Organisation Environmental Footprint (OEF) of the JRC Ispra site will be updated via a contractor to bring it in line with the more recent developments of the OEF method and underlying OEF data. An external review of the OEF report will be carried out to enable the communication of OEF results for the JRC Ispra site in line with Recommendation 2013/179/EU.	31/12/2017	JRC technical reports
												20175	EPLCA information system	The European platform on LCA provides the EU Commission platform for distributing and promoting best practice and data for LCA. It includes Life Cycle Inventory (LCI) and Life Cycle Impact Assessment (LCIA) related data and the LCA Resource Directory (RD). The JRC will support this primarily by increasing the availability of data and case studies to support the environmental footprint, as well as bio and green economy in global supply chains.	31/12/2017	Scientific information systems and databases
												20176	LCA for impact assessment of policies	Analysis of the use of life cycle assessment and thinking in policy impact assessment, both based on analysis of policy documents and on the result of a workshop on: key elements for the application of life cycle thinking and assessment on policy impact assessment at EU, national and regional level; existing policy cases studies, focusing on bio and green economy related examples, illustrating models, indicators, added values and current limitations of the application.	31/12/2017	Science-for-policy reports
												20177	Making biotic resources count in LCA	Currently the assessment of biotic resource in LCA and Environmental Footprint should be improved both on the impact assessment and the inventory side. This deliverable will address the lack of so-called "elementary flows" (as per ISO 14040) in the current version of the International Reference Life Cycle Data System (ILCD). For this, the ILCD nomenclature will be adapted for including ~ 300 biotic resources flows that are needed to assess biotic resources from an environmental perspective.	31/12/2017	Datasets
												20181	Training on LCA supporting Better Regulation -3	The training material on Life Cycle Thinking will be revised/adjusted in terms of format and content based on feedback and expressed needs from participants in the last sessions. The possibilities to produce an e-learning tool will be tested.	31/12/2018	Training
												20182	Environmental impact assessment models for LCA 2	Update the recommendations of the International Reference Life Cycle Data System (ILCD) Handbook via the European Platform on Life Cycle Assessment (EPLCA) for models and methods to be used in the impact assessment phase of LCA, step 2: taking into account e.g. ecotoxicity, human toxicity (cancer) and human toxicity (non-cancer), considering the outcome of the global guidance on life cycle impact assessment project UNEP-SETAC.	31/12/2018	JRC technical reports
												20183	EPLCA information system	The European platform on LCA provides the EU Commission platform for distributing and promoting best practice and data for LCA. It includes Life Cycle Inventory (LCI) and Life Cycle Impact Assessment (LCIA) related data and the LCA Resource Directory (RD). The JRC will support this primarily by increasing the availability of data and case studies to support the environmental footprint, as well as bio and green economy in global supply chains.	31/12/2018	Scientific information systems and databases
												20184	Life Cycle Data Network (LCDN)	Through continuous developments, maintenance, updates and additions of data sets the Life Cycle Data Network (LCDN) will ensure the accessibility of quality assured and peer reviewed life cycle data to industries involved in the Environmental Footprint (EF) work. This will cover the product categories and sectors covered in the ~25 industry led EF pilots, 12 of which focusing on food, feed, textile and wood-related sector.	31/12/2018	Datasets

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Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
												20185	Lesson learned from the EF pilot phase	Focusing on the 4 year support gained in the 3 JRC led Environmental Footprint (EF) pilots, the lessons learned will cover experiences from all ~25 industry led EF pilots (12 of which related to the food and feed sector, textile and wood-related products). Conclusions will be drawn from a JRC perspective for further policy support activities in the area of environmental assessments with a focus on the relevance of pre-normative activities and stakeholder involvement.	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												20186	Guidance on LCA-based policy impact assessment	The Better Regulation with its toolbox n.58 foresees the enhanced application of Life Cycle Analysis for the purpose of supporting policy Impact Assessments. This deliverable will provide a categorization leading to guidance in which policy cases LCA should be further investigated as a means for the policy Impact Assessment, in which cases an initial screening should be sufficient, and in which cases the application of LCA is not indicated. The case studies will focus on bio and green economy	31/12/2018	Science-for-policy reports
1.3.3 Protection from environment-related risks to human health and wellbeing																
1.3.3.a chemicals and nanomaterials - support the implementation of the chemicals' legislations and policy development in cross-cutting areas. Set up a toxicology knowledge base and further develop and maintain the Information Platform for Chemical/Nanomaterial Monitoring IpCheM, including the nanomaterial repository, especially in view of supporting the European Human Biomonitoring Initiative (HBM4EU). Support mutual																
101 - Predict JRC.F.3	805 - Predict-WPK3 Endocrine disruptors and reproductive/developmental toxicants	There is concern that manufactured chemicals released into the environment on their own or in combination with other chemicals may be partly responsible for the rise in certain types of disorders in humans and wildlife. It is suspected that these disorders originate from exposure during development and may in some cases be caused by the chemicals interfering with the production or action of hormones. This project will focus on the development and evaluation of integrated approaches for testing and assessment of endocrine disrupting chemicals and reproductive toxicants, including developmental (neuro)toxicants with a view to improving the protection of humans	JRC.F.3 SHARON MUNN	1.3.3.a	ENV	JRC	ENV.A.3, Peter KORYTAR	GROW SANTE	- United States Environmental Protection Agency Chem Cos Pharm Food Agri - Chemicals, Cosmetics, Pharmaceuticals, Food, and Agrochemicals Industry Chem Cos Pharm Food Agri EU - Competent Authorities of EU Member States Chemicals, Cosmetics, Pharmaceuticals, Food, and Agrochemicals Industry ECHA - European Chemicals Agency (ECHA) EFSA - European Food Safety	01/01/2016 31/12/2018	INS-RS	3	EURL ECVAM strategy for reproductive toxicity	Development of a strategy that provides a roadmap of activities towards the replacement, reduction and refinement of animal tests for the detection of chemical substances causing reproductive toxicity including effects on development and fertility. The strategy will undergo extensive consultation with a variety of stakeholders including policy DGs, EU Agencies, MS regulators, industry associations, academic societies and NGOs	15/12/2017	Science-for-policy reports
												4	Improved approaches to detecting DNT	This analysis will focus on how in vitro methods can contribute to mechanistic understanding and refinement of in vivo tests for detecting developmental neurotoxicants including the identification of relevant and standardised in vitro methods.	31/05/2017	JRC technical reports
												5	Advanced methods for identification of EDs	To provide scientific support to DG ENV for a series of workshops/activities (including disruption of hypothalamic-pituitary-thyroid axis and retinoid pathway, as well as temporal aspects of exposure) leading to a strategy for the identification and prioritisation of new methods and enhancement of existing methods for the assessment of endocrine disrupting substances (EDs).	31/05/2018	JRC technical reports
101 - Predict JRC.F.3	807 - Predict-WPK1 Toxicity assessment of combined exposures and chemical mixtures	While humans and the environment are continuously exposed to a multitude of substances via different routes of exposure, the current regulatory risk assessment approach focuses on the assessment of individual substances via a single exposure route. Different types of mixtures are regulated under a variety of EU regulations, but currently there is no harmonised methodological approach for their assessment. This gap in the EU regulatory assessment framework has recently gained more attention, following the 2012 Commission Communication on the Combined Effects of Chemicals. With a view to developing a harmonised risk assessment methodology and informing regulatory guidelines, this work package focuses on the use of existing information, in vitro	JRC.F.3 Stephanie BOPP	1.3.3.a	ENV	JRC	ENV.A.3, Peter KORYTAR	GROW SANTE	ECHA - European Chemicals Agency (ECHA) EFSA - European Food Safety Authority	01/01/2014 31/12/2018	INS-RS	5	Methodological guidance for	Further development and analysis of selected case studies (chemical mixtures and their	31/12/2017	Science-for-policy
												6	Exposure based case study on chemical mixtures	Results of a case study, based on existing exposure data, to predict combined effects from mixtures of chemical substances regulated under different regulatory frameworks (e.g. pesticides, REACH, biocides, pharmaceuticals, cosmetics...). This will include exploring the impact of different methodological choices (such as grouping) on the outcome of the assessment.	30/06/2017	JRC technical reports
												7	Linking combined exposure to disease outcome	Case study using spatial information on exposure to chemical mixtures for predicting combined effects and comparison to disease registry data (e.g. air pollution leading to lung cancer).	31/10/2018	JRC technical reports
												8	CRA methodology for developmental neurotoxicants	Development of an integrated approach for evaluating combination effects of potential developmental neurotoxicants (e.g. pesticides, industrial chemicals, heavy metals and polychlorinated biphenyls). Based on the results of in vitro experiments, it will be determined whether synergistic, antagonistic or additive effects are observed for realistic mixtures. In addition, different ways of grouping will be performed to explore the impact on the results of the cumulative risk assessment (CRA).	30/11/2018	JRC technical reports
102 - Disseminate JRC.F.3	814 - Disseminate-WPK2 Data, information & knowledge platforms supporting chemical safety assessment & alternative methods	The work package disseminates knowledge generated in the unit and within its cross-JRC, cross-Commission and global collaborations, dealing with Adverse Outcome Pathways (AOPs), chemical hazards and internationally agreed data reporting formats. Knowledge is distributed on three levels: conceptually (e.g. the AOP principle), content-wise (e.g. concrete AOPs, chemical hazard information) and practice-oriented (ICT systems, data formats, tools for data migration to these formats). The conceptual level is covered by the provision of publications, conference presentations and contributions to international steering groups (e.g. OECD EAGMST); content provided to the stakeholder community are in-house developed AOPs, data on chemical hazard properties (e.g. genotoxicity/carcinogenicity), while the tool aspect is implemented by providing public access to relevant knowledge bases (e.g. AOP-KB, especially a module dealing with Intermediate Effects of Chemicals) and portal applications (e.g. ChemLIST and ChemAgora), as well as OECD Harmonised Templates and tools to format legacy data accordingly.	JRC.F.3 Clemens WITWEHR	1.3.3.a	ENV	JRC	ENV.A.3, HANSEN Bjorn	GROW SANTE	- United States Environmental Protection Agency Chem Cos Pharm Food Agri - Chemicals, Cosmetics, Pharmaceuticals, Food, and Agrochemicals Industry Chem Cos Pharm Food Agri EU - Competent Authorities of EU Member States Chemicals, Cosmetics, Pharmaceuticals, Food, and Agrochemicals Industry ECHA - European Chemicals Agency (ECHA) EFSA - European Food Safety Authority OECD - Organisation for Economic Co-operation and Development (OECD)	01/01/2014 31/12/2018	INS-RS	10	AOP-KB evolution reports	Report on progress in development and roll-out of further releases and modules of the Adverse Outcome Pathway Knowledge Base (AOP-KB), including the Intermediate	30/11/2017	Scientific information systems and
												13	Chem Inf Systems (dev/update) - 2017	2017 Status report on Chemical Information Systems related activities. This includes outputs on all levels of abstraction (from prescriptive standards to descriptive DB content), like reporting formats (OHTs, AOP-XML, ...), tools (XLS2OHT), portals (ChemLIST, ChemAgora, eChemPortal, ...), and in-house toxicological databases (Skin Sensitisation DB, Genotoxicity/Carcinogenicity DB, Acute Systemic Toxicity DB...).	31/10/2017	Scientific information systems and databases
												14	AOP-KB evolution reports	Report on progress in development and roll-out of further releases and modules of the Adverse Outcome Pathway Knowledge Base (AOP-KB), including the Intermediate Effects DB (IEDB), the JRC module of the AOP-KB. The AOP-KB, developed through a collaboration of JRC and the US EPA and launched by the OECD, allows stakeholders to build AOPs by entering and linking information about AOP elements in a "crowdsourcing" fashion. Value is added by re-using AOP-KB elements across different AOPs.	30/11/2018	Scientific information systems and databases
												15	Chem Inf Systems (dev/update) - 2018	2018 Status report on Chemical Information Systems related activities. This includes outputs on all levels of abstraction (from prescriptive standards to descriptive DB content), like reporting formats (OHTs, AOP-XML, ...), tools (XLS2OHT), portals (ChemLIST, ChemAgora, eChemPortal, ...), and in-house toxicological databases (Skin Sensitisation DB, Genotoxicity/Carcinogenicity DB, Acute Systemic Toxicity DB...).	31/10/2018	Scientific information systems and databases
												16	Content Contribution to the AOP-KB 2017-2018	Development and evaluation of Adverse Outcome Pathways (AOPs) which are structured mechanistically-based descriptions of chemically-induced toxicity. This includes harvesting and generating knowledge on the causal chain of events from exposure of an organism to an adverse outcome. The information will be used to populate the AOP Knowledge Base inform development of computational models, prioritise in-vitro assays for validation and guide the development of approaches to integrated assessment.	30/11/2018	Datasets
102 - Disseminate	816 - Disseminate-WPK1 Dissemination and knowledge	This WPK fulfils an EURL ECVAM mandate by providing read-to-use information on various aspects of advanced and alternative methods (e.g. in vitro, in silico) through PUBLIC DATABASES, together with SEARCH GUIDANCE to facilitate their uptake, as well as by providing COMPREHENSIVE REVIEWS on their status. This principally includes the: i) DataBase service on Alternative Methods (DB-ALM), QSAR Model Database, Tracking System for Alternative methods towards Regulatory acceptance (TSAR), as well as ii) the Search Guide, and the iii) the EURL ECVAM Status Report. The shift to non-animal experimentation is both scientifically justified and a requirement of EU law (Directive 2010/63/EU, Cosmetics, Pharmaceuticals, Chemicals Regulation, etc). However, the ready access to adequately described methods is a prerequisite for their use in any decision making process by regulators, scientists or any end-user in biomedical research. The databases are unique in providing it in OECD accepted formats, which has a huge potential to make readily available the knowledge from the R&D domain to policy makers, such as on novel	JRC.F.3	1.3.3.a	ENV	JRC	ENV.A.3, Satu Susanna	GROW SANTE	Chem Cos Pharm Food Agri EU - Competent Authorities of EU Member States Chemicals, Cosmetics, Pharmaceuticals, Food, and Agrochemicals Industry ECHA - European Chemicals Agency (ECHA) EFSA - European Food Safety Authority EMA - European Medicines Agency (EMA) EMA - European Medicines Agency (EMA)	02/01/2017	INS-RS	11	EURL ECVAM Search Guide-Internet version	The Search Guide provides advice and good practice for a structured and systematic data retrieval approach in life sciences together with supporting information thereby reducing the reliance on animal use in scientific projects. It has found wide applications in formal academic training and project licences courses in and outside Europe. The interactive Internet version represents a natural evolution of the guidance responding to users' needs and further enhancing its outreach.	30/06/2017	Scientific information systems and databases
												12	Advancement of EURL ECVAM databases in 2018	Provision of: i) UPDATED CONTENTS in various policy areas, addressing novel methods used in mechanistic investigations, or originating from EU projects, and from validation activities indicating their tracking status; ii) UPDATED REPORTING FORMATS to new standards and scientific needs; and iii) INNOVATED SYSTEMS regarding new uses, such as for integrated approaches to testing; data displays, retrieval and management; interoperability; optimisations/upgrades and technological evolution).	30/11/2018	Scientific information systems and databases
												13	Harmonised classification system on alternatives	Structured controlled vocabulary (including headings, sub-headings, index terms) shall be provided enhancing access to mechanistic information by methods of EURL ECVAM databases supporting integrated approaches to testing, adverse outcome pathways and research. It will include evaluation of ontologies, assessments during practical application to ensure accuracy during indexing and data retrieval procedures in the databases/systems with the aim to further pursue systems interoperability.	30/10/2018	JRC technical reports
												14	2017 EURL ECVAM status report alternative methods	The 2017 EURL ECVAM status report provides to regulators, stakeholders and the general public an update on the progress made in the development, validation and regulatory acceptance of alternative methods and approaches since the last report published in 2016. It is informing on ongoing research and development activities, validation studies, peer reviews, recommendations, strategies and international acceptance of alternative methods and approaches.	30/11/2017	Science-for-policy reports

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Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
JRC.F.3	management of advanced and alternative methods in life sciences	<p>techniques generating large data sets, thus facilitating their assessments.</p> <p>Current emphasis is given by the WPK to toxicological assessments of chemicals with their various modes of action and properties, but also refers to nanomaterials, medical devices, drugs, biologicals. Most activities are built around two main pillars: i) the definition of information content as expert written documents from specific projects or are based on systematic literature analysis and synthesis as thematic reviews; and ii) the further system evolution to scientific and technological advancements including information standardisation.</p> <p>The JRC is attracting a large stakeholder community through the services; e.g. 2000 newsletter subscriptions, over 4000 registrations from 82 countries. The multidisciplinary approach covering various policy areas, the central access to new approach methods at all stages of development and acceptance from various sources in internationally recognised formats make them unique resources. Moreover, the services have proven to be useful for providing access to activities of JRC staff. However, to further ensure</p>	Annett JANUSCH ROI		ENV	ENV	LOUHIMIES	SANTE	<p>ICATM - International Cooperation on Alternative Test Methods (ICATM)</p> <p>KNIC3Rs - Korean National Information Center for the 3Rs</p> <p>OECD - Organisation for Economic Co-operation and Development (OECD)</p> <p>Reg Aut BR - Regulatory Authorities from Brazil</p>	30/12/2018	CON-AA	15	2018 EURL ECVAM status report alternative methods	The 2018 EURL ECVAM status report provides to regulators, stakeholders and the general public an update on the progress made in the development, validation and regulatory acceptance of alternative methods and approaches since the last report published in 2017. It is informing on ongoing research and development activities, validation studies, peer reviews, recommendations, strategies and international acceptance of alternative methods and approaches.	30/11/2018	Science-for-policy reports
												5	EURL ECVAM Search Guide – 3rd edition	The Search Guide provides advice and good practice for structured and systematic data retrieval approaches in life sciences together with information sources thereby reducing the reliance on animal use in scientific projects. It has found wide application in academic and legally required training courses in and outside Europe. An updated version will be prepared considering new or improved search tools and strategies, as well as information sources, basic principles and terminologies.	30/10/2018	Books and monographs with JRC editorship
												7	Mechanistic information on non-animal methods	In order to make all EURL ECVAM databases and systems interoperable, a harmonised classification system for non-animal methods for toxicological assessments will be developed also considering the adverse outcome pathway approach on key-events. It will include a proposal for amendments of the database on in vitro and in silico methods compliant with relevant international ontologies and scientific vocabularies for indexing and classifying information contents in life sciences.	31/03/2017	JRC technical reports
												9	Advancement of EURL ECVAM databases in 2017	Provision of: i) UPDATED CONTENTS in various policy areas, addressing novel methods used in mechanistic investigations, or originating from EU projects and validation activities indicating their tracking status; ii) UPDATED REPORTING FORMATS to new international standards and scientific needs; and iii) INNOVATED SYSTEMS regarding new uses, such as for adverse outcomes pathways; data displays, retrieval and management; interoperability, optimisations/upgrades and technological evolution).	30/11/2017	Scientific information systems and databases
213 - TMA CC JRC.I.3	3351 - ENVRM ENV RISK MONITOR	Support to DG ENV for Environmental Risk Monitoring based on open source (news) information, including the definition of topics of	JRC.I.3 Erik VAN DER GOOT	1.3.3.a	ENV	ENV	Elena Montani DG ENV			01/01/2017 31/12/2017	CON-AA	2	Categories & filters for monitoring of threats	Setup of categories and filters for monitoring of threats to the environment (e.g. chemical spills) and health (e.g. intoxication)	28/05/2017	Technical systems
101 - Predict JRC.F.3	3443 - Predict-WPK2 Integrated approaches for the regulatory assessment of chemicals	<p>The aim of the project is to develop and evaluate scientifically robust and innovative approaches for the safety assessment of chemicals across multiple regulatory sectors. By relying on the use of multiple and diverse sources of chemical information, integrated approaches are designed to predict (eco)toxicological endpoints of regulatory concern, thereby providing an efficient and effective means of assessing chemical safety, while also promoting the 3Rs.</p> <p>This work package focuses on the development and evaluation of integrated approaches for toxicological endpoints of regulatory concern. In particular, the focus will be on systemic toxicity (acute and repeat dose toxicity, carcinogenicity) and topical toxicity (eye irritation, skin sensitisation), as well approaches for aquatic (fish) toxicity. The outputs of the work will be used to inform the development of regulatory guidelines and guidance documents.</p>	JRC.F.3 Raffaella CORVI	1.3.3.a	ENV	JRC	ENVA.3, Susanna LOUHIMIES	GROW RTD SANTE	<p>CEFIC - European Chemical Industry Council (CEFIC)</p> <p>Cosmetics Europe - European Cosmetics Association</p> <p>ECHA - European Chemicals Agency (ECHA)</p> <p>EFSA - European Food Safety Authority</p> <p>OECD - Organisation for Economic Co-operation and Development (OECD)</p>	01/01/2016 31/12/2018	INS-RS	10	Good modelling practices for biokinetics	Development of a guidance on good physiologically based biokinetic (PBK) modelling practices to facilitate acceptance and use of PBK in the regulatory assessment of	30/11/2017	JRC technical reports
												11	Case study on new methods for safety assessment	A case study focusing on repeated dose toxicity will be developed for an integrated chemical safety assessment relying specifically on alternative methods and based on exposure considerations. It will highlight the challenge of integrating multiple data streams for safety assessment decisions, and will also identify knowledge gaps and propose a way forward.	31/03/2017	JRC technical reports
												12	Moving forward in cancer safety assessment	Mapping and definition of needs for novel approaches to assess cancer risk based on the different regulatory requirements across sectors.	30/06/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												13	Framework for new approaches in carcinogenicity	Development of a conceptual framework for the safety assessment of carcinogenicity to improve human protection. In sectors where a huge number of animals is needed upon regulatory requirements, the focus will be on the establishment of an intelligent strategy that relies on all available in vitro and in vivo data. In other sectors, where animal experiments are limited, the emphasis will be on identifying the underlying mechanisms of carcinogenicity, especially of non-genotoxic carcinogens.	31/12/2018	JRC technical reports
												6	Framework for animal-free risk assessment	Development of a conceptual framework for the safety assessment of the systemic effects of chemicals based entirely on mechanistic knowledge and data derived from alternative (non-animal) methods. This framework will represent a shift away from the current regulatory testing paradigm based on apical (whole animal) endpoints to an entirely new approach based on animal-free methods (computational and in vitro) that address key mechanisms of action common to multiple endpoints.	30/11/2018	JRC technical reports
												7	IATA for serious eye damage and eye irritation	Development of an Integrated Approach to Testing and Assessment (IATA) for serious eye damage and eye irritation in support of the chemicals legislation (in particular the REACH and CLP regulations). This will form the basis of a draft OECD guidance document, which will be submitted to OECD.	30/04/2017	JRC technical reports
												8	Comparative evaluation of chronic health endpoints	Use of existing animal data to perform a comparative analysis of chronic toxicological effects measured in different species and using different animal models. This is expected to lead to recommendations on how information from existing animal studies can be re-used in novel ways in the safety assessment process. Emphasis will be placed on how to extrapolate animal data for the evaluation of chronic effects such as repeat dose systemic toxicity and carcinogenicity.	30/09/2017	JRC technical reports
												9	Defined approaches for skin sensitisation	Further evaluation of defined approaches for skin sensitisation to promote their regulatory implementation. This will include defined approaches to assess hazard classification and identification of strong/extreme sensitisers, as required by the REACH regulation.	31/12/2017	JRC technical reports
												102 - Disseminate JRC.F.3	3445 - EASIS-AA EASIS Lifecycle Management under AA with ENV	<p>Activities in the context of the lifecycle management for the Endocrine Active Substances Information System (EASIS), under an Administrative Arrangement with DG ENV: Scientific, political and ICT governance, data management, user support, further development, maintenance.</p> <p>EASIS was originally developed under an AA with ENV, as well as with institutional funds. EASIS is a web-based information system for the management, insertion and dissemination of information about endocrine activity-related properties of chemicals. EASIS's underlying data format is compatible with the OECD Harmonised Templates (OHTs), which makes EASIS data immediately re-useable in the regulatory context. EASIS is one of the pillars of JRC activities in the Endocrine Disrupter Chemicals area.</p>	JRC.F.3 Clemens WITTEWEHR	1.3.3.a
5	Updated version of EASIS 2017	A new version of EASIS containing all features described in the record of requirements being part of Deliverable 4.	30/09/2017	Scientific information systems and databases												
6	Annual Progress Report 2018	The EASIS Annual progress report will feature, related to the reporting period: - A communication and promotion activity report (i.e. how Deliverable 2 has been implemented). - A report on identification of relevant knowledge and data and on content additions and modifications. - A report on help-desk activities (number and kind of support tickets, resolution, trends) and on maintenance activities on EASIS. - A report on requirements to be implemented in the next EASIS release (Deliverable 7).	31/03/2018	Project management related documents/reports identified as outputs of the JRC Work Programme												
7	Updated version of EASIS 2018	A new version of EASIS containing all features described in the record of requirements being part of Deliverable 6	30/09/2018	Scientific information systems and databases												
555 - IPChem NextGen	3820 - IPChem-SD Information Platform for Chemical	IPChem has been developed over the last three years to provide a single point for searching and retrieving chemical data collections of Europe. It aims at addressing one of the major gaps in knowledge base for chemical policies, which is the	JRC.F.3					GROW RTD SANTE	ECHA - European Chemicals Agency (ECHA)	01/01/2017		201701	IPChem Version 4	Fourth release of IPChem (including interfacing with cross unit/directorate IT systems)	30/06/2017	Scientific information systems and databases
												201801	IPChem Version 5	Fifth release of IPChem (including interfacing with cross unit/directorate IT systems)	28/02/2018	Scientific information systems and databases

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JRC.F.2	Monitoring (IPChEM): System Development	lack of information on the chemical exposure on the human body and the environment thus assisting policy makers and scientists to respond to related key policy questions. The main reference policy document is the EC Communication "The combination effects of chemicals – Chemical	SILVIA DALLA COSTA	1.3.3.a	ENV	ENV	BJORN HANSEN	SANTE	EFSA - European Food Safety Authority	31/12/2018	CON-AA	201802	IPChEM Version 5.1	Upgraded version of the fifth release of IPChEM (including interfacing with cross unit/directorate IT systems)	31/10/2018	Scientific information systems and databases
												201803	Technical specifications for installation, deployment	Final software Architecture document, hosting environment specifications, and code documentation	30/11/2018	JRC technical reports
82 - Validate JRC.F.3	3821 - Validate-WPK1 Identification, assessment, acceptance and use of alternative methods to animal testing	<p>This work package aims at identifying promising alternative methods to animal testing, their scientific assessment, their eventual peer review and recommendation to stakeholders, and the promotion of their international acceptance and use.</p> <p>Identification of alternative methods is done through e.g., incoming test method submissions, web calls, surveys, literature search, workshops and European and international research efforts. The methods are scientifically assessed by EURL ECVAM in collaboration with EU-NETVAL, prioritised through engagement with EU regulatory experts (PARERE), stakeholders (ESTAF) and international partners (ICATM) and peer-reviewed by the EURL ECVAM Scientific Advisory Committee (ESAC). Following this, EURL ECVAM Recommendations on the test methods' scientific validity and (regulatory) use are issued in order to fulfil the requirements of European legislation and sectorial regulatory frameworks calling for alternative methods.</p> <p>This work package also encompasses the translation of validated alternative methods and approaches for quality/efficacy assessment, hazard identification, classification and labelling, hazard characterisation and/or safety assessment into EU chemicals legislation (e.g. REACH annexes and EU test method regulation) and international test guidelines and guidance documents adopted by e.g., the Organisation for Economic Cooperation and Development (OECD), the International Conference on Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use (ICH), the International Conference on Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Veterinary Use (VICH).</p> <p>Finally, it involves the engagement with stakeholders via formal committees [i.e. ECVAM's network of regulators (PARERE), ECVAM's stakeholders forum (ESTAF), international cooperation on alternative test methods (ICATM), network of validation laboratories (EU-NETVAL)] and informal networks (e.g. EU 3Rs Centres, universities, biomedical community) to promote the wider acceptance and use of alternative methods.</p>	JRC.F.3 Laura GRIBALDO	1.3.3.a	ENV	JRC	ENV.A3, Satu Susanna LOUHIMIES	GROW SANTE	<p>Chem Cos Pharm Food Agri - Chemicals, Cosmetics, Pharmaceuticals, Food, and Agrochemicals Industry</p> <p>Chem Cos Pharm Food Agri EU - Competent Authorities of EU Member States Chemicals, Cosmetics, Pharmaceuticals, Food, and Agrochemicals Industry</p> <p>ECHA - European Chemicals Agency (ECHA)</p> <p>EDQM - European Directorate for the Quality of Medicines and HealthCare (EDQM, Council of Europe)</p> <p>EFSA - European Food Safety Authority</p> <p>EMA - European Medicines Agency (EMA)</p> <p>ICATM - International Cooperation on Alternative Test Methods (ICATM)</p> <p>ICCR - International Collaboration of Cosmetics (ICCR)</p> <p>ICH - International Conference on Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use (ICH)</p> <p>OECD - Organisation for Economic Co-operation and Development (OECD)</p> <p>VICH - International Conference on Harmonisation of Technical Requirements for Registration of Veterinary Products (VICH)</p>	01/01/2016 31/12/2018	INS-RS	10	Contributions on alternatives OECD&Internat. 2018	To support safety assessment of chemicals and/or nanomaterials based on alternative methods, EURL ECVAM develops new and revised (OECD) Test Guidelines, Performance Based Test Guidelines, Guidance Documents, Detailed Review Papers, Performance Standards and others under EC leadership, including replies to official comments provided by member countries on such documents; Provision of comments or documents developed under non-EC leadership. This deliverable captures the relevant activities in 2018	31/10/2018	Validated methods, Reference methods and measurements
												11	Contributions on alternative methods to EC 2018	To support safety assessment of chemicals and/or nanomaterials based on alternative methods and approaches, EURL ECVAM e.g., develops documents for technical and policy support to DG ENV, DG GROW and ECHA in view of updates of REACH annexes or preparation of guidance documents, contributes to the review and fitness check of EU chemicals legislation, and contributes to the revision of the SCCS Notes of Guidance. The deliverable captures the relevant activities in 2018.	31/10/2018	Validated methods, Reference methods and measurements
												4	Alternative method assessment reports 2017	Assessment reports on alternative methods assessed by EURL ECVAM between January and October 2017. This includes assessment of both pre- and complete submissions of alternative methods received through EURL ECVAM's two-step submission process or of promising alternative methods identified through other means with regards to their status of development, optimisation and/or validation and their potential relevance with regard to the 3Rs (replacement, reduction, refinement of animal testing).	31/10/2017	JRC technical reports
												5	Altern. method peer reviews & recommendations 2017	ESAC peer reviews and EURL ECVAM Recommendations (RECs) on alternative methods, issued between January and October 2017. The RECs express EURL ECVAM views on scientific validity, usefulness, limitations, possible regulatory application and possible follow-up activities in view of addressing knowledge gaps, taking into account the outcome of independent peer review by ESAC and following consultation of EU regulatory experts, stakeholders, international partners, other EC services and the public.	31/10/2017	JRC technical reports
												6	Contributions on alternatives OECD&Internat. 2017	To support safety assessment of chemicals and/or nanomaterials based on alternative methods, EURL ECVAM develops new and revised (OECD) Test Guidelines, Performance Based Test Guidelines, Guidance Documents, Detailed Review Papers, Performance Standards and others under EC leadership, including replies to official comments provided by member countries on such documents; Provision of comments or documents developed under non-EC leadership. This deliverable captures the relevant activities in 2017.	31/10/2017	Validated methods, Reference methods and measurements
												7	Contributions on alternative methods to EC 2017	To support safety assessment of chemicals and/or nanomaterials based on alternative methods and approaches, EURL ECVAM e.g., develops documents for technical and policy support to DG ENV, DG GROW and ECHA in view of updates of REACH annexes or preparation of guidance documents, contributes to the review and fitness check of EU chemicals legislation, and contributes to the revision of the SCCS Notes of Guidance. The deliverable captures the relevant activities in 2017.	31/10/2017	Validated methods, Reference methods and measurements
												8	Alternative test method assessment reports 2018	Assessment reports on alternative methods assessed by EURL ECVAM between November 2017 and October 2018. This includes assessment of both pre- and complete submissions of alternative methods received through EURL ECVAM's two-step submission process or of promising alternative methods identified through other means with regards to their status of development, optimisation and/or validation and their potential relevance with regard to the 3Rs (replacement, reduction, refinement of animal testing).	31/10/2018	JRC technical reports
												9	Altern. method peer reviews & recommendations 2018	ESAC peer reviews and EURL ECVAM Recommendations (RECs) on alternative methods, issued between November 2017 and October 2018. The RECs express EURL ECVAM views on scientific validity, usefulness, limitations, possible regulatory application and possible follow-up activities in view of addressing knowledge gaps, taking into account the outcome of independent peer review by ESAC and following consultation of EU regulatory experts, stake	31/10/2018	JRC technical reports
												82 - Validate JRC.F.3	3822 - Validate-WPK2 Evaluation, validation and translation into regulation of in vitro test methods	<p>This work package implements part of the tasks assigned to the European Reference Laboratory for Alternatives to Animal Testing (EURL ECVAM) as stipulated in Directive 2010/63/EU "on the protection of animals used for scientific purposes" (Art. 48), namely (i) coordinating and promoting the development and use of alternatives to procedures including in the areas of basic and applied research and regulatory testing, (ii) coordinating and participating in the validation of alternative approaches at Union level. Moreover, following the above mentioned Directive (Art 47), a network of 36 EU specialised and qualified laboratories has been established and is being coordinated by EURL ECVAM to assist in validation studies (EU-NETVAL).</p> <p>To achieve these tasks, the laboratories of EURL ECVAM will assess the technical performance, completeness and clarity of a number of promising in vitro test methods. This will be followed, when appropriate, by further evaluation or a formal validation to assess the reliability and relevance of the in vitro method. The EURL ECVAM laboratories have also high throughput screening capacity to be used for in-house generation of toxicological datasets that will facilitate international collaborations (with e.g. the US EPA) in various policy areas such as endocrine disruptors and environmental chemicals. EURL ECVAM will make use of its network of expert laboratories (EU-NETVAL) to assist in a number of tasks such as in vitro method definition and description, and, in vitro method validation. The above described activities will lead to the translation of the validated alternative methods into OECD test guidelines in various important fields</p>	JRC.F.3 Mounir BOUHIFD	1.3.3.a
13	AR-CALUX assay data for selected chemicals	The AR-CALUX reporter gene in vitro method assesses androgenic and anti-androgenic activity of chemicals. This method has been accepted for an ECVAM coordinated validation study, consisting of data generation by 3 EU NETVAL labs, using the method with a small set of selected coded chemicals. The study reports of the 3 labs will allow an assessment of the data generated to proceed to step 2 in the evaluation of the AR-CALUX method (D3).	30/06/2017	Validated methods, Reference methods and measurements												
14	Draft OECD Guidance Good In Vitro Method Practice	The OECD Guidance document for the development and implementation of in vitro methods for regulatory use in human safety assessment will result from a consultation process by the OECD member countries that will review and complete with their views and expertise the EURL ECVAM Guidance document. The proposal for such guidance document was accepted at OECD and added to their work program (April 2015). An OECD expert group has been established to review and complete the document.	30/11/2017	JRC contributions to standards												
15	Genomics-informed high throughput screening	Information on what role genes play on disease is publically available. By combining this genetic information with toxicological data, diseases will be identified associated to genes known to be perturbed by chemicals. In collaboration with the US EPA in policy areas of common interest, e.g. environmental chemicals, cell based models (designed at EPA) to specifically probe the identified genes, will be implemented on the in-house high throughput platforms for large scale chemical assessment.	15/06/2018	JRC technical reports												
3	Large scale AR-CALUX assay data	The AR-CALUX reporter gene in vitro method assesses androgenic and anti-androgenic activity of chemicals. In the context of a ECVAM coordinated validation study, following Step 1 (D13), the 3 EU-NETVAL laboratories will proceed with Step 2, being the generation of a large data set with selected coded chemicals using the AR-CALUX assay. The final study reports of all 3 labs will allow a final assessment on reliability and relevance of the AR-CALUX in vitro method.	30/06/2018	Validated methods, Reference methods and measurements												
7	ECVAM guidance on metabolic clearance methods	To estimate the exposure of target cells to a toxicant, knowledge of hepatic metabolic clearance is important. Many metabolic clearance in vitro methods exist but differ a lot in experimental design and reliability. To ensure that different in vitro hepatic metabolic clearance methods can be effectively assessed for reliability and relevance for use in regulatory decision making and compared in their performance, a guidance document will be drafted for appropriate description and characterisation	15/11/2017	JRC technical reports												
82 - Validate	3868 - VAC2VAC	The H2020 project VAC2VAC brings together 20 public and private partners (vaccines manufacturers, control laboratories, academia, etc) and aims at provision of data to support the consistency approach for quality control of established vaccines (e.g. tetanus, diphtheria,	JRC.F.3	1.3.3.a	ENV	ENV.A3, Satu Susanna	GROW	Chem Cos Pharm Food Agri EU - Competent Authorities of EU Member States Chemicals, Cosmetics, Pharmaceuticals, Food, and Agrochemicals Industry	01/03/2016	CON-AA	2	Annual Report 2017	The report will summarise the work carried out in 2017 including the templates for method developers (as deliverables 5.1.1-5.1.4. of VAC2VAC WP5) and the organisation of an expert workshop.	31/12/2017	Project management related documents/reports identified as outputs of the JRC Work Programme	

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol.	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
JRC.F.3	comparison by consistency testing	pertussis, clostridial, leptospiral and rabies vaccines). The consistency approach moves away from the current focus on final product control heavily relying on animal testing. In the light of this VAC2VAC partners will develop, optimise and evaluate non-animal methods, e.g. physicochemical	MARIA ELISABETH HALDER		ENV		LOUHIMIES	SANTE	EMA - European Medicines Agency (EMA)	28/02/2021	CON-IA	3	Annual report 2018	This report summarises the work carried out in 2018 including the guidance on design of multicentre validation studies (as deliverable 5.4 of VAC2VAC WP5).	31/12/2018	Project management related documents/reports identified as outputs of the JRC Work Programme
565 - IPChem-NextGen JRC.F.2	3944 - IPChem-SciCooor Information Platform for Chemical Monitoring (IPChem); Scientific Coordination	Understanding of environmental and human health effects of combined exposure to chemicals and evidence-based decisions of a number of EU policies cross-cutting the areas of environment, health and chemicals rely on timely accessing and using reliable, robust and high quality data. This concerns the implementation and evaluation of the entire chemical legislation acquis and requires serving multiple Commission Services (e.g. ENV, SANTE, GROW, JUST, ENER, HOME, TAXUD, EMPL), EU Agencies (e.g. EEA, EFSA, ECHA, EMA) as well as international work on chemical management under the OECD and the environmental and health policies of UNEP and WHO. This work package aims to: (a) coordinate the work of the other WPs of the IPChem-NextGen project to achieve their objectives (i.e. setting up the information platform for monitoring of concentrations of chemical compounds in various media and products); (b) facilitate and ensure the progressive development of IPChem to the next generation of a multifaceted information platforms according to according to the INSPIRE principles on interoperability that will allow integrating environment, health and chemicals data to address specific cross-policy problems (e.g. exploring possible correlations between environmental chemical concentrations and incidence of certain diseases); (c) ensure that new data providers are progressively connected to the platform and that the IPChem content is widely disseminated to relevant stakeholders. The long-term development of IPChem will be steered by a group formed by representatives of all cooperating JRC Units. In order to facilitate a harmonized and efficient application of regulatory provisions specific to nanomaterials, the Commission has adopted the recommendation on the definition of a nanomaterial (COM(2011) 696. This is under review by the commission and the revised version, will be published during 2017. This revision is expected to involve only minor clarifications in the text and the ways to facilitate its implementation with the main elements (definition only related to size and particle number size distribution) remaining unchanged. Currently the routine implementation of the definition in legislation is still hindered by a lack of accepted, validated methods for the routine classification of materials with respect to the definition. The D-Nano WP will contribute to the resolution of this problem by undertaking a combination of instructional, networking and research activities as follows. Firstly, it will contribute to the general implementation of the definition by manufacturers and enforcement bodies by providing them with technical guidance documents based on own experience and use of results obtained in FP7 project NanoDefine (available by 10/2017). Secondly it will seek to establish and coordinate a European network for nanomaterial analysis (ENNA) involving national enforcement bodies or equivalents. Through this network it will collect and disseminate the most	JRC.F.2 Stylianios KEPHALOPOULOS	1.3.3.a	ENV	JRC	Bjorn Hanssen (DG ENV); Peter Korytar (DG ENV); Florence Limet (DG ENV); Frans Verstraete (DG SANTE); Elsa Maia (DG HOME); Tommaso Chiamparino (DG JUST); Antonios Barbas (DG CNECT)	CNECT EMPL ESTAT JUST RTD SANTE TAXUD	ECHA - European Chemicals Agency (ECHA) EEA - European Environment Agency EFSA - European Food Safety Authority OECD - Organisation for Economic Co-operation and Development (OECD) UNEP - United Nations Environment Programme (UNEP) WHO - World Health Organization	01/01/2016 31/12/2018	INS-RS	3	Prioritization/interoperability of EU data sources	Report on progress of promoting the data uptaking and enabling interoperability of IPChem with data sources from other EC related initiatives and projects (e.g. DG RTD's)	30/06/2017	JRC technical reports
												4	IPChem training support & dissemination activities	Report on the IPChem training support and dissemination activities in 2017	30/11/2017	JRC technical reports
												5	Supporting policy relevant case studies	Report on: the identification of data needs and sources for supporting policy relevant case study(-ies) planned to link exposure data, IT health information systems and toxicological specific info; identification of potential structural improvements need to be performed on the IT architecture of IPChem to accommodate the implementation of such case studies. This represents a synergistic development involving the following JRC Institutes/units: 1.1, 1.2, 1.5, H.6.	31/03/2018	JRC technical reports
												6	Supporting the HBM at global scale	Report on the implementation of Human Biomonitoring Module related data at global scale under IPChem (i.e. data produced in the context of the DG RTD's project HBM4EU and the Health Canada HMB database under the OECD Task Force Exposure Assessment).	30/09/2017	JRC technical reports
												7	Feasibility study for HERK-Hub	The feasibility study will explore the potential for the JRC's IPChem-NextGen project to develop into a Health and Environmental Information Systems Reference Knowledge Hub (HERK-hub) serving EU policies cross-cutting environment and health. The specific objectives of HERK-Hub will be to: •Identify common thematic areas / building blocks related to the integration of health and environmental data which are relevant to EU policies and enhance synergies of existing and future related activities/projects at both EU and MS levels . •Develop the HERK-hub Platform and its governance structure consisting of a cloud of distributed platforms based on the above identified common thematic areas / building blocks. •Provide guidance on: how addressing the challenges and making progress toward more effective use and integration of data already collected; prioritising future data collections while promoting and boosting data quality, comparability, harmonisation and standardisation; how enhancing our understanding of environmental health associations in EU MS; and performing robust impact assessments (health, environmental, economical)	31/10/2018	Science-for-policy reports
												1	Nanodefinition Preliminary Guidance	Based on previous JRC reports on the Commission Recommendation, a Working Document with questions and answers on the eventual revised nanomaterial definition will be produced plus basic guidance on how to apply the definition to specific nanomaterials. A first version of the guidance is urgently requested by stakeholders and will be produced on request from ENV. This initial version will address aspects of the definition that are unlikely to be affected by the currently on-going review.	31/01/2017	JRC contributions to policy documents
												2	Nanodefinition Full Guidance	After conclusion of the EC's nanomaterial definition review and depending on the resulting revisions, full Guidance on its practical implementation is necessary. The Guidance will also make use of results obtained in project NanoDefine (available by 10/2017). It will be produced in co-ordination with DG ENV, other relevant DGs and EU agencies, to assist industry and regulators how to practically determine whether a material should be regarded as nanomaterial for registration and other purposes	30/11/2017	JRC contributions to policy documents
3	Report detailing activities of the ENNA network	Report detailing the activities of the ENNA network.	15/12/2017	JRC technical reports												
4	Generalized pre-treatment methods for NP detection	Implementation of the EU nanomaterial definition is hindered by a lack of methods to analyse nanoparticles in complex matrices and requires access to broad spectrum sample pre-treatment methods to complement existing instrumental methods. To support the core policy-related work, at least two publications/technical reports evaluating experimental methods for extraction/quantification of chemically robust nanoparticles from key classes of complex matrices will be produced by late-2018.	30/11/2018	Article contribution to periodicals or to conference proceedings listed in SCOPUS												
5	Micro/nanoplastics in food and environment	Waste plastic present in the environment can degrade to form micro and possibly nano-particulates and that these can enter the food-chain with potential consequences for the environmental and food safety. Further degradation may produce potentially more harmful nano-size particulates but experimental evidence is absent due a lack of analytical methods. This deliverable will evaluate methods to detect and characterise micro and nanoparticulate plastics in the environment and the food-chain.	14/12/2018	Article contribution to periodicals or to conference proceedings listed in SCOPUS												
1.3.3.b air quality, pollutant emissions and industrial accident prevention - monitor and model ambient air quality and emissions (for vehicle emissions see also key orientation 4.1.a); carry out integrated impact assessments of air quality and climate policies and provide tools to facilitate air quality management at national, regional and local level; support the implementation of EU air quality policies through harmonisation and																
4854 - AIR JRC.C.5	2121 - K-VOC Metrology for VOC indicators for air pollution and climate change	To improve the measurement for key VOCs by providing traceable reference gas standards and by validating sensors-based devices. WP1 deals with fundamental issues related to the preparation of VOC standards. WP2 looks after traceability, accuracy and long-term stability. WP3 focuses on metrological issues related to indoor air. WP4 covers the validation of commercial sensor-based devices, including the development of a testing protocol, the review of the existing sensors and their validation.	JRC.C.5 Michel GERBOLES	1.3.3.b	ENV	RTD	MUNOZ CUESTA Marta (ENV.C.3)	GROW SANTE	CEN - European Committee for Standardization EMEP - European Monitoring and Evaluation Programme EURAMET - European Organisation of Metrology (EURAMET) WMO - World Meteorological Organization (WMO)	01/10/2014 30/09/2017	CON-IA	428	Testing protocol and procedure	Revision of the testing protocol and procedure for calibration based on laboratory validation	31/10/2017	JRC Technical reports
												433	Report on the field validation	Report on the field validation of (micro) sensors and identification of appropriate sensors	31/12/2017	JRC Technical reports
												435	Evaluation of the sensor uncertainty	Report on the evaluation of the sensor uncertainty and calibration and recommendations for improvement	31/07/2017	JRC Technical reports
												436	Validation of (micro) sensors for VOC	4.3.6 - Scientific publication on the validation of (micro) sensors for VOC monitoring submitted for publication in a peer-reviewed journal Using input from D4.2.7, D4.3.4 and D4.3.5 JRC and VSL will prepare of a scientific publication on the validation of (micro) sensors for VOC monitoring and submission for publication in a peer-reviewed journal.	31/08/2017	JRC Technical reports
4854 - AIR JRC.C.5	2422 - ACTRIS 2 Aerosols, Clouds, and Trace gases Research Infrastructure Network 2	The project is a follow-up of the FP7 project ACTRIS (2011-2015) in which JRC has been a partner. It aims to coordinate the European ground based network of stations equipped with advanced in-situ and remote sensing atmospheric	JRC.C.5 Jean-Philippe PUTAUD	1.3.3.b	ENV	RTD	Marta MUNOZ CUESTA (ENV.C.3), Anna Maria JOHANSSON (RTD B.4)	CLIMA	EMEP - European Monitoring and Evaluation Programme WMO - World Meteorological Organization (WMO)	01/05/2015 30/04/2019	CON-IA	1	Intercomparisons for carbonaceous content of PM	Reports on organisation and performance evaluation related to annual inter-laboratory comparison exercises for the determination of elemental and organic carbon in PM deposited on filters, within the ACTRIS-2 community and beyond. The exact number and dates of intercomparisons will follow from decisions made by the consortium.	30/04/2019	JRC Technical reports
341 - Reference Materials JRC.F.6	2741 - CARBAIR Developing measurement standards for carbon in airborne particulate matter	Exploratory Research Project The Air Quality Directive 2008/50/EC requires monitoring of (amongst others) elemental carbon (EC) and organic carbon (OC) in rural background locations. EC/OC is an important air pollutant because of its health and climate relevance. At present no suitable reference materials are available to Member State monitoring laboratories to ensure reliable measurement of EC/OC. Several	JRC.F.6 Andrea HELD	1.3.3.b	ENV	JRC	Marta Munoz (ENV.C.3)	CLIMA MOVE SANTE	Air Qual EU - Member States Competent Authorities for Air Quality EEA - European Environment Agency UN ECE - UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE WHO - World Health Organization	01/04/2015 31/03/2017	INS-ER	2	Final report	Final report of the project	31/03/2017	JRC Technical reports
												3	Project plan	Detailed project plan for the production of an EC/OC Certified Reference Material	31/03/2017	JRC Technical reports
												4	Publication	Publication summarizing the outcome of the exploratory research project submitted to a journal.	31/03/2017	Article contribution to a peer-reviewed periodical listed in the ISI Science Citation Index Expanded and/or Social Science Citation Index

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426 - MAHB JRC.E.2	3680 - Seveso AA 2016-2018 Seveso establishments and accident reporting	This AA supports Member State reporting obligations of the Seveso III Directive under Article 21 in terms of managing operational and customer interface needs and new requirements associated with 1) the Seveso Establishments database (eSPIRS http://minerva.jrc.ec.europa.eu) to facilitate the obligation of Member States to report establishment data to the Commission and 2) the Major Accident Reporting System (eMARS https://emars.jrc.ec.europa.eu) to facilitate collection of Member State reports of major chemical accidents. The eMARS database is also	JRC.E.2 Maureen WOOD	1.3.3.b	ENV	ENV	Alexandros Kiriazis	ECHO NEAR SANTE	CC EU - Candidate Countries EU MS EU - Member states EU OECD - Organisation for Economic Co-operation and Development (OECD) UN ECE - UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE UNEP - United Nations Environment Programme (UNEP)	01/06/2016 31/05/2018	CON-AA	1	eSPIRS and eMARS Maintenance/ HelpDesk - 2016-2017	This deliverable consists of final report summarising assistance and support in 2017 to Member States in reporting to eMARS and eSPIRS, including completing data fields properly, quality control and report follow-up, problem-solving on specific cases, advice and support on using the XML bulk import and confidentiality management tools. It also includes response to database queries, maintenance updates, and management supervision of the entire system.	31/05/2017	Scientific information systems and databases
												3	eSPIRS and eMARS Maintenance/ HelpDesk - 2017-2018	This deliverable consists of final report summarising assistance and support in 2017 to Member States in reporting to eMARS and eSPIRS, including completing data fields properly, quality control and report follow-up, problem-solving on specific cases, advice and support on using the XML bulk import and confidentiality management tools. It also includes response to database queries, maintenance updates, and management supervision of the entire system.	31/05/2018	Scientific information systems and databases
4854 - AIR JRC.C.5	3840 - AQAP Air Quality Assessment and Planning	This Administrative Arrangement (AA) supports the implementation and further development of EU air policies. In particular it aims to support, guide and check air pollution monitoring activities in Europe (through the AQUILA network), and to support, guide and promote the use of air quality modelling (through the FAIRMODE network). It further enhances the use of regional integrated assessment modelling techniques with a particular aim of extending the JRC Integrated Assessment Tool capabilities to allow cities and local	JRC.C.5 Philippe THUNIS	1.3.3.b	ENV	ENV	HENRICH Thomas (ENV.C.3), HOSS Frauke (ENV.C.3), KREGAR Zlatko (ENV.C.3)	DEVCO REGIO	CEN - European Committee for Standardization	01/01/2016 31/12/2018	CON-AA	2	Air quality modelling and monitoring	Report on activities undertaken under the AA, which include a report on the outcome of the inter-comparison exercise on spatial representativeness, a report on the updates made on the AirMonTech database for measurement techniques, and a guidance	15/05/2017	JRC technical reports
												3	Bottom-up composite map of European air quality	Report on activities undertaken under the AA, which include a database of air quality maps across Europe, and a report on the composition of bottom-up air quality maps.	15/06/2017	JRC technical reports
												6	SHERPA-City - 1	Report on activities undertaken in the AA including the development of the SHERPA integrated assessment tool including city scale features.	30/06/2017	JRC technical reports
												7	SHERPA-City - 2	SHERPA integrated assessment tool including city scale features and possibilities for the users to test interactively city scale air quality planning options	01/01/2018	Technical systems
4854 - AIR JRC.C.5	3842 - IACA Integrated analysis of a changing atmosphere	The work package Analysis of a Changing Atmosphere supports the implementation and development of the EU's Clean Air policy framework. It further explores emission reduction scenarios that are beneficial for air and climate, and as well regarding human health and crop yields. Core activities are related to the JRC mandate to control the quality of air pollution data measured by the Member States as requested by the 2008/50/EC Air Quality Directive. Air Pollution data are observed and reported according to Council Decision 81/462/EEC on the conclusion of the Convention on Long-range Transboundary Air Pollution. Ex-post and scenario evaluations of the effectiveness of emission reduction policies are carried out to answer specific policy questions and anticipate emerging issues. The activities contribute to the evaluation of the Air Quality Directive, which will be launched by DG ENV in 2017, and the envisaged comprehensive air policy review. The work is complemented by activities on development, application, harmonisation and standardisation of modelling, measurement and innovative sensing of air pollution to pave the way to better regulations in the future. A solid foundation for future activities in the field of citizen science is built up by preparing harmonised protocols for the evaluation and benchmarking of sensors against the Data Quality Objectives of indicative measurements set in the Air Quality Directive (2008/50/EC) and in collaboration with strategic European reference centres. The work package also aims at integrating sensor measurements into public information systems by releasing open source software and platforms ensuring compliance with the requirements of the Inspire Directive (2007/2/EC) out of the box.	JRC.C.5 Annette BOROWIAK	1.3.3.b	ENV	JRC	HENRICH Thomas (ENV.C.3), MUNOZ CUESTA Maria (ENV.C.3)	CLIMA GROW	- WORLD HEALTH ORGANIZATION REGIONAL OFFICE FOR EUROPE BIPM - International Committee on Weights and Measures CEN - European Committee for Standardization EEA - European Environment Agency EURAMET - European Organisation of Metrology (EURAMET) UN ECE - UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE UN FCCC - UN Framework Convention on Climate Change (UN-FCCC)	01/01/2016 31/12/2020	INS-RS	0	Impacts of the implementation of the UNECE LRTAP	Policy briefing on EU air and emission relevant information taken from a trend analysis of air pollutant concentrations based on the implementation of the UNECE Convention on Long-range Transboundary Air Pollution (LRTAP, 1979). Over the years, the LRTAP has been extended by eight protocols that identify specific measures to be taken by Parties to the Convention to cut their air pollutant emissions. Carried over from WP 2016, deliverable 201606.	15/03/2017	Science-for-policy reports
												1	Evaluation of capabilities to measure air quality	The JRC has the legal obligation to organise quality assurance programmes for the Member States' National Reference Laboratories responsible for air quality measurements. In the technical report the Member States capabilities to measure gaseous air pollutants during the 2016 quality assurance programmes (two intercomparison exercises inorganic gaseous pollutants, one intercomparison organic pollutants) are being evaluated.	01/11/2017	JRC technical reports
												2	Ex-post analysis of biomass burning on air quality	The JRC will carry out an ex-post analysis of concentration trends in regulated and emerging pollutants measured at the air pollution observatory in Ispra. Data are submitted under the UNECE Convention on long range transboundary air pollution. The analysis will focus on the impacts of the expected increased burning of biomass as a result of the economic crisis and climate and energy policies. The Ispra case study will be used as benchmark and the extension to the European scale will be examined.	30/11/2017	JRC technical reports
												3	Evaluation of current data quality criteria	The 2008/50/EC Air Quality Directive will be evaluated by the European Commission starting in 2017. JRC will contribute to this evaluation by analysing the quality assurance programmes of the past years (including 2017) on air pollutant measurement capabilities of the Member States. The Data Quality Objectives for measurements of gaseous and particulate air pollution of the 2008/50/EC Air quality Directive will be critically reviewed.	31/10/2018	JRC technical reports
												4	Impact of Air and Climate policies	Analysis of air quality and climate policies and their impacts on short-lived climate pollutants by the web-based Fast Scenario Screening Tool FASST will be extended to include uncertainty ranges based on ensemble techniques, economic evaluation of costs and benefits, and a higher spatial detail over Europe. The tool will be applied to evaluate how air pollutant emissions affect pollutant concentrations and their impact on human health and crop yields under various policy options. JRC.C.6 collab	30/11/2017	Scientific information systems and databases
												5	Cost-benefit analysis of mitigation scenarios	The web-based Fast Scenario Screening Tool FASST tool will be applied for cost-benefit analysis of mitigation scenarios for climate and air quality in a European and global perspective specifically in the framework of the UNECE Convention on Long-range Transboundary Air Pollution and the Intergovernmental Panel on Climate Change (IPCC). Links with integrated assessment tools for policy support will be explored.	01/12/2018	Scientific information systems and databases
												6	Scientific Publications	Scientific Publications on how sensors are affected by several gaseous compounds and physical parameters and how to determine ambient air pollutants by solving a system of equations, on the evaluation of multi-scale ensemble model results in the framework of the Air Quality Model Evaluation International Initiative (AQMEII), and on a global assessment of short-lived climate forcers impacts.	01/07/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												7	Potential of new technologies in air assessment	New or emerging technologies for an easier, more cost-efficient and better spatial coverage assessment of air pollutants will be examined and recommendations for a future use in a legal and a citizen science context will be given. This deliverable contributes to the evaluation process of the Air Quality Directive 2008/50/EC.	01/07/2018	Science-for-policy reports
												8	Ex-post analysis of transport emission standards	An ex-post analysis of concentration trends in regulated and emerging pollutants measured at the air pollution observatory in Ispra will be carried out. Data are submitted under the UNECE Convention on long range transboundary air pollution. The analysis will focus on the impacts of emission standards for vehicles and study possible trends of emerging issues due to introduction of new technologies. The Ispra case study will be used as benchmark and the extension to the European scale will be assessed.	01/11/2018	JRC technical reports
												9	European standard methods to assess air quality	JRC is contributing to the EU Standardisation process in the CEN (Comité Européen de Normalisation) Technical Committee "air quality" by steering the work and chairing two and collaborating in seven working groups on measurement and modelling of air pollution. The correct implementation of EC mandates is monitored. The drafting and publication of several standards for various pollutants relevant in air policy is foreseen in the upcoming years.	01/07/2018	JRC contributions to standards
4855 - GHG-MoVe JRC.C.5	3844 - AMIT02 Atmospheric Methane and its Impacts on Tropospheric Ozone, human health and the environment	The activities leverage the integrated synergy of H2's three main assets: emissions monitoring, air quality (AQ) modelling, and AQ impact analysis. We also envisage collaboration with H04 (Monitoring Agricultural Resources) on matters pertaining to the effects of air pollutants, specifically ozone, on vegetation and crops. The AA supports work carried out in the Task Force on Hemispheric Transport of Air Pollutants (TF HTAP). The AA provides support to DG ENV on mitigation options for CH4 and other air pollutants in the northern hemisphere, and the benefits for reducing tropospheric ozone and its impacts on	JRC.C.5 Greet JANSSENS-MAENHOUT	1.3.3.b	ENV	ENV	André Zuber (ENV.C.3), F. Hoss (ENV)	AGRI CLIMA	EEAS - European External Action Service EMEP - European Monitoring and Evaluation Programme UN ECE - UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE	01/01/2016 31/12/2017	CON-AA	201701	CH4 and O3 emissions and mitigation and link to O3	Comparison of EDGAR, ECLIPSE, and EU GHG inventories (EEA/CEIP/EMEP), based on the 2015 Arctic Monitoring and Assessment Programme report on CH4. Analysis of the potential drivers of CH4 trends and the consequences for hemispheric O3. Identification of target sectors for NH3 and CH4 reduction. Speciation of Non-Methane Volatile Organic Compounds Report on emission intercomparison with impact of EU and USA AQ policies evaluation, focusing on CH4 and including uncertainty assessments.	15/12/2017	Science-for-policy reports
												201702	Scenario evaluation with new FASST tool	Source-receptor matrices: EMEP and HTAP community source-receptor relations and model uncertainties as well as non-linearity corrections from TM5 to be included in TM5-FASST. Impacts: Inclusion of N and S deposition to ecosystems, inclusion of new stomatal flux approach for crop damage.	30/12/2017	Validated methods. Reference methods and measurements
												201703	Impacts of emission reductions	Application of the online FASST tool on HTAP and SSP scenarios to estimate the impact on health and crop yields; Assessment of the impacts of ozone on vegetation (and more specifically on crops) in collaboration with ICP vegetation and AgMIP (the agricultural modelling community); Source attribution of air pollution with an emphasis on consistency of observations.	31/12/2017	Scientific information systems and databases

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		agricultural crops, human health and climate. Models, databases and AQ model analyses of impacts on a variety of scales will provide the scientific basis for including methane as an air pollutant in new policies.										201704	Outreach in EC and UN assessments	Coordination, dissemination and outreach activities under the TF HTAP and other EC-endorsed activities. Participation in LRTAP/TF HTAP meetings and promotion of the use of integrated information (emission, modelling, impacts) by international communities other than the LRTAP. Organisation of workshops to harmonise activities and combine efforts in the three topics. Networking with GEIA, IGAC, TFMM and the Eurodelta Community.	18/12/2017	Oral presentation
												201705	Model & input uncertainty evaluation for AQMEII	Evaluation of HTAP global regional model and ensembles for current/future air pollution scenarios. Representativeness of sampling sites for global/regional models. Using ensembles of models to determine impacts with the online FASST tool.	31/12/2017	JRC technical reports
426 - MAHB JRC.E.2	4383 - EU-CAPP Scientific support to EU Seveso Directive Implementation	This project is aimed to support Seveso Directive implementation. It has three main elements: 1) fulfilling the Lessons Learned obligation (Art. 21). 2) upgrading the eMARS reporting tool to increase the value of reporting lessons learned from major chemical accidents for scientific use and as a technical resource for all stakeholders (in particular to EU and OECD competent authorities who supply the data). eMARS fulfils the Commission obligation to establish a database for mandatory reporting of major chemical accidents by EU Member States under Seveso Article 21. eMARS is also the official reporting system for exchanging lessons learned from chemical accidents between OECD countries. https://emars.jrc.ec.europa.eu Maintenance and daily operations of the eMARS system are funded under an AA between JRC and DG ENV (WP 3680). 3) facilitating exchange and dissemination of good practice through development of Seveso inspector tools in collaboration with Member States. This element also provides significant support to the JRC's work in Seveso capacity building in WP's 4382 (Chemical accident prevention and preparedness products and services - general scientific support, including EU but also the global community), 3672 and 4388 (DG ECHO AAs on Seveso Capacity Building in Neighbour Countries). This WPK also supports WPK 437. This work package also supports the JRC Disaster Risk Knowledge Management Centre.	JRC.E.2 Maureen WOOD	1.3.3.b	ENV	JRC	A. Kiriazis (ENV), Ian Clark (ECHO)	DEVCO ECHO GROW HOME NEAR	CC EU - Candidate Countries EU MS EU - Member states EU OECD - Organisation for Economic Co-operation and Development (OECD) UN ECE - UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE UNEP - United Nations Environment Programme (UNEP)	01/01/2016 18/12/2020	INS-RS	01	Chemical Accident Analysis Emerging Trends - 2017	In fulfillment of the Seveso Article 21, MAHB will produce 2 Lessons Learned Bulletins (June and December) containing analytical briefs of lessons learned from chemical accidents related to specific thematic topics. The topics are chosen based on recent trends, and accidents with input from current projects and collaborations with international partners and Member States. Several topics are currently under discussion	22/12/2017	JRC technical reports
												02	Chemical Accident Analysis Emerging Trends - 2018	In fulfillment of the Seveso Article 21, MAHB will produce 2 Lessons Learned Bulletins (June and December) containing analytical briefs of lessons learned from chemical accidents related to specific thematic topics. The topics are chosen based on recent trends, and accidents with input from current projects and collaborations with international partners and Member States.	21/12/2018	JRC technical reports
												04	eMARS-XML import and validation tool - 2017	Development of XML Import functionality and Validation Tool within eMARS (for reporting major chemical accident lessons learned).	30/11/2017	Scientific information systems and databases
												05	Modernisation-eMARS Accident Reporting - 2017	Analysis of options for modernisation of the EU/OECD eMARS reporting tool (for reporting major chemical accident lessons learned) to: 1) reflect updated approaches to motivate high quality and more timely lessons learned reporting 2) to address user feedback and encourage an increase in non-mandatory reporting. 3) incorporate Seveso III changes This task will consist mainly of analysis of current eMARS data and a number of reporting re-design alternatives based on 1 and 2.	31/05/2018	Scientific information systems and databases
												06	eMARS-Training, Beta-test, and Feedback -2018	Training of eMARS EU/EEA/OECD competent authority users on XML import and invalidation tool. Incorporation of feedback in the development of a continuously improving web application for reporting major chemical accident lessons learned.	30/11/2018	Scientific information systems and databases
												10	INSPIRE for SEVESO – 2017	This deliverable is a report following the progress related to the 2016 strategy paper on MAHB's strategy to address the needs for INSPIRE compliance, with close collaboration with JRC INSPIRE and DG ENV associated with WPK 1052.	15/12/2017	Scientific information systems and databases
												11	INSPIRE for SEVESO – 2018	This deliverable is a progress report of INSPIRE compliance activities carried out in 2018, taking stock of MAHB's 2016 strategy paper, the with close collaboration with JRC INSPIRE and DG ENV associated with WPK 1052.	14/12/2018	Scientific information systems and databases
												14	Knowledge Management-Accident Data/Studies-2018	This deliverable consists of development and implementation of a knowledge management strategy for delivering accident reporting and analyses products. It consists of making the analyses more easily retrievable, readable and available for use of user communities using online presentation strategies, new communication technologies, etc. and also on-line tutorials for using the eMARS accident reporting system and data. The deliverable is a summary report of progress.	14/12/2018	Scientific information systems and databases
												16	Risk management/enforcement good practice-2017	The deliverable will consist of a good practice document for inspectors, and summarise results of a workshop for Seveso inspectors on LPG/warehouse distribution sites hosted by Cyprus, and the outcomes of the JRC Chemical Accident Risks Seminar relevant for EU Seveso implementation (joint with WPKs 4383 & 4388), as well as knowledge management activities to disseminate results more broadly and in accessible formats.	15/12/2017	JRC technical reports
												17	Risk management/enforcement good practice-2018	Collaborations with EU Member States and industry on good practice documents for inspectors and industry on good practice for implementing and enforcing effective risk management on Seveso sites. This element includes: -a workshop for Seveso inspectors on management of safety instrumented systems hosted by Austria, a good practice document on risk management of explosive sites, dissemination in useful formats stakeholders.	14/12/2018	JRC technical reports
												19	Safety Performance Indicator Tools-2017	Research and development in collaboration with EU competent authorities and industry experts on key safety performance indicators to fill gaps in existing guidance and develop a tool to assist competent authorities and industry in recognizing indicators relevant for specific major hazard sites, in support of implementation and enforcement of effective safety management systems. The deliverable will be Terms of Reference and a Work Plan based on the outcome of expert task force discussions.	15/12/2017	JRC technical reports
												20	Safety Performance Indicator Tools-2018	Research and development in collaboration with EU competent authorities and industry experts on key safety performance indicators to fill gaps in existing guidance and develop a tool to assist competent authorities and industry in recognizing indicators relevant for specific major hazard sites, in support of implementation and enforcement of effective safety management systems. Deliverable is a summary report of information gathering and technical development in 2018.	14/12/2018	JRC technical reports
4854 - AIR JRC.C.5	5103 - ACTRIS PPP Aerosol, Clouds, and Trace gases	ACTRIS is the European Research Infrastructure for the observation of Aerosol, Clouds, and Trace	JRC.C.5 Jean-Philippe PUTAUD	1.3.3.b	ENV	RTD	Thomas Henrichs			01/11/2017 31/10/2020	CON-IA	1	Application for European Research Infrastructure C	The necessary preparatory procedures and documents for an application of ACTRIS to ERIC will be prepared and submitted	30/04/2019	Scientific information systems and
1.4 Maritime affairs and fisheries																
1.4.a CFP (Common Fisheries Policy) implementation - develop and apply biological, economic, social, spatial and genetic/genomic approaches to sustainable and competitive aquaculture and fisheries, in the EU and worldwide;																
												248301172	Fisheries and Aquaculture Economics	The JRC will contribute to the economic performance assessment of fisheries related sectors such as fleets, aquaculture and the fish processing sector for 2017. This activity supports the provision of scientific advice foreseen under the Common Fisheries Policy, and also sustains the Blue Economy and the implementation of the European Maritime and Fisheries Fund (EMFF).	30/11/2017	Science-for-policy reports
												248301173	Monitoring essential fish habitats	Monitoring essential fish habitats in support of a sustainable blue economy The JRC will integrate marine habitat modelling into stock assessment approaches for commercially exploited fish species and work towards their integration into existing management schemes.	15/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												248301174	Fisheries bioeconomic modelling and MSEs	Fisheries bioeconomic modelling and its integration into Management Strategy Evaluation.	15/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
248 - AquaFish JRC.D.2	301 - BluEcoFa Blue Economy from a Fisheries and Aquaculture Perspective	In this work package, the JRC will focus on research activities to support the Blue Growth long-term strategy (COM(2012) 494) and the Blue Economy, with a focus on assessing the potential for economic performance in the EU fisheries and aquaculture sector. Work items include the discards ban and bio-economic modelling and analysis. This work package is strongly linked and complementary to the AA FishMan (WPK3886).	JRC.D.2 Jann MARTINSOHN	1.4.a	MARE	JRC	Ruth-Elisa ROLLER VRUJENHOEK; DG MARE A.3		- Food and Agricultural Organisation GFCM - General Fisheries Commission for the Mediterranean ICES - International Council for the Exploration of the Sea	01/01/2014 31/12/2018	INS-RS	248301175	CFP information system fisheries and aquaculture	The Common Fisheries Policy information system on fisheries and aquaculture Fisheries and Aquaculture relevant data and information will be made available to end-users and stakeholders through the JRC Data Dissemination Tool.	15/12/2017	Scientific information systems and databases
												248301176	Balancing fishing fleet and resources	Balancing EU fishing fleet capacity and fishing opportunities: An analysis The balance between capacity and fishing opportunities will be analysed, assessed and reported.	15/12/2017	Science-for-policy reports
												248301177	Economic analysis of the EU fisheries sector	Economic analysis of the EU fisheries sector in support of Blue Growth A series of economic analyses will be performed to better understand trade and market patterns and the performance and trends of diverse EU fleet segments.	15/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												248301178	Supporting the CFP Control Scheme	Supporting the Common Fisheries Policy Control Scheme Upon request of DG MARE support to capacity building in the area of fisheries control and enforcement, in particular for statistical analysis in the context of the landing obligation and genetics/genomics for traceability will be provided.	15/12/2017	Training
												248301181	Fisheries and Aquaculture Economics	The JRC will contribute to the economic performance assessment of fisheries related sectors such as fleets, aquaculture and the fish processing sector for 2017. This activity supports the provision of scientific advice foreseen under the Common Fisheries Policy, and also sustains the Blue Economy and the implementation of the European Maritime and Fisheries Fund (EMFF).	30/11/2018	Science-for-policy reports
												248301182	Balancing fishing fleet and resources	The balance between capacity and fishing opportunities will be analysed, assessed and reported.	15/12/2018	Science-for-policy reports
248 - AquaFish JRC.D.2	302 - SuFIA Sustainable Fisheries and Aquaculture	The sustainable exploitation of marine fish constitutes a major challenge, and is the only way to ensure also economic profitability and resilience of the fisheries and aquaculture industry in the long term. Moving towards a sustainable and profitable exploitation of marine renewable living resources depends on the provision of sound scientific advice as stipulated in the basic regulation underpinning the Common Fisheries Policy. The JRC will focus on new approaches for the provision of scientific advice to fisheries management and policy making and contribute to the international scientific progress in this field. These activities are closely linked and complementary to Work Package 301 BluEcoFa and the Administrative Arrangement FishMan between the JRC and DG MARE.	JRC.D.2 Jann MARTINSOHN	1.4.a	MARE	JRC	Ruth-Elisa ROLLER VRUJENHOEK; Valerie LAINE	ENV	FAO - THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO) EFCA - European Fisheries Control Agency GFCM - General Fisheries Commission for the Mediterranean ICES - International Council for the Exploration of the Sea STECF - Scientific, Technical, and Economic Committee for Fisheries	01/01/2014 31/12/2018	INS-RS	248302171	Spatial analysis in fisheries: Effort and Impact	Fishing activity information generated from vessel positioning data will be merged with Member State data collected under the Data Collection Framework ((EC)199/2008) to produce estimates of fishing effort at high spatial and temporal resolution in the Mediterranean and in other sea basins used by the EU fishing fleet.	15/05/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												248302170	State of fish stocks in the Black Sea	Abundance and state of fish stocks in the Black Sea The JRC will contribute to scientific advice on the commercial exploitation of marine fish in the Black Sea.	15/12/2017	Science-for-policy reports
												248302171	Genetics and genomics for management	Genetics and genomics for improved fisheries and aquaculture management In collaboration with international research institutions and under the remit of the International Council for the Exploration of the Sea, the JRC will assess the potential of genetic close-kin analysis for abundance estimates of commercially exploited fish species with emphasis on deep-sea species.	15/09/2017	Article contribution to a monograph or other periodicals
												248302172	Pelagic Habitat and Marine Foodweb Framework	Existing knowledge and modelling on small and large predators (tuna, fin whale, hake, small pelagics, sole), including EU available presence/abundance data (scientific) and regional catch data will be merged to create a generic pelagic habitat and marine foodweb framework.	15/12/2017	JRC technical reports
												248302173	Fish habitat mapping in support to CFP	Habitat mapping of commercially exploited fish species in support of the Common Fisheries Policy JRC will explore how and to what extent marine habitat mapping can support management decision finding to enhance the sustainable exploitation of commercially exploited fish species.	15/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												248302174	Fisheries modelling research and application	Fisheries modelling research and application based on a4a and FLR. The Fisheries Library based on R (FLR) and the JRC Assessment for All (a4a) modelling framework will be further enhanced and tested.	15/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												248302175	Fisheries Modelling and MSEs: Capacity building	Introductory and/or advanced courses will be provided to stakeholders and end-users on fisheries modelling and Management Strategy Evaluation to support EU-capacity building in this area	15/12/2017	Training
												248302176	Scientific support to policy dissemination	Advancing fisheries and aquaculture scientific support to policy: Dissemination and stakeholder engagement Contributions to international workshops, symposia and conferences will support the engagement with stakeholders and the scientific community and foster the dissemination of JRC activities.	15/12/2017	Oral presentation
												248302177	Fisheries Management Plans/Strategies: Evaluation	Fisheries Management Plans and Strategies under the Common Fisheries Policy: Evaluation As required under the remit of the Common Fisheries Policy, the JRC, together with the Scientific, Technical and Economic Committee for Fisheries (STECF) will review and assess Fisheries Management Plans.	15/12/2017	Science-for-policy reports
												248302178	Support to the EU Mediterranean Strategy	Support to the EU Mediterranean Strategy: Enhancing the assessment of commercially exploited fish stocks. The JRC will contribute to scientific advice on the commercial exploitation of marine fish in the Mediterranean, a particularly challenging region with respect to fisheries management	15/12/2017	Science-for-policy reports
												248302179	New approaches to assessment of exploited stocks	Novel approaches to assessment of commercially exploited stocks In collaboration with international research institutions the JRC will explore and develop new approaches to the assessment of commercial fish stocks, taking into account current data availability and data gaps.	15/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												248302181	Fisheries Management Plans/Strategies: Evaluation	As required under the remit of the Common Fisheries Policy, the JRC, together with the Scientific, Technical and Economic Committee for Fisheries (STECF) will review and assess Fisheries Management Plans.	14/12/2018	Science-for-policy reports

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248 - AquaFish JRC.D.2	3886 - FishMan 2016_18 Managing Scientific Advice and Monitoring Fisheries Data (2016 - 2018)	Under the remit of this Administrative Arrangement the JRC produces scientific advice in support of the Common Fisheries Policy. Core activities include administrative and scientific support to the Scientific, Technical and Economic Committee for Fisheries, support to the Data Collection Framework ((EC) 199/2008) and the development of the DCF to future data collection multi-annual (DC-MAP) for 2014-2020, but also response to ad-hoc requests by DG MARE. The work and research carried out under this AA is largely complemented by institutional research activities under the scope and remit of the project AquaFish.	JRC.D.2 Jann MARTINSOHN	1.4.a	MARE	MARE	Ruth-Elisa ROLLER VRIJENHOEK			13/09/2016 12/02/2018	CON-AA	248302182	Support to the EU Mediterranean Strategy	The JRC will contribute to scientific advice on the commercial exploitation of marine fish in the Mediterranean, a particularly challenging region with respect to fisheries management	14/12/2018	Science-for-policy reports
												248302183	State of fish stocks in the Black Sea	The JRC will contribute to scientific advice on the commercial exploitation of marine fish in the Black Sea.	14/12/2018	Science-for-policy reports
												24833993171	AA FishMan Annual Progress Report	At the end of the activity period covered by this AA, the JRC delivers the annual progress report to DG MARE outlining and summarizing pursued activities and outcomes covered by the AA remit, but also providing additional information of other projects and activities carried out.	29/09/2017	Project management related documents/reports identified as outputs of the JRC Work Programme
												24833993172	STECF Plenary Reports	The JRC will be a key contributor to the Plenary Meeting Reports of the Scientific, Technical and Economic Committee for Fisheries (STECF), the major scientific advisory body to the European Commission in matters pertaining the Common Fisheries Policy (CFP), as stipulated in the basic CFP regulation (EU) 1380/2013.	01/09/2017	Science-for-policy reports
												24833993173	The EU Data Collection Framework	Under the remit of the EU Fisheries and Aquaculture Data Collection Framework (EC) 199/2008, member states are obliged to submit fisheries and Aquaculture data on fishery dynamics and economics to the European Commission. The DCF is currently under reform. DCF data is hosted, processed and also analyzed by the JRC. The JRC will contribute with its expertise and capacity to a series of reports of the Scientific, Technical and Economic Committee for Fisheries on the DCF status and reform process.	01/09/2017	Science-for-policy reports
24833993174	Monitoring the Common Fisheries Policy Performance	Article 50 of the Common Fisheries Policy (CFP; Regulation (EU) No 1380/2013) stipulates that the European Commission shall report annually to the European parliament and Council on status and progress of certain provisions laid down in the basic CFP regulation. To this end the Commission has requested the STECF to review and advise on suitable metrics and indicators. The JRC will contribute to this process.	01/09/2017	Science-for-policy reports												
248 - AquaFish JRC.D.2	4886 - FishMan 2018_19 Managing Scientific Advice and Monitoring Fisheries Data (2018 - 2019)	Under the remit of this Administrative Arrangement the JRC produces scientific advice in support of the Common Fisheries Policy. Core activities include administrative and scientific support to the Scientific, Technical and Economic Committee for Fisheries, support to the Data Collection Framework ((EC) 199/2008) and the implementation of the DCF to future data collection multi-annual (DC-MAP) for 2014-2020, but also response to ad-hoc requests by DG MARE. The work and research carried out under this AA is largely complemented by institutional research activities under the scope and remit of the project AquaFish.	JRC.D.2 Jann MARTINSOHN	1.4.a	MARE	MARE	Ruth-Elisa ROLLER VRIJENHOEK			13/02/2018 12/02/2019	CON-AA	24833993181	AA FishMan Annual Progress Report	At the end of the activity period covered by this AA, the JRC delivers the annual progress report to DG MARE outlining and summarizing pursued activities and outcomes covered by the AA remit, but also providing additional information of other projects and activities carried out.	28/02/2019	Project management related documents/reports identified as outputs of the JRC Work Programme
												24833993182	STECF Plenary Reports	The JRC will be a key contributor to the Plenary Meeting Reports of the Scientific, Technical and Economic Committee for Fisheries (STECF), the major scientific advisory body to the European Commission in matters pertaining the Common Fisheries Policy (CFP), as stipulated in the basic CFP regulation (EU) 1380/2013.	15/12/2018	Science-for-policy reports
												24833993183	The EU Data Collection Framework	Under the remit of the EU Fisheries and Aquaculture Data Collection Framework (EC) 199/2008, member states are obliged to submit fisheries and Aquaculture data on fishery dynamics and economics to the European Commission. The DCF is currently under reform. DCF data is hosted, processed and also analyzed by the JRC. The JRC will contribute with its expertise and capacity to a series of reports of the Scientific, Technical and Economic Committee for Fisheries on the DCF status and reform process.	15/12/2018	Science-for-policy reports
												24833993184	Monitoring the CFP Performance	Article 50 of the Common Fisheries Policy (CFP; Regulation (EU) No 1380/2013) stipulates that the European Commission shall report annually to the European parliament and Council on status and progress of certain provisions laid down in the basic CFP regulation. To this end the Commission has requested the STECF to review and advise on suitable metrics and indicators. The JRC will contribute to this process.	15/12/2018	Science-for-policy reports
1.4.b maritime spatial planning and coastal management - develop and collate knowledge for maritime spatial planning and coastal management, and the relevant knowledge management tools (EU Atlas of the seas and Marine Competence Centre):																
703 - NC-Waters	2900 - MARATLAS 2	This project will develop the next generation of the MARATLAS 3 focuses on the scientific advancement of the "European Atlas of the Seas". With the increased attention given to the Atlas, the range of stakeholders (and related requirements) has also significantly increased, to include: the general public; professionals from Member States	JRC.D.2	1.4.b	MARE	MARE	M. King			01/05/2015	CON-AA	201602	Final Report	Final Report of the European Atlas of the Seas Project	30/06/2017	Scientific and policy
703 - NC-Waters JRC.D.2	5015 - MARATLAS 3 European Atlas of the Seas 3		JRC.D.2 Vittorio BARALE	1.4.b	MARE	MARE	Anne-France WOESTYN	ENV		02/05/2017 01/05/2019	CON-AA	201801	Map collection for 'Atlas of the Seas' - prelim.	Collection of maps for the 'Atlas of the Seas' Version 4 upgrade, with reference to specific marine/maritime sectors (e.g. Fisheries) and their overall integration into a coherent set for policy applications (in particular: Maritime Spatial Planning).	30/04/2018	Scientific information systems and databases
												201901	Map collection for 'Atlas of the Seas' - final	Collection of maps for the 'Atlas of the Seas' Version 4 upgrade, with reference to specific marine/maritime sectors (e.g. Fisheries) and their overall integration into a coherent set for policy applications (in particular: Maritime Spatial Planning).	30/04/2019	Scientific information systems and databases
1.4.c maritime security - improve EU maritime surveillance systems, enhance their interoperability and provide support to implement selected actions under the EU Maritime Security.																
4973 - CISE JRC.E.5	1901 - CISEPOV CISE Pre-Operational Validation	To support the Pre-Operational Validation (PoV) FP7 Project EUCISE2020 for the implementation of CISE (Common Information Sharing Environment for the Maritime Domain), as a permanent member of the Engineering & Operation Support (EOS) and Verification & Validation (VV) Groups set up for this FP project. To review project deliverables, advise on selected technical topics, and ensure coherence with other parallel	JRC.E.5 Franco OLIVERI	1.4.c	MARE	MARE	Christos ECONOMOU	CNECT DIGIT HOME MOVE TAXUD	EFCA - European Fisheries Control Agency EMSA - European Maritime Safety Agency EUROPOL - EUROPOL EUSC - European Union Satellite Centre MS EU - Member states EU	03/12/2014 02/09/2018	CON-AA	7	Activity Reports (2017)	This deliverable includes the different activities linked to the chairing and managing of the Technical Advisory Group (TAG) and to the scientific and technical contributions of JRC. This deliverable includes the development of a test bed platform for CISE and the associated commissioning plan.	20/09/2017	JRC Technical reports
												8	Implementation of CISE components (2017)	It will also include the activities linked to the necessary adaptation of CISE components produced by the PoV and the consolidation of CISE technical documentation produced by the PoV.	02/12/2017	Scientific information systems and databases
												9	Test reports	This deliverable includes the activities of JRC related to the testing of software interfaces of the CISE participant entities (application of the commissioning test).	02/12/2017	JRC Technical reports
4973 - CISE JRC.E.5	5040 - CISERO CISE Roll Out	The CISE (Common Information Sharing Environment) for the Maritime Domain will enter into the final phase (roll-out) in 2018, according to CISE's guiding principles established in Commission Communication (COM(2009)538 final) of 15.10.2009 and further defined in Commission Communication (COM(2014) 451 final) of 08.07.2014. The JRC has supported DG MARE in the development of CISE from the very early stages. Currently, this support is materialised under the AA 33537, which will expire on December, 2nd 2017 and will be renewed to allow the finalisation of the	JRC.E.5 Franco OLIVERI	1.4.c	MARE	MARE	Christos ECONOMOU	CNECT DIGIT ENV HOME MOVE TAXUD	EDA - European Defense Agency EFCA - European Fisheries Control Agency EMSA - European Maritime Safety Agency EUROPOL - EUROPOL EUSC - European Union Satellite Centre MS EU - Member states EU	03/09/2018 31/12/2019	CON-AA	1	Activity report with the TAG	This deliverable describes the different activities linked to the chairing and managing of the TAG (Technical Advisory Group for Maritime Surveillance) as well as the scientific and technical contributions to it by JRC.	21/12/2018	JRC technical reports
												2	Implementation of the CISE Test Bed (2018)	This deliverable is the test bed platform for CISE (to take into account the lessons learned from the FP7 EUCISE2020 verification phase) and will include the definition of suitable test plans for interoperability verification. Possibly, it will also include the execution of some pilot tests with relevant authorities or EU Agencies.	21/12/2018	Technical systems
												3	Finalisation and maintenance of CISE components	This deliverable includes the maintenance of the CISE eHandbook (website & technical content), the refinement and maintenance of the CISE Data and Service model and the activities related to the launch of its standardisation. It also includes the activities linked to the adaptation of CISE components and the consolidation of CISE technical documentation produced by the CISE PoV, taking into account the parallel development of the CEF (Connecting Europe Facility) digital building blocks.	21/12/2018	JRC technical reports
1.5 Health and food safety																
1.5.1 Health																
1.5.1.a healthcare and health information - the standardisation, harmonisation and improvement of healthcare and health information in the EU, with an initial focus on cancer and rare diseases; this includes the coordination/development of European health registries, the launch of an innovative and comprehensive quality assured healthcare pathway (starting with breast cancer, followed by colorectal cancer), monitoring cross-																
242 - HQHI JRC.F.1	647 - RD Platform Development of a European Platform for Rare Diseases	The European Platform for Rare Diseases (RD) is being developed (1) to cope with the enormous fragmentation of data contained in over 600 patient registries across Europe (developed and maintained by national and regional entities, research institutes, hospitals, patient organisations pharmaceutical companies) and other data sources. In addition, (2) the Platform functions as a sustainable data repository: the central databases and the European-level coordination activities of the surveillance networks EUROCAT (European Surveillance of Congenital Anomalies) and SCPE	JRC.F.1 SIMONA MARTIN	1.5.1.a	SANTE	SANTE	DG SANTE.C.1 - Jaroslaw WALIGORA - Jaroslaw.WALIGORA@ec.europa.eu	RTD	MIN Health EU+ - European Ministries of Health (Member States and Associated Countries)	11/12/2013 10/12/2017	CON-AA	1	Mapping interoperability needs of stakeholders	Preliminary step for providing interactive communication/information website for RD registries including exchange of good practices and experiences. The long term objective will be the creation of an information web-hub to connect a wide range of providers and users of rare disease data. In order to develop it, the first requirement is to identify the needs of stakeholders in rare disease community.	28/02/2017	JRC technical reports
												20	Harmonisation of procedures for RD data collection	Report on the harmonisation of procedures and protocols for rare diseases: common data sets	31/10/2017	JRC technical reports
												30	European monitoring of congenital anomalies	Report on the statistical monitoring of congenital anomalies in Europe	15/12/2017	JRC technical reports
												40	Surveillance of cerebral palsy in Europe	Report on the development of the JRC-SCPE (Surveillance of Cerebral Palsy in Europe) central database and public health indicators	01/12/2017	JRC technical reports

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		(Surveillance of Cerebral Palsy in Europe) were transferred to the JRC and are part of the Platform. The Platform (1) will have a central role in										5	Platform's architecture design document	Vision document and architecture overview document	15/12/2017	JRC contributions to policy documents
												8	Training course for rare diseases registries	A training course will be organised for supporting existing registries and for establishing new registries	30/11/2017	Training
												33502	MEDISYS	Enhanced and Maintained MEDISYS for ECDC's Internet health Surveillance activities	15/06/2017	Technical systems
222 - DRMKC JRC.E.1	3353 - MHRA for DRMKC Multi-hazard Risk Assessment for Disaster Risk Management Knowledge Centre	The WPK will, in collaboration with other JRC projects involved in DRM and DRR, contribute to an improved science-policy interface through activities in the field of Multi-hazard Risk Assessment, Risk reduction, Risk Management Capabilities, and Risk for Human Losses. A series of technical reports and guidelines will provide a step forward towards a science-based methodology for National Multi-hazard risk assessments that will provide guidance and dedicated tools to further strengthen Disaster Risk Management National Capabilities. The global and EU legal/policy context will serve as basis for better orienting the proposals provided. One of the objectives of this WPK is to establish the basis towards a common consolidated methodology and understanding of the risk, which would lead to easily comparable results, facilitating in this way the prioritization of funding programs that would revert on effective mitigation and preventive actions. Fast developing crises of social (conflict) or biological (pandemics and disease outbreaks) origin need collaborative, expert-sourced risk assessment (RA) to support informed decision-making by European institutions (SANTE, EEAS, FRONTEX, Council) and international organisation (African Union, World Health Organisation). The DRMKC will support the bringing together of media information, structural indicator data and geographic data, as well as collaborative IT technology, to provide appropriate contextual information for a truly actionable RA. The WPK	JRC.E.1 Brian DOHERTY	1.5.1.a	SANTE	JRC	HEUBEL, SANTE C3	CLIMA ENV GROW HOME RTD	Civ Protection EU - Civil Protection Services in Member States MS EU - Member states EU UN ISDR - United Nations International Strategy for Disaster Reduction (UN-ISDR)	02/01/2017 28/12/2019	INS-RS	201704	Identification of Contextual Information	Report identifying contextual information of benefit to Rapid Risk Assessment in global health threats.	02/10/2017	JRC technical reports
												201705	Support CRA for health threats	Collaborative risk assessment for health threats needs ancillary information about vulnerability and coping capacity that can be derived from INFORM. It would be necessary to enhance the health related components in INFORM for better assess the vulnerability and coping capacity of the countries to epidemics threats.	15/12/2017	Technical systems
												201801	Analysis of sources and gaps in provision	Report containing Analysis of sources and gaps in provision of contextual information	31/10/2018	JRC technical reports
												201802	Joint Humanitarian Analysis Platform	Contribute to the establishment of protocols for real time collaborative analysis in emergencies.	14/12/2018	JRC technical reports
												201803	Global Probabilistic Risk Assessment	Global Probabilistic Risk Assessment for human losses and its application in INFORM The Index for Risk Management INFORM is a global, open-source risk assessment for humanitarian crises and disasters. In probabilistic hazard risk methodology three sets of data, i.e., hazard, exposure and the vulnerability of the exposed assets at stake, should be available to provide the risk information and each of them presented as the random variable.	15/12/2018	JRC technical reports
												201804	Integrate INFORM results with the GHS	GHS can be used to disaggregate data related to population and to derive new indicators INFORM uses indicators and produce index related to population that can be attached to the GHS.	01/10/2018	Scientific information systems and databases
												201901	Multi-Hazard Risk Assessment - Methodologies for N	A peer-reviewed article presenting the results of research into science-based multi-hazard risk assessment at the level of EU member states. The results of this research will provide important input to the recommendations to member states for harmonized methodology referred to in further policy-based deliverables.	22/12/2017	Article contribution to periodicals or to conference proceedings listed in SCOPUS
												201902	Towards EU harmonized methodology and tools for RA	Science for policy report to provide a step forward towards a science-based methodology for National Multi-hazard risk assessments. The global and EU legal/policy context will serve as basis for better orienting the proposals provided. The main objective of this deliverable is to establish the basis of a common consolidated methodology and understanding of the risk, which would lead to easily comparable results to support prioritization of funding programs on effective prevention actions	13/12/2018	Science-for-policy reports
213 - TMA CC JRC.I.3	3461 - draft ECDC2017 MEDISYS - ECDC 2017	Provide operational support for ECDC's Internet Bio Surveillance activities. Develop customer specific applications of tools and techniques derived from WPs MMA and EMM for Health. (e.g.	JRC.I.3 Erik VAN DER GOOT	1.5.1.a	SANTE	EA	Funded by ECDC			01/07/2017 30/06/2018	CON-AA	346101	ECDC Event based surveillance	Improved Internet Bio-Surveillance systems for Event Based early warning systems used by ECDC to fulfil its responsibilities in risk assessment and identifying emerging and re-emerging communicable diseases; and providing S&T in related to crisis management	30/06/2018	Technical systems
213 - TMA CC JRC.I.3	3469 - EFSA2016 MEDISYS FOR PLANT HEALTH 2016	The general objective of the SLA is to further develop the media monitoring system MediSys for the early identification, monitoring and reporting of signals on existing and emerging plant health	JRC.I.3 Jens LINGE	1.5.1.a	SANTE	EA	Funded by EFSA			01/01/2017 04/12/2017	CON-AA	2017001	EFSA Event based surveillance	Improved Internet Bio Surveillance systems used for Plant Health and Food/Feed Safety monitoring at EFSA enabling EFSA to fulfil its responsibilities related to the identification of emerging risks and providing S&T advice related to crisis management.	04/12/2017	Technical systems
222 - DRMKC JRC.E.1	4560 - EIOS Epidemic Intelligence from Open Source	Since 2008 the JRC has been working together with the World Health Organisation (WHO) and the Global Health Security Initiative (GHSI) to develop two systems for open source news monitoring and collaborative risk assessment, namely HDRAS and EAR respectively. The objective of this Third Party Work agreement with WHO is to develop the first	JRC.E.1 Brian DOHERTY	1.5.1.a	SANTE	n/a	Michael HUEBEL		GHSAG - Global Health Security Action Group WHO - World Health Organization	01/06/2016 31/05/2017	CON-TW	2	Second interim Report	2nd Progress Report reporting on months 5-8	15/05/2017	Technical systems
												201701	First Interim Report	First Interim Report	17/01/2017	JRC technical reports
												201702	Epidemic Intelligence from Open Sources (EIOS)	Main contributions and impacts of EIOS system to relevant related policies.	01/07/2017	Science-for-policy reports
242 - HQHI JRC.F.1	4857 - HARCAS II Cancer Information Systems and Breast Cancer Services in Europe	The objective of the WPK is to tackle some of the fundamental elements impeding the progress to limit the cancer burden in the EU and ensure better outcomes for patients suffering from cancer and rare diseases. In order to tackle disparities in the EU regarding outcomes of breast-cancer patients the EC, partly via this WPK, is developing a pan European quality assurance (QA) scheme. The QA scheme will be underpinned by a set of evidence-based guidelines for the screening and diagnosis pathways. The work will be coordinated by JRC with the close liaison of DG SANTE and with the support of working groups of experts and patients. Access to accurate and relevant indicators is a further critical element to support the development of healthcare policies. In order to allow comparisons of these indicators, the underlying data must adhere to harmonised protocols. The agreement of metadata standards and harmonised data protocols in liaison with the European cancer registries and cancer-epidemiology stakeholders therefore forms an important focus of this WPK. The system being developed will provide the definitive European cancer registry database for cancer epidemiological research studies and will eventually be linked up to environmental and socio-economic indicators. The work will be conducted in close collaboration with the European Network of Cancer Registries and the major cancer-data user stakeholders (IARC, CONCORD, EURO-CARE). The main priority for 2017 is the cleaning of cancer registry data submitted at the end of 2015 and the display of the data via interactive tools. The WPK will also initiate activities on networking and knowledge base activities with the view of revising the existing European guidelines for quality assurance in colorectal cancer screening and diagnosis (2011).	JRC.F.1 Donata LERDA	1.5.1.a	SANTE	SANTE	Paolo GUGLIEMETTI (Paolo Guglielmetti@ec.europa.eu) ; Antoni MONTSERRAT (Antoni.Montserrat@ec.europa.eu)	ESTAT GROW RTD	IARC - INTERNATIONAL AGENCY FOR RESEARCH ON CANCER MIN Health EU+ - European Ministries of Health (Member States and Associated Countries)	01/01/2017 31/12/2017	CON-AA	BGP12017	ECIBC Guidelines Platform	The Platform will include existing guidelines covering all breast cancer care processes (in the shape of recommendations) developed by other bodies (e.g. professional associations) and new evidence-based guidelines selected from a list obtained via a search and a call (to include also non-published documents) by applying AGREE II requirements. It will have two functions: provide an easily accessible source of evidence for stakeholders and underpin with evidence the requirements of QA scheme.	15/12/2017	Science-for-policy reports
												BGP22017	Guidelines for Breast Cancer Screening & Diagnosis	The Guidelines covering Screening and Diagnosis are developed under the direct co-ordination of the JRC and complement the platform for the key care process of screening. Screening is in fact a population based intervention and is an area where the Commission was active since 20 years, therefore the JRC was given the mandate of coordinating their development with the support of a group of experts (the GDG).	15/12/2017	Science-for-policy reports
												BGP32017	QA Scheme for Breast Cancer Services	The Quality Assurance (QA) scheme aims at reducing inequalities across countries via the assessment of application of evidence-based practices for all care processes for breast cancer. Its requirements will be based on the evidence provided by guidelines, quality potentials and feasibility criteria selected by a group of experts (QASDG). It will be voluntary and its implementation will be monitored via indicators. The JRC will collect all the indicators of the certified breast cancer services.	15/12/2017	Science-for-policy reports
												BGP42017	Digital Screening Training Template	Diversity across EU of professional curricula is well known and may have a serious impact on the patients' outcomes if medical professions are considered. Given that screening is an intervention on all the women aged between 50 and 69, it was decided to develop a template for a harmonised training of professionals for digital mammography in screening. Its application will be monitored via the QA scheme. Other training templates may follow.	15/12/2017	Science-for-policy reports
												BGP52017	ECIBC web hub	What is being developed under the ECIBC is being made available to all the stakeholders including women, citizens, patients, since the development phase. Once the deliverables to 4 would have been completed, it will be the interface for all stakeholders to find breast cancer-related info. For professionals to see all existing evidence-based recommendations and for patients to find the closer EU certified breast cancer service.	15/12/2017	Scientific information systems and databases
												CIP12017	European Cancer Registry data visualisation system	A system for displaying via interactive maps the European cancer statistics and overlaying with other types of datasets, as well as geographical correlation of exposure to environmental hazards and disease outcome.	15/12/2017	Scientific information systems and databases
												CIP22017	Cancer Registry data quality check software	Open-source software toolkit for checking cancer-registry data, according to the agreed European cancer registry data submission protocol	30/04/2017	Technical systems
												CIP32017	European Cancer Registry database	Establishment of cancer registry database holding data submitted from European national and regional cancer registries according to an agreed European protocol for data collection	30/04/2017	Scientific information systems and databases
												CIP42017	Harmonised protocol 4 cancer registry data quality	Report on the process of agreeing quality criteria and updating of the 2014 proposal into an agreed and accepted protocol	30/09/2017	JRC technical reports
												CIS12017	Latest cancer incidence and mortality figures	Analysis and publication of latest cancer statistics in Europe from 2007 up until 2012/2013, received from the 2015 ENCR-JRC cancer registry data call.	15/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
222 - DRMKC	4976 - EIOS 2017 Epidemic Intelligence from Open Sources	The Epidemic Intelligence from Open Sources (EIOS) platform will combine into a single technical	JRC.E.1	1.5.1.a	SANTE	n/a	Michael HUEBEL		GHSAG - Global Health Security Action Group	02/06/2017	CON-TW	201801	First Interim Progress Report	First Interim Progress Report	17/01/2018	Scientific information systems and

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
JRC.E.1	Epidemic Intelligence from Open Sources (2017)	implementation of the Hazard Detection and Risk Assessment System (HDRAS) of the World Health Organization	Brian DOHERTY	1.5.1.a	SANTE	EA	n/a		WHO - World Health Organization	01/06/2018	CON-TW	201802	Second interim Report	Second interim Report	15/05/2018	Technical systems
												201803	Final Report	Final Report	02/07/2018	Technical systems
213 - TMA CC JRC.I.3	5862 - EFSA_PLANTS2016 MEDISYS FOR PLANT HEALTH 2016	The general objective of the SLA is to further develop the media monitoring system MediSys for the early identification, monitoring and reporting of signals on existing and emerging plant health	JRC.I.3 Jens LINGE	1.5.1.a	SANTE	EA	n/a			01/01/2017 31/12/2019	CON-AA	2017001	EFSA event-based surveillance	Improved Internet biosurveillance systems used for Plant Health and Food/Feed Safety monitoring at EFSA enabling EFSA to fulfil its responsibilities related to the identification of emerging risks in both news and scientific literature and providing S&T advice related to crisis management.	08/12/2019	Technical systems
1.5.1.b promotion of a healthier society - action in the field of physical activity, nutrition, alcohol and tobacco in the framework of chronic disease prevention;																
270 - PREVENT JRC.F.1	213 - PATHWAY-27 Pivotal Assessment of the Effects of Bioactives on Health and Wellbeing	This WPk entails the JRC participation in the FP-7 funded project PATHWAY-27. The project itself evaluates the effects of three bioactives – docosahexaenoic acid (DHA), β-glucan and anthocyanins – incorporated into dairy, egg and bakery foods on risk factors for the development of chronic diseases. This WPk contributes to the achievement of PREVENT's objectives by gathering and developing the evidence base and methodologies for policy making, implementation, and monitoring of key strategic actions of Member States (MS). Establishment of a distributed laboratory facility for the characterisation and preclinical testing of candidate nanomedicines. The JRC is responsible for the phys-chem characterisation of nanomedicine, as well as for the dissemination activities and contacts with stakeholders	JRC.F.1 STEFAN STORCKSDIECK GENANN/ BONSMANN	1.5.1.b	SANTE	RTD	NIKOLAKOPOULOU Alexandra (SANTE)			01/02/2013 31/01/2018	CON-IA	3	Integrated guidelines for health claims	This deliverable consists of the preparation and publication of two guidance documents that will inform and assist academia and the food industry sector, especially SMEs, to produce bioactive-enriched foods (BEF) with supportive health claims according to the EU legislation. Prior to publication stakeholders from all relevant sectors will be consulted (two workshops) on the feasibility and appropriateness of the guidance for the intended target audiences.	30/01/2018	JRC technical reports
270 - PREVENT JRC.F.1	426 - TOOL-DEV Development of tools and guidance for health-related diet and physical activity measures		JRC.F.1 Jan WOLLGAST	1.5.1.b	SANTE	JRC	C4 A. Furtado	AGRI EAC ENPL ENV RTD	Chem Cos Pharm Food Agri - Chemicals, Cosmetics, Pharmaceuticals, Food, and Agrochemicals Industry Chem Cos Pharm Food Agri EU - Competent Authorities of EU Member States Chemicals, Cosmetics,	01/01/2014 31/12/2018	INS-RS	10	Joint Action on Nutrition and Physical Activity	Contribution to JANPA activities, in various ways, for example supporting their scientific activities and acting at the strategic level with an advisory function. The deliverable is a report of activities, produced in a yearly basis as well as any materials produced with a view to support JANPA. In 2017, we will focus on monitoring and benchmarking of sugar content of SSBs (and propose an approach to address breakfast cereals and dairy in the context of SSBs)	30/11/2017	Science-for-policy reports
433 - SciNANO JRC.F.2	2180 - EU NCL European Nanomedicine Characterisation Laboratory		JRC.F.2 LUIGI CALZOLAI	1.5.1.c	SANTE	RTD	SANTE -Agnes Mathieu (SANTE.B.5) ; RTD -Andrea de Candido (RTD.B.4)	GROW RTD		01/05/2015 30/04/2019	CON-IA	5	Implementation of the content management system	Report on the implementation of the content management system, describing the data structure and web based platform operation	28/02/2017	JRC technical reports
												6	2nd completed survey with regulatory bodies	Report on the survey activities with regulatory bodies in relation to the activities of EU NCL	30/04/2017	JRC technical reports
												7	EU-NCL Annual Progress Report	Annual progress report of the EU-NCL project	30/11/2018	JRC technical reports
565 - IPCheM-NextGen JRC.F.2	3543 - IPCheM-M4 IPCheM - Module IV products and indoor air monitoring data	IPCheM-M4 work package will ensure and assist in the implementation of the DG ENV's IPCheM (Information Platform for Chemical Monitoring) project by: (a) Facilitating the retrieval of and access to existing and future decentralized chemical monitoring data sources pertaining to IPCheM-M4 in close co-operation with national monitoring programs in EU MS and EU funded projects; (b) Supporting the development of harmonised templates for metadata content and codes list and data reporting of data from indoor air monitoring and product emissions and use in close co-operation with the OECD Task Force on Exposure Assessment; (c) Promoting the interoperability of IPCheM-M4 with other relevant systems which have been developed in the context of EC initiatives (e.g. DG RTD's EHBMI, DG ENPL's occupational exposure database, JRC's KCEE, INSPIRE Directive's interoperability principles and standards)	JRC.F.2 Stylianos KEPHALOPOULOS	1.5.1.c	SANTE	SANTE	Frans Verstraete (DG SANTE); Peter Korytar (DG ENV)	EMPL ENER RTD	ECHA - European Chemicals Agency (ECHA) EEA - European Environment Agency EFSA - European Food Safety Authority OECD - Organisation for Economic Co-operation and Development (OECD)	01/07/2016 31/12/2017	CON-AA	1	Harmonised templates for data and metadata	Harmonised templates for monitoring data, metadata content and codes list and data retrieval/reporting for IPCheM module on 'Products and Indoor Air Monitoring'. The development of the harmonised templates for metadata content and codes list and data reporting of data concerning products' (consumer and construction) chemical content, emissions- and use will be done in close co-operation with the OECD Task Force 'ExposureAssessment', ECHA and other EU projects (i.e. EPHECT).	30/06/2017	JRC technical reports
												2	Training Workshop	Training Workshop for the dissemination of the harmonised templates pertaining to IPCheM module 4. The Training Workshop will be organised with experts and data owners/data providers from all EU MS and international organisations (such as OECD and WHO) to disseminate the harmonised templates pertaining to the IPCheM module on 'Products and Indoor Air Monitoring' and demonstrate their practical use.	30/10/2017	Training
												3	Integration of new IPCheM-M4 data collections	JRC Technical Report summarising the data sources integrated in the timeframe of this AA. The integration of new data collections will be done by prioritising those relating to urgent needs expressed and commitments already taken by European Commission services, European Agencies, international organisations. Priorities should be agreed with DG ENV and DG SANTE, in close consultation with IPCheM Governance board and in line with IPCheM's Data Policy.	30/11/2017	JRC technical reports
												4	Interoperability with EU chemical data sources	Report on interoperability with EU chemical monitoring data sources related to IPCheM module on 'Products and Indoor Air Monitoring'. Sharing technical and semantical solutions to ensure interoperability of data and systems pertaining to data sources from other EC related initiatives and projects (e.g. DG RTD's EHBMI, DG ENPL's occupational exposure database, JRC's KCEE, OECD Exposure Assessment Task Force's work related to consumer products' categorisation, content and emissions, etc).	31/12/2017	JRC technical reports
102 - Disseminate JRC.F.3	3871 - AOP-Train Training Courses on the Development of Adverse Outcome Pathways (AOP)	Provision of eight training courses for the European Food Safety Authority (EFSA) on the AOP scientific principles and on how to develop an AOP	JRC.F.3 SHARON MUNN	1.5.1.c	SANTE	SANTE	SANTE.DDG.03, ANDRÉ Dorothee	ENV GROW	EFSA - European Food Safety Authority	10/12/2014 09/12/2017	CON-TW	5	Training courses in 2017	Preparation, administrative support and execution of training courses 6, 7 and 8	09/12/2017	Training
433 - SciNANO JRC.F.2	4202 - SPEED-THERAPY Speeding up the development of targeted precision therapies	There is a growing interest in the development of nanotechnology-based medicines and diagnostics and intense research and patents, but all this research activity faces difficulties in the translational process and has produced only a limited number of new medicines in the market, partly due to the lack of appropriate characterization methods. In this project, building	JRC.F.2 LUIGI CALZOLAI	1.5.1.c	SANTE	JRC	SANTE -Agnes Mathieu (SANTE.B.5)	RTD	EMA - European Medicines Agency (EMA)	01/04/2016 31/03/2018	INS-ER	2	Characterization of targeted-NV-drug delivery syst	Report on the characterization of targeted-NV-drug delivery systems	30/06/2017	JRC internal reports
												3	Knowledge transfer on advanced analytical methods	Report on advanced analytical methods for nanomedicine to EMA and EU-NCL	30/12/2017	JRC internal reports
												4	Characterization of the complete platform	Publication on the characterization and function of the complete platform	31/03/2018	JRC internal reports
1.5.2 Food safety																
1.5.2.a food and feed safety - management of six EU reference laboratories, including the development of harmonised/validated methods and new analytical tools in the area of food and feed safety control and the premarketing authorisation of GMOs and feed additives;																
67 - Food Safety JRC.F.5	187 - IFAAM Participation in FP7 project "Integrated approaches to food allergen and allergy management (IFAAM)"	The setting of clinical thresholds and safe levels for certain allergens in food is hampered by difficulties in measuring their allergenic ingredients. IFAAM is an integrated project bringing together allergy groups, clinical experts, food producers and the food testing community to address many of the important issues facing allergen sufferers. The role of JRC-IRMM in this project is to improve measurement comparability through the development of harmonised testing methods. WPK 3261 (preoraller) will provide technical assistance for delivering the work to the FP 7 project, since not enough funding was available for the work to be carried out.	JRC.F.5 GAVIN O'CONNOR	1.5.2.a	SANTE	RTD	Alexandra Tuijteleaars, RTD.E3, alexandra.tuijteleaars@ec.europa.eu			01/03/2013 31/12/2017	CON-IA	3	Validation of multiple allergen LCMS method	The objective of this work package is to investigate an extension in scope of the developed Egg and Milk in biscuit method to include other matrices and allergens that have been investigated by other IFAAM partners. A fully validated method including robustness, trueness, repeatability and reproducibility and measurement uncertainty will be assessed for biscuit, chocolate and desert matrices.	30/09/2017	Validated methods, Reference methods and measurements
												4	Preparation of IFAAM publications for Peer review	One of the major expected outputs from the IFAAM project is the publication of reports stating the current capability of analytical methods for providing "fit for purpose" analytical data. The JRC will play a critical role in drafting these publications. The JRC will help draft two publications. The first concerns the round robin study on peanut quantification using ELISA and MS methods. The second will focus on the validated method developed in Deliverable 1.	30/09/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
204 - Feed control JRC.F.5	604 - FAA Feed additives	This WPk includes the operation of the EU reference laboratory for feed additives, which contributes to the authorisation of feed additives by (1) writing evaluation reports of feed additives dossiers submitted by the industry and (2) maintaining and curating a sample bank of feed additives. The work is mandated by Regulation (EC) No 1831/2003, which nominates the JRC as EU reference laboratory for feed additives. Next to the administrative part this project also includes research to identify and authenticate feed additives by spectroscopic techniques and to validate by collaborative study several feed additives, notably carotenoids. The validated methods will form the	JRC.F.5 Christoph VON HOLST	1.5.2.a	SANTE	JRC	Stefano Soro SANTE E5		EFSA - European Food Safety Authority	01/01/2016 31/12/2018	INS-RS	1	EUROL Feed additives evaluation reports	The main output are the EUROL evaluation reports to support the authorisation of feed additives	31/12/2017	Validated methods, Reference methods and measurements
												2	CEN methods for the analysis of feed additives	The final outcome of the work will be CEN draft standards describing methods for the analysis of carotenoids and coccidiostats in feed.	31/12/2017	Validated methods, Reference methods and measurements
												3	Inter-laboratory comparison validation study	Peer-reviewed scientific paper describing the collaborative study organised within the workpackage	28/02/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												1	Method validation	Reports on the validation of methods of analysis of GMOs in food and feed. The methods are provided by applicants, requesting authorisation of a GMO. A successful validation is a pre-condition for the authorisation. The validation procedure includes the in silico (i.e. bioinformatics) verification of method characteristics, that will be reported in detailed bioinformatics analysis reports that are summarised in the EUROL GMFF validation reports	31/12/2017	Validated methods, Reference methods and measurements
												10	GMO sequence verification and re-sequencing of GMO	On request of DG SANTE the EUROL GMFF will conduct a systematic quality check of the sequence information provided by applicants, also for sequences provided in the past. This deliverable will consist of bioinformatics reports on this issue. It will also include results of re-sequencing of GM events for confirming the sequences submitted by the applicants and verifying presence of additional modifications. The deliverable will include other reports, responding to ad-hoc requests of DG SANTE	31/12/2018	JRC technical reports

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
264 - GMO JRC.F.5	803 - EURL 1829 EURL GMFF method validation	<p>These comprise the assessment and validation of methods for the detection, identification and quantification of GMOs in food and feed provided by external applicants or other developers in the frame of GMO authorisation in the EU; the communication with and reporting to the European Food Safety Authority; the running of the European Network on GMO Laboratories as support to the implementation of GMO legislation and the EURL GMFF, all JRC activities to establish an EU wide consensus and harmonised approaches for GMO analysis, and the provision of appropriate control samples for correct GMO testing to the official control laboratories.</p> <p>It is crucial for the acceptance of the outcome of the regulatory work listed above that the EURL GMFF remains at the forefront of the scientific developments in the GMO area, also for being able to anticipate policy needs and to assist DG SANTE and the official control authorities of the Member States when new challenges arise.</p> <p>Therefore this work package includes tasks on the development and validation of new or improved analytical approaches, e.g. higher throughput, streamlined and cost-efficient methods and smart strategies to address the appearance of new (types of) GMOs. Moreover, the ad hoc support to DG SANTE by the EURL GMFF, e.g. for the verification and quality control of DNA sequences provided by applicants, and emergency measures in case of a sudden appearance of GMOs outside the authorised range and international trade or other dispute issues have to be dealt with.</p> <p>Involvement of the EURL GMFF in standardisation activities will be increased as this allows contributing to support the EU vision at the global level.</p> <p>New sequence data, coming from biotechnology companies, public databases or produced in-house by DNA sequencing need to be continuously integrated with the data stored in the Central Core Sequence Information System (CCSIS) of the JRC. This system integrates a well curated sequence database with bioinformatics tools for their analysis and enables a complex bioinformatic analysis in support to the legal duties of the EURL GMFF.</p>	JRC.F.5 Marco MAZZARA	1.5.2.a	SANTE	JRC	Chantal Bruietschy - SANTE E.3 - chantal.bruietschy@ec.europa.eu	GROW TAXUD TRADE	EFSA - European Food Safety Authority NRLs - NRLs - national reference laboratories	01/01/2016 30/12/2018	INS-RS	11	Updated CCSIS and related on-line support tools	An updated and curated sequence databases and related up-to-date bioinformatics tools forming the Central Core Sequence Information System (CCSIS) is key to the capacity of the EURL GMFF to fulfil its mandate flowing from Regulation (EC) No 1829/2003. In addition, the CCSIS is fundamental for the provision of bioinformatics (based) support to MS control laboratories, which is increasingly requested, in particular in the context of unknown and un-authorised GMOs. This deliverable consist of the CCSIS as such and the related on-line decision support tools, as described in a yearly progress reports, documenting their continued update and improvement	31/12/2018	JRC technical reports
												12	European Network of GMO Laboratories	Reports on the operations and output of the ENGL. Typically this deliverable will consist of meeting reports (ENGL-SC, ENGL-plenary) and guidance and position documents prepared by ENGL Working Groups on specific topics according to priorities defined by the ENGL Steering Committee and/or DG SANTE.	31/12/2018	JRC technical reports
												2	Control samples	Report on the preparation and distribution of control samples to National Reference Laboratories. These control samples are needed to allow carrying out efficient GMO controls and regularly used by most official control laboratories in the Member States.	31/12/2017	JRC technical reports
												3	New approaches to GMO analysis	Reports and/or peer reviewed publications on new approaches for the detection of (pre-defined) genomic targets, primarily for the identification and quantification of GMOs. These approaches will include loop-mediated isothermal amplification (LAMP), NGS-based approaches (e.g. Nanopore) and multi-target methods. The reports will range from proposing a hypothesis to presenting a proof-of-concept. In all cases they will address the added value of the proposed alternative method for regulatory testing.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												4	GMO sequence verification and re-sequencing of GMO	On request of DG SANTE the EURL GMFF will conduct a systematic quality check of the sequence information provided by applicants, also for sequences provided in the past. This deliverable will consist of bioinformatics reports on this issue. It will also include results of re-sequencing of GM events for confirming the sequences submitted by the applicants and verifying presence of additional modifications. The deliverable will include other reports, responding to ad-hoc requests of DG SANTE	31/12/2017	JRC technical reports
												5	Updated CCSIS and related on-line support tools	An updated and curated sequence databases and related up-to-date bioinformatics tools forming the Central Core Sequence Information System (CCSIS) is key to the capacity of the EURL GMFF to fulfil its mandate flowing from Regulation (EC) No 1829/2003. In addition, the CCSIS is fundamental for the provision of bioinformatics (based) support to MS control laboratories, which is increasingly requested, in particular in the context of unknown and un-authorised GMOs. This deliverable consist of the CCSIS as such and the related on-line decision support tools, as described in a yearly progress reports, documenting their continued update and improvement	31/12/2017	JRC technical reports
												6	European Network of GMO Laboratories	Reports on the operations and output of the ENGL. Typically this deliverable will consist of meeting reports (ENGL-SC, ENGL-plenary) and guidance and position documents prepared by ENGL Working Groups on specific topics according to priorities defined by the ENGL Steering Committee and/or DG SANTE.	31/12/2017	JRC technical reports
												7	Support to the CBD BCH	Report on support provided in the context of the Convention of Biological Diversity. Nominated by DG SANTE as Biosafety Clearing House (BCH) National Focal Point, the JRC contributes to Convention of Biological Diversity - BCH activities with regular update of the BCH-website, participation in the BCH informal advisory committee and by supporting and cooperating with the CBD-BCH capacity building activities	31/12/2017	Conferences and workshops organized by the JRC
												8	Method validation	Reports on the validation of methods of analysis of GMOs in food and feed. The methods are provided by applicants, requesting authorisation of a GMO. A successful validation is a pre-condition for the authorisation. The validation procedure includes the in silico (i.e. bioinformatics) verification of method characteristics, that will be reported in detailed bioinformatics analysis reports that are summarised in the EURL GMFF validation reports	31/12/2018	Validated methods, Reference methods and measurements
9	Control samples	Report on the preparation and distribution of control samples to National Reference Laboratories. These control samples are needed to allow carrying out efficient GMO controls and regularly used by most official control laboratories in the Member States.	31/12/2018	JRC technical reports												
67 - Food Safety JRC.F.5	825 - Support CEN Mandates Pre-normative research to support standardisation of methods for 2260 - CEN M523 RN in feed CEN Mandate 523 radionuclides in feed	In line with the mission of the JRC, and based on Mandates M/520, M/521, M/522 and M/523 given by COM to CEN, IRMM develops and validates by Development of an European Standard for the determination of the radionuclides Cs-134, Cs-137 and I-131 in feed.	JRC.F.5 Joerg STROKA	1.5.2.a	SANTE	JRC	VERSTRAETE Frans (SANTE)		CEN - European Committee for Standardization	01/01/2014 31/12/2017	INS-RS					
283 - RADMED JRC.G.2			JRC.G.2 Timotheos ALTIZOGLU	1.5.2.a	SANTE	JRC	VERSTRAETE Frans (SANCO.E7) Frans.Verstraete@ec.europa.eu	ENER	CEN - European Committee for Standardization ISO - International Organization for	01/09/2014 01/01/2017	INS-RS	2	Report of validation study	This report will describe the results of the validation study of the method developed (described in deliverable 1) and specifying the performance characteristics of the method	31/08/2017	JRC technical reports
67 - Food Safety JRC.F.5	3261 - Prenormative research for allergen and gluten analysis	Provisions of the Food Information to Consumers legislation (Regulation (EU) No 1169/2011) address the requirement for the labelling of priority allergenic ingredients and gluten to guide allergen sufferers and consumers intolerant to gluten in making informed choices. Development and optimisation of method(s) for the determination of allergens in food commodities will be carried out in support of the European measurement infrastructure, to assess diagnostic tests and support the harmonised implementation of allergen monitoring plans in the Member States. Focus will be given to harmonise in cooperation with DG SANTE and the Member States the wording of Precautionary Allergen Labelling ('may contain') information and to provide appropriate analytical methods for implement this labelling threshold.	JRC.F.5 GAVIN O'CONNOR	1.5.2.a	SANTE	JRC	Tim GUMBEL		EFSA - European Food Safety Authority	01/01/2016 31/12/2018	INS-RS	1	Precautionary Allergen Labelling	The requirements for precautionary allergen labelling as foreseen in Article 36 of Regulation (EC) No 1169/2011 will be summarised and appropriate methods of analysis for ensuring that the correct label information is passed on to consumers identified.	30/06/2017	JRC technical reports
												2	Validation of proteomics based allergen detection	The markers identified from the different species of gluten will be assessed for their ability to act as quantitative indicators for the presence of gluten. Selected allergen detection methods based on mass spectrometric measurement of allergenic peptides will be in-house validated and the results summarised in this report	31/12/2017	JRC technical reports
												3	Assessment of reference methods	The assessment of the quantity assigned via the reference methods and its ability to harmonise and/or standardise routine allergen testing results will be assessed. Materials will be specially prepared with known quantities of protein and food ingredients. These materials will be used to assess the effects of different food processing and food matrices on the detection of the allergenic proteins via ELISA and mass spectrometry.	30/10/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
67 - Food Safety JRC.F.5	3264 - EURL-PAH Operation of the European Union Reference Laboratory for Polycyclic Aromatic Hydrocarbons	The JRC operates the European Union Reference Laboratory for Polycyclic Aromatic Hydrocarbons in Food (EURL-PAH). The EURL-PAH coordinates a network of National Reference Laboratories (NRLs) with the aim of ensuring quality and comparability in the official control of measurements of process contaminants such as PAHs in food, as stipulated by Regulation (EC) No 853/2004 on official controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules.	JRC.F.5 Christoph VON HOLST	1.5.2.a	SANTE	SANTE	Frans VERSTRAETE		EFSA - European Food Safety Authority NRLs - NRLs - national reference laboratories	01/01/2016 31/12/2017	CON-AA	1	Workshop for the National Reference Laboratories	Report to the National Reference Laboratories of the annual workshop organised by the EURL	31/12/2017	JRC technical reports
												2	Proficiency Test (PT) for PAHs in coconut oil	Report to the National Reference Laboratories which took part in the proficiency test (PT) on the determination of PAHs in coconut oil.	31/10/2017	JRC technical reports
												3	PT for acrylamide in food	Report to the national reference laboratories which took part in the proficiency test (PT) on the determination of acrylamide in food.	31/12/2017	JRC technical reports
												4	Method validation study by collaborative trial	A report will be submitted to DG SANTE, on the outcome of a method validation study by collaborative trial of an indirect analysis method for the determination of MCPD esters and glycidyl esters in fatty food.	31/10/2017	JRC technical reports
												5	Annual report to DG SANTE	A report will be submitted to DG SANTE, as requested in the AA, providing evidence that the JRC has fulfilled its duties during 2017 as described in the AA.	31/03/2018	Project management related documents/reports identified as outputs of the JRC Work Programme
												1	Proficiency test on deoxynivalenol in food	The proficiency of national reference laboratories to determine deoxynivalenol (DON) in cereals will be evaluated. DON was chosen as the measurand as this topic is equally important for food and feed. In addition, screening methods for DON are available and their performance can be tested as well.	31/10/2017	JRC technical reports
												2	Proficiency test on ergot alkaloids in food	Proficiency test on the determination of ergot alkaloids in a cereal product, as this topic has been a request during a EURL/NRL workshop in 2015.	30/11/2017	JRC technical reports

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
67 - Food Safety JRC.F.5	3265 - EURL-MYC Operation of the European Reference Laboratory for Mycotoxins in Feed and Food	JRC operates the European Union Reference Laboratory for Mycotoxins in Feed and Food (EURL-MYC). The EURL-MYC coordinates a network of National Reference Laboratories (NRLs) with the aim of ensuring quality and comparability in the official control of mycotoxin and plant toxin measurements in food and feed, as stipulated by Regulation (EC) No 882/2004 on official controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules.	JRC.F.5 Joerg STROKA	1.5.2.a	SANTE	SANTE	F. Verstraete, SANTE.E2, frans.verstraete@ec.europa.eu		NRLs - NRLs - national reference laboratories	01/01/2016 31/12/2017	CON-AA	3	Annual report to DG SANTE	A report will be submitted to DG SANTE, as requested in the AA, providing evidence that the JRC has fulfilled its duties during 2017 as described in the AA.	30/03/2018	Project management related documents/reports identified as outputs of the JRC Work Programme
												4	Workshop for National Reference Laboratories	Organisation of an annual workshop for the NRL network. The workshop will focus on the discussion/follow-up of the results of the proficiency test organised in previous years and the further strengthening of the network of NRLs. It will serve to identify the needs of the NRLs, to address pertinent scientific issues and to plan the actions of the EURL.	31/12/2017	JRC technical reports
												5	Proficiency Test on pyrrolizidine alkaloids	In agreement with DG SANTE the remit of the EURL mycotoxins was enlarged to cover plant toxins as well. A proficiency test on pyrrolizidine alkaloids in food will be organised to cover this part in addition to mycotoxins.	31/12/2017	JRC technical reports
												6	Training workshop for NRLs	Training/Hands-On workshop for up to 6 NRL delegates on LC-MS. The workshop will focus on practical aspects of LC-MS method implementation for use in the food or feed control laboratory or other relevant topics upon agreement with DG SANTE. This event will be announced at the annual workshop and is foreseen to last 3 days (incl. lectures, round table discussions and practical demonstrations).	31/12/2017	Training
												8	Support to DG SANTE on plant toxins	A literature survey will be performed to identify suitable methods for the determination of tetrahydrocannabinol and morphine alkaloids. Specific attention will be paid to the validation status of such methods. In discussion with experts from Member States laboratories the most suitable method(s) will be identified and a design for its collaborative validation will be developed.	30/09/2017	JRC technical reports
67 - Food Safety JRC.F.5	3266 - EURL-HM Operation of the European Union Reference Laboratory for Heavy Metals in Feed and Food	JRC operates the European Union Reference Laboratory for Heavy Metals in Feed and Food (EURL-HM). The EURL-HM coordinates a network of National Reference Laboratories (NRLs) with the aim of monitoring quality and comparability in the official control of HM measurements in food and feed, as stipulated by Regulation (EC) No 882/2004 on official controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules.	JRC.F.5 Piotr ROBOUCH	1.5.2.a	SANTE	SANTE	Frans VERSTRAETE		EFSA - European Food Safety Authority NRLs - NRLs - national reference laboratories	01/01/2016 30/12/2017	CON-AA	2017EURHM4	Annual report to DG SANTE (activities 2017)	A report will be submitted to DG SANTE, as requested in the AA, providing evidence that the JRC has fulfilled its duties as described in the AA for 2017.	31/03/2018	Project management related
												2017EURLHM1	Annual Workshop of the EURL-HM	Report to the National Reference Laboratories of the annual workshop organised by the EURL.	31/12/2017	JRC technical reports
												2017EURLHM2	EURL-HM 24 Heavy Metals in food supplements	Report to the national reference laboratories that took part in a proficiency test for the determination of heavy metals in food in support to Regulation (EC) 1881/2006 on contaminants in food.	31/12/2017	JRC technical reports
												2017EURLHM3	EURL-HM 25 Heavy Metals in feed	Report to the National Reference Laboratories that took part in a proficiency test on determination of heavy metals in feed in support to Directive 2002/32/EC on contaminants in feed.	31/12/2017	JRC technical reports
												4	Annual report for 2016 to DG SANTE	A report will be submitted to DG SANTE, as requested in the AA, providing evidence that the JRC has fulfilled its duties as described in the AA for 2016.	31/03/2017	Project management related documents/reports identified as outputs of the JRC Work Programme
204 - Feed control JRC.F.5	3372 - EURL-FAC Operation of the European Union Reference Laboratory for Feed Additives - Control (EURL-FAC). The EURL-FAC coordinates a network of National Reference Laboratories (NRLs) with the aim of ensuring quality and comparability in the official control of feed additives, as stipulated by Regulation (EC) No 882/2004 on official controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules.	JRC.F.5 Ursula VINCENT	1.5.2.a	SANTE	SANTE	Stefano SORO		Standardization NRLs - NRLs - national reference laboratories	01/01/2017 31/12/2017	CON-AA	1	Activity report of EURL control 2017	The EURL-FAC will organise a proficiency test (PT) for the determination of vitamins in feedstuffs for the national reference laboratories and its annual workshop. This report will summarise the outcome of the PT and of the workshop.	31/12/2017	JRC technical reports	
264 - GMO JRC.F.5	3500 - EURL 882-2004 VIII EURL GMFF mandate under Regulation (EC) No 882/2004 on official controls (food and feed law)	The EURL GMFF will provide the required support to DG SANTE and co-ordinate the National Reference Laboratories in the implementation of official control testing of food and feed for the presence of GMOs, required under Regulation (EC) No 882/2004. It will ensure the development and use of reference methods, provide training and guidance, organise comparative testing schemes (CT) and provide support for the improvement of testing by the National Reference Laboratories.	JRC.F.5 Wim BROOthaerts	1.5.2.a	SANTE	SANTE	Chantal Bruetschy - SANTE E.3 - chantal.bruetschy@ec.europa.eu	GROW TRADE	ENGL - European network of GMO laboratories NRLs - NRLs - national reference laboratories	01/01/2016 31/12/2017	CON-AA	1	Provision of Reference Methods	Validated methods are provided to National Reference Laboratories and official control laboratories through the publicly available GMO methods database. If a need to fill current analytical gaps in the detection of unauthorised GMOs is signalled through the ENGL, up to two new screening methods per year are validated and included in the GMO methods database.	31/12/2017	JRC technical reports
												2	Multi-target high throughput platform	A EURL GMFF developed validated multi-target detection system, the pre-spotted plates, is made available for regulatory GMO control in the EU, increasing efficiency and cost-effectiveness of the official control laboratories.	31/12/2017	JRC technical reports
												3	Comparative (proficiency) testing	Reports on the outcome of comparative testing (CT), including the bi-annual CT reports with the indication of the performance of NRLs, an annual report on the follow-up actions organised, and reports of the meetings of the Advisory Board for CT.	31/12/2017	Validated methods, Reference methods and measurements
												4	Delivery of ad-hoc support to DG SANTE	Reports (including validated methods, if needed) on timely and adequate support provided in cases of e.g. unauthorised GMOs on the EU market, rapid alert notifications, preparation of specific legislation	31/12/2017	JRC technical reports
												5	Harmonisation of regulatory testing in the EU	Reports on the annual workshop organised for NRLs, and on any ad-hoc training activities organised in response to requests from NRLs. If appropriate, new guidance documents from the EURL GMFF and/or ENGL on practical arrangements for the implementation of GMO testing methods.	31/12/2017	JRC technical reports
												6	Analytical performance of control laboratories	Data produced by the laboratories participating to the Comparative Testing studies organised by the EURL GMFF are analysed to show trends, achievements and corrective actions in the analytical activity of control laboratories.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
274 - FCM JRC.F.5	3521 - EURL-FCM XI - 2016 European Reference Laboratory for Food Contact Materials (AA XI)	JRC operates the European Union Reference Laboratory for Food Contact Materials (EURL-FCM). It provides methods and representative substances, inter-laboratory comparisons and proficiency tests in order to monitor the quality and comparability in the official control and enforcement of the official controls legislation regarding FCM and in support of Regulation No EC 882/2004. The EURL-FCM also coordinates a network of National Reference Laboratories (NRLs) and acts as coordinator for dissemination of information, technology transfer, trainings and networking. It also develops methods in agreement with DG SANTE in priority areas for intended legislative developments in order to ensure ex-ante the potential enforceability of future legislative options (in 2015-2017, ceramics).	JRC.F.5 Eddo HOEKSTRA	1.5.2.a	SANTE	SANTE	DG SANTE.DDG2.E.6 - M. Iglesia (HoU); B. Schupp	GROW	CEFIC - European Chemical Industry Council (CEFIC) CEN - European Committee for Standardization EDQM - European Directorate for the Quality of Medicines and HealthCare (EDQM, Council of Europe) EFSA - European Food Safety Authority Food contact mat. EU MS - EU Member States Competent Authorities for food contact materials ISO - International Organization for Standardization (ISO) NRLs for FCM - National Reference Laboratories for food contact materials	01/01/2016 31/12/2018	CON-AA	1	Annual Report	Mid-term progress report for DG SANTE on Work Package activities in 2016	30/04/2017	Project management related documents/reports identified as outputs of
												2	Development, use and access to high quality analyt	Commission Decision C(2015) 4993 stipulates the preparation for accelerated collection of new methods for substances under Regulation (EU) No 10/2011. The deliverable will consist in the collection of methods on measurements of migrants from FCM from petitioners and other sources, the collection and characterisation of monomers and additives received by JRC via EFSA, and the development of an on-line database for dissemination.	30/11/2017	Validated methods, Reference methods and measurements
												3	Interlaboratory comparative testing (ILC) on speci	Interlaboratory comparative testing (ILC) on specific migration/screening Commission Decision C(2015) 4993 stipulates the maintenance of appropriate ILC testing. The outputs will include 3 ILCs respectively on plastics in particular in support to Regulation 10/2011 and a validation/PT from ceramicware reflecting the much lower intended future limits to the revision of Dir EEC/84/500. The results will also be provided to ISO TC166 to contribute to new reference method(s)	05/07/2017	Validated methods, Reference methods and measurements
												4	Anticipation work on ceramics	The revision of Council Directive 84/500/EEC on ceramics foresees reduction of limits or new limits for >10 metals, and extension of scope for materials (crystal, bakeware, etc). This implies new testing methodologies. The deliverable will consist of a report on method development and policy support data on testing regimes to provide technical options for future enforceability as stipulated in Commission Decision C(2015) 4993.	29/09/2017	Science-for-policy reports
												5	Operational outputs of the EURL FCM	The management of the EU-RL funding cycle relies on timely submission and completeness of the completion of the necessary steps of EU-RL programmes' funding cycle. The deliverables include annual report 2015, workshop reporting 2016 and submission of work programme 2017 in consensus with customers	14/05/2017	JRC technical reports
												6	standardisation for single market	The JRC will contribute to standardisation of multi-analyte methods and methods of single substances in the framework of the "Annual Union work programme for European Standardisation" of DG GROW via its EURL-NRL network.	31/10/2018	JRC contributions to standards

JRC 2017- 2018 WORK PROGRAMME																											
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category											
274 - FCM JRC.F.5	3777 - FCM-Sci2Pol Policy support to EU frameworks of FCM	Food contact materials (FCM) includes various materials ranging from sustainable (paper and board, recyclable & compostable) to highly technological innovations (nanocomposites, active intelligent). These materials with improved functionality contribute to ensure better safety in the food supply chain and comply with the framework Regulation 1935/2004 on food contact materials (FCM). The work package aims to provide the technical safety support frameworks to DG SANTE with 1) guidelines and tools for the correct technical implementation of legislation and options for non-harmonised FCM, 2) underpinning research on materials to foster safe design approaches for innovative and sustainable FCM contributing to the circular economy and 3) compilation of relevant chemical data to support improved risk assessment tools and towards strategies for standardization and compliance.	JRC.F.5 Eddo HOEKSTRA	1.5.2.a	SANTE	JRC	DG SANTE.DDG2.E.6 - M. Iglesia (HoU); B. Schupp	GROW	CEFIC - European Chemical Industry Council (CEFIC) CEN - European Committee for Standardization CEPE - Paints, printing inks and artists' colours in Europe EDQM - European Directorate for the Quality of Medicines and HealthCare (EDQM, Council of Europe) EFSA - European Food Safety Authority Food contact mat. EU MS - EU Member States Competent Authorities for food contact materials ISO - International Organization for Standardization (ISO) NRLs for FCM - National Reference Laboratories for food contact materials	01/01/2016 31/12/2018	INS-RS	1	Multianalyte methods for reacting migrating subst.	Development of multianalyte methods for reacting migrating substances. A major trade and compliance issue for FCM are the presence of reaction products from polymer or interactions with foods. Commission Decision C(2015) 4993 stipulates a priority for JRC on new methods to quantify unexpected migrants such as oligomers, and towards multianalyte methods. Methods will be collected and developed to facilitate the implementation of Regulation 10/2011.	03/11/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)											
												3	Technical guidelines on testing kitchenware	The Council of Europe refers to the JRC Technical guidelines on migration testing of kitchenware from harmonised and non-harmonised materials. Recent developments in national legislations require an update of the 1st edition which was published in 2009 and to update testing to new rules of the Regulation for plastics Reg 10/2011	31/05/2018	JRC contributions to policy documents											
												6	Recycling of plastic FCM	Regulation 282/2008 provides the framework of recycling plastics for reuse as FCM. PET recycling processes are being evaluated. Several issues remain to be elucidated such as the use of non-compliant PET sandwiched between compliant PET, potential contaminants in post-consumer used plastics other than PET and the decontamination yield at realistic contaminant level.	30/11/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)											
												7	standardisation for single market	The JRC will contribute to standardisation of multi-analyte methods and methods of single substances in the framework of the "Annual Union work programme for European Standardisation" of DG GROW via its EURL-NRL network.	30/11/2017	JRC technical reports											
1.5.2.b food and feed fraud - assistance in the fight against food fraud; production of certified reference materials for food and feed analysis;																											
341 - Reference Materials JRC.F.6	344 - FFRMs Food and feed Reference Materials	This work package develops reference materials (RMs), including certified reference materials, required for the implementation of food and feed legislation, in particular for the quantification of GMOs in food and feed products, the monitoring of microbiological criteria in foodstuffs, the identification of animal by-products in feed and the quantification of contaminants and residues in food. GMO companies need to ensure that GMO CRMs which are produced according to ISO Guide 34 criteria, are made available to fulfil the EU authorisation requirements laid down in (EC) No 1829/2003 and (EC) No 619/2011. Standardisation efforts in the field of microbiological measurements are undertaken and RMs required for the monitoring of microbiological criteria as laid down in (EC) No 1441/2007 are developed. This concerns likewise standardisation activities in support of (EC) No 853/2004 on hygiene rules for food and RMs for the detection of microbiological toxins in food in support of (EC) 2073/2005 are also developed. RMs for the identification and quantification of animal by-products from poultry for the implementation of (EC) No 1069/2009 and daughter legislations on the prevention, control and eradication of certain transmissible spongiform encephalopathies are developed. Moreover, this work package produces RMs supporting the implementation of EU Regulation (EC) No. 1881/2006 and (EC) No. 396/2005 about contaminants and residues in food. There is a particular focus on the development of RMs for pesticides, mycotoxins and trace elements in food, as listed in the aforementioned legislation. New scientific and technical approaches are investigated to ensure the development of suitable and state-of-the-art RMs. This includes the development of new measurement approaches for the characterisation and certification of RMs in the field of food safety. The standardisation efforts and RM developments undertaken in this work package support the EURLs active in the field of food safety by, e.g., producing RMs used as samples in the annual	JRC.F.6 Stefanie TRAPMANN	1.5.2.b	SANTE	JRC	Ilaria.CIABATTI (SANTE E3) Koen Van Dyck (SANTE G4) Almut Bitterhof (SANTE E4) Frans Verstraete (SANTE E2)	ENGL - European network of GMO laboratories EU-RL Bivalve molluscs - European Union Reference Laboratory (EURL) for monitoring bacteriological and viral contamination of bivalve molluscs EU-RL Lm - European Reference Laboratory for Listeria monocytogenes EU-RL M - European Reference Laboratory for Mycotoxins EU-RL MMP - European Reference Laboratory for Milk and Milk Products EURL AP - European Reference Laboratory for Animal Proteins in feedings EURL CPS - European Union Reference Laboratory for Coagulase Positive Staphylococci EURL Pesitides - European Union Reference Laboratory for Pesticides in Fruits and Vegetables EURL-GMFF - European Reference Laboratory for GMO food and feed (EURL-GMFF) ICAR - International Committee for Animal Recording IDF - International Dairy Federation NRLs - NRLs - national reference laboratories OCL - Official Control Laboratories for Food and Feed	01/01/2014 31/12/2018	INS-RS	05	Set of GMO CRMs for a soya bean event	Set of GMO CRMs for a soya bean event (here: GTS-403-2 soya), required for the authorisation of GMO events for the European market and implementation of (EC) No 1829/2003 and (EC) No 619/2011, released. The current available set of CRMs is close to be sold out and a replacement is required.	29/06/2017	Reference Material												
											06	Production of a RM for an GMO CT	Production of a reference material to be used as sample in the comparative testing CT 1/2017 which will be organised by the EURL-GMFF in order to monitor the measurement capability of the official control laboratories in Europe. The organisation of CTs is a mandatory requirement laid down in (EC) No 882/2004.	31/12/2017	Validated methods, Reference methods and measurements												
											07	Production of a RM for an GMO CT	Production of a reference material to be used as sample in the comparative testing CT 2/2017 which will be organised by the EURL-GMFF in order to monitor the measurement capability of the official control laboratories in Europe. The organisation of CTs is a mandatory requirement laid down in (EC) No 882/2004.	31/12/2017	Reference Material												
											08	Release of a plasmid CRM	This CRM is developed and released to facilitate the quantification of animal by-products from poultry for the implementation of (EC) No 1069/2009 and daughter legislations on the prevention, control and eradication of certain transmissible spongiform encephalopathies. In contrast to the reference material developed in 2016 this CRM is suitable for the calibration of measurements.	31/12/2017	Reference Material												
											09	CRM for selected pesticides in cucumber	This CRM supports the implementation of EU regulation (EC) No 1881/2006 about contaminants in food. It concerns the measurements of pesticides in food.	31/12/2017	Reference Material												
											10	CRM for heavy metals in bovine liver	This CRM supports the implementation of EU regulation (EC) No 1881/2006 and (EC) No 396/2005 about contaminants and residues in food. It concerns the measurements of heavy metals in food.	31/12/2017	Reference Material												
											11	Set of CRMs for a maize GMO event	Set of GMO CRMs for a maize event (here Bt-11 maize), required for the authorisation of GMO events for the European market and implementation of (EC) No 1829/2003 and (EC) No 619/2011, released. The current available set of CRMs is close to be sold out and a replacement is required.	31/12/2018	Reference Material												
											12	Production of an RM for an GMO CT	Production of a reference material to be used as sample in the comparative testing CT 1/2018 which will be organised by the EURL-GMFF in order to monitor the measurement capability of the official control laboratories in Europe. The organisation of CTs is a mandatory requirement laid down in (EC) No 882/2004.	30/12/2018	Reference Material												
											13	Listeria CRM	Release of a certified reference materials for the identification and quantification of the bacterium Listeria monocytogenes. Listeriosis is a serious infection usually caused by eating food contaminated with the Listeria monocytogenes, therefore CRMs are required for the monitoring of microbiological criteria in food as laid down in (EC) No 1441/2007.	30/12/2018	Reference Material												
											14	CRM for selected pesticides in soya	This CRM supports the implementation of EU regulation (EC) No 1881/2006 and (EC) No 396/2005 about contaminants and residues in food. It concerns the measurements of pesticides in food.	31/12/2018	Reference Material												
											15	CRM for heavy metals in chocolate	This CRM supports the implementation of EU regulation (EC) No 1881/2006 and (EC) No 396/2005 about contaminants and residues in food. It concerns the measurements of heavy metals in food.	31/12/2018	Reference Material												
											16	SEA CRM certified for quantity	The bacterium Staphylococcus aureus produces toxins which are harmful for humans. The reference material facilitates the quantification of Staphylococcus aureus enterotoxin A (SEA), supporting the implementation of (EC) 2073/2005 on microbiological toxins in food.	31/12/2018	Reference Material												
											68 - Food Forensics JRC.F.4	730 - FoodIntegrity Participation in FP7 project "Ensuring the Integrity of the European food chain (FoodIntegrity)"	This project aims to develop systems for horizon scanning of emerging food fraud issues by examining correlations between commodity prices and fraud incidents, and to link them to differences between production of certain foods and traded volumes. In 2017, JRC will be involved in drafting i) in support to requests from the European Parliament, the Council and the "Food Fraud Network" (FFN) of DG SANTE JRC will develop, optimise, validate and implement tools to fight food fraud. JRC will follow-up on the European Control Plan on honey by extending the honey databank with data obtained on certified authentic samples, and validate the LC-IRMS method and evaluate emerging analytical methods (e.g. NMR and vibrational spectroscopy) for detecting non-authentic honey. As an associated partner in the "SEATRACES" proposal within the Interreg Atlantic Area 2014-2020 call financed by the European Regional Development Fund (ERDF) the activities to detect fraud in the fisheries sector will continue. New DNA based methods (e.g. isothermal amplification using a field deployable instrument for on the spot testing and Next Generation Sequencing (NGS) for fish species identification and quantification in mixtures will be explored. JRC will collaborate within the JRC - Chinese Academy of Inspection and Quarantine collaboration agreement in translating the EU wine databank approaches to China and in enhancing consumer protection by non-targeted approaches for wine	JRC.F.4 Alain MAQUET	1.5.2.b	SANTE	RTD	Sandra Tuijelaars, DG RTD E.3, alexandra.tuijelaars@ec.europa.eu; Sandrine Vaentin, AGR1 DDG2.C.2	AGRI	MS EU - Member states EU	01/01/2014 31/12/2018	CON-IA	D1	FoodIntegrity - 2017 Yearly report	A report summarising the contributions of the JRC to this project will be prepared.	31/12/2017	JRC technical reports
																							D2	FoodIntegrity - Knowledge database	Hosting and management of the FoodIntegrity Knowledge database on a medium-term and even long-term perspectives. The infrastructure developed at Fera (UK) will have to be adapted for the specific infrastructure of the European Commission. This will be evaluated in 2016 and implemented in 2017.	31/12/2018	Scientific information systems and databases
											68 - Food Forensics JRC.F.4	3941 - Food fraud Detection of fraud in the food chain	This project aims to develop systems for horizon scanning of emerging food fraud issues by examining correlations between commodity prices and fraud incidents, and to link them to differences between production of certain foods and traded volumes. In 2017, JRC will be involved in drafting i) in support to requests from the European Parliament, the Council and the "Food Fraud Network" (FFN) of DG SANTE JRC will develop, optimise, validate and implement tools to fight food fraud. JRC will follow-up on the European Control Plan on honey by extending the honey databank with data obtained on certified authentic samples, and validate the LC-IRMS method and evaluate emerging analytical methods (e.g. NMR and vibrational spectroscopy) for detecting non-authentic honey. As an associated partner in the "SEATRACES" proposal within the Interreg Atlantic Area 2014-2020 call financed by the European Regional Development Fund (ERDF) the activities to detect fraud in the fisheries sector will continue. New DNA based methods (e.g. isothermal amplification using a field deployable instrument for on the spot testing and Next Generation Sequencing (NGS) for fish species identification and quantification in mixtures will be explored. JRC will collaborate within the JRC - Chinese Academy of Inspection and Quarantine collaboration agreement in translating the EU wine databank approaches to China and in enhancing consumer protection by non-targeted approaches for wine	JRC.F.4 Alain MAQUET	1.5.2.b	SANTE	JRC	Eric MARIN, SANTE E.5	AGRI OLAF TAXUD	MS EU - Member states EU	01/01/2017 31/12/2018	INS-RS	D1	European honey databank	i) an extension of the honey databank including authentic samples, validated LC-IRMS data, NMR and HRMS results; ii) results of the interlaboratory comparison exercises of LC-IRMS, NMR and HRMS; and iii) evaluation of the performances of spectroscopy.	31/12/2017	Scientific information systems and databases
																							D2	Report on fish substitution	The outcomes of i) the development of the LAMP method to identify commercialised fish species and its validation on the field (market, retailers, restaurants, etc.); and ii) the progress on the application of NGS for the identification and quantification of fish species in mixture.	31/12/2017	JRC technical reports
D3	Report on JRC-China collaboration	The outcomes of the collaboration with Chinese authorities in i) the harmonisation of regulations related to wine; ii) the actions planned to adapt the EU wine databank system to the Chinese market and first results	31/03/2018	JRC technical reports																							
D4	2017 Report on the integration of JRC databanks	Progress made so far on i) gaps to solve IPR and access rights; ii) technical tools to allow registration of high throughput data from diverse platforms and their pre-treatments; the development of a flexible ontology and database management to cover various matrices, experimental designs, analytical methods and instrumentations.	31/12/2017	JRC technical reports																							
D5	Scientific dissemination	Peer-reviewed papers regarding the application of advanced technologies for detecting food fraud.	31/10/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)																							

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
68 - Food Forensics JRC.F.4	5143 - DNA-FISH Fish species detection	Fish-related fraud is known to be widespread and is estimated to cost the EU consumer about 10 billion Euro per year, mostly due to substitution of expensive species with (much) cheaper fish species. Another aspect falling into this field is illegal fishing where protected fish stocks are exploited and the fish origin is falsified to allow its commercialization in the EU. The work carried out	JRC.F.4 VALENTINA PARACCHINI	1.5.2.b	SANTE	JRC	Mr Eric Marin (Unit G.5 DG SANTE)	MARE TAXUD	FAO - THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO) EFCA - European Fisheries Control Agency	01/01/2017 31/12/2017	INS-UR	1	Identification of fish species in processed food	The work carried out in the exploratory project SPI-UCES (# 2751 in 2016) will be continued and applied to additional fish families, including species difficult to identify with currently available markers and samples difficult to analyse with currently available methods.	31/12/2017	JRC technical reports
												2	Fish origin detection	NGS-based approaches might allow determining the fish population from which a particular specimen of fish comes from. The results will be presented in scientific publications, and through posters and presentations at relevant conferences, including an targeting regulatory decision makers.	31/12/2017	JRC technical reports
1.5.2.c plant health - protection of plant health by early detection and plant health monitoring initiatives; support for the establishment of a priority list of plant pests in the Union.																
703 - NC-Waters JRC.D.2	2740 - BIOCL4CRISMA Molecular biosensors & climate data for crisis management to prevent waterborne microorganism impact	To combine the experimental molecular biological data with climate modeling in an early warning crisis management support system in order to predict and anticipate the outbreak of water-related microorganisms and then mitigate the impact on human and environment health.	JRC.D.2 Teresa LETTIERI	1.5.2.c	SANTE	JRC	Frans Verstraete	ENV		01/07/2015 30/06/2017	INS-ER	3	Mapping mosquito & link to global temperature data	Identification of potential habitat for dengue virus in Europe and verification of dengue virus presence into mosquito eggs.	15/01/2017	JRC Technical reports
												4	Crisis management support system	The report will describe the parameters and variables to be included in the crises management for the case studies described in the project. For floods the Danube river will be the pilot study and mapped for the presence of the targeted microorganisms.	10/03/2017	JRC Technical reports
												5	Crisis management Simulation	The publication will show the integration of the parameters developed in the project and they will be used in a simulation scenario for a crisis management support.	30/06/2017	Article contribution to a peer-reviewed periodical listed in the ISI Science Citation Index Expanded and/or Social Science Citation Index
701 - NC-Forest JRC.D.1	3628 - CANHEMON Remote sensing based forest canopy health monitoring to support measures against the spread of pests	This project will research and implement remote sensing based monitoring of forests, at or near the level of individual tree crowns in the context of an ongoing phytosanitary crisis, namely the outbreak of Pine Wood Nematode (PWN) in Portugal. The work will support DG SANTE and Portuguese and Spanish plant health authorities in their forest management to contain the ongoing outbreak of PWN. Under this project, monitoring methods are being developed at JRC with the longer term goal of establishing the capability to deploy them in other plant health emergencies as well.	JRC.D.1 PIETER BECK	1.5.2.c	SANTE	SANTE	PASQUALE DI RUBBO	AGRI ENV	- ISTITUTO AGRONOMICOMEDITERRANEO DI BARI EEA - European Environment Agency EFSA - European Food Safety Authority	29/07/2015 28/12/2017	CON-AA	3	Evaluation of next-generation satellite sensors	Evaluation of next-generation satellite sensors for canopy health monitoring	19/11/2017	JRC technical reports
												5	Scientific publications	Scientific publications	27/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												6	Large-area Canopy Health maps	Canopy health maps for the entire 2.3 Mha Pine Wood Nematode buffer zone along the Portugal-Spain Border	31/05/2017	Datasets
701 - NC-Forest JRC.D.1	3873 - CANHEMON 2 Remote sensing based tree canopy health monitoring to support measures against the spread of pests	This project will implement remote sensing based monitoring of trees, at or near the level of individual crowns in the context of two ongoing phytosanitary crises, namely the outbreak of Pine Wood Nematode in Portugal and that of Xylella fastidiosa in Italy	JRC.D.1 PIETER BECK	1.5.2.c	SANTE	SANTE	Pasquale DI RUBBO (SANTE.DDG2.G.1)	AGRI ENV	- ISTITUTO AGRONOMICOMEDITERRANEO DI BARI EEA - European Environment Agency EFSA - European Food Safety Authority	01/09/2017 31/12/2018	CON-AA	1	Canopy Health maps Pine Wood Nematode	Maps describing the health of the coniferous forest canopy the Pine Wood Nematode buffer zone, Portugal	28/02/2017	Datasets
												2	Canopy Health maps for the Xylella fastidiosa buff	Maps describing the health of the olive grove canopy in the Xylella fastidiosa buffer zone in Puglia, Italy	31/12/2017	Datasets
												3	Remote sensing-based pest monitoring guidelines	A description of best practices for the optimization of remote sensing based monitoring of forests, and trees in general, in the context of forest pest outbreaks.	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												4	Scientific publications	Scientific publications detailing new advances in the remote sensing based detection and management of tree pests	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
701 - NC-Forest JRC.D.1	4760 - XF-ACTORS Xylella fastidiosa Active Containment Through a Multidisciplinary-Oriented Research Strategy	The work package will develop and demonstrate methods for the detection of symptoms associated with Xylella fastidiosa infection in Olive trees using remote sensing. It will capitalize on the larger XF-ACTORS consortium that will include intensive environmental and physiological monitoring of	JRC.D.1 PIETER BECK	1.5.2.c	SANTE	RTD	Pasquale DI RUBBO (SANTE.DDG2.G.1)	AGRI ENV		01/12/2016 30/11/2020	CON-IA	1	JRC contributions to the XF-ACTORS H2020 project	a) A set of scale-appropriate techniques for the remote sensing-based monitoring of olive dominated landscape for the early detection and damage mapping of Xylella fastidiosa infection. b) Pre-operational implementation of remote sensing based monitoring of an olive-tree dominated landscape at the forefront of the Xylella fastidiosa outbreak.	30/11/2020	JRC technical reports
701 - NC-Forest JRC.D.1	4963 - XYLEM (MC) Guarding Europe against a Xylella fastidiosa epidemic through airborne monitoring for early detect	The plant pathogen Xylella fastidiosa is considered established in Puglia, and recently found in France and poses a major risk to olive trees, as well as other crops, throughout the Mediterranean region. This Marie Curie fellowship will develop novel, scalable, and affordable methods to increase preparedness once Xylella fastidiosa spreads to other EU member States. It will scale plant stress measurements from the leaf to the canopy level	JRC.D.1 PIETER BECK	1.5.2.c	SANTE	RTD	Pasquale DI RUBBO (SANTE.DDG2.G.1)	AGRI ENV	FAO - THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO) EFSA - European Food Safety Authority	01/07/2017 30/06/2019	CON-IA	1	Scientific publications	Publications in peer-reviewed international journals on the use of remote sensing for the early detection of Xylella fastidiosa infection	01/06/2019	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
1.6 Regional policy																
1.6.a territorial modelling for impact assessment of policies and investments - develop an integrated modelling capacity to better assess the impact of investments and policies in regions, cities and macro-regions, including demographic trends, and climate change impacts;																
		LUISA is a modelling platform developed by the EC JRC to support territorial impact assessment of policies which have direct or indirect spatial implications, such as regional policy, transport, environment, energy. It is a pillar of the pilot Knowledge Centre for Territorial Policies. LUISA allows investigating and understanding territorial dynamics in a wider continental dimension, while considering local and regional driving forces. Beyond a traditional land use model, LUISA adopts a new approach towards activity-based modelling based upon the endogenous dynamic allocation of population, services and activities. LUISA's standard configuration is consistent with the most recent EU socio-economic assumptions and projections, and it incorporates observed trends and preferences, as well as existing policies. Alternative scenarios which consider different assumptions and/or alternative policies can be simulated in order to gain insight on their potential territorial implications. The main output from LUISA are in the form of indicators of territorial performances covering the following fields:										201606	Definition of Regional profiles	Definition of methodology and analytical quantification of regional profiles based on the LUISA outputs (dynamic land functions) which are based upon Composite Indicators and cluster analyses. Analysis of trends and patterns of development of European regional projections.	31/12/2017	JRC technical reports
												2017001	Urban form, transport demand and energy dependence	The proposed indicator will allow us to obtain estimates of how regional policies may directly or indirectly affect demand for energy for transportation.	30/06/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												201701	Synergies between regional and energy policies.	Maximisation of synergies between regional and energy policies, considering local and regional patterns of energy production and consumptions. Definition of regional cost coefficients for regional economic modelling (e.g. input to RHOMOLO), in consistency with EU Energy Reference Scenario(s).	31/12/2017	JRC technical reports
												201702	LUISA for Territorial Impact Assessment	Following the Better Regulation guidelines and EC Roadmap, LUISA contributes to : - Implementation of the Territorial Reference Scenario - Pilot Applications of 'Urban Proofing' and Territorial Impact Assessments in the frame of the EU Urban Agenda - Policy dossiers where TIA is relevant (following discussion with SG and policy DGs) - Input to Impact Assessment of the Multiannual Financial Framework post-2020	31/12/2017	JRC technical reports
												201703	Knowledge sharing	Integrate the specialised JRC efforts in the more sophisticated infrastructure for the management of knowledge (data, models and tools) related to the assessment of territorially-oriented policies and investments. Includes the reuse and exploitation of DRDSI. Visualisation tools will be implemented and released in sequence.	31/12/2017	Scientific information systems and databases

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488 - TERMOD_INVEST JRC.B.3	Application of the LUISA Modelling Platform to Cohesion and Investment Policies	<p>1. Demographic change, population distribution and migrations</p> <p>2. Economic performances (e.g. GDP, sectoral production, employment, convergence...)</p> <p>3. Access to services (e.g.: to public structures, recreational and cultural sites...)</p> <p>4. Infrastructures for housing, transport, energy and other services</p> <p>5. Environmental performances (e.g. pollution levels and mitigation measures)</p> <p>6. Patterns of Energy Production/Consumption at regional and urban scale</p> <p>7. Urban growth</p> <p>LUISA is a component of the EC Toolbox#29 for Territorial Impact Assessment (Better Regulation Package) and key tool for REGIO for the evaluation of cohesion policies and the ex-ante impact Assessment of the MFF post-2020. Reference scenario is regularly up-dated, and will also consider National policies in collaboration with OECD.</p> <p>A notably relevant effort in 2017-18 is devoted to the analysis of causes and impact of inter-regional migrations and other demographic trends. LUISA provides input to the LAGREG project (on lagging regions) and MARREF (Scenarios for macro-regional strategies). It also relates with the project WEF-Water - Energy - Food Nexus.</p>	JRC.B.3 Carlo LAVALLE	1.6.a	REGIO	JRC	Lewis DIJKSTRA	ENV ESTAT GROW RTD SG	OECD - Organisation for Economic Co-operation and Development (OECD) WB - World Bank	01/01/2016 31/12/2018	INS-RS	201704	Status and trends of Cities	Assessment of the determinants of urban growth in a regional context. Contribute to the EU Urban Agenda and provides quantitative inputs to the Urban Data Platform in the frame of the EC Urban Platform and initiatives related to Smart Cities. It also relates to the Smart Specialisation Strategies (in particular those related to energy and peer-reviews for Integrated Sustainable Urban Development strategies). Joint work with CC COIN and MIT Lab (walkability index).	30/12/2017	JRC technical reports
												201705	Regionalized demographic and economic projections	Paper on a method to regionalize demographic and economic projections using a scenario based approach. Follows for the work done in 2016.	30/10/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												201801	Determinants of inter-regional migrations.	Scenario of inter-regional (between NUTS3) movements based on employment opportunities and other economic and spatial factors, on top of reference demographic projections trends from EUROSTAT. Collaboration with KC for Migration and Demography.	30/06/2018	JRC technical reports
												201802	Contribution to the Seventh Cohesion Report	This involves the setting up and modelling of policy scenarios that take into account country- and regional-specific policies and conditions. Thematic analysis is performed on territorial indicators produced by LUISA, in combination with information generated by EC internal and external sources.	31/12/2018	JRC contributions to policy documents
												201803	What contributes to overall city attractiveness?	Meta-analysis of factors contributing to city attractiveness within its regional context, taking into account the role of all stakeholders (citizens, institutions, businesses, and the research community). A library of best practices will be developed in conjunction with the Urban Data Platform and city profiling from LUISA will help to identify the most effective measures according to specific city characteristics. Joint work with CC COIN and MIT Lab.	14/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
488 - TERMOD_INVEST JRC.B.3	2002 - IAM-SUL Integrated Assessment Methodologies to promote Sustainable and resilient Urban Living	<p>IAM-SUL develops a framework to support the implementation and assess the impact of urban/regional strategies that aim to foster sustainable development. The approach is based on the application of integrated assessment tools, among which SHERPA is the main instrument. The framework is based on:</p> <p>(1) collecting and integrating urban/regional measures, with a particular focus on the transport, energy and residential sectors</p> <p>(2) developing and applying integrated assessment tools to support local to EU-wide impact assessments</p> <p>(3) harmonizing and standardizing modeling methodologies across Member-States</p> <p>(4) fostering capacity building across and outside of the EU</p> <p>IAM-SUL is instrumental in supporting the objectives of growth and competitiveness of European cities and metropolitan areas in the context of the EU Structural and Investment Funds. By supporting "urban proofing", i.e. by ensuring that urban aspects are adequately accounted for in EU legislation, IAM-SUL also contributes to "better EU regulation". IAM-SUL allows for a better integration of local measures acting on air quality improvement, climate change mitigation, clean energy and sustainable mobility. IAM-SUL supports the "urban agenda" through the active participation to the "Partnership on Air Quality", an EU initiative to strengthen ties between the Member States of the European Union, national parliaments, regions and cities to tackle urban challenges. Collaborations with China are focusing on source-apportionment and integrated assessment with the aim of exchanging experiences and best practices.</p>	JRC.C.5 Philippe THUNIS	1.6.a	REGIO	JRC	DIJKSTRA Lewis (REGIO.B.1); HENRICHS Thomas (ENV.C.3)	CLIMA DEVCO ENER ENV MOVE	CEN - European Committee for Standardization EEA - European Environment Agency	01/01/2016 31/12/2021	INS-RS	201701	Support to negotiations on the EU air strategy	This deliverable aims to support the harmonisation and benchmarking of EU Member States' air quality modelling approaches (FAIRMODE). It consists of a guidance document on source apportionment, including source receptor and chemistry transport models, and an update of the online SPECIEUROPE database.	15/06/2017	JRC technical reports
												201702	Measures for sustainable urban development	Measures for sustainable urban development generally focus on the transport and residential sectors, and are assessed in terms of air quality and climate change. The following measures will be screened: (1) electro-mobility strategies for vehicles (city pilot study), (2) quantification of the effects of sustainable mobility plans; (3) quantification of the effects of national energy efficiency and Covenant of Mayor city plans. Measures will be harmonised and used to populate a database.	15/06/2017	Scientific information systems and databases
												201703	SHERPA-ECO: A tool to support urban/regional plans	The SHERPA-URBAN tool addresses regional and urban impacts assessment. This tool aims at supporting the Commission in its impact assessments as well as National, Regional and local Authorities in designing and assessing the impacts of air quality plans on air quality and climate. SHERPA-ECO adds the economical dimension with the possibility of screening possible measures according to their cost-effectiveness.	30/11/2017	Technical systems
												201704	Regional policies on air quality - An EU Atlas	This Atlas will analyse the potential to abate regional air pollution at the NUTS2 level. For each NUTS2 entity, it will quantify the potential for regional action and prioritise the key activity sectors and pollutants to be addressed. Note: This deliverable is an extension of deliverable 10 planned in the 2015 SUL work plan.	30/11/2017	JRC technical reports
												201705	IAM tools in support to e-reporting	According to the Commission Implementing Decision 2011/850/EU (IPR), EU member states (MS) have to report the data on air quality according to the new reporting scheme (e-reporting). In addition to the concentration of pollutants, MS have to report detailed information about source apportionment and air quality plans. We here aim at developing specific modules into SHERPA to provide an output fully compatible with the Member States e-reporting requirements regarding air quality plans	31/10/2017	Technical systems
												201801	Cost-effectiveness methodologies for IAM	This deliverable aims at reviewing the available methodologies to assess the cost of emission abatement measures that typically take place in urban areas (e.g. bicycle lane, low emission zone...). This will serve as input to the construction of SHERPA ECO (see SHERPA-ECO deliverables)	26/03/2017	JRC technical reports
												201802	Support to the EU partnership on air quality	One mechanism to implement the "EU Urban Agenda" is the setting up of thematic partnerships. Within these partnerships, the Commission, Member States and cities work together to ensure that the urban dimension is strengthened in EU policies. As support to the "air quality partnership", IAM-SUL will a) propose a working framework to allow interaction/exchange of data among the partnership participants, and b) assess strategies to improve air quality at city scale via IAM modelling applications	29/06/2018	JRC technical reports
4856 - ARCTIC JRC.C.5	2021 - PACAR Policies and atmospheric change impacting the Arctic	<p>PACAR focuses on how European and international policies on air pollution and climate impact the Arctic, by studying the atmospheric lifecycle of short-lived pollutants (such as black carbon and methane) emitted in the Northern Hemisphere and transported to the Arctic, and their potential impact on the regional climate. Statistical methodologies are used to estimate the change and development of important environmental parameters due to climate change. By statistically processing multi-model predictions, the work package will provide information on the effect of the Arctic on the climate of the mid-latitude Northern Hemisphere, including Europe. First, the work package evaluates the risk of major outbreaks of methane from the Arctic permafrost in the future that could significantly accelerate global warming with enormous impacts on the global environment and economy. Second, it estimates future climate impacts of black carbon in the Arctic, together with the changes in weather patterns at midlatitudes related to the enhanced warming in the Arctic. Third, it evaluates the impacts of measures to mitigate black carbon emissions being developed under the Arctic Council Task Force on Black Carbon and Methane, and distinguishes their impacts from the global warming. The work package development is based on collecting mode outputs from long-term climate simulations in a local database that may be available for other</p>	JRC.C.5 SRDAN DOBRICIC	1.6.a	REGIO	JRC	MAIRATE Andrea (REGIO.DGA2.D.1); PETERSEN Terkel (EEAS.III.B.1); CLOCCHIATI Alessia (MARE.C.1); GAMBARDILLA Attilio (RTD.I.4); ENV.E.1	CLIMA ENV MARE RTD	AACA - Adaptation Actions for a Changing Arctic AMAP - Arctic Monitoring and Assessment Programme EEAS - European External Action Service IGAC - International Global Atmospheric Chemistry (IGAC) UN EGE - UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE UN FCCC - UN Framework Convention on Climate Change (UN-FCCC) UNEP - United Nations Environment Programme (UNEP) US-EPA - US Environmental Protection Agency WB - World Bank WHO - World Health Organization	01/01/2016 31/12/2018	INS-RS	201702	Pressures on methane in the Arctic environment	We will examine climate impacts on sea ice melting, permafrost thawing and higher air temperatures influencing natural emissions of methane from the Arctic. By comparing	30/11/2017	Science-for-policy reports
												201703	Evaluation of climate predictions for the Arctic	A number of climate predictions for the Arctic freely available on the Internet will be evaluated regarding their consistency in predicting the change of some major environmental parameters in the Arctic like atmospheric temperature, ocean temperature, sea ice coverage, precipitation. Predictions will be obtained mostly from CMIP5, but other data sources such as the Arctic CORDEX will also be considered based on the free data availability.	30/11/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												201704	Contribution to drafting EU policy on the Arctic	Summary of JRC contributions to the EU Arctic Policy and reporting to EEAS and relevant DGs on JRC participation in Arctic Council activities and working groups, during the US Chairmanship 2015-2017, which ends in May 2017. Carried over from PACAR 2016 work programme (deliverable 201601).	30/05/2017	JRC contributions to policy documents
												201801	Multi-model estimates of atmospheric pollution	Predictions made by several climate models obtained in the previous deliverable and source-receptor estimates by the FASST model are compared to select important processes for modelling future pollution in the Arctic. In particular, we estimate how the future change of Northern Hemispheric weather patterns due to sea-ice melt may impact weather in Europe and other source areas of atmospheric pollution and its transport to the Arctic.	31/12/2018	Science-for-policy reports
												201802	Analysis of BC mitigation policy in the Arctic.	The impacts of measures to mitigate black carbon emissions being developed under the Arctic Council Task Force on Black Carbon and Methane are evaluated using the Community Earth System Model and FASST model. The study will estimate the importance of atmospheric pollution, in particular black carbon, for the amplification of climate change in the Arctic.	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)

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141 - TEM JRC.C.6	2027 - REGIOTRANS Transport modelling and assessment tools to support EU regional and urban policy	Support to DG REGIO on multimodal congestion and accessibility indicators analysis by improving and extending JRC modelling tools to support the economic analysis defining the objectives and investment priorities of EU cohesion policy and the	JRC.C.6 JUAN IBANEZ RIVAS	1.6.a	REGIO	REGIO	Lewis Dijkstra, REGIO.B.1	MOVE		08/07/2015 07/07/2018	CON-AA	3	Transport and regional development	Activities in support of forthcoming Cohesion report	31/12/2017	JRC contributions to policy documents
												4	Final Report	Final Report 2018	30/09/2018	JRC contributions to policy documents
488 - TERMOD_INVEST JRC.B.3	2744 - EREBILAND European Regional Energy Balance and Innovation Landscape	The project aims at supporting innovative efficient patterns of regional energy supply and demand in Europe. A suite of modelling tools will be deployed	JRC.B.3 CLAUDIA BARANZELLI	1.6.a	REGIO	JRC	Lewis Dijkstra (REGIO.B.1) and STRACHINESCU OLTEANU Magdalena	CLIMA ENER ENV		01/01/2015 31/07/2017	INS-ER	5	Impact of modelling energy systems at the regional	Scientific publication of the main outcome of the research	31/07/2017	Article contribution to a peer-reviewed periodical listed in the
147 - REMO JRC.B.3	3485 - RHOMOLO VI Macro-economic modelling: regional and sectoral analysis (VI)	Macro-economic modelling support to ex-ante policy impact assessment with regional and sectoral detail. To use the spatial computable general equilibrium model RHOMOLO to evaluate the growth and welfare effects of (i) R&D and innovation policies; (ii) human capital policies; (iii) transport infrastructure investments; (iv) territorial impact assessment; and (v) structural reforms. The development, maintenance and update of the RHOMOLO model, which is linked and aligned with the dynamic macroeconomic model QUEST.	JRC.B.3 FRANCESCO DI COMITE	1.6.a	REGIO	REGIO	Philippe MONFORT	ECFIN EMPL RTD SG		01/01/2017 31/12/2018	CON-AA	2	interim report 01/01/2017 - 31/12/2017	Report of the Regional Model for Impact assessment of EU Cohesion Policy 2017-2019 - Final Report for the period 01/01/2017 - 31/12/2017	31/01/2018	JRC technical reports
												5	Paper on data estimation for the RHOMOLO model	A paper will be prepared, describing the methodology used to build the regional dataset for the RHOMOLO model, since no comparable datasets at the regional level exist at the moment.	30/09/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
348 - MARREF JRC.C.5	3575 - Environment Supporting the environmental dimension of the Macro-regional Strategies in the area of Air	This work package is part of wider JRC efforts to support all the policy areas of the macro-regional strategies. One of the main objectives of the WPK is to support the implementation of the action plan of Priority Area six (PA6) "Biodiversity, landscapes, quality of air and soils" of Pillar 2 "Protecting the environment" of the Danube Strategy. The tasks associated with this objective are a) the application of integrated assessment tools to provide guidelines for the development of air pollution abatement strategies, and b) the setting up and coordination of the Danube Task Force on Air Quality. The JRC's leading role in FAIRMODE and AQUILA represents a unique asset that will be used to mobilise local experts and authorities to spark urban and regional actions, taking advantage of the macro-regional funding schemes (e.g. Danube Transnational Programme). By promoting the harmonisation with and transposition of the EU regulations in EU candidate (Serbia, Montenegro, Bosnia and Herzegovina) and neighbour (Ukraine and Moldova) countries, the WPK also contributes to the objectives of the Enlargement and Integration (E&I) strategy. On the basis of the experience gained in the Danube macro-region, the WPK aims to support DG REGIO in the development and implementation of the environmental pillars of the Adriatic-Ionian (EUSAIR) and Alpine (EUSALP) macro-regional strategies, by carrying out ex-ante baseline analyses.	JRC.C.5 CLAUDIO BELIS	1.6.a	REGIO	JRC	MAIRATE Andrea, ONIDA Marco (REGIO.DGA2.D.1); ENV.E.1	AGRI CLIMA ENV NEAR RTD SANTE	ICPDR - International Commission for the Protection of the Danube River EEA - European Environment Agency IAEA - International Atomic Energy Agency (IAEA) MZOIP - Ministarstvo Zaštite Okoliša i Prirode (Ministry of Environmental and Nature Protection) STMUV - Bayerisches Staatsministerium für Umwelt und Verbraucherschutz (Bavarian State Ministry of the Environment and Consumer Protection)	01/01/2017 31/12/2018	INS-RS	201701	Air quality legislation compliance in the Danube	The deliverable is based on planned quality assurance (inter-comparison) exercises dedicated to the countries of this area. Relevant for E&I.	30/09/2017	Training
												201702	Ex-ante assessment of EUSAIR and EUSALP	Ex-ante assessment of the current status of the quality in key environmental areas identified in the action plans of the EU Strategy for the Adriatic and Ionian Region and the EU Strategy for the Alpine region. The assessment will focus on specific problems of each macroregion (e.g. the impact of harbour emissions on air quality, or wood burning in the residential sector in Alpine valleys).	30/06/2017	Science-for-policy reports
												201704	Sources of atmospheric pollution in the Danube	A study to quantify the contribution from emission sources (activity sectors) and the geographic origin of particulate matter and gaseous pollutants observed in pilot urban areas of the Danube macro-region using a combination of source apportionment and dispersion models. An integrated assessment tool will be used to evaluate the efficacy of policy options.	30/11/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												201705	Development of air quality modelling capacities	Dealing with the air pollution hot spots in the Danube macro-region requires skilled staff for a better implementation of the air quality directives. The deliverable aims at enhancing the modelling capabilities of Danube countries by dedicated training on source apportionment and integrated assessment tools for visiting experts. The involvement of non EU countries favours a common air quality management approach beyond EU borders. This activity is relevant for the E&I strategy.	30/11/2017	Training
												201801	Sustainable use of biomass in residential sector	Development of Policy options using integrated assessment tools to pursue renewable energy targets in regional (sub national scale) and urban areas in accordance with air quality and climate long term objectives. The first part of this deliverable, focusing on emission and health impact scenarios and analysis of the bioenergy resources and needs will be carried out in the WPK 3577 CONNECTIVITY deliverable 201802.	15/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												201802	Building up air quality measurement capacities	Aiming at promoting a better implementation of the air quality directives in areas where air quality limits are often exceeded and at supporting accessing countries to harmonize their networks to the EU standards, training on pollutant measurements dedicated to experts from the EU and non EU Danube countries will be accomplished taking advantage of the JRC ERLAP facility. Activity relevant to the E&I strategy.	30/07/2018	Training
												201803	Status of the PA6 action plan on air quality	The progress made in the implementation of the PA6 action plan on air quality will be evaluated with particular reference to the activity of the Task Force on Air quality.	15/11/2018	Science-for-policy reports
												201601	Report on simulation and analysis Year 1	Report on the activities performed in the first year of operations.	31/01/2017	JRC technical reports
488 - TERMOD_INVEST JRC.B.3	3927 - TERMES Territorial Modelling Platform: projections, impacts and analysis for cohesion objectives	The main purpose of this Administrative Arrangement (AA) is to increase the capabilities and application of the LUISA Territorial Modelling Platform in order to provide support to the preparation of the post-2020 Multi-annual Financial Framework MFF and to the analytical work and	JRC.B.3 Carlo LAVALLE	1.6.a	REGIO	REGIO	DG REGIOA.1.B1 Lewis DIJKSTRA	ECFIN ENER	CoR - Committee of the Regions OECD - Organisation for Economic Co-operation and Development (OECD)	01/03/2016 28/02/2019	CON-AA	201701	Report on simulations Year 2	Report on activities performed in the second year of operations.	31/12/2017	JRC technical reports
												201801	Report on simulations Year 3	Report on activities performed in third year of operations.	31/12/2018	JRC technical reports
488 - TERMOD_INVEST JRC.B.3	4207 - ENACT Enhancing ACTivity and population mapping	The project aims at developing and implementing a consistent and validated methodology to produce day-time and seasonal population distribution grids for Europe. Such datasets will expand the	JRC.B.3 FILIPE BATISTA E SILVA	1.6.a	REGIO	JRC	Lewis Dijkstra (REGIO.A1.B.1)	ECFIN ENER ENV ESTAT		01/01/2016 31/12/2017	INS-ER	2	Peer-reviewed Paper	Modelling spatiotemporal population distribution	31/12/2017	Article contribution to
488 - TERMOD_INVEST JRC.B.3	4304 - URBPLAT-Data Urban Data Platform	Arrangement (AA) is to implement and populate the Urban Data Platform - a spatial data hub for access and visualization of data and indicators	JRC.B.3 Carlo LAVALLE	1.6.a	REGIO	REGIO	Lewis DIJKSTRA	CLIMA ENER ENV MOVE	CoR - Committee of the Regions	01/09/2016 31/12/2019	CON-AA	201701	URBPLAT-DATA Version 1.0	First Operational Version of the Urban Data Platform. Includes data and indicators produced by the LUISA Modelling Platform (latest reference configuration and selected policy scenarios/options). Contributes to the WP KC-TP HUB.	31/12/2017	Scientific information systems and databases
147 - REMO JRC.B.3	5043 - Rhomolo-EIB Macroeconomic Modelling for investments by the European Investment Bank (EIB)	Early contacts with the "Policy and Strategy Division" of the European Investment Bank's "Economics Department" have shown the great potential for RHOMOLO to be used for the impact assessment of the EIB investments in order to guide investments and determine priorities. The RHOMOLO-EIB work package thus aims at further developing the model to be able to provide the EIB with accurate ex-ante policy impact assessment with regional and sectoral detail.	JRC.B.3 FRANCESCO DI COMITE	1.6.a	REGIO	n/a	EIB - Marcin Wolski	ECFIN EMPL REGIO RTD	EIB - European Investment Bank	01/10/2016 31/03/2019	CON-TW	2017ModelD	Description of RHOMOLO-EIB model	Publication detailing features of the RHOMOLO-EIB model and properties	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												ImpactAssesment2017	Impact assessment of EIB investments 2017	RHOMOLO simulations on impact assessment of EIB investments, with results delivered as Excel tables and technical reports explaining the results.	30/06/2017	JRC technical reports
												ImpactAssesment2018	Impact assessment of EIB investments 2018	RHOMOLO simulations on ex-ante impact assessment of EIB investments, with results delivered as Excel tables and technical reports explaining the results.	30/06/2018	JRC technical reports
												Report2017Interim	Interim report 01/09/2016 - 31/08/2017	Report of activities and actions agreed with EIB, including publications, presentations, simulations and sensitivity analyses for the year 2016/2017.	31/12/2017	JRC technical reports
												Report2018Final	Final report 01/09/2017 - 31/08/2018	Report of activities and actions agreed with EIB, including publications, presentations, simulations and sensitivity analyses for the year 2018.	31/12/2018	JRC technical reports
												SensAnalysis2017	Sensitivity analyses on RHOMOLO simulations 2017	Sensitivity analyses and presentations on RHOMOLO simulations on impact assessment of EIB investments.	30/06/2017	JRC technical reports
												SensAnalysis2018	Sensitivity analyses on RHOMOLO simulations 2018	Sensitivity analyses and presentations on RHOMOLO simulations on impact assessment of EIB investments.	30/06/2018	JRC technical reports
488 - TERMOD_INVEST JRC.B.3	5400 - REGISTER II Regional Indicators and Territorial Cohesion Analysis II	The main purpose of this Administrative Arrangement (AA) is to elaborate European wide information relating to key themes (e.g.: demography, environment, urban	JRC.B.3 Carlo LAVALLE	1.6.a	REGIO	REGIO	Lewis DIJKSTRA	ECFIN EMPL ENER		01/01/2018 31/12/2020	CON-AA	201801	Inputs to the 7th Cohesion Report	Thematic fact-sheets will be produced as inputs to the 7CR on issues such as transport & accessibility, demography, economic development, evolution of European Urban areas	31/01/2019	JRC technical reports
												202001	Final Report	Report on activities and methods	31/12/2020	JRC technical reports

1.6.b economic, social and environmental cohesion and development - develop indices and quantitative analyses at urban, regional and macroregional levels;

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Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
661 - COIN JRC.I.1	1022 - COIN_REGIO Regional Human Development	The WP aims at developing a series of regional composite indicators related to well-being, poverty, and human development. The indices to be developed are: Regional Human Development	JRC.I.1 Michaela SAISANA	1.6.b	REGIO	REGIO	Lewis DIJKSTRA			18/09/2013 16/06/2017	CON-AA	201701	Trust and Quality of Local Governance in Romania	A report that discusses key findings of the survey data (to be delivered by the World Justice Project) covering a nationally representative sample of 3,200 adults in Romania. The report will look into their experiences and perceptions on the rule of law situation in the country's eight regions.	30/05/2017	Science-for-policy reports
224 - GHSL JRC.E.1	1193 - URBA Human settlements in Europe	The goal of this support activity is to extend the collaboration on the use of JRC's Global Human Settlement Analysis (GHSL) tool, in the context of its application in the European Urban Atlas. The JRC effort will focus on i) maintenance and update of the built-up detection on the service of European	JRC.E.1 Stamatia HALKIA	1.6.b	REGIO	REGIO	Lewis DIJKSTRA		Tech Serv - Member States and their Technical Services/type approval authorities	23/04/2014 22/04/2017	CON-AA	3	Population grid selected countries Europe 100m res	Population grid for selected countries in Europe (100m resolution). Based on a selection of 5-10 countries identified by the customer, & using population and boundary data at the level of census tracts, 1 sq km grid or at the level of municipalities (LAU2), whatever best is available in each country, JRC will apply the agreed disaggregation methodology to produce a 100m grid and an aggregated 1 sq km version. The customer will take the responsibility to provide population counts & boundary data.	28/02/2017	Scientific information systems and databases
488 - TERMOD_INVEST JRC.B.3	2801 - REGISTER Regional Indicators and Territorial Cohesion Analysis	The main purpose of this Administrative Arrangement (AA) is to elaborate European wide information relating to key themes (e.g.: demography, environment, urban development,	JRC.B.3 Carlo LAVALLE	1.6.b	REGIO	REGIO	Lewis Dijkstra (REGIO.B.1)	CLIMA ECFIN ENER ENV	CoR - Committee of the Regions OECD - Organisation for Economic Co-operation and Development (OECD)	23/03/2015 22/03/2018	CON-AA	201701	Territorial Cohesion and investment policy	Map of the Regional investments and territorial impact assessment - Updated Territorial Baseline	23/04/2017	JRC Technical reports
224 - GHSL JRC.E.1	3416 - Sentinel GHSL Pre-operational service framework for GHSL production using Copernicus Sentinel data	This 3-year activity aims to: Firstly, customise a set of satellite-based data processing and analysis techniques developed by the JRC for global human settlement (GHS) detection and analysis in order to render them suitable for a production service framework. Secondly, to develop the technical requirements for a pre-operational Copernicus service framework for the production of Global Human Settlement measurements and exposure indicators. The future service and its information products shall help the EU and countries around	JRC.E.1 Martino PESARESI	1.6.b	REGIO	REGIO	Lewis.DIJKSTRA@ec.europa.eu	DEVCO ECHO GROW	UN HABITAT - United Nations, Human Settlement Programme (UN HABITAT) UN ISDR - United Nations International Strategy for Disaster Reduction (UN-ISDR) UNDP - United Nations Development Programme WB - World Bank	01/03/2016 28/02/2019	CON-AA	201701	2nd release- GHSL exposure & population indicators	2nd release of prototype Global Human Settlement, population & exposure indicators, these are developed using further improved information extraction & analysis methods under development by JRC to serve future operational purposes. Data tested include Sentinel+Landsat data combined with population data, and include built-up areas, urban open spaces & landcover resolutions 20m-250m and years (1975)-1990-2000-2014 (Landsat & CIESIN population data).	16/12/2017	Technical systems
348 - MARREF JRC.C.5	3577 - Connectivity Supporting clean growth in Bioenergy and Transport	This work package is part of wider JRC effort in support of macro-regional strategies. Connectivity WPK supports clean growth in the actions promoted by the Pillars of the EU Macro-regional strategies related to "Transport" and "Sustainable energy" dealing with cross-priority area issues. Pilot studies are carried out to investigate on the impact of biomass combustion on air emissions and health, and to improve the methodology to estimate emissions from freight transport focusing on cross-border issues. The methodologies and tools used are those of the JRC Emissions Database for Global Atmospheric Research (EDGAR) and Fast Scenarios Screening Tool (FASST). These linked studies are performed by JRC teams working together with local experts in support to the EU Macro-regional strategies implementation aiming at a sustainable economic development-environment integrated approach. Currently the work is focused on the Danube Region but an ex-ante baseline analyses in support of DG REGIO in the implementation of the connectivity pillars of the Adriatic-Ionian (EUSAIR) and Alpine (EUSALP) macro-regional strategies will be performed as well. The Bioenergy part in this WPK focuses more on identifying the regional priorities whereas the BioenerASMod WPK of the "Bioeconomy" project focuses on the use of biomass in bioeconomy.	JRC.C.5 Marilena MUNTEAN	1.6.b	REGIO	JRC	MAIRATE Andrea, ONIDA Marco REGIO.DGA2.D.1; ENV.C.3	ENER ENV GROW MOVE NEAR SANTE	- DANUBE DELTA NATIONAL INSTITUTE FOR RESEARCH AND DEVELOPMENT ICPDR - International Commission for the Protection of the Danube River EEA - European Environment Agency EMEP - European Monitoring and Evaluation Programme	31/12/2015 31/12/2018	INS-RS	201701	Key priorities for EUSAIR and EUSALP	Ex-ante assessment of key priorities focusing on clean growth in transport and bioenergy in support to the EU Strategies for the Adriatic - Ionian and Alpine Regions. This deliverable will be carried out in collaboration with Land-Use-based Integrated Sustainability Assessment Modelling Platform (LUISA) group (B.3).	30/11/2017	JRC technical reports
												201703	Impact of bioenergy production on air emissions	The EDGAR methodology will be used to assess the impact of biomass combustion on air emissions in the Danube Region by estimating emissions based on international statistics i.e. International Energy Agency (IEA) and official datasets of emission factors.	30/11/2017	JRC technical reports
												201802	Impact of the use of biomass in residential sector	Study on the impact of the use of biomass in residential sector on air quality and health: macro-regional approach: 1. Emissions will be calculated using refined technology-based emission factors, 2. Impact of short-lived pollutants on air quality, human health and ecosystems will be evaluated. The second part of this deliverable targeting "urban areas and hot spots" will be carried out in the WPK Environment Deliverable 201802. Collaboration with country experts is expected.	15/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												201803	Ship emissions in Adriatic and Ionian Macro-region	Ship emissions in support to the Adriatic and Ionian Macro-regional Strategy implementation: 1. emissions using EDGAR methodology and data from Automatic Identification System (data sharing: JRC in-house databases of vessel tracking data) will be estimated, 2. possible collaboration with experts from scientific institutions in the region to add in Port emissions, 3. results/trend analysis.	15/12/2018	JRC technical reports
												201804	Clean growth in freight transport: Danube Region	This research aims at improving the methodology currently used to estimate emissions from freight transport in Central Europe/Danube Region, which is based on "fuel sold". Considering the transboundary characteristics of freight transport, we propose an advanced methodology based on "fuel used": 1. Data collection, 2. Developing the methodology and 3. Comparing the emissions from freight transport estimated using the two methodologies. Collaboration with country experts is expected.	15/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
661 - COIN JRC.I.1	3960 - COIN_REGIO_II Regional and Urban Policy support through indices and econometric analysis	The goal of this agreement is two-fold: (a) to further develop and extend indicator frameworks and indices related to the monitoring at regional level of the distance to the EU2020 targets, human development, governance and other social phenomena (extending the work of the past AA 33322); (b) to analyse the determinants of territorial dynamics in rural and urban areas in the EU at three spatial resolutions (LAU-2, NUTS3, 1 km grid).	JRC.I.1 Beatrice D'HOMBRES	1.6.b	REGIO	REGIO	Lewis Dijkstra			01/07/2016 30/06/2019	CON-AA	201701	Europe 2020 Index	The report describes an updated version of the regional Europe 2020 Index (and by degree of urbanization), eventual updates to the conceptual framework and the methodology, main results (regional level in the EU and trends over time) and sensitivity analysis.	30/11/2017	JRC technical reports
												201702	Regional HDI	The report describes an updated version of the regional Human Development Index, eventual updates to the conceptual framework and the methodology, main results (regional level in the EU and trends over time) and sensitivity analysis.	18/12/2017	JRC technical reports
												201703	Drivers of territorial dynamics at LAU-2	The report will include the literature review, the indicator framework of key drivers of territorial dynamics at municipality level, the methods used, main results and sensitivity analysis.	20/11/2017	JRC technical reports
												201704	Drivers of territorial dynamics at NUTS3	The report will include the literature review, the indicator framework of key drivers of territorial dynamics at NUTS3 level, the methods used, main results and sensitivity analysis.	18/12/2017	JRC technical reports
												201801	Regional indices	The report will include the description of selected regional indices, their conceptual framework and the methodology, main results and sensitivity analysis.	18/06/2018	JRC technical reports
												201802	Update 2018 Europe 2020 Index	The report will include the final regional Europe 2020 Index (and by degree of urbanization), eventual updates to the conceptual framework and the methodology, main results (regional level in the EU and trends over time) and sensitivity analysis.	20/12/2018	JRC technical reports
												201803	Update 2018 HDI	The report will include the final regional HDI, eventual updates to the conceptual framework and the methodology, main results (regional level in the EU and trends over time) and sensitivity analysis.	20/12/2018	JRC technical reports
4854 - AIR JRC.C.5	4800 - iScape Improving the Smart Control of Air Pollution in Europe	Aims to integrate and advance the control of air quality and carbon emissions in European cities through the development of sustainable and passive air pollution remediation strategies, policy interventions and behavioural change. It will tackle air pollution reduction at target receptors with an	JRC.B.6 Andreas SKOULLOUDIS	1.6.b	REGIO	RTD	DALAN Fabio (RDT.EASME); DIJKSTRA Lewis (REGIO.B.1); HENRICHS Thomas (ENV.C.3)	CLIMA ENV RTD SANTE	EEA - European Environment Agency WHO - World Health Organization	01/09/2016 31/08/2019	CON-IA	D7a	Status of Geographical Representation of Domains	This report examines the geographical representation of urban and regional domains on which ISCAPE will be operational with regard to urban and industrial activities.	31/12/2017	JRC technical reports
												D7b	Generalisation of consequences in EU urban domain	Report generalising the temporal consequences with regard to regional climate change.	31/12/2018	Science-for-policy reports
1.6.c support for macro-regional and smart specialisation strategies - integrated processes and qualitative methods to support the development, implementation and monitoring of smart specialisation strategies and capacitybuilding at national, regional, urban and macro-regional levels.																
146 - S3 Platform JRC.B.3	673 - S3P - MACROREGIONS Smart specialisation for the Danube	Support to R&I strategies for Smart Specialisation in the Danube Region has been a flagship	JRC.B.3 Ales GNAMUS	1.6.c	REGIO	JRC	Andrea MAIRATE	DEVCO HOME		01/01/2014 30/12/2018	INS-RS	2	Publication of the "Science	Contribution to the Report on Promoting Innovative and Inclusive Danube Societies	30/11/2017	JRC technical reports
												3	Annual report 2017	Annual report on the activities carried out.	31/12/2017	JRC internal reports
146 - S3 Platform JRC.B.3	3021 - S3P-ENERGY Smart Specialisation Policies in the field of Energy	Aims to align regional & local activities through technologies and innovative solutions to EU energy policy priorities. Tasks include to:	JRC.B.3 Manuel PALAZUELOS MARTINEZ	1.6.c	REGIO	REGIO	Colin WOLFE	ENER		01/07/2015 31/12/2017	CON-AA	3	Final report	Compendium of activities, policy inputs to DG REGIO, DG ENER and the EC, reporting on papers, public presentations, seminars, publications, impact on the regional and national innovation contexts and scientific contribution	31/12/2017	JRC contributions to policy documents
148 - LAGREG JRC.B.3	3475 - Lagging Regions Support for smart specialisation strategies for research and innovation in Lagging Regions	Implemented by JRC.B3 over a fifteen month period (Sept 2014-Nov 2015), the European Parliament Preparatory Action (PA) focused on the Greek region of Eastern Macedonia and Thrace (REMT) aimed to facilitate the refinement and implementation of the RIS3 strategy in the region and to generate a model for other lagging regions in Europe. In so doing, it also served as a test bed for theories on smart specialisation. The impacts of this work, and the various lessons emerging, are highly relevant for the EC, the regional authority and other local stakeholders.	JRC.B.3 John Mark BODEN	1.6.c	REGIO	REGIO	Colin WOLFE		EP - European Parliament	01/07/2016 30/06/2018	CON-AA	2	First Interim Progress Report	The project will produce a series of policy briefs, setting out reflections both on practical issues, including lessons for other regions, as well as on broader issues of relevance to the lagging regions initiative	30/06/2017	Science-for-policy reports
												3	Second Interim Progress Report	The project will produce a series of policy briefs, setting out reflections both on practical issues, including lessons for other regions, as well as on broader issues of relevance to the lagging regions initiative	31/12/2017	Science-for-policy reports
												4	Final Activity Report	Report on: Outcomes of specific regional stakeholder activities Horizontal analysis of lessons learned Future planning and further developments Dissemination and replication of activities	30/06/2018	JRC technical reports
												1	Annual report 2017	Compendium of activities, policy inputs to DG REGIO and the EC, reporting on papers, public presentations, seminars, publications, impact on the regional and national innovation contexts and scientific contribution	31/12/2017	JRC contributions to policy documents

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
146 - S3 Platform JRC.B.3	5038 - SSP- 4 Smart Specialisation Platform – Phase IV	Specialisation Platforms aiming at creating critical mass in R&I efforts among regions by using ESIF - support the creation of EU value chains out of the activities related to above - support implementation of smart specialisation strategies via operational programmes	JRC.B.3 Manuel PALAZUELOS MARTINEZ	1.6.c	REGIO	REGIO	Colin WOLFE	CNECT EAC GROW RTD	CoR - Committee of the Regions EP - European Parliament	01/01/2017 31/12/2018	CON-AA	2	Final report 2018	Compendium of activities, policy inputs to DG REGIO and the EC, reporting on papers, public presentations, seminars, publications, impact on the regional and national innovation contexts and scientific contribution	31/12/2018	JRC contributions to policy documents
												3	Special issue on smart specialisation	Special issue in a top scientific journal gathering contributions on smart specialisation and territorial development from the SMARTER conference organised by JRC and RSA in 2016.	31/12/2017	Books and monographs with JRC editorship
146 - S3 Platform JRC.B.3	5039 - S3P-NEAR Smart Specialisation for enlargement and neighbourhood countries	The relations with neighbouring countries have been a central concern for the EU throughout the integration process. Every round of the EU enlargement has created new 'neighbouring'	JRC.B.3 Ales GNAMUS	1.6.c	NEAR	NEAR	Bernard BRUNET	DEVCO ECHO FPI JRC		01/07/2017 31/12/2018	CON-AA	1	Annual Report for 2017	Compendium of activities, policy inputs to DG NEAR and the EC.	22/12/2017	JRC contributions to policy documents
												2	Annual Report for 2018	Compendium of activities, policy inputs to DG NEAR and the EC.	31/12/2018	JRC contributions to policy documents
488 - TERMOD_INVEST JRC.B.3	5041 - URBADDEV Support to the EU Urban Policy and Urban Development Strategies	This Work Package aims at providing support to the activities of the Urban Development Network-UDN of the European Commission managed by DG REGIO, and to inform future EU policy with an impact on cities and urban areas, either directly or indirectly. Three hypothesis support the research proposal: This project will analyse and support the strategic management capabilities in partner countries, with a special emphasis on the entrepreneurial discovery processes at both government and non-governmental level. In the WP 2017-18, the project will continue to support the three pilot countries from 2016 (RS, UA, MD) to ensure longer term impact and lasting process. However, the method can be expanded in the future, depending on an assessment of the results and demand. Limited horizontal actions will be open to other partner countries. The project has the following 6 main objectives: -To focus on the process of strategic management and policy design in partner countries and	JRC.B.3 MARTINA PERTOLDI	1.6.c	REGIO	JRC	EVA NUSSMUELLER	REGIO	CoR - Committee of the Regions	01/01/2017 31/12/2018	CON-AA	FinalReport	Final Report	Final Report on activities and publications linked to the Work Package.	28/12/2018	JRC technical reports
												InterimReport 2017	Interim Report 2017	Report on activities and publications linked to the Work Package.	29/12/2017	JRC technical reports
												Methodologic alguide	Methodological guidance1	Methodological guidance on the establishment of Integrated urban development strategies	07/12/2018	JRC technical reports
												Methodologic alguide2	Methodological guidance on urban peer-review	Development and test of a EU peer-review methodology targeted to urban strategies	30/06/2017	JRC technical reports
146 - S3 Platform JRC.B.3	5042 - S3P-E&IA Smart specialisation and organisational development in enlargement and H2020 associated countries	This project will analyse and support the strategic management capabilities in partner countries, with a special emphasis on the entrepreneurial discovery processes at both government and non-governmental level. In the WP 2017-18, the project will continue to support the three pilot countries from 2016 (RS, UA, MD) to ensure longer term impact and lasting process. However, the method can be expanded in the future, depending on an assessment of the results and demand. Limited horizontal actions will be open to other partner countries. The project has the following 6 main objectives: -To focus on the process of strategic management and policy design in partner countries and	JRC.B.3 ALEXANDER KLEIBRINK	1.6.c	NEAR	JRC	Bernard BRUNET	REGIO RTD		01/01/2017 31/12/2018	INS-E&IA	1	Terms of reference for organisational development	The research team will draft the terms of reference for the two-year project and agree with the counterparts in partner countries on the desired results of the project. This tailored plan will be developed together with partner countries on the main challenges to strategic management and organisational development. It will also be agreed who the care-taking experts will be to follow the process and who appropriate 'critical friends' from EU MS and regions could be.	31/03/2017	JRC contributions to policy documents
												2	Current status of STI strategy development	The research team will write a policy note on the current status of STI strategy development in target countries.	31/07/2017	Science-for-policy reports
												3	Organisational development for S3	A publication co-authored by the research team and an external expert will summarise the main findings of the activities and put them into context.	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
146 - S3 Platform JRC.B.3	5146 - S3P-TER-INNO S3P- Analysis and methodologies of Territorial Innovation Ecosystems	This WP aims to study the functioning of territorial innovation ecosystems (at regional and urban level and the role of individual key players in a set of regions which have adopted a quadruple helix stakeholders model (4H) in their regional smart specialisation strategies (RIS3), in order to understand their specific contribution to the Entrepreneurial Discovery Process (which calls for strong multi-stakeholders engagement as a precondition for successful implementation of regional operational programmes), and ultimately to make their region's innovation plans to succeed. "Creating jobs and sustainable growth are key challenges for Europe. Boosting competitiveness is an essential requirement and depends largely on promoting innovation, creativity and	JRC.B.3 Gabriel RISSOLA	1.6.c	REGIO	JRC	Colin WOLFE	CNECT GROW	CoR - Committee of the Regions	02/01/2017 31/12/2018	INS-RS	1	Mapping selected territorial innovation ecosystems	This deliverable will provide a detailed picture of the regional/urban innovation ecosystem (Locality Mapping) in three areas selected for their diversity and possible representativeness of the European context. It will consist of a collection of three exhaustive mapping exercises performed on the ground (through fieldwork activities like study visits, semi-structured interviews, etc) and presented as stand-alone case studies describing local innovation ecosystems' actors and their inter-links.	30/09/2017	Science-for-policy reports
												2	Analysis of EU territorial innovation ecosystems	Based on Del. 1, this analysis will build a (cross-regional) typology of innovation-catalyse actors; compare mapped innovation ecosystems (and others that might be documented if available literature) scrutinising their key enabling factors, drivers and dynamics, governance and sustainability models; extract conclusions and recommendations for regional & urban development policy.	30/09/2018	JRC technical reports
												3	Augmented Entrepreneurial Discovery Process	Based on Del. 1 and 2, this deliverable will identify the more promising methodologies to develop innovation ecosystems through strong multi-stakeholders engagement and collaboration (e.g. Innovation Camps), developing an expanded methodological framework that can potentiate the Entrepreneurial Discovery Process as it is known and used today.	31/12/2018	Science-for-policy reports
801 - Pilot KC TP JRC.B.3	5163 - KC TP II Implementation of the Knowledge Centre for Territorial Policies_ Phase II	The pilot Knowledge Centre for Territorial Policies (KC TP) aims to change the way knowledge for territorial policies is shared and used to increase its impact and improve its efficiency. It achieves it by better integrating and coordinating the supply and demand for knowledge. It provides one-stop access to data, policy analysis, interactive tools and methods for policy makers, scientists and	JRC.B.3 Carlo LAVALLE	1.6.c	REGIO	JRC	Lewis DIJKSTRA	CLIMA ENER SG	CoR - Committee of the Regions	01/01/2017 31/12/2018	INS-RS	201702	KCTP Platform new functionalities	Building on the 1st phase of the platform development, a testing group will be set up to test the platform. New functionalities will be identified by the Steering Group of the project and in collaboration with DG REGIO. These functionalities will be linked to visualisation of data and information	29/09/2017	Technical systems
												201703	KCTP Platform mid-term report	Reporting on the results of the testing, implementation of main functionalities and need for new functionalities.	29/09/2017	JRC technical reports
												201801	KCTP release 2018	Up dated release	21/12/2018	JRC technical reports
6344 - Stairway2Excellence JRC.B.3	5420 - S2E - II Cohesion Policy & synergies with R&D	The scope of this pilot project is to continue to provide assistance for new Member States to start Cohesion Policy & synergies with R&D funds: the "Stairway to Excellence" - phase III : the scope of	JRC.B.3 Andrea CONTE	1.6.c	REGIO	REGIO	Colin WOLFE	RTD	CoR - Committee of the Regions EP - European Parliament	01/01/2017 31/03/2017	CON-AA	1	Final Report 2017	Compendium of activities and contribution (events/ presentations, papers, publications, etc).	31/12/2017	Science-for-policy reports
6344 - Stairway2Excellence JRC.B.3	5521 - S2E- III Cohesion Policy & synergies with R&D	Implemented by JRC.B.3 over a fifteen month period (Sept 2014-Nov 2015), the European Parliament Preparatory Action (PA) focused on the Greek region of Eastern Macedonia and Thrace (REMTH) aimed to facilitate the refinement and implementation of the RIS3 strategy in the region and to generate a model for other lagging regions in Greece and Europe. In so doing, it also served as a test bed for theories on smart specialisation. The impacts of this work, and the various lessons emerging, are highly relevant for the EC, the regional authority and other local stakeholders.	JRC.B.3 Andrea CONTE	1.6.c	REGIO	REGIO	Colin WOLFE	RTD	CoR - Committee of the Regions EP - European Parliament	01/04/2017 31/12/2018	CON-AA	1	Final Report 2018	Compendium of activities and contribution (events/ presentations, papers, publications, etc).	30/12/2018	Science-for-policy reports
148 - LAGREG JRC.B.3	5522 - RIS3 Romania Targeted RIS3 Support to Romania	The European Commission strategy from May 2016, "Digitising European Industry – Reaping the full benefits of a Digital Single Market" based on the collective effort of public and private stakeholders across Europe at regional, national and EU level the Commission aims to ensure that any industry in Europe can fully benefit from digital innovations to upgrade its products, improve processes and adapt its business models to the digital change. One of the pivotal parts of the Strategy is the pan-European network of digital innovation hubs (DIHs). For which there is an investment of € 500 million to provide business with advice and possibilities to test digital innovations.	JRC.B.3 John Mark BODEN	1.6.c	REGIO	REGIO	Colin WOLFE		EP - European Parliament	01/07/2016 30/06/2018	CON-AA	02	First Interim Progress Report	The project will produce a series of policy briefs, setting out reflections both on practical issues, including lessons for other regions, as well as on broader issues of relevance to the lagging regions initiative.	30/06/2017	Science-for-policy reports
												03	Second Interim Progress Report	The project will produce a series of policy briefs, setting out reflections both on practical issues, including lessons for other regions, as well as on broader issues of relevance to the lagging regions initiative.	31/12/2017	Science-for-policy reports
												04	Final Activity Report	Final Report on: Outcomes of specific regional stakeholder activities Horizontal analysis of lessons learned Future planning and further developments Dissemination and replication of activities	30/06/2018	JRC technical reports
146 - S3 Platform JRC.B.3	5680 - S3P-DIH Smart Specialisation and Digital Innovation Hubs	The European Commission strategy from May 2016, "Digitising European Industry – Reaping the full benefits of a Digital Single Market" based on the collective effort of public and private stakeholders across Europe at regional, national and EU level the Commission aims to ensure that any industry in Europe can fully benefit from digital innovations to upgrade its products, improve processes and adapt its business models to the digital change. One of the pivotal parts of the Strategy is the pan-European network of digital innovation hubs (DIHs). For which there is an investment of € 500 million to provide business with advice and possibilities to test digital innovations.	JRC.B.3 JENS OSKAR SORVIK	1.6.c	CNECT	CNECT	Max LEMKE			01/01/2017 31/12/2018	CON-AA	1	Online tool	JRC B3 will take on the development of the tool, and host it in the Smart Specialisation webpage. For this purpose the JRC will hire an external consultant.	31/12/2017	Technical systems
												2	Case studies	Case studies identifying, documenting and diffusing good practices of DIH involved in developing and implementing Smart Specialisation Strategies, also mobilising a community of practitioners in collaboration. This work is not substituting the collection of good practices planned by CONNECT, but rather making use of them as a relevant input.	31/03/2018	Science-for-policy reports
												3	Mapping and analysis of DIH investment patterns	Based on the catalogue of DIHs JRC B3 will analyse the DIH participation in FP7 and H2020 projects – to identify what type of experiments they carry out and compare these data sets with data on Smart Specialisation priorities, regional innovation strengths, to analyse patterns of regional pre-conditions, services offered to see the DIHs regional embeddedness, networks and value chains.	31/03/2018	JRC technical reports
												4	Case studies of DIHs.	Based on the analysis from WP2, a selected number of regions will be explored in more depth, to better understand the connection between different forms of pre-conditions and the activities of the DIHs.	31/12/2018	JRC technical reports
1.7 Research, science and innovation																
1.7.a research and innovation policies model, monitor and analyse the drivers of, and barriers to research and innovation, including the effectiveness of policy instruments related to research and innovation at EU, national, regional and (cross)-sectorial levels. Research and Innovation Observatory for the collection, production and dissemination of data and analysis related to national research and innovation policies. Indicators,																
145 - IRI-TEC JRC.B.3	3474 - IRIMA II Industrial Research and Innovation Monitoring and Analysis (Phase 2)	IRIMA II provides evidence to support the EU and national level policy-making in key areas of research and innovation policy, particularly those related to reforms aiming at increasing the level of corporate R&D investments in Europe. It also provides evidence on the performance of companies operating in strategic and high knowledge intensive industrial sectors in Europe, supporting the design of industrial innovation support measures. The economic and financial analyses at firm, sector, country, EU and international levels are carried-out on the basis of	JRC.B.3 Alexander TUEBKE	1.7.a	RTD	RTD	Roberto MARTINO (DG RTD A.4)	CNECT ECFIN EEMPL GROW SG	OECD - Organisation for Economic Co-operation and Development (OECD) WIPO - World Intellectual Property Organization	01/01/2016 30/06/2018	CON-IA	1	2017 EU Industrial R&D Investment Scoreboard	The Scoreboard contains economic and financial data of the world's top 1500 companies ranked by their investments in research and development (R&D).	31/12/2017	Science-for-policy reports
												2	EU R&D 2017 Survey	Results of the 2017 EU Survey on Industrial R&D Investment trends will be presented. Survey is sent to the EU companies of the EU Industrial Scoreboard.	01/07/2017	Science-for-policy reports
												3	2017 annual Report - Scientific and policy output	Report on the scientific output of IRIMA II (Working Papers and Technical reports) and of policy related reports adopted in 2017	31/12/2017	JRC technical reports
												4	Contribution to DG RTD's 2017 report Science & Inn	This report summarises IRIMA's contribution to DG RTD's 2017 report on Science and Innovation.	30/06/2017	JRC technical reports
												5	First report on Global Value Chains	This report summarises the results from the first phase of WP3 on breaking down R&D and innovation activities in Global Value Chains.	01/05/2017	JRC technical reports
												6	Summary of the February 2017 IRIMA Workshop	Summary of the 8th IRIMA Workshop on R&D&I in Global Value Chains	31/05/2017	JRC technical reports

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
		original data collected as part of the project and other statistical and commercial sources.										7	Summary of the September 2017 Workshop	Summary of the 9th IRIMA Workshop	31/12/2017	JRC technical reports
661 - COIN JRC.I.1	3514 - INNOVA_MEASURE_3 Statistical analyses and composite indicators in research and innovation	This project builds on past JRC work carried out between 2011 and 2015 (financed by the Capacities work programme of FP7 and H2020). Aims: (a) to provide statistical support for the development and update of indicators related to science, technology and innovation; (b) to carry out statistical and econometric analysis in order to better understand the nature, needs and determinants of high-growth enterprises, as well as the policy responses and the framework conditions needed to facilitate the growth of companies in innovative sectors; (c) to explore the relationship between inward and outward foreign direct investment flows in R&D and framework conditions such as the tax system/tax incentives (R&D tax incentives in particular); (d) to provide econometric and statistical support related to the above-mentioned activities; and (e) to carry out a	JRC.I.1 DANIEL VERTESY	1.7.a	RTD	RTD	Richard DEISS	GROW		01/04/2017 30/09/2018	CON-AA	1	Updating the European Innovation Scoreboard	The technical report will document the JRC contributions to the foreseen revision of the European Innovation Scoreboard and its Summary Innovation Index. The areas of improvement entail conducting simulations, sensitivity analysis to various assumptions and robustness analysis of country rankings.	31/12/2017	JRC technical reports
												2	Composite Indicators of Research and Innovation	The report will present the results of the update and the fine-tuning of the Indicator of Innovation Output and Adjusted Research Excellence composite indicator.	15/06/2018	JRC technical reports
												3	A global statistical overview of high-growth firms	This study addresses the issue of global comparability of statistical information on high-growth enterprises, the multitude of definitions and potential limitations.	31/01/2018	JRC technical reports
												4	Characteristics, determinants of high-growth firms	The study provides empirical evidence on the characteristics and determinants of fast-growing firms. It provides a comprehensive assessment of the role of public support and broader framework conditions as well as company-specific characteristics to assess the distribution and persistence of firm growth in the sample.	30/06/2018	JRC technical reports
												5	Inward and outward FDI in R&D	This study focuses on the determinants of inward and outward R&D flows, with a focus on tax incentives (and R&D tax incentives in particular) that have the potential of boosting knowledge- and technology-intensive economic activities in receiving and sending countries or helping those countries moving up the global value chains.	30/04/2018	JRC technical reports
												6	Deliverable to be deleted	Deliverable to be deleted	31/12/2017	JRC technical reports
661 - COIN JRC.I.1	3580 - INNOVA_MEASURE 2 Statistical analyses and composite indicators in research and innovation	(a) to better understand the sectoral and cross-country differences in fast-growing enterprises in Europe. The object of this Work package is to carry out a micro econometric analysis in order to measure the impact of EU research funding schemes on private firms. This activity maps onto INNOVA MEASURE II and III. Outcomes from this WP, jointly designed with Unit RTD.DDG1.A.4 "Analysis and monitoring of national research policies" and Unit RTD.DDG1.A.5 "Evaluation", will inform about the impact and effectiveness of EU R&D funding, potentially leading to identifying effective and ineffective funding schemes. Input from JRC colleagues working on R&D will be actively sought	JRC.I.1 DANIEL VERTESY	1.7.a	RTD	RTD	Richard DEISS	ECFIN ESTAT GROW SG		01/11/2015 31/03/2017	CON-AA	1	Exploring fast-growing innovative enterprises	To explore the sectoral and cross-country differences in fast-growing enterprises in Europe exploiting microdata from CIS2012 survey.	14/03/2017	Science-for-policy reports
												2	Impact of EU funding on research excellence	To analyse the impact of EU funding on research excellence using CORDA and other bibliometric data.	21/03/2017	Science-for-policy reports
603 - CC-ME JRC.I.1	3928 - CC-ME.RTD Competence Centre on Microeconomic Evaluation - RTD	The object of this Work package is to carry out a micro econometric analysis in order to measure the impact of EU research funding schemes on private firms. This activity maps onto INNOVA MEASURE II and III. Outcomes from this WP, jointly designed with Unit RTD.DDG1.A.4 "Analysis and monitoring of national research policies" and Unit RTD.DDG1.A.5 "Evaluation", will inform about the impact and effectiveness of EU R&D funding, potentially leading to identifying effective and ineffective funding schemes. Input from JRC colleagues working on R&D will be actively sought	JRC.I.1 ANDREA MORESCALCHI	1.7.a	RTD	JRC	Richard DEISS	JRC		01/01/2016 31/12/2017	INS-UR	1	Feasibility study: impact of EU research funding	This WP is a feasibility study aiming to assess the feasibility of a counterfactual impact evaluation of the EC research funding schemes on the knowledge basis and economic performance of private firms. Data on successful and unsuccessful applicants to EC calls can be drawn from CORDA. CORDA can be linked to sources of data on firms, such as ORBIS and Patstat to collect information on outcomes and covariates.	30/04/2017	JRC technical reports
												2	Impact of EU research funding schemes: private Cos	Will use data collected in deliverable 1 to implement a counterfactual impact evaluation of EC research funding schemes on the knowledge base and economic performance of private companies. The application score drawn from CORDA can be used within a Regression Discontinuity Design (RDD) to compare outcomes of marginal beneficiaries and non-beneficiaries, i.e. applicants scoring slightly above and below a cutoff value identifying the eligibility threshold for funding.	31/12/2017	JRC technical reports
437 - SAFE&CLEAN-CONSTRUCT JRC.E.4	4950 - SEERIA 4 EU Seismology and Earthquake Engineering Research Infrastructure Alliance for Europe	The project aims at the integration of the earthquake engineering and the engineering seismology research communities in a European research alliance. The project will comprise transnational and virtual access activities, networking activities (e.g. distributed database of experimental results and integration with the EPOS platform of seismological data) and joint research activities (risk mitigation, advancement of hybrid testing methods, multi-hazard testing in coupled conventional and city-laboratory facilities, etc.).	JRC.E.4 Georgios TSIONIS	1.7.a	RTD	RTD	Antonio DI GIULIO			01/07/2017 30/06/2020	CON-IA	1	Review of current SERIES and EPOS databases	Detailed description of the data, data products, services and software (DDSS) elements, metadata structure used in the SERIES and EPOS databases, i.e. the Common European Research Information Format (CERIF).	31/12/2017	JRC technical reports
												2	Expansion of the SERIES database	Creation of IT tools to facilitate the input of data into the database – following a general parametrized method compatible with the SERIES format, that each lab will have to tune with respect to its own DAQ system – and distribution to all the earthquake engineering partners, creation of a user-friendly interface to visualise data.	30/06/2017	JRC technical reports
												3	Roadmap for SERIES & EPOS data banks integration	The roadmap for the integration of data banks and informatics services from the earthquake engineering and seismology RIs in Europe will be defined on the basis of the review of the current data platforms, the anticipated research needs in each discipline and in cross-discipline issues, the latest technological developments, the requirements of users beyond the RIs, the collaboration with international research organisations and synergies with sibling disciplines.	14/12/2018	JRC technical reports
5062 - RIO JRC.B.7	5064 - Impact of FP/H2020 Impact of Framework Programme	This Work Package aims to contribute to the Impact Assessment of the Framework Programme/H2020 including the midterm review of H2020. The purpose is to improve our understanding of the impact of the FP7, H2020 and	JRC.B.7 Peder CHRISTENSEN	1.7.a	RTD	JRC	LIVIU STIRBAT	CNECT GROW		01/01/2017 31/12/2017	INS-RS	50641	Impact of MSCA on excellence and collaboration	Article based on a JRC Technical Report on the impact of the Marie S Curie Actions under FP7/H2020.	15/04/2017	Science-for-policy reports
												50642	Macroeconomic impact of Framework Programme	JRC Technical Report on the macroeconomic impact of the FP/H2020	01/12/2017	Science-for-policy reports
5062 - RIO JRC.B.7	5065 - EUNIV National Policy Frameworks and Entrepreneurial Universities	This WP will contribute to the Commission priorities "Better Regulation" and "Strengthening the Industrial Base". Its objective is to provide Commission services with an analysis of the factors that have led to the emergence of entrepreneurial universities. Promoting such universities features prominently in the EU policy agenda and lies into the Country Specific Recommendations on fostering university-industry ties. A greater understanding of the national policies which foster this development facilitates policy learning by EU and national policy makers.	JRC.B.7 KOEN JONKERS	1.7.a	EAC	JRC	Georgi Dimitrov	CNECT GROW RTD		01/01/2017 31/12/2017	INS-RS	50651	Entrepreneurial universities & national frameworks	To provide a JRC scientific and technological report analysing the impact of national level policies in driving, facilitating and hindering the transition to different types of entrepreneurial universities in Europe.	30/09/2017	Science-for-policy reports
												50652	Policy frameworks and entrepreneurial universities	To provide a scientific article based on the science for policy report extended with an econometric analysis of the impact of national policies on the performance of universities on knowledge transfer and excellence	30/11/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters Science Citation Index Expanded (SCIE) or Social Science Citation Index (SSCI)
5062 - RIO JRC.B.7	5066 - RIO Country Reports RIO Country Reports	The objective of this Workpackage is to provide the European Commission services with consolidated input on national innovation policies, feeding directly into the European Semester process. The results of the process will provide also the lessons learnt on how to deliver inputs in other policy areas (e.g. employment or digital	JRC.B.7 Katarzyna SZKUTA	1.7.a	RTD	JRC	Marta TRUCO CALBET	CNECT EAC ECFIN EMPL GROW REGIO SG		01/01/2017 31/12/2017	INS-RS	50661	RIO Country Reports	The annual RIO Country Report analyses and assesses the development and performance of the national research and innovation system of the EU-28 Member States and related policies in the perspective of EU strategy and goals having the goal of monitoring and evaluating the EU policy implementation as the input to the European Semester as well as facilitating policy learning in the MS as an input to the Policy Support Facility. The RIO Country Reports 2016 will cover 28 Member States.	28/02/2017	Science-for-policy reports
5062 - RIO JRC.B.7	5067 - RIO/PSF Website RIO/PSF Website	The objective of the work package is to provide European Commission services and national policy makers with up to date world-class analysis, intelligence and data on designing, implementing and evaluating research and innovation policy at EU and national level. The work package comprises the maintenance and further development of the RIO IT system as a whole, including the RIO-PSF website and a data warehouse database. The work package contributes to the JRC's policy priority nexus "innovation systems and processes priority". The RIO-PSF website has a key function in making knowledge in the field of R&I comparable, easily accessible and directly applicable to policy questions for users from different DGs, Member State policy-makers and other stakeholders.	JRC.B.7 HRISTO HRISTOV	1.7.a	RTD	JRC	Marta TRUCO CALBET	CNECT ECFIN FISMA GROW REGIO SG	OECD - Organisation for Economic Co-operation and Development (OECD)	01/01/2017 31/12/2017	INS-RS	20171	Revamped release including extension of database	Revamped release of the RIO/PSF website covering the EU28 and beyond, based on a forward looking assessment B.7, the needs of partner policy DGs (the needs DG RTD's PSF in particular). Update/extension of the database (data, key indicators and visualisations) by further population of the data warehouse database with R&I data from primary sources. Technical support will be delivered by colleagues from unit R10 in Ispra	30/11/2017	Scientific information systems and databases
												20172	Cooperation with OECD's Innovation Policy Platform	The Solr search platform will be further developed with the objective to empower the user to conduct simultaneous and effective searches for RIO/PSF and IPP contents in both websites. The resulting solution will be platform independent which also allows for similar types of cooperation with other international providers of world-class R&I data and intelligence. Options for further cooperation will be explored.	30/09/2017	Scientific information systems and databases
												20173	Improvements to the RIO website	To conduct a user/stakeholder survey online to get qualitative data about usefulness of the RIO/PSF website. To continuously collect and analyse quantitative website usage statistics gathered with advanced analytical tool (PIWIK). Exploration of synergies with other EC innovation themed websites and study of features of major EC and external innovation related websites to find out possible gaps and/or opportunities that could be filled by RIO/PSF.	30/09/2017	Scientific information systems and databases
1.7.b fuel cells and hydrogen technologies support under the Fuel Cells and Hydrogen Joint Undertaking, typically in cross-cutting areas, such as safety regulations, codes and standards;																
167 - CoTEST JRC contribution to Description of Work (DoW) for the Fuel Cells and Hydrogen Joint Undertaking (FCH JU), consisting of operating test facilities for performance measurement and	599 - FCHJU FP7 JRC contribution to Description of Work (DoW) for the Fuel Cells and Hydrogen Joint Undertaking (FCH JU), consisting of operating test facilities for performance measurement and	JRC contribution to still ongoing FP7 projects funded by the Fuel Cells & Hydrogen Joint Undertaking (FCH JU), consisting of operating test facilities for performance measurement and	JRC.B.1 DANIEL VERTESY	1.7.a	RTD	JRC	Philippe JANNON	ENER	FCH JTI - Joint Technology Initiative	01/01/2017 31/12/2017	INS-RS	1	FCH JTI AutostackCore LTFC research	Performing the experimental testing activities for automotive fuel cells verifying European stack design according to specific tasks in Project Description of Work (DoW) with test	28/02/2017	Validated methods, Reference methods
												10	Scientific publications and outreach activities	Dissemination of scientific results of the project activities at international conferences and workshops	31/12/2017	Poster presentation
												11	FCH JTI HyCoRa dissemination activity	Organisation of a workshop for the dissemination of projects results of the JTI HyCoRa project on hydrogen fuel quality in support of ongoing ISO fuel quality standardisation including drafting of the workshop agenda and collection of presentations.	28/04/2017	JRC contributions to standards
												2	FCH JTI DonQuichote FC in kind support sys.testing	Performing experimental testing activities for fuel cell systems according to specific tasks in Project Description of Work (DoW) with test results to appear in project report to FCH2JU	30/09/2017	Validated methods, Reference methods and measurements

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
167 - GasTEST JRC.C.1	Work of ongoing FCH JU projects started under FP7	conducting research and validation testing of fuel cells, electrolysers & related innovative technologies for stationary power generation and transportation.	Thomas MALKOW	1.7.b	RTD	RTD	P. Vannson (RTD-G2), B. Biebuyk (FCH2JU)	GROW MOVE	on Fuel Cells and Hydrogen	31/12/2017	CON-IA	3	FCH JTI ProSOFC HTFC research	Performing the experimental testing activities for high temperature fuel cells (HTFC) according to specific tasks in Project Description of Work (DoW) with test results to appear in project report to FCH2JU	31/10/2017	Validated methods, Reference methods and measurements
												5	FCH JTI SOCTESQA testing	Performing validation testing on solid oxide cells (SOC) according to specific tasks in Project Description of Work (DoW) with test results to appear in project report to FCH2JU	28/04/2017	Validated methods, Reference methods and measurements
												7	FCH JTI HyCoRa testing	Performing the experimental testing activities for low temperature fuel cells (LTFC) according to specific tasks in Project Description of Work (DoW) with test results to appear in project report to FCH2JU	30/06/2017	Validated methods, Reference methods and measurements
												9	FCH JTI SecondAct research	Performing the experimental testing activities for low temperature fuel cells (LTFC) according to specific tasks in Project Description of Work (DoW) with test results to appear in project report to FCH2JU	30/04/2017	Validated methods, Reference methods and measurements
167 - GasTEST JRC.C.1	2186 - FWC FCH2JU Framework Contract with FCH2 JU	<p>Policy and scientific support to the Fuel Cells and Hydrogen 2nd Joint Undertaking (FCH2 JU) objectives and operations at programme level for the duration of H2020, as indicated in sections 4.1 and 4.3 of the FCH2 JU Multi-Annual Work Programme (MAWP) and described in the Technical Annex to the Framework Agreement between JRC and FCH2 JU. In line with JRC mission and role under H2020, support typically addresses topics of cross-cutting nature from section 3.1.4 of the MAWP. This WPK is essential part of the overarching goal of FuCellHy, and particularly to objective 3.</p> <p>Activities calling explicitly upon JRC's independence are provided in-kind to the industry-led FCH Joint Technology Initiative and to the FCH2 JU Programme Office are not included in this WPK, but are integrated in the institutional activities of WPKs STREP and P2H.</p> <p>As stated by the mid-term review of the first FCH JU, a lack of coordination regarding the RCS issues has characterised the development of the programme in the FP7 period. JRC plays a unique role at the interface between industry and the Commission, in identifying and filling RCS and safety gaps of public interest.</p> <p>The activities consist of</p> <p>a) contribution to the strategy related to FCH2 JU cross-cutting activities, mainly regulations and</p>	JRC.C.1 Thomas MALKOW	1.7.b	RTD	RTD	P. Vannson (RTD-G2), B. Biebuyk (FCH2JU)	ENER MOVE	- FUEL CELLS AND HYDROGEN JOINT UNDER	18/02/2016 31/12/2022	CON-TW	11	B.1 JRC support to RCS strategy (2017)	The FCH2JU Programme Office has asked JRC to facilitate and support the work of the industry-led RCS Strategy Coordination Group. Building on the preparatory work of 2016, the support to the RCS SC Group will consist in:	31/12/2017	Science-for-policy reports
												12	B.2 Contribution to implementing RCS strategy	JRC contribution to the implementation of the RCS strategy consists of:	31/12/2017	Validated methods, Reference methods and measurements
												13	B.3 Programme monitoring & assessment	Provision of reference international technology data adapted to FCH2JU TEMONAS database needs and structure. Technology indicators related to the US DoE programme will be delivered for all main hydrogen sub-technologies.	31/12/2017	JRC technical reports
												14	B.4 Contribution to safety and safety awareness	Building on the preparatory work of the 2016, in 2017 JRC contribution to safety dimension and safety awareness in FCH2JU funded projects consists i) in managing and populating the Database HIAD from all related projects (including maintaining a communication channel with them, ii) implementation and testing of the database software upgrade, iii) an annual report on the events collected in 2017.	31/12/2017	Scientific information systems and databases
												15	B.6 JRC testing activities	This is an optional deliverable, which depends on the request from PO to provide specific testing services by means of JRC reference facilities to projects as part of the strategy implementation at programme level. The type and the quantity of the testing service will depend on the execution of AWP2017 and Programme Office requests.	31/12/2017	Validated methods, Reference methods and measurements
213 - TMA CC JRC.I.3	3819 - TIM FCH TIM for Fuel Cell and Hydrogen Joint Undertaking	<p>Work package related to project 2186. 100k€ reserved for this activity.</p> <p>Specific tasks: Development of a monitoring system for tracking technologies related to fuel cells and hydrogen - monitoring of news related to FCH field.</p>	JRC.I.3 Olivier EULAERTS	1.7.b	RTD	RTD	P. Vannson (RTD-G2), B. Biebuyk (FCH2JU)		FCH JTI - Joint Technology Initiative on Fuel Cells and Hydrogen	01/01/2016 31/12/2017	CON-AA	1	Technology tracking and monitoring system	A technology tracking and monitoring system for the JTI FCH	31/12/2016	Scientific information systems and databases
												1	TIM-EMM for FCH 1.0	A technology and media monitoring system for FCH JU	31/12/2017	Scientific information systems and databases
1.7.c low-carbon energy observatory - provide data, analysis and intelligence on the state of the art of different energy supply technologies, their industrial development, market barriers and global competition;																
621 - LCEO JRC.C.2	2140 - LCEO Low Carbon Energy Observatory	<p>The Low Carbon Energy Observatory (LCEO) is an Administrative Arrangement with DG-RTD that addresses the 14 low carbon energy supply technologies identified in the SET-Plan Integrated Roadmap. Its objectives are:</p> <ul style="list-style-type: none"> - Provide world-class data, analysis and intelligence on energy research and innovation policy and performance at EU, national and regional level, including developments in major countries outside Europe in order to support EU Energy research and innovation policy. - Facilitate technological development and deployment of innovative solutions by providing a neutral assessment on the state of the art of different energy technologies, identification of market barriers, as well as best practices in terms of mobilisation of private and public funds and policy measures. <p>The assessments are based on data, information and project results from EU-funded projects, from selected international, national and regional projects (conditional on availability of data), from publications and from other appropriate sources.</p> <p>An inventory of scientific developments and new</p>	JRC.C.2 Nigel TAYLOR	1.7.c	RTD	RTD	Piotr Tulej (RTD G.3); Irene Bonvisuto (RTD.G.3), B. Atanasiu (ENER.C.1), D. Raytchev (ENER.C.1)	ENER		01/04/2015 31/03/2020	CON-AA	220	Technology Development Reports 2018	LCEO technology development reports describe the technology maturity status and development trends. A separate report is made for each of 14 energy supply	31/03/2018	Science-for-policy reports
												250	Cross-sectorial issues in the energy system	The cross-sectorial report addresses the whole energy system and hence includes non-energy supply sectors such as transport, transmission and distribution and heating and cooling. The analysis considers current R&D activities targeting energy system integration, challenges and potential developments.	31/03/2017	Science-for-policy reports
												260	Trans-technology synergies in the energy system	This is the 2nd trans-technology report, and will update the first report delivered in 2016. It focuses on current research and trends on how an increasing share of variable renewable energy can be balanced with flexible power sources, storage and ICT.	31/03/2018	Science-for-policy reports
												350	Future and Emerging Energy Supply Technologies 2017	Annual report to present emerging concepts (TRLs from 1 to 3), analysing them in relation to the EU policy objectives and highlighting their potential to impact them. It will also report the status of the FET inventory/database.	31/03/2017	Science-for-policy reports
												360	Future and Emerging Energy Supply Technologies 2018	Annual report to present emerging concepts (TRLs from 1 to 3), analysing them in relation to the EU policy objectives and highlighting their potential to impact them. It will also report the status of the FET inventory/database.	31/03/2018	Science-for-policy reports
												420	Technology Market Reports 2018	LCEO technology development reports describe the market status and prospects. A separate report is made for each of 14 energy supply technologies. These will update the first set of reports delivered in 2016.	31/03/2018	Science-for-policy reports
												430	Global market for energy supply technologies	The report will address the recent developments (from 2010) and explore the medium and long-term perspectives of the global low carbon energy technology market, highlighting relative competitive position of EU industries.	31/03/2017	Science-for-policy reports
460	LCEO Industry Intelligence Report 2018	This report (updating the 2016 deliverable) will describe recent developments in EU-base industry related to low carbon energy production technologies. It will include a snapshot of the industrial sector (main players, turnover etc.) and explore the medium and long-term development prospects.	31/03/2018	Science-for-policy reports												
1.7.d bioeconomy - develop a Knowledge Centre providing data collection, analysis, dissemination and modelling on the bioeconomy, and the assessment of food and nutrition security. On an ongoing basis, provide data and analysis on sustainable biomass supply and demand at EU and global scale, covering all uses of biomass, to provide a basis for coherent policies on the bioeconomy, including relevant agriculture, food,																
569 - BIOECONOMY JRC.D.1	1351 - SIMWOOD Sustainable Innovative Mobilisation of Wood	<p>The objective of the SIMWOOD project is to promote a combined approach to multi-functional forestry and collaborative wood mobilization across European forest types & model regions. The role of the JRC is to develop a pan-European monitoring and policy support system (SIMWOOD)</p>	JRC.D.1 Sarah MUBAREKA	1.7.d	RTD	RTD	DORU-LEONARD IRIMIE	AGRI ENV GROW		01/11/2013 31/10/2017	CON-IA	52	Simwood Mobiliser final information system	Operational prototype of information system and knowledge base with database query capabilities. This IT tool will report on innovative projects across Europe, which were applied to mobilise wood. Evaluations of the projects are also reported here.	31/10/2017	Scientific information systems and databases
												53	Implementation report of Simwood Mobiliser	Report on how the IT tool "Mobiliser" was implemented, reporting of assumptions, and future plans for maintenance.	31/10/2017	JRC technical reports
569 - BIOECONOMY JRC.D.1	2300 - CoorBE Coordination of the bioeconomy project	<p>CoorBE will consolidate the output of the thematic, knowledge-generating WPKs of the BIOECONOMY project, condensing it into key project deliverables.</p> <p>Thus it will develop further the overarching knowledge base on biomass supply, demand and flows at the EU and global levels, with a higher level of detail over Europe, as initiated in the context of the JRC's overarching study on biomass. This will provide a basis on which to assess the sustainability of and impacts linked with the production and use of biomass, and the competition and synergies between sectors with</p>	JRC.D.1 Andrea CAMIA	1.7.d	RTD	JRC	AGUSTIN ESCARDINO MALVA	AGRI CLIMA DEVCO ENV GROW MARE MOVE SG		02/01/2017 31/12/2018	INS-RS	1	EU and global biomass assessment and outlook	Consolidated project-level report on biomass supply, uses and flows for all biomass sources in Europe and worldwide, derived datasets and identified gaps. Prospective analysis of biomass supply and demand and their respective impacts with baseline and alternative scenarios (comprehensive report in accordance with the JRC BIOMASS Mandate). All Units in the BIOECONOMY project contributing to project objectives 1, 2 and 3 will collaborate to this deliverable.	31/12/2017	Science-for-policy reports
												2	EU and global biomass assessment and outlook	Consolidated project-level report on biomass supply, uses and flows for all biomass sources in Europe and worldwide, derived datasets and identified gaps. Prospective analysis of biomass supply and demand and their respective impacts with baseline and alternative scenarios (comprehensive report in accordance with the JRC BIOMASS Mandate). All Units in the BIOECONOMY project contributing to project objectives 1, 2 and 3 will collaborate to this deliverable.	30/12/2018	Science-for-policy reports
												201701	Bioeconomy Dashboards V1	Creation of Bioeconomy Dashboards in thematic, sectorial and geographical categories based on information provided by Member States and stakeholders. This deliverable will contribute to project objective 4.	29/12/2017	JRC technical reports
												201706	Bioeconomy Report 2017	This annual report will describe the state of development of Bioeconomy policies and their implementation across the EU. This deliverable will contribute to project objective 4	29/12/2017	Science-for-policy reports
												201707	Bioeconomy Report 2016	This will be the first in a planned series of annual bioeconomy reports. It will describe bioeconomy policies, socioeconomic and environmental aspects and different sectors of the bioeconomy. This deliverable will contribute to project objective 4.	31/03/2017	Science-for-policy reports

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Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
												201801	Bioeconomy Report 2018	This annual report will describe the state of development of Bioeconomy policies and the implementation across the EU. This deliverable will contribute to project objective 4.	31/12/2018	Science-for-policy reports
												201802	Bioeconomy Dashboards V2	Updates of Bioeconomy Dashboards in thematic, sectorial and geographical categories based on information provided by Member States and stakeholders. This deliverable will contribute to project objective 4	31/12/2018	JRC technical reports
4862 - LCM-IABR&M JRC.D.1	4302 - ENSURE Ensuring sustainable bio-economy - Sustainability schemes for biobased products	To develop a comprehensive and transparent sustainability assessment scheme applicable to a wide variety of biobased products, an implementable to current legislator and policy framework. The development of the scheme builds upon the life cycle based assessment methods, existing work on biomass, biobased products and biofuels, complementing the current framework	JRC.D.1 Rana PANT	1.7.d	RTD	RTD	AGUSTIN ESCARDINO MALVA	AGRI ENV GROW		01/01/2017 31/12/2020	CON-IA	201801	Base LCA methodology for bio-based products	Provides quantitative understanding of a wide range of environmental aspects that will allow the user to assess the environmental sustainability of bio-based products and their supply chains. It will be a friendly user methodology and will include important and critical aspects such as ILUC factors and indicators concerning cascading use, resource efficiency and circular economy.	03/09/2018	JRC technical reports
												201901	Rules on critical aspects of the assessment	Report on specific and detailed rules for critical aspects – It will include clear recommendations on how to address those critical aspects and specific and detailed rules as inputs to Product Category Rules for selected bio-based products.	30/04/2018	JRC technical reports
												201701	BKC AA detailed work programme	A detailed work programme will be submitted at the end of Month 2 at the latest to further specify tasks of this AA. It will be discussed at a kick-off meeting between DG JRC and DG RTD, where adjustments to the work programme of the AA can be agreed if necessary (related to Task 0 of the Administrative Arrangement: Project Management and Coordination).	28/02/2017	JRC technical reports
												201702	BBi Markets: draft classification	Clear classification of different BBi products categories (e.g. platform chemicals, fine chemicals, formulated products etc.) and the corresponding value chains and markets (related to Task 1 of the Administrative Arrangement: Analysis of the EU BBi market)	30/06/2017	JRC technical reports
												201703	Qualitative assessment and conceptual framework	Qualitative assessment and conceptual framework for coherent policy scenarios, with a focus on sustainability and elements of circularity (three dimensions). This deliverable will support the ongoing review of the Bioeconomy action plan through a contribution to the qualitative assessment. It also conceptualises a framework for quantitative analysis for policy scenarios (related to Task 2 - sustainability as a cross-cutting issue for the bioeconomy)	30/06/2017	JRC contributions to policy documents
												201704	BBIA product market indicators and land areas use	Draft description of market indicators and land areas use of the BBi products group. This deliverable focusses on different indicators and data related to the bio-based industry products related to production, consumption, trade of bbi feedstocks, economic indicators and land area (related to Task 1 of the Administrative Arrangement: Analysis of the EU BBi market)	31/12/2017	JRC contributions to policy documents
												201705	First yearly report or factsheet(s)	First yearly report or factsheet(s) on bioeconomy scenarios, including bio-based industries and bioeconomy-related parts of the circular economy. The research outcome will be transformed into easily understandable and accessible factsheets (related to Task 2 of the Administrative Arrangement: sustainability as a cross-cutting issue for the bioeconomy)	31/12/2017	JRC contributions to policy documents
												201706	BKC ICT platform	Report describing the functionalities and structure of the new ICT platform that will be put in place, including additional benefits such as the integration of a Data Catalogue or a document repository/library, the development of dashboards, and integration of relevant JRC data, such as data related to biomass. (related to Task 4 of the Administrative Arrangement: Support for the set-up of ICT Platform of the Bioeconomy Knowledge Centre)	31/12/2017	Scientific information systems and databases
												201801	First interim management report	Mid-term management report (linked to interim payment) (related to Task 0 of the Administrative Arrangement: Project Management and Coordination)	30/06/2018	JRC technical reports
												201802	1st report expert input & stakeholder engagement	First report on the creation of a network of institutions/organisations and experts for bioeconomy knowledge collection, synthesis and exchange, and the use of external expertise to respond to policy questions and/or to monitor national bioeconomy policies. (related to Task 3 of the Administrative Arrangement: Network of institutions and experts)	30/06/2018	JRC technical reports
												201803	Biorefineries distribution in the EU - draft	This deliverable will focus on data on biorefineries distribution in the EU, classified per product group, and analysis on the relationship between biorefineries distribution and feedstock availability, capital requirements and technology development potential (i.e. patents) (related to Task 1 of the Administrative Arrangement: Analysis of the EU BBi market)	30/06/2018	JRC technical reports
												201804	BBi Markets: interim report- development pathways	Interim report with updates of previous data and description of possible development pathways per market segment towards 2030 (related to Task 1 of the Administrative Arrangement: Analysis of the EU BBi market)	31/12/2018	JRC contributions to policy documents
												201805	Second yearly report or factsheet(s)	Second yearly report or factsheet(s) on bioeconomy scenarios, including bio-based industries and bioeconomy-related parts of the circular economy (related to Task 2 of the Administrative Arrangement: sustainability as a cross-cutting issue for the bioeconomy)	31/12/2018	JRC technical reports
												11	Woody biomass resources, flows and value chains	The report will give an improved assessment of woody biomass availability and potential at the EU level, integrating forest statistics with spatially explicit data. Wood resource balance sheets will be drawn up at EU Member State level, mapping and quantifying wood-based value chains, and accounting particularly for value-added products, including the analysis of trends and opportunities for advanced wood-based products. Contribution to project objectives 1, 3, 4	15/12/2017	JRC technical reports
												12	Forest-based sector modelling and outlook	The forest-based sector in the integrated modelling framework of the bioeconomy project includes the forest resource Carbon Budget Model (CBM) and the Global Forest Trade Model (GFTM). The interaction between these two models will be strengthened and models improved. Outlooks for the forest-based sector will be developed, sensitivity analyses will be carried out to analyse impacts on the modelling outcome of varying parameters and assumptions. D12 will contribute to project objectives 2, 3, 4.	30/10/2018	JRC technical reports
												13	Advanced forest sector modelling	The deliverable will develop advanced concepts of spatial explicit forest resource modelling. Spatially explicit assessments of woody biomass changes across the EU territory will be carried out, with stronger links between land use and forest resource models and the integration of the European Forestry Dynamics Model (EFDm). D13 will contribute to project objective 2	30/12/2018	JRC technical reports
												14	Scientific publications	Peer reviewed scientific publications in the fields of forest biomass assessment and forest based sector modelling	31/12/2018	Article contribution to periodicals or to conference proceedings listed in SCOPUS
												56949181	Update commercial fish stock supply	Refinement and updating of assessments of the supply of commercially exploited marine fish stock biomass estimates at the global and EU-levels. During phase 1 of the ASBIO project, biomass supply from marine fisheries was assessed for commercially-exploited fish stocks over large geographical scales. Taking advantage of the enhanced RAM Legacy Stock Assessment Database and the Memorandum of Understanding between the University of Washington and the JRC, the results from the analysis undertaken during phase 1 will be revisited, updated and broken down to provide further detail on refined, smaller geographical scales.	15/12/2017	Article contribution to periodicals or to conference proceedings listed in SCOPUS
												56949182	Marine biomass flows and value chains: Algae	he deliverable will report on improved assessment of the biomass supply of marine algae for industrial purposes at European and global dimension. It will include comprehensive analysis of the entire value chain from the cultivation of algal biomass to harvesting and processing, to product extraction and formulation.	22/12/2017	JRC technical reports
												2017D1	Agricultural biophysical assessment	The report will deliver a biophysical quantification of crop- and grassland biomass in Europe based on remote sensing, statistical and modeled data. The assessment will be spatially explicit and to this end the methodology developed for the statistical component of the agricultural biomass estimates will be used. Focus will be put on how environmental conditions influence biomass assimilation and partitioning by agricultural canopies. The report contributes to the project objectives 1 and 3. A f	31/12/2017	JRC technical reports
																Activities in this work package build on the

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Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
569 - BIOECONOMY JRC.D.1	4921 - AgriBiom Agricultural biophysical biomass assessment (crops and grassland)	The work package "biophysical assessment" was carried out within the BIOMASS WP in 2015 and 2016. The WP will further develop the overarching knowledge base on biomass supply, demand and flows at the EU and global levels, with a higher level of detail over Europe. This will be done for the agricultural sector for what concerns the part of the biophysical assessment (how much and where?). This work will contribute to provide a basis on which to assess the sustainability and impacts linked with the production and use of biomass, and the competition and synergies between sectors with regard to biomass resources. The work will focus on the biophysical component of the biomass assessment for agricultural crops and grassland. The biophysical assessment is driven by novel integration of Earth Observation data and biophysical models that describe Net Primary Production (NPP). Furthermore the use of Sentinel imagery to increase the resolution of satellite based biomass products will be explored.	JRC.D.5 Marijn VAN DER VELDE	1.7.d	RTD	JRC	Escardino	AGRI CLIMA ENV ESTAT		01/01/2017 31/12/2018	INS-RS	2017D2	Towards high resolution biomass estimates	This deliverable will investigate the possibility to spatially and temporally disaggregate classical biomass products from low and medium resolution (e.g. MODIS and AVHRR) with the use of high resolution Sentinel satellite imagery. Specifically, Sentinel-1 and Sentinel-2 can respectively be used for seasonal agricultural biomass production and grassland land use.	31/12/2017	JRC technical reports
												2017D3	Harvest indices	Scientific publication on harvest indices for different crops and regions and possible biomass assessments.	30/04/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												2018D1	Agricultural biophysical assessment	The report will deliver a biophysical quantification of crop- and grassland biomass in Europe based on remote sensing, statistical and modeled data and will build upon 2017D1 with a further refinement of the plant partitioning approach. The assessment will be spatially explicit and to this end the methodology developed for the statistical component of the agricultural biomass estimates will be used. The report contributes to the project objectives 1 and 3.	31/12/2018	JRC technical reports
												2018D2	Towards high resolution biomass estimates	This deliverable will investigate the possibility to spatially and temporally disaggregate classical biomass products from low and medium resolution (e.g. MODIS and AVHRR) with the use of high resolution Sentinel satellite imagery. It will build upon deliverable 2017D2. Specifically, Sentinel-1 and Sentinel-2 can respectively be used for seasonal agricultural biomass production and grassland land use. It contributes to the project objectives 1 and 3.	31/12/2018	JRC technical reports
569 - BIOECONOMY JRC.D.1	4939 - Economy&BBI Key trends in the EU bioeconomy	This WPK focusses on the economic features of the Bioeconomy and bio-based industries (BBI). It will also further develop the available information about biomass supply, demand and flows in the EU Bioeconomy, with a special focus on the use of bio-based feedstock in the production of industrial materials and products (non-food/non energy), which represents an emerging industry with great economic and environmental potential but for which specific data are still difficult to retrieve. A new dataset will be created by collecting data on the organic waste flow in the EU, with a focus on lignocellulosic biomass sources. The representation of the non-traditional sectors of the Bioeconomy, like bio-based chemicals, plastics and composites, will be improved by collecting new data, also in cooperation with the Bio-based Industries Joint-Undertaking and other FP7/Horizon 2020 projects. As a result, the database will present the full biomass balance for the EU-28 and Member States.	JRC.D.4 Robert MBAREK	1.7.d	RTD	JRC	Thomas DODD	AGRI CLIMA DEVCO ENER ENV GROW MARE MOVE SG		01/01/2017 31/12/2018	INS-RS	1	Quantification of biomass supply and demand	Technical report on methodology and quantification of biomass supply and demand in the bioeconomy sectors. The deliverable includes: The conversion of traded bio-based products in biomass equivalents; quantification of the European domestic demand of biomass with a breakdown by uses, including organic waste flow in the EU and the representation of the non-traditional sectors of the Bioeconomy.	31/12/2017	JRC technical reports
												2	New socio-economic indicators of the EU Bioeconomy	In Deliverable 2 a special focus will be put on the manufacturing sectors (manufacturing of food, wood, pulp and paper, chemicals, pharmaceutical, etc.). The pilot indicators (jobs and turnover) will be complemented with new indicators derived from EUROSTAT – Prodcum (volume and value of bio-based production, including bio-based chemicals and plastics) and from EUROSTAT – Structural business statistics (number of enterprises, investments, wages and salaries, etc.).	31/12/2017	JRC technical reports
												4	Socio-economic indicators of the EU Bioeconomy	This Deliverable provides updates of several indicators related to jobs and turnover, volume and value from official statistical databases and other data sources. It has a specific focus on manufacturing sectors (manufacturing of food, wood, pulp and paper, chemicals, pharmaceutical, etc.).	31/12/2018	JRC technical reports
												5	Dynamics of jobs and turnover in EU's bioeconomy	Analysis of the dynamics of jobs and turnover in the European bioeconomy, using a very transparent and replicable methodology. The bioeconomy is defined as the production and transformation/manufacturing of biomass. The article highlights the activity of sectors of the bioeconomy that have been gaining/losing jobs and turnover.	01/03/2017	Article contribution to periodicals or to conference proceedings listed in SCOPUS
569 - BIOECONOMY JRC.D.1	4967 - EnvImpact Assessment of Environmental Impacts	This workpackage aims at making an assessment of the environmental and time-dependent climate impacts of the use of biomass for energy and other purposes, including industrial ones, based on a life cycle perspective. The analysis will also include assessing alternative uses of biomass. The assessment will be carried out following an attributional life-cycle analysis perspective, expanded to include non-energy uses of the biomass, land use, economic and technological performances. Moreover, making use of the results of the modelling framework set in that context, this WP will also provide an environmental impact assessment of complex and large scale policy scenarios.	JRC.C.4 Luisa MARELLI	1.7.d	RTD	JRC	AGUSTIN ESCARDINO MALVA	AGRI CLIMA DEVCO ENER ENV GROW MARE MOVE SG		01/01/2017 31/12/2018	INS-RS	1	Environmental potential risks	Environmental potential risks associated to relevant present and perspective bioeconomy commodities, calculated with a Life Cycle Assessment. The definition of the pathways to be studied follows developments in Task 2 and Task 5 of the Mandate of the project. Data collection initiated already in 2015-2016 will continue in 2017 and beyond, to expand the type of pathways, the number of commodities and the quality of pollutants considered. A special focus will be placed on uncertainties ranges.	30/11/2017	Science-for-policy reports
												2	Database containing Life Cycle Inventory data	Database containing Life Cycle Inventory data for the relevant present and perspective bioeconomy commodities. All the data collected under Deliverable 1 will be presented as a separate database (Excel based) that could eventually be made public and accessible	30/11/2017	Datasets
												3	Environmental Impact Assessment of future trends	This deliverable will present the results of the Environmental Impact Assessment of the European bioeconomy sector for the modelling framework for different future scenarios. The work takes stock of the results obtained from the integrated modelling framework being developed within the project. The newly developed modelling framework will be used to test multiple scenarios to study the influence of various policy options and technological developments.	30/11/2018	JRC technical reports
												4	Environmental impact assessment of EU bioeconomy	The work takes stock of the results obtained from the modelling effort in the framework of the BIOMASS project of the JRC. Various techno-economic models within JRC are coupled to obtain an integrated framework that will be used to assess the environmental impacts of several policy scenarios.	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
569 - BIOECONOMY JRC.D.1	5070 - WasteRes Waste assessment and residues	The work package "waste assessment and residues" aims at supporting the assessment of options for the valorisation of biomass-based waste and residues, both substituting virgin raw materials and for producing energy. The basic concept is the so called "industrial symbiosis" principle for which a waste/by-product of a production stream could become an input for another production stream. The focus will be mainly on food waste, assessing the technological options available for the use thereof. Based on identified options, different scenarios will be built for both domestic, industrial/agricultural waste and residues. The benefits associated to the scenarios will be evaluated applying life cycle thinking concepts and methodologies in order to ensure that the benefits associated to the resource and energy recovery are not offset by additional environmental burdens. A workshop with expert is envisaged to ensure the capitalization of a wide interdisciplinary knowledge needed for a transition towards a more circular economy in the biomass-related waste and residues treatment.	JRC.D.1 SERENELLA SALA	1.7.d	RTD	JRC	AGUSTIN ESCARDINO MALVA	CLIMA ENER ENV GROW SG	EEA - European Environment Agency	01/01/2017 31/12/2018	INS-RS	20171	Scenarios on domestic food waste	The assessment of options and scenarios related to domestic food waste to be used as resources will be developed. The expected benefits will be tested a life cycle based indicators framework	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												20172	Workshop on industrial ecology for food waste	A workshop on industrial ecology applied in the context of food waste will be organised in order to provide an overview of the methodologies for the estimate of food waste quantities a potential of uses, including an overview of ecoinnovations to use food waste as resources, upscaling from laboratory to real cases, biorefineries. The workshop will foresee the involvement of the EU food round table	31/12/2017	JRC technical reports
												20173	TO BE REMOVED	TO BE REMOVED	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												20181	review of industrial food waste and residues	A literature review on the use of industrial and agricultural food waste and residues will be conducted as input for the development of the scenarios for del 20182. The link with energy production and energy efficiency in industrial systems will be ensured.	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)

JRC 2017- 2018 WORK PROGRAMME																	
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category	
												20182	scenarios on industrial food waste	The assessment of options and scenarios related to industrial and agricultural food waste to be used as resources will be developed. The expected benefits will be tested a life cycle based indicators framework	31/12/2018	Science-for-policy reports	
1.8 Transport																	
1.8.a transport innovation - support the strategic transport innovation agenda and develop the transport innovation and monitoring information system (TRIMIS);																	
623 - TRIMIS JRC.C.7	3943 - TRIMIS Transport Research and Innovation Monitoring and Information System	TRIMIS aims at becoming the Commission's instrument for mapping technology trends and research and innovation capacities in the transport field. It will be designed as an open-access information and knowledge management system and will need to fulfil multiple roles: horizon scanning, monitoring progress against R&I roadmaps, mapping and support to further steps, dissemination of information and putting together and further developing a set of toolboxes and models. Its thematic focus will be on areas where public intervention at European level can create the highest added value in order to overcome weaknesses of the transport innovation system and pave the way towards an increased competitiveness of the sector while addressing the broad goals of the EU energy and transport strategy. It is the analytical support tool for the establishment and implementation of an EU Strategic Transport Research and Innovation Agenda (STRIA).	JRC.C.7 Luisa MARELLI	1.8.a	MOVE	MOVE	Robert MISSEN, HoU MOVE.B.3	RTD		01/08/2016 31/12/2019	CON-AA	3	TRIMIS PORTAL	Creation of TRIMIS portal - version 1	30/06/2017	Scientific information	
												4	Creation of transport R&I database	A database of projects and programmes, transport technologies and innovations, which will act as a continuously updated repository of all techno-economic assumptions will be set up.	20/12/2017	Scientific information systems and databases	
												5	Support to the development of STRIA roadmaps	TRIMIS shall support the entire chain of development, monitoring and updating of the seven identified STRIA roadmaps, through the publication of Roadmaps Information Sheets. Updates of progress against the STRIA roadmaps, as well as gaps and delays in progress shall be identified and flagged.	20/12/2018	JRC technical reports	
												6	Technology status and Horizon Scanning	TRIMIS shall keep track of developments in the field of transport and identify relevant new technologies. This assessment will make use of the transport R&I database, and will be carried out through: - Monitoring and assessing transport sector and technology performances - Monitoring progresses of funded (EU, MS etc.) R&I projects - Flagging new opportunities and new technologies	31/12/2017	Science-for-policy reports	
												7	Transport R&I scoreboards and KPIs	Preparation and publication of real time and annual Transport R&I Scoreboards, and definition of measurable Key Performance Indicators (KPIs) relevant for mapping innovation and to assess the performance of STRIA roadmaps	20/12/2018	Science-for-policy reports	
												8	Monitoring Transport R&D investments	This deliverable provides continuous monitor of transport R&D investments, financial and human resources, and socio-economic aspects, through the creation of capacity maps addressing all STRIA roadmaps, and the creation of country profiles. Rough estimates of the current corporate and public research and development (R&D) investments in transport technologies in the EU will also be provided.	20/12/2018	Science-for-policy reports	
												9	Transport modelling	This deliverable make and assessment and provide coordination of existing transport modelling activities, to ensure that R&I/technology trends and outcomes of STRIA roadmaps are well reflected in transport models used by the JRC and the EC.	20/12/2018	JRC technical reports	
1.8.b alternative fuels - carry out pre-normative testing and contribute to the development of standards supporting the implementation of the alternative fuels infrastructure in the framework of the Alternative Fuels Infrastructures Directive (AFI); assessment of the relevant national AFI policy frameworks; and modelling of and support for electro-mobility standardisation;																	
167 - GasTEST JRC.C.1	495 - STREP Support to Regulations and European Standardisation Policy in hydrogen- related technologies	This WPk supports the implementation of EC regulations and European standardisation policy in the field of hydrogen & fuel cells technologies (H&FC), as well as the development of related international standards at IEC and ISO level through liaison-A on behalf of the Commission. It contributes to the anticipation and foresight activities by identification of knowledge gap and anticipating knowledge needs. The focus of this WPk is on hydrogen solutions for transport, including infrastructure, thus covering objective 1 of project FuCellHy. For products/components/hardware that are commercially available on the market, compliance with safety requirements falls under the responsibility of the producers/manufacturers. However, for disruptive technologies that have not yet reached the market, identifying the requirements for public safety in the use and operation of these technologies is the task of the legislator. In the specific case for enabling the use of hydrogen as an alternative fuel as a contribution to the needed de-carbonisation of transport, JRC independence is required for achieving the appropriate balance between the conflicting commercial interests of the major European industrial stakeholders, namely hydrogen providers and car OEMs, and to ensure appropriate consideration of public interests (in particular public safety) in the formulation of the standards required by the AFI Directive 2014/94. The activities consist of a) pre-normative research (PNR) by means of reference laboratories and technical competences, focusing on public safety aspects, b) involvement in standardisation working groups, c) interfacing with DG MOVE, d) involvement in international collaborative activities (IEA/HIA, IPHE, JRC-DoE Collaboration Arrangement). As in 2016, in 2017-18 the focus will be on the implementation of the Alternative Fuels Infrastructure Directive, at the request of DG MOVE, and the usual contribution to SETIS (SET-Plan) according to requests. The WPk will also develop and guarantee the knowledge and the required background activities for the Unit contribution to TRIMIS.	JRC.C.1 Beatriz ACOSTA IBORRA	1.8.b	MOVE	JRC	TRICAS AIZPUN Antonio (MOVE C1); VANNSON, Philippe (RTD G2); BROERTJES Peter (GROW C4)	GROW RTD	IEA-HIA - IEA HIA International Energy Agency Hydrogen Implementing Agreement IEC - International Electrotechnical Commission IPHE - Partnership for Hydrogen and Fuel Cells in the Economy ISO - International Organization for Standardization (ISO) UN ECE - UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE US DoE - US Department of Energy (DOE) - FUEL CELLS AND HYDROGEN JOINT UNDER		01/01/2016 31/12/2018	INS-RS	STREP01	Support to implementation of Directive 94/2014	Support implementation of the Deployment of Alternative Fuel Infrastructure directive by monitoring progress on mandate M/533 to CEN-CENELEC and performing necessary PNR. JRC reports back to DG MOVE on these activities and issues an annual report on their status, with the final goal of a standardisation frame in place for end of 2017. The work includes interacting with the CEN-mirror committee TC 268, as well as representing the Commission in the Internal Workshop on Hydrogen Infrastructure.	31/12/2017	JRC contributions to policy documents
													STREP02	Contribution to standard ISO 19880-1 HRS	Contributions to the work of WG24 of ISO TC197 on gaseous hydrogen fueling stations, by feeding in results of in-house PNR and of risk assessments and by participating to the drafting of the standard.	31/12/2018	JRC contributions to standards
													STREP03	Annual Support to SET-Plan	Fulfillment of the requests by SETIS for production or updating of documents related to the hydrogen & fuel cell technologies for transport.	31/12/2017	JRC contributions to policy documents
													STREP04	Contribution to the work of ISO/TC197 WG27 & WG28	The ISO TC197 WG 27 and WG 28, working to define standards on hydrogen fuel quality and on hydrogen quality control respectively, need input on the effect of the hydrogen purity on the long-term performance of fuel cells used in automotive applications. The latter will be delivered by JRC and upon project completion, JRC will disseminate the public results on hydrogen contaminant tests to the two Working Groups.	31/12/2018	JRC contributions to standards
													STREP05	Support to UN-ECE GTR on hydrogen vehicles	S&T support, upon request of DG GROW, to the activities of Subgroup on Safety of the UN-ECE Global Technical Regulation 13 (UN Regulation 134). Its phase 2 is foreseen to start in the next 2 years, pending agreement at UN-ECE WP29 level. The support consists of a) verification of selected testing procedures and of b) provision of expert technical advice, especially on safety aspects. This work is based on the already established modus operandi adopted for the first phase of GTR 13.	30/12/2018	JRC contributions to policy documents
													STREP06	Contribution to the FCH2JU	Annual in-kind institutional support to multi-annual goals of the FCH2JU as specified in the framework contract between JRC and FCH2JU: it consists in participation with reviewers to the FCH2JU annual program reviews, contributions to technology monitoring and assessment studies and interfacing with international collaborations (to complement and not to be confused with the contractual activities in WPk FWC FCH2JU specified in the Annual Rolling Plans).	31/12/2018	JRC technical reports
													STREP07	Dissemination of results from STREP Laboratories	Dissemination of results by: - At least one conference contribution on the research performed by each STREP lab: GasTeF, SoTeF and FCTest - Results of underpinning scientific work published in peer-reviewed scientific journals: at least 1 paper/AD equivalent a) GasTeF on high pressure hydrogen refuelling & storage PNR. b) SoTeF on solid-state hydrogen storage underpinning research. c) FCTest on fuel cells/performance / electrolyser experimental results.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
													STREP08	PhD Thesis in collaboration with Univ. Glasgow	A PhD thesis on hydrogen storage for mobility in collaboration with the Department of Chemistry of the University of Glasgow.	31/12/2017	PhD thesis
													STREP09	Technical reports from SoTeF co-operations	- Under the framework of cooperation with Nuclear Research Centre Negev & University of Negev (MoU 30893 SoTeF) performs measurements of kinetic H2 sorption & kinetic H2 absorption /desorption on members of first and second materials family respectively. The report will contain the elaborated experimental data and conclusions made on this basis - Upon request of Fondazione Bruno Kessler in the frame of FET graphene, report on performance assessment of various materials solutions for H2 storage	31/12/2017	JRC technical reports
209 - MODELISM JRC.C.4	736 - Mobility Systems Smart Mobility Market and System Integration	Perform integrated smart mobility modelling activities in order to assist the design and implementation of electro-mobility/ transport related policy initiatives at European and regional/urban level, including smart city initiatives The Smart Mobility Market and Systems Integration WP will perform comprehensive multidisciplinary model-based analyses of technological, market, behavioural aspects and policy options for smart mobility solutions. The activities in this work-package primarily support the implementation of the Directive 2014/94/EU on the deployment of alternative fuels infrastructure (AFI). Costly, inefficient, or unfair policy measures need to be avoided. A successful implementation of the AFI Directive is facilitated by testing policy initiatives in a virtual, multi-disciplinary model-based setting as provided by this WPk. Together with	JRC.C.4 CHRISTIAN THIEL	1.8.b	MOVE	JRC	Hugues Van Honacker (MOVE.C.1)	CLIMA ENER EPSC GROW	EEO - European Electro-mobility Observatory	01/01/2014 30/12/2020	INS-RS	10	Alternative fuel scenarios for EU road transport	Report on model based assessment of alternative fuel scenarios in road transport in EU member states until 2030	31/12/2017	Science-for-policy reports	
												11	Assessment of National Policy Frameworks	Support to quantitative impact calculations from NPFs, assessment of appropriateness of NPF versus legal requirements	16/11/2017	JRC contributions to policy documents	
												12	Smart Mobility Modelling toolbox 2017	Updated Powertrain transition Market Agent Model with revised choice modelling features, updated EV-Charge model with new database structure and user interface and enlarged datasets, updated GIS based infrastructure sizing and positioning tool. Enlarged mobility datasets on the basis of floating car data, EU field tests and real time traffic information sources, updated Green-Driving-tool, updated KCERT	31/12/2017	Scientific information systems and databases	
												13	Scientific publications 2017	Submit manuscripts to peer-reviewed journals on transport and electro-mobility related modelling issues to strengthen the knowledge base portfolio of the JRC and to broaden its opportunities for support to EU transport and mobility relevant policies.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)	
14	Fuel scenarios for road transport in EU MS	Report on collaboration with member states on model based assessment of member state specific alternative fuel scenarios in road transport	31/12/2018	Science-for-policy reports													

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Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
		WP 64 - EVIAC considers social equity aspects of policy measures that promote the deployment of alternative fuels. Furthermore the WPk will also explore, together with WPk 64 (EVIAC), the potential use of big data for its modelling activities.										15	Lessons from Assessment of National Policy Framework.	Improve guidance for member state NPFs, study and inform on possible distributional effects	31/12/2018	JRC contributions to policy documents
												16	Smart Mobility Modelling toolbox 2018	Updated Powertrain transition Market Agent Model with further disaggregation of social groups in order to assess fairness aspects, updated EV-Charge model with link to power system models in order to include citizen participatory engagement in power markets, updated Green-Driving-tool to support citizen participation to the decarbonisation of transport, updated KCERT	31/12/2018	Scientific information systems and databases
563 - BATEST JRC.C.1	3444 - FiveVB Five Volt Lithium Ion Batteries with Silicon Anodes produced for Next Generation Electric Vehicles	The FiveVB project will develop a new cell technology based on innovative materials such as high capacity anodes, high voltage cathodes and stable, safe and environmentally friendly electrolytes. In FiveVB, JRC contributes to the definition of testing methodologies and carries out ex-situ experiments. Through the work in FIVEVB, JRC extends and reinforces its collaboration with	JRC.C.1 Andreas PFRANG	1.8.b	MOVE	RTD	Liam BRESLIN (HoU RTD.H.2)	GROW MOVE	- UMICORE AG & CO. KG - Free University of Brussels (VUB) - Zentrum für Sonnenenergie- und Wasserstoff-Forschung - ZSW - ROBERT BOSCH GMBH - AVL LIST GMBH	01/05/2015 30/04/2018	CON-IA	1	D7.2 Report on characterisation of full battery cell	Report that will summarize the results of life cycle tests performed on full cells (PHEV1) in task 7.4.	31/12/2017	JRC technical reports
												2	D1.4 Report on Environmental Impact Eco-Design	Report that will summarize the results of task 1.4 which focuses on the environmental impact of the new battery development (incl. comparative life cycle assessment).	31/03/2018	JRC Technical reports
												3	D7.4 Post mortem analysis report	Report that will summarize the results of post mortem analysis carried out within task 7.5 on G0C, G1C, G2C and full cells.	30/04/2018	JRC technical reports
563 - BATEST JRC.C.1	4203 - SASLAB Sustainability Assessment of Second Life Application of Automotive Batteries	The goal of the SASLAB (Sustainability Assessment of Second Life Application of Automotive Batteries) exploratory project is to develop and apply an adapted methodology to analyze the sustainability of technically sound second-life application of EV (Electric Vehicle) batteries. The environmental and economic advantage of EV battery second use need to be assessed, especially considering that the extraction of resources used into batteries.	JRC.C.1 Andreas PFRANG	1.8.b	MOVE	JRC	Maggiore, Maurizio (RTD)	ENV RTD	- Free University of Brussels (VUB)	01/01/2016 31/12/2017	INS-ER	1	SASLAB final report	The SASLAB final report will summarize the overall results of the SASLAB project.	31/12/2017	JRC technical reports
												2	Publication environmental assessment	Presentation of SASLAB results related to environmental assessment in peer-reviewed journal and at a conference.	29/12/2017	JRC contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
209 - MODELISM JRC.C.4	5620 - AFID NPF Assessment: Alternative Fuels Infrastructure Directive – National Policy Framework Assessment	The work of this AA covers the assessment of the National Policy Frameworks that the Member States have to send to the Commission in the context of the implementation of the Alternative fuels infrastructure Directive (2014/94/EU). Per Article 10 (2) of said directive the Commission will	JRC.C.4 CHRISTIAN THIEL	1.8.b	MOVE	MOVE	Antonio TRICAS AIZPUN			01/01/2017 31/12/2017	CON-AA	1	Progress report	Progress report (Development of the methodology)	16/01/2017	JRC contributions to policy documents
												2	Draft Final Report	Draft Final Report of the NPF Assessment	17/07/2017	JRC contributions to policy documents
												3	Final Report	Final Report of the NPF Assessment	15/09/2017	JRC contributions to policy documents
1.8.c transport policy analysis - socioeconomic analyses of the transport sector, using transport models, quantitative methodologies, data, scenarios and technology watch; congestion indicators; and harmonise transport data with spatial and environmental information;																
141 - TEM JRC.C.6	971 - TSEA Transport sector economic analysis	TSEA develops and applies quantitative tools, methodologies and models to analyse economic, societal and environmental issues related to transport markets and networks. The main objective of the WP is to collect, generate, process	JRC.C.6 Panayotis CHRISTIDIS	1.8.c	MOVE	JRC	Maria Cristina Mohora (MOVE.A.3)	CLIMA REGIO	OECD - Organisation for Economic Co-operation and Development (OECD) UN ECE - UNITED NATIONS ECONOMIC COMMISSION FOR	01/01/2016 31/12/2017	INS-RS	1	Peer-review paper(s)	Applications of TSEA analytical instruments to address transport policy (infrastructure Report on economic, geographic or operational aspects of transport networks and markets. Focus on a specific transport mode of policy relevance (to be defined, either aviation, maritime or road transport)	31/12/2018	Article contribution to
												2	Analysis of policy relevant issues in transport		31/12/2017	Science-for-policy reports
141 - TEM JRC.C.6	2028 - TrEntaMo Europe wide Transport model	This Administrative Arrangement is envisaged as a means to build upon IPTS expertise in order to provide DG RTD with scientific input for the public	JRC.C.6 Elena NAVAJAS CAWOOD	1.8.c	MOVE	RTD	A DAMIANI (RTD.H.1) A. KOURTESIS(RTD.H.1) in collaboration with Klaus WINKLER (MOVE.E.3); Antonio COLACO(MOVE.C.2)	MOVE REGIO		01/04/2015 31/03/2018	CON-AA	3	TRENTAMO model development review	Summary of the review, evaluation and validation activities	31/12/2017	JRC technical reports
												4	Final Report	Report	31/03/2018	JRC technical reports
195 - ALFA JRC.C.4	3565 - AAF Alternative Aviation Fuels	Aviation is the fastest growing transport mode globally; industry has adopted a set of targets to achieve carbon neutral growth by 2020 and have	JRC.C.4 Laura LONZA	1.8.c	MOVE	JRC		CLIMA ENER	- INSTITUT FRANCAIS DU PETROLE - MASSACHUSETTS INSTITUTE OF	01/04/2016 31/03/2019	INS-RS					
1.8.d intelligent transport systems and electronic tools - technical support for the implementation of the digital tachograph, in particular the preparation of new technical specifications; support for the development of cooperative intelligent transport systems; development of electronic tools in support of quality inland water transport across Europe;																
328 - SPRINT JRC.E.3	565 - C-ITS Cooperative Intelligent Transport Systems	This WP offers a direct support to the DG MOVE unit in charge of Intelligent Transport Systems (ITS - C.3), in particular in the preparation of a Master-plan EU communication on C-ITS deployment, planned first part of 2017. JRC G.06 is already involved in various WP of the DG MOVE C-ITS platform and will support the edition and review of that communication, addressing the emerging challenges regarding trust, privacy, data protection, e-identity and security aspects. In a more prospective approach, research will also be dedicated to the growing concerns regarding the communications between vehicles and the road infrastructures, and the probable near introduction of fully autonomous vehicles, triggering legal, technical, and possibly ethical new challenges. The Master-plan also foresees to call for the preparation	JRC.E.3 Vincent MAHIEU	1.8.d	MOVE	JRC	Claire DEPPE	CNECT ENER GROW	ACEA - European Automobile Manufacturers Association EP - European Parliament Tech Serv - Member States and their Technical Services/type approval authorities	01/01/2014 14/12/2018	INS-RS	56504	Security & Privacy Challenges in C-ITS	Identification and recommendations on Security and Privacy/Data protection challenges, when cooperative and automated vehicles (private and professional) will start entering the market, including legal implications together with the necessary technical framework to settle and reach a seamless and harmonized implementation throughout EU and beyond. Technical and organizational aspects of the design and implementation of a new and common C-ITS security certification policy in Europe.	28/12/2018	JRC technical reports
												56505	Harmonization Task Group HTG#7	C-ITS standards analysis Support governments, standards organizations, and interested stakeholders in identifying gaps for those interfaces and data flows that are of significant public interest by: 1.Recommending available standards to adopt, 2. Identify interfaces and functions where adapting existing standards is best, and describe the needs/requirements 3. Identify gaps and describe the needs/requirements where there is a need to create new content. Develop an App identifier registry.	21/12/2017	JRC technical reports
328 - SPRINT JRC.E.3	576 - DTRRevision Digital Tachograph Revision	Support to DG MOVE, in accordance with the relevant AA (MOVE/D3/2013-251-1-SI2.652828), in the elaboration of the implementing legislation following the adoption of the new tachograph regulation 165/2014, and in particular support to the timely implementation of the provisions in the new technical specifications of forthcoming smart tachographs. It also includes the continuation of JRC services to MS's, AETR Countries and Industry as Root Certification Authority and single EU Interoperability certification laboratory, and the specific efforts to prepare for the same services for the implementation of new smart tachographs, deployed in the field early 2019.	JRC.E.3 Vincent MAHIEU	1.8.d	MOVE	MOVE	Eddy LIEGEOIS		ACEA - European Automobile Manufacturers Association EP - European Parliament Law-enforcement Nat. Auth. - MS Law-enforcement National Authorities MS EU - Member states EU Tech Serv - Member States and their Technical Services/type approval authorities UN ECE - UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE	01/07/2013 30/06/2017	CON-AA	57607	2017 AA Final reporting	Report on the support and maintenance of the ERCA operations. This includes: • MS Policy review and audit monitoring • Root key maintenance operations • Key certification operations and distribution • Security management activities • Configuration Management • Support and Maintenance of the JRC DT web site • Digital Tachograph Help Desk • Testing: interoperability tests, interoperability certifications • Support and Monitoring of the field tests operations	30/06/2017	JRC technical reports
												57608	2017 Technical report for DG MOVE	2017 technical report for DG MOVE regarding the •Final edition of the new Protection Profiles according Common Criteria •Test keys / ERCA 2 infrastructure and new GEN 2 root keys / Keys ceremony •New JRC EC ERCA policy •Migration and co-existence of Gen 1 and Gen 2 in the field •Review of new MS security policies •New IOT specs and LAB (GNSS, DSRC, co-existence) •Continuation of ERCA/IOT services •Preparation to extended services for GEN2 tachographs	30/06/2017	JRC technical reports
328 - SPRINT JRC.E.3	3528 - SIDT Secured and Interoperable Digital Tachographs	New smart tachographs deserve sound interoperability certification scheme, smart and secured positioning systems, and reliable communications of parameters (tachograph status or weights) to enforcers. The techniques and solutions developed and adopted in this context can also be transferred to other transport regulated applications, like the vehicles weight monitoring, in relation with the Directive (EU) 2015/719 on Weight & Dimensions. This WP will technically support the implementation of these new requirements, in close collaboration with DG MOVE and smart tachographs final users. Specific research activities will be conducted in collaboration with the European GNSS Agency (GSA) to promote the use of EGNOS/Galileo.	JRC.E.3 Vincent MAHIEU	1.8.d	MOVE	JRC	Eddy LIEGEOIS	CNECT ENER GROW	ACEA - European Automobile Manufacturers Association GSA - European GNSS Agency MS EU - Member states EU UN ECE - UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE	01/01/2016 30/12/2018	INS-RS	352804	Laboratory for Interoperability Certification	Following the interoperability test specifications defined in the deliverable 352803, this deliverable describes the laboratory design requirements, and the subsequent implementation (including the assessment, evaluation and validation of the new lab setup). First certifications are expected in 2018, accordingly the new lab must be ready and accepted by DG MOVE, the Member States and the other stakeholders by 2017. Subsequent adjustments are planned in 2018, till full stabilization of processes.	21/12/2018	Technical systems
												352805	DSRC interface for vehicles weight monitoring	To anticipate the technical requirements for enforcement readers, complementary to remote DSRC for Tachograph enforcers, in order to ease the development of reliable readers for the vehicles axis remote weight monitoring. This deliverable will also demonstrate the feasibility of low cost readers for weight monitoring and will support the implementation of the Weight & Dimensions Directive, foreseeing these readers in 2021.	31/10/2018	JRC technical reports
												352806	Secure positioning for road transportation	Studies to provide robust positioning in Intelligent Transport Systems (ITS). Identification of potential threats to robust positioning (e.g., jamming, difficult environmental conditions and ways to mitigate these threats either through signal processing or by corroboration of multiple sources of motion/location (e.g., in-vehicle sensors). Specific research activities will be conducted in collaboration with the European GNSS Agency (GSA) to promote the use of EGNOS/Galileo.	22/12/2017	JRC technical reports
328 - SPRINT JRC.E.3	3532 - DITILAB 2016 Digital Tachograph Interoperability Certification 2016	In the context of the JRC support to the "Digital Tachograph (DT) legislation", the JRC has been appointed as the single EU laboratory for Interoperability Certification (IC). IC is required for type approving of all new DT cards or Vehicle Units produced by the DT manufacturers and card	JRC.E.3 Michel CHIARAMELLO	1.8.d	MOVE	MOVE	Eddy LIEGEOIS		ACEA - European Automobile Manufacturers Association Tech Serv - Member States and their Technical Services/type approval authorities UN ECE - UNITED NATIONS	01/01/2016 30/06/2017	CON-TW					

JRC 2017- 2018 WORK PROGRAMME																	
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category	
209 - MODELISM JRC.C.4	4205 - ART Autonomous Road Transport	The work-package will set up an experimental integrated platform of Autonomous Road Transportation (ART) that combines advanced methods in three interrelated areas: traffic modelling, fuel consumption & emissions measurement, and real-time data processing. ART is a concept, in which vehicles move without human intervention and are coordinated in order to maximize the overall efficiency of the transportation.	JRC.C.4 BIAGIO CIUFFO	1.8.d	MOVE	JRC	n/a	CLIMA CNECT GROW	- University of Birmingham - TECHNION ISRAEL INSTITUTE OF TECHNOLOGY	01/01/2016 31/12/2017	INS-ER	3	ART simulation platform	AIMSUN based traffic simulation tool, applied for the Tel-Aviv test case, linked with extended COMPAS tool and spatially highly resolved SHERPA model. Development, prototypical implementation and documentation of new real time system status detection and optimisation algorithms for an ART system approach. This deliverable will have several intermediate milestones during the platform and database development phase.	31/05/2017	Scientific information systems and databases	
												4	Final project report on feasibility of an ART	Integration of all components of the ART (Expand the prototype platform with the pollution dispersion module and COMPAS and implement the status detection/optimization algorithms)	31/12/2017	JRC technical reports	
328 - SPRINT JRC.E.3	4852 - SmartDT Smart Tachographs 2017-2018	Support to DG MOVE, in accordance with the relevant AA (MOVE/D3/2017-xxx-1-yyy), in the implementation of the new tachograph regulation 165/2014 following the adoption of the Implementing Acts in March 2016. In particular support to the timely implementation of the provisions in the new technical specifications of forthcoming smart tachographs. It also includes the continuation of JRC services to MS's, AETR Countries and Industry as Root Certification Authority and single EU Interoperability certification laboratory, and the specific efforts to prepare for the same services for the implementation of new In the context of the JRC support to the "Digital Tachograph (DT) legislation", the JRC has been appointed as the single EU laboratory for Interoperability Certification (IC). IC is required for type approval of all new DT cards or Vehicle Units	JRC.E.3 Vincent MAHIEU	1.8.d	MOVE	MOVE	Eddy LIEGEOIS	GROW	ACEA - European Automobile Manufacturers Association GSA - European GNSS Agency MS EU - Member states EU Tech Serv - Member States and their Technical Services/type approval authorities UN ECE - UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE	01/07/2017 31/12/2018	CON-AA	485201	2018 AA Final Reporting	Report on the support and maintenance of the ERCA operations. This includes: • MS Policy review and audit monitoring • Root key maintenance operations • Key certification operations and distribution • Security management activities • Configuration Management Support and Maintenance of the JRC DT web site • Digital Tachograph Help Desk • Testing: interoperability tests, interoperability certifications • Support and Monitoring of the field tests operations.	21/12/2018	JRC technical reports	
												485202	2018 Technical Report for DG MOVE	2018 technical report for DG MOVE regarding the • Final edition of the new Protection Profiles according Common Criteria • Test keys / ERCA 2 infrastructure and new GEN 2 root keys / Keys ceremony • New JRC EC ERCA policy • Migration and co-existence of Gen 1 and Gen 2 in the field • Review of new MS security policies • New IOT specs and LAB (GNSS, DSRC, co-existence) • Continuation of ERCA/IOT services • Preparation to extended services for GEN2 tachographs (testing, certifications)	21/12/2018	JRC technical reports	
328 - SPRINT JRC.E.3	4853 - DITILAB 2017 Digital Tachograph Interoperability Certification 2017	In the context of the JRC support to the "Digital Tachograph (DT) legislation", the JRC has been appointed as the single EU laboratory for Interoperability Certification (IC). IC is required for type approval of all new DT cards or Vehicle Units	JRC.E.3 Michel CHIARAMELLO	1.8.d	MOVE	MOVE	Eddy LIEGEOIS		ACEA - European Automobile Manufacturers Association Tech Serv - Member States and their Technical Services/type approval authorities	01/01/2017 30/06/2018	CON-TW						
328 - SPRINT JRC.E.3	4858 - eIWT 2017 Electronic Tools in support of Inland Waterways Transport - 2017	The present AA, follow-up of the eIWT AA, will provide technical and scientific support to DG MOVE.B.3 for the preparation, implementation and follow up of the Commission Directive 2016/0050 on the recognition of professional qualifications in inland navigation. The main objective is a set of electronic tools in	JRC.E.3 Fivos ANDRITSOS	1.8.d	MOVE	MOVE	Dimitrios THEOLOGITIS				02/01/2017 21/12/2018	CON-AA	485801	EU Hull Database requirements for eIWT	EU Hull database enhancements and modifications required for eIWT	15/12/2017	Science-for-policy reports
													485802	EU IWT professional qualifications registry	The definition of the characteristics and conditions of use of the EU central registry of IWT professional qualifications which, along with the EU hull database, will be a central element of eIWT	15/12/2017	Science-for-policy reports
													485803	eIWT detailed functional specifications	Detailed functional specifications of the complete eIWT system	15/11/2018	JRC technical reports
1.8.e safety and security - develop tools and databases on EU-wide multimodal accidents and incidents, and data visualisation and exploration tools for transport safety analysis, including for aviation safety; and carry out performance testing and analysis of aviation security technologies.																	
339 - MULTRA JRC.E.5	298 - MULTRA-CF MULTRA Common Framework	This work-package makes sure the ECCAIRS approach for collecting, integrating, exchanging and disseminating accident and incident data in the various transport domains and in the various geographical locations world-wide remains a valid solution for existing deployments in the mid-term and can be used as a very fast solution for new data collection and integration needs at EU or international level. While the operational systems for the three public transport domains are being transferred to the respective agencies, in the context of contractual projects, this institutional work-package will focus on maintaining support for	JRC.E.5 Wietse POST	1.8.e	MOVE	JRC	C. Berg (Maritime Safety); F. Cornelis (Aviation Safety); S. Schmidt (DG MOVE Road Safety); S. Prout (DG MOVE Rail)		Avi Acc Invest EU - EU Aviation Accident Investigation Bureau's Civ Avi Aut EU - EU Civil Aviation Authorities Civ Avi Aut Int - International Civil Aviation Authorities EASA - European Aviation Safety Agency (EASA) EMSA - European Maritime Safety Agency ERA - European Railway Agency EUROCONTROL - European Organisation for the Safety of Air	01/01/2017 31/12/2019	INS-RS	10	ECF migration to 64 bits	The ECCAIRS Common Framework is developed as a Windows application (Server and Client) running in a 32 bits environment. The analysis requirements, driven by a larger amount of available data (more than 1 million records in the database) and the wider availability of 64 bit applications (like Excel) push for a 64 bit version of the ECCAIRS Common Framework. The implementation will first require a detailed analysis of the to be ported parts of the system followed by a redesign/recompilation.	15/12/2017	Scientific information systems and databases	
												9	ECF support for mobile devices	The ECCAIRS Common Framework (ECF) supports data entry and retrieval from desktop and laptop type of devices. A need has been expressed by the user community to extend this functionality to the world of mobile devices (tablets and phones). A solution is to be implemented which allows the generation of mobile applications from the standard ECCAIRS design tools supporting at least the three most important platforms: iOS, Android and Windows 10 both on tablets and phones.	15/12/2017	Technical systems	
339 - MULTRA JRC.E.5	574 - EMCIP-3 European Marine Casualty Information Platform - Support to EMSA nr. 3	This project implements the European Marine Casualty Information Platform (EMCIP) system as requested by the European Maritime Safety Agency in the context of Directive 2009/18/EC on the investigation of accidents in the maritime transport sector. EMCIP provides the means to store data and information related to marine casualties and occupational accidents involving all types of ships. EMCIP is implemented by the JRC on top of the transport mode independent ECCAIRS Common Framework. In addition to the EMCIP Reporting system the EMCIP collaborative	JRC.E.5 Wietse POST	1.8.e	MOVE	MOVE	C. Berg (MOVE.D.2)		EMSA - European Maritime Safety Agency IMO - International Maritime Organization (IMO)	04/12/2013 31/12/2017	CON-TW	1	Operational EMCIP services	The operation of two maritime safety related services for EMSA during 2017. The services are: the European Marine Casualty information Platform(EMCIP) and the EMCIP collaborative portal (emcipportal.jrc.ec.europa.eu).	30/12/2017	Scientific information systems and databases	
												2	EMCIP Transfer strategy plan	Mid 2018 the EMCIP system functionality will be transferred into the European Maritime Safety Agency (EMSA). Since the software platform of the new EMCIP system will be based on internal EMSA standards and developments, it will be necessary to extract and convert the existing ECCAIRS based data (EMCIP casualties, users, reference databases, etc.) in a format readable by EMSA. This deliverable is a report describing these technical and practical steps.	31/12/2017	JRC internal reports	
												3	EMCIP Dataset	The EMCIP dataset is the data contained in the EMCIP repository after completion of the Work Package. This data is then to be transferred to the European maritime Safety Agency during 2018.	31/12/2017	Datasets	
194 - TDSS JRC.E.5	618 - AVSEC Aviation Security	Since 2002, the Commission has established common rules in the field of civil aviation security aimed at protecting persons and goods from unlawful interference with civil aircraft, which includes technical requirements for security screening equipment. Additionally, the Commission is developing a Regulation to establish an EU certification scheme for aviation security equipment, in line with the EU approach to single market and conformity assessment.	JRC.E.5 David ANDERSON	1.8.e	MOVE	JRC	STROHSCHNEIDER Michaela (MOVE.A2), WILLMOTT Graham (HOME.B4)	HOME	ECAC - European Civil Aviation Conference MS Border Sec - MS Border and other Security Authorities Tech Serv - Member States and their Technical Services/type approval authorities	01/01/2016 31/12/2018	INS-RS	2	Technical support to EU-wide certification scheme	Technical reports describing the JRC's support to the Commission's upcoming Regulation "establishing a Union certification scheme for aviation security equipment". Under Article 24, the Commission (JRC) will chair a sectoral group of technical services aimed at ensuring the necessary coordination and cooperation among designated technical	31/12/2018	JRC technical reports	
												3	EU capability development - detection technology	Technical reports describing the development of enhanced scientific & technical capabilities across EU, including: i) establishment of programme for external experts to access JRC's facilities, to leverage resources in the Union, bring new players to the research landscape (including academia) and to build up critical mass, ii) further development of EC's in-house capabilities, e.g. training & strategic cooperation.	30/06/2018	JRC technical reports	
339 - MULTRA JRC.E.5	3662 - ECCAIRS 18 European Coordination Centre for Accident and Incident Reporting Systems 18	This work-package makes sure that during 2017 aviation accident and incident information continue to be collected from, and disseminated to, the European Aviation Safety Agency and the Member States as requested by Regulation 376/2014 and Regulation 996/2010. An estimate of between 150.000 and 200.000 incident and accident reports per year, originating from the 31 involved States, are integrated in the European Central Repository for occurrences. In addition, more than 500 Safety Recommendations per year, originating from the European Safety Investigation Authorities, are stored in the European Central Repository for Safety recommendations. The third service provided in this context is the European Aviation	JRC.E.5 Wietse POST	1.8.e	MOVE	MOVE	Delphine Micheaux-Naudet, Olivier Ferrante		Avi Acc Invest EU - EU Aviation Accident Investigation Bureau's Civ Avi Aut EU - EU Civil Aviation Authorities Civ Avi Aut Int - International Civil Aviation Authorities EASA - European Aviation Safety Agency (EASA) EUROCONTROL - European Organisation for the Safety of Air Navigation (EUROCONTROL) ICAO - International Civil Aviation Organization (ICAO) Int Acc Invest Bodies - International Accident Investigation Bodies	01/01/2017 31/12/2017	CON-AA	1	Operational services	The operation of four aviation safety related services for DG MOVE during 2017. The services are: the European Central Repository for occurrences (ECR-ECCAIRS), the European Central Repository for Safety Recommendations (ECRSRIS), the European Aviation Safety Reporting Portal (AVIATION REPORTING EU) and the ECCAIRS collaborative portal (eccairsportal.jrc.ec.europa.eu).	15/12/2017	Scientific information systems and databases	
												2	Transfer project plan	A project plan describing in detail all the actions required to transfer for each service (the European Central Repository for occurrences, the European Central Repository for Safety Recommendations, the European Aviation Safety Reporting Portal and the ECCAIRS collaborative portal), the operational environment, the datasets involved, the technical documentation and the specific expert knowledge. This project plan will need to become accepted by DG MOVE and EASA.	15/12/2017	JRC technical reports	
												7	ECCAIRS and SRIS datasets	The ECCAIRS and SRIS datasets contain the data in the ECCAIRS and SRIS European Central repositories at the end of 2017. The data is made available to the authorised aviation community but will remain in the JRC storage systems at the end of 2017.	31/12/2017	Datasets	
339 - MULTRA JRC.E.5	4949 - ECCAIRS 19 European Coordination Centre for Accident and Incident Reporting Systems 19	This work-package makes sure that during 2018 and 2019 aviation accident and incident information continues to be collected from, and disseminated to, the European Aviation Safety Agency and the Member States as requested by Regulation 376/2014 and Regulation 996/2010. An estimate of between 150.000 and 200.000 incident and accident reports per year, originating from the 31 involved States, are integrated in the European Central Repository for occurrences. In addition, more than 500 Safety Recommendations per year, originating from the European Safety Investigation Authorities, are stored in the European Central Repository for Safety recommendations. The third service provided in this context is the European Aviation Reporting Portal, enabling small organisations and individuals to report aviation	JRC.E.5 Wietse POST	1.8.e	MOVE	MOVE	Delphine Micheaux-Naudet, Olivier Ferrante			01/01/2018 31/12/2019	CON-AA	1	Operational services	The operation of four aviation safety related services for DG MOVE during 2018 and 2019. The services are: the European Central Repository for occurrences (ECR-ECCAIRS), the European Central Repository for Safety Recommendations (ECR-SRIS), the European Aviation Safety Reporting Portal (AVIATION REPORTING EU) and the ECCAIRS collaborative portal (eccairsportal.jrc.ec.europa.eu).	30/12/2019	Scientific information systems and databases	
												2	Transfer of services outside JRC	The agreed set of operational services are successfully transferred, likely to the European Aviation Safety Agency. For each service, the operational environment, the datasets involved, the technical documentation and the specific expert knowledge will be prepared and handed over. In addition, this deliverable comprises starting up the services at the new premises, running the services in parallel for an agreed period and stopping the services in the JRC.	30/12/2019	Scientific information systems and databases	
												3	ECCAIRS and SRIS datasets	The ECCAIRS and SRIS datasets contain the data which will be transferred to the European Aviation Agency during 2018 and/or 2019. The datasets contain all the accident and incident data collected during the last two decades in the ECCAIRS European Central Repository plus all the Safety Recommendations collected during the last decade in the European Central repository for Safety Recommendations.	31/12/2019	Datasets	
1.9 Employment, social affairs, skills and labour mobility																	
1.9.a employment and social policy - provide highquality monitoring, benchmarking, impact assessment and evaluation support for employment and socialpolicyrelated measures, notably through three competence centres referred to in section 11.1;																	
150 - Education & Skills JRC.B.4	2277 - Innovative Edu Furthering Innovative Education in	Project 150 consist of research and policy support on modernising and innovating Education and	JRC.B.4 Yves PUNIE	1.9.a	EAC	EAC	Jan Pakulski	EMPL		10/12/2014 09/06/2017	CON-AA	5	Scientific article on InnovativeEdu	Scientific articles on one of the outcomes of the earlier deliverables of InnovativeEdu	29/05/2017	Article contribution to periodicals or to	

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
5090 - Employment & Skills JRC.B.4	5091 - SocialChange&Welfare Social Change and Welfare	PB 5090 (Employment&Skills) researches the area of skills and their relation to employment and employability with emphasis on the socio-economic implications on growth and productivity as well as the way the wide scale uptake of digital technology affects the everyday life of Europeans. This WPK 5091 consolidates results achieved through project 'ICT-Enabled Social Innovation to support the implementation of the Social Investment Package'(IESI) with and for DG EMPL (2014-16). In 2017 it will focus on contributing to the implementation of Social Policy Innovation	JRC.B.4 GIANLUCA MISURACA	1.9.a	EMPL	JRC	Claire GRAPELOUX	CNECT GROW SANTE		01/01/2017 31/12/2017	INS-RS	1	Mapping the EU Social Policy Innovation landscape	Report of mapping and analysis of the EU Social Policy Innovation landscape	31/10/2017	Science-for-policy reports
												2	i-FRAME Methodological framework and prototype	Report of the testing of the prototype of the i-FRAME Methodological framework to assess the social and economic return on investment of social policy innovations	30/11/2017	JRC technical reports
												3	Future of Welfare and Governance Innovation	Case study analysis of the social consequences of the emerging socio-technical challenges on the EU welfare systems and the governance implications they have in term of fairness and quality of access to services so to contribute to the policy debate on the re-design of the EU Social Model in line with the need to strengthen the social dimension of the EMU. This analysis may contribute - among others - to the DG EMPL ESDE2017	31/12/2017	JRC contributions to policy documents
603 - CC-ME JRC.I.1	5165 - CC-ME.CRIE IV Competence Centre on Microeconomic Evaluation - Centre for Research on Impact Evaluation IV	CRIE supports capacity building in counterfactual impact evaluation and provides scientific expertise and methodological support to the Commission and Member States for the evaluation of impact of the ESF funded interventions.	JRC.I.1 GIULIA SANTANGELO	1.9.a	EMPL	EMPL	Santiago LORANCA GARCIA			01/01/2017 31/12/2017	CON-AA	2017001	2017 Data Fitness Initiative for CIE	The initiative will invite ESF Managing Authorities (MA) to provide CRIE with the data that are needed for carrying out a CIE of a specific ESF funded intervention or to push the selected plan for data collection /linkage. CRIE will select the most suitable applicants in order to: -accompany two 'data-ready' MA with CIE; -accompany five other good prospective applicants in getting 'data-ready'; -present the final results	31/12/2017	Science-for-policy reports
												2017002	Community of Practice on CIE (CIE-CoP)	In 2017, CRIE will, in collaboration with DG EMPL: • organize two meetings of the CIE-CoP back to back to with training sessions; • run a web forum favouring exchanges with the members of the community on specific topics/documents of common interest; • provide a customised support on CIE methodology for the CIE-CoP	31/12/2017	Training
												2017003	Counterfactual Evaluation Archive	Update of the archive of CIEs on ESF type of interventions (called Counterfactual Evaluation Archive (CEA)) with recently published studies. The CEA takes the form of a web-search facility to be accessed on CRIE's website interactively	31/12/2017	Scientific information systems and databases
												2017004	Facilitating a European Market for CIE	CRIE will: • post MA' calls for tender about CIE studies on ESF interventions in the EU, additional to the publication on the respective national sites; • CRIE will manage a mailing list of potential suppliers of CIE studies.	31/12/2017	Scientific information systems and databases
												2017005	Web resources for the CIE	CRIE will continue to provide tailor made resources for the support of CIE evaluation for ESF related interventions. This includes guidance documents, papers, FAQ. Four standard introductory video tutorials on CIE methods and activities related to data collection will be produced with the purpose to respond to the need from MA for basic CIE training	31/12/2017	Scientific information systems and databases
												2017006	Feasibility and ESF impact study	CRIE will perform a feasibility study on the possibility to assess the causal effect of ESF investment in the EU-27 regions that have benefited from financial assistance in the programming periods 1994-99, 2000-06 and 2007-13. Based on the feasibility study, CRIE will test perform the counterfactual analysis of the impact of European Social Fund by December 2017, if possible by counterfactual methods.	31/12/2017	JRC technical reports
1.9.b European pillar of social rights - support the establishment of a European pillar of social rights and the updating of the social acquis through analysis of the changing nature of work and welfare systems, collaborative economy and health and safety at work;																
276 - OHE JRC.F.2	3509 - SCOEL IV Additional SCOEL SUPPORT Activity	The overall objective of the SCOEL support project is to develop at the JRC, a scientific support activity providing knowledge gathering and	JRC.F.2 Demosthenes PAPAMELETIOU	1.9.b	EMPL	EMPL	DG EMPL B3 - Maria MOITINHO DE ALMEIDA; Secretariat of SCOEL Mr.	ENV GROW MOVE	ECHA - European Chemicals Agency (ECHA) OSHA - European Agency for Safety	23/12/2015 22/03/2017	CON-AA	2	Final Report	Final report summarises the overall activities executed in the frame of the AA as laid out in the Technical Annex of the AA	30/04/2017	JRC contributions to policy documents
276 - OHE JRC.F.2	4883 - OSH V OSH V	This project provides policy-support to DG EMPL B3 for the implementation of OSH legislation	JRC.F.2 Demosthenes PAPAMELETIOU	1.9.b	EMPL	EMPL	Maria MOITINHO DE ALMEIDA	ENV GROW	ECHA - European Chemicals Agency (ECHA)	01/12/2016 30/11/2019	CON-AA					
5090 - Employment & Skills JRC.B.4	5092 - Changing Nature Work Changing Nature of Work	The project 5090 (Employment&Skills) researches the area of skills and their relation to employment and employability with emphasis on the socio-economic implications of growth and productivity as well as the way the wide scale uptake of digital technology affects the everyday life of Europeans. This WPK 5092 deals with the impact of the digital transformation on skills, labour markets and welfare systems, providing an holistic approach to these closely interrelated areas. Starting with skills, the project will look into how digitalisation impacts the skills required for old as well as new jobs. The focus is on the substitutability and complementarity relationship between human capital and digital technologies and hence on the impacts on wage and job distributions (job polarization). The work-package will also explore the social risks that emerge as a consequence of technological induced organizational changes and the challenges that these pose for labour as well as welfare policies. Finally we will also explore the issue of mismatches and over-education –with	JRC.B.4 Fabienne ABADIE	1.9.b	EMPL	JRC	Ralf Jacob (EMPL/A4)	CNECT EAC GROW		01/01/2017 31/12/2017	INS-RS	1	Impact of digitalization on labour markets	Analysis of the challenges posed by digitalization on tasks and hence on jobs. We aim at developing a coherent and robust framework for the analysis of the relationship between digitalization, routinization and wage and job polarization. The framework will then be brought to data for the EU. We will also discuss the role of the collaborative economy and the challenges that it induces in traditional labour market relationships.	15/09/2017	Science-for-policy reports
												2	New forms of work and new social risks	Study of new forms of work (new in terms of both contractual regulation and work organization) that have recently emerged (e.g. zero-hours contracts, ICT enabled forms of work, precarious work, involuntary part time work) to provide a quantification of new forms of work and an analysis of the main socio-economic and legal challenges they pose. We will look both at efficiency and equity aspects, and focus on the opportunities as well as the new risks that these new forms of work generate.	01/11/2017	Science-for-policy reports
												3	Skills matching and the youth employment challenge	This research will analyse changes in the distribution of educational and skill mismatch over time and between countries in the EU, and their relationship with socio-economic background and demographics. We also intend to study to what extent skill mismatches can be responsible for the poor labour market performance of some vulnerable groups. Particular attention will be devoted to the youngest generations, and to the analysis of youth unemployment and its determinants.	15/12/2017	Science-for-policy reports
												4	Chapter for ESDE 2017 Report	A chapter on the Future of Work, where the impacts of digitalisation and globalisation on the labour market are discussed, will be prepared to support DG EMPL with the drafting of the 2017 ESDE report.	01/09/2017	Article contribution to a monograph or other periodicals
1.9.c skills and employment - provide analysis of the distribution and evolution of skills and their links with employment potential.																
5090 - Employment & Skills JRC.B.4	3281 - COFRADEM Competence Frameworks and Digital Platforms for Employment	Project 5090 (Employment&Skills) covers research on skills, employment and employability in close collaboration with EMPL, supporting the new European Skills Agenda initiatives (COM 7 June 2016). WPK 3281 will focus on studying the emerging collaborative economy and the further take-up and implementation of the competence frameworks developed by the JRC. The COFRADEM project covers two major studies during a period of a maximum of eighteen (18) months. A Collaborative economy and employment (COLLEEM) consisting of a (1) Mapping of digital labour platforms in order to provide an up-to-date overview of existing digital labour platforms active in the collaborative economy and (2) a survey in up to 10 EU countries (1,000 responses per country) asking EU citizens about their motivations, background and the type of work they carry out on digital labour market platforms and under which conditions.	JRC.B.4 Yves PUNIE	1.9.c	EMPL	EMPL	SONIA PERESSINI	CNECT EAC GROW		02/01/2017 02/07/2018	CON-AA	3	Digital Competence Framework version 2.1	The report "DigComp 2.1: The Digital Competence Framework for Citizens with 8 proficiency levels and examples of use" provides an update of DigComp, covering 8 levels of proficiency for each competence, as well as examples and scenarios of use applied to	02/05/2017	Science-for-policy reports
												4	Guidelines for use of DigComp by stakeholders	The report will provide guidelines for use of DigComp by stakeholders. The guidelines should describe the nature of digital competence and the purpose of the competence framework, and through examples of best practice and practical guidelines, guide use of the competence framework by potential users.	18/12/2017	JRC technical reports
												5	Guidelines for use of EntreComp	EntreComp is the entrepreneurship competence framework developed by JRC on behalf of DG EMPL. This report will provide guidelines for use of the framework by stakeholders.	18/12/2017	JRC technical reports
												6	Mapping of digital labour platforms	This report will provide an up-to-date overview of existing digital labour platforms with a description of their characteristics and information on their size (in terms of number of service providers, number of users, turnover) and reach (in which countries/regions they operate). Any information published by platforms about how they promote or ensure compliance with regulations (e.g. labour law, health and safety, social security etc.) will be included also.	27/11/2017	Science-for-policy reports
												7	Results from survey on digital labour platforms	Results from a survey on digital labour platforms reporting in the number of service-providers, their working conditions, their profiles, their motivation, their source(s) of income, the remuneration they receive from the platform work, the number of platforms they are active in and portability of ratings/track record. The survey will cover 10 EU countries.	02/07/2018	Science-for-policy reports
2 A connected digital single market																
2.1 Digital economy and society																
2.1.a analysis in ICT-led innovations, the impact of digital technology and related economic models on growth, jobs and consumer welfare in the EU, with a particular focus on policy priorities related to the EU digital single market and the digital agenda for Europe;																
		This WP (2044) "Prospective Insights in ICT R&D phase 3" (PREDICT 3) focuses on analysing the supply of Information and Communications Technologies (ICT) and Research and Development (R&D) in ICT in Europe, with comparison to major competitors worldwide. ICTs are indeed the technologies underpinning the digital														
												1	Dataset 2016	Dataset	01/01/2017	JRC contributions to policy documents
												2	Dataset 2017	Dataset	01/01/2018	JRC contributions to policy documents
												4	PREDICT Key Facts 2016	Yearly set of graphs on Key facts on ICT R&D and ICT Industry	31/03/2017	Science-for-policy reports

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
153 - Digital Economy JRC.B.6	2044 - PREDICT-3 Prospective Insights in ICT R&D phase 3	<p>economy. This research entails:</p> <p>a) ICT R&D analysis: providing data on private & public ICT R&D expenditures (EU+competitors), improving interaction with EUROSTAT for consistency of country level data, investigating to extend the coverage to intangibles other than R&D (possibly applying the PREDICT macroeconomic model to the evaluation of alternative policy initiatives); and</p> <p>b) ICT industry analysis: beyond official statistics.</p>	JRC.B.6 GIUDITTA DE PRATO	2.1.a	CNECT	CNECT	Christophe Dain, Connect F.4	ESTAT RTD	OCLEP - Organisation for Economic Co-operation and Development (OECD)	01/03/2016 28/02/2019	CON-AA	5	PREDICT Key Facts 2017	Yearly set of graphs on Key facts on ICT R&D and ICT Industry	31/03/2018	Science-for-policy reports
												8	PREDICT Analysis on techno-economic segments 2017	Mapping innovative ICT technologies with big data methodologies	21/12/2017	JRC technical reports
												9	PREDICT analysis on techno economic segments 2018	Mapping innovative ICT technologies with big data methodologies	21/12/2018	JRC technical reports
												91	PREDICT Methodological Compendium	Methodological report on data sources, processing, estimation and analytical methods	30/12/2017	JRC contributions to policy documents
244 - CSPI JRC.E.3	2760 - CCDL Crypto-Currencies and Distributed Ledgers in the Digital Single Market	<p>This work-package aims at investigating on virtual-currencies and distributed ledger technologies under a cyber-security and architectural perspective to provide first hand support to the DSM strategy (COM(2015) 192 final), the Anti-Money Laundering policy package and future coming policy requests on the subject.</p> <p>Virtual-currencies are the raising stars among the payment schemes of the digital market. Their completely un-regulated and fully distributed nature is subject of increasing concerns within the bank authorities (see EBA opinion EBA/Op/2014/08). On the other end crypto-currencies stand the so called "Distributed Ledgers" a new set of distributed system paradigms that have been recently defined as the "disruptive technology" of the XXI century. Several EU Government (UK, Estonia, Latvia, Germany among the others) started to investigate on possible ways to exploit its potential to provide new, cost-efficient, secure and flexible e-services. The recent report of MEP Weizsäcker (2016/2007(INI)) on virtual Currencies and Distributed ledgers technologies (DLT) approved by the European Parliament Committee on Economic and Monetary Affairs calls the Commission for the creation of a horizontal Task</p>	JRC.E.3 Igor NAI FOVINO	2.1.a	CNECT	JRC	Pierre CHASTANET DG CNECT - H4	CNECT ECFIN FISMA GROW TAXUD	ECB - European Central Bank EP - European Parliament	01/01/2015 14/12/2018	INS-RS	276006	Regulated Crypto-Currency Proof of Concept	This activity will leverage on all the previous deliverables to develop a first proof of concept of crypto-currency system satisfying the requirements identified in the deliverables developed in 2016.	15/12/2017	Technical systems
												276007	Regulated Crypto-Currency Requirements	This activity aims at identifying, in collaboration with the involved DGs, the requirements that a new crypto-currency system should have to mix together the featured desired by the consumer with the need for market regulation, traceability, security and accountability of the bank regulators. It will build-up on the research activities conducted in 2016. The results will be made available through a JRC technical report and publications on peer-reviewed journals.	15/12/2017	JRC technical reports
												276008	Distributed Ledgers-State of the art	This deliverable will analyse the state of the art in distributed ledger technologies, to identify the different technological paradigms and the related use case scenarios in a e-government and e-service context. The results will also support the preparation of peer reviewed scientific papers in the area.	13/10/2017	JRC technical reports
												276009	Distributed Ledger on-field analysis	This deliverable will build on the activities conducted in the virtual-currency experimental platform to develop a simulation environment enabling the analysis of distributed ledgers architectures, vulnerabilities and potentialities. The environment will be used to conduct on field-tests which will be used to produce peer reviewed research papers in the area and to provide inputs for policy option identification (see the following deliverable)	15/12/2017	JRC technical reports
												276010	Distributed Ledgers: opportunities and policy opt.	This deliverable will build on the previous technical reports and on-field analysis to present a list of use-cases where distributed ledgers can boost the development of the DSM agenda for what concerns e-services and e-government. Each use-case will be presented in term of potentialities, cyber-security, resilience and scalability, and supported by a related demo built into the G.6OpenSpace. The activity will be conducted, for what concerns the energy use case in synergy with work-package 3440	14/12/2018	JRC technical reports
153 - Digital Economy JRC.B.6	3285 - RISES Research on Innovation, Startup Europe and Standardisation – RISES	<p>This WP3285 "Research on Innovation, Startup Europe and Standardisation" (RISES) focuses on analysing digital innovation and entrepreneurship in the EU, in support of policy development in this area.</p> <p>The WP builds upon and further develops the research of the EURIPIDIS (European Innovation Policies for the Digital Shift) AA with DG CNECT ending in December 2016 (WP 1691).</p> <p>As agreed with DG CNECT, the research under this WP will address and analyse:</p> <p>(a) ICT standardisation & IPRs;</p> <p>(b) the role of public funding in financing digital innovation; and</p> <p>(c) the EU ecosystem of high growth innovative digital companies.</p> <p>This research will be done in close interaction with DG CNECT. It will support in particular the</p>	JRC.B.6 DANIEL NEPELSKI	2.1.a	CNECT	CNECT	Peters ZILGALVIS	GROW RTD		02/01/2017 31/12/2019	CON-AA	1	First project report	This first project report on digital innovation and entrepreneurship in Europe will address in particular: (a) The role and impact of ICT standardisation & IPRs (b) The role and impact of public funding in financing digital innovation (c) Framework conditions for high growth innovative digital companies in the EU ecosystem and geographic mapping of scaleups in the EU. Note: Exact contents of this project deliverable is to be agreed with DG CNECT during the on-going AA negotiations	31/12/2017	Science-for-policy reports
												2	Second project report	This second project report on digital innovation and entrepreneurship in Europe will address in particular: (a) The role and impact of ICT standardisation & IPRs (b) The role and impact of public funding in financing digital innovation (c) Framework conditions for high growth innovative digital companies in the EU ecosystem and geographic mapping of scaleups in the EU. Note: Exact contents of this project deliverable is to be agreed with DG CNECT during the on-going AA negotiations	31/12/2018	Science-for-policy reports
153 - Digital Economy JRC.B.6	3286 - EDMS+ Economics of the Digital Single Market (II)	<p>This WPK (3286) provides economic analysis for the implementation of the Commission's commitment under the DSM agenda to do a comprehensive assessment of online platforms, possibly leading to a policy initiative to improve the regulatory environment. It will start with a comprehensive review of the existing research literature on the economics of online platforms, with a view to extract findings that document the social welfare impact of platforms and possible market distortions that might require regulatory intervention. It will identify gaps in existing research with regard to the public policy and regulatory aspects of platforms. Additionally, the WPK will examine the economic impact of (big) data collection & analytics and EU data ownership and access regulation, or proposed changes in that regulation. Finally, as part of the DSM agenda the WPK covers studies on cross-border geo-blocking in online services and digital media content, in particular audio-visual media content. Empirical analysis on a number of case studies will be carried out in the later stages of the programme.</p>	JRC.B.6 Bertin MARTENS	2.1.a	CNECT	CNECT	Martin Ulbrich	COMP EAC GROW JUST		01/01/2016 31/12/2018	CON-AA	11	Business to business practices in online platforms	As online platforms play an increasingly important role in the economy, the terms & conditions of access to online platforms as a distribution channel have become crucial for goods & services producers, particularly for small producers (SMEs) that have less leverage in the market. The public consultation on platforms highlighted these alleged unfair trading practices and suggested that additional measures may be required to ensure fair competition.	31/03/2017	Science-for-policy reports
												12	The impact of online labour market platforms	Online task outsourcing platforms constitute a special category of peer-to-peer platforms with implications for labour market policy and regulation. This study will provide a literature review and try to do some empirical analysis of these platforms.	30/06/2017	Science-for-policy reports
												13	Innovation in platforms	A theoretical model and an empirical investigation into the economic and technological drivers of platform dynamics	30/09/2017	Science-for-policy reports
												14	Shift in value-added from content providers to	Title: The shift in value-added from content providers to platform operators Description: The distribution of value-added between platforms and the suppliers that provide content and services on these platforms is a contentious issue. This study will launch an empirical investigation into this subject.	31/12/2017	Science-for-policy reports
												15	Impact platform data analytics on content provider	Title: The impact of platform data analytics on content providers and their business models. Description: This study will focus on car transport and the impact of digital car controls, driving and traffic control on the distribution of value-added between car manufacturers and digital car services	31/03/2018	Science-for-policy reports
												16	Empirical evidence on the impact of data analytics	Title: Empirical evidence on the impact of data analytics in platforms on consumer welfare. Description: Data analytics in online consumer platforms may affect consumer decisions and welfare, through privacy, pricing and the variety of goods consumed online. This study will present a literature review on this subject.	30/06/2018	Science-for-policy reports
												17	Overall economic impact data analytics in online	Title: the overall economic impact of data analytics in online platforms. Description: This report will provide a comprehensive overview and synthesis of the platform studies carried out under this research programme.	31/12/2018	Science-for-policy reports
												19	Impact lifting territorial restrictions on product	Title: The impact of lifting territorial restrictions on the production of audio-visual media in the EU. Policy document: Copyright policy proposal	31/03/2017	Science-for-policy reports
												21	2017 Country fact sheets	Production of country factsheets summarising with tables and graphs the most relevant data and trends related to the supply side of ICT in the 28 MS economy + Europe. This output is not planned as part of PREDICT3, it is a complementary production enhancing the use of collected and additional new data. It comes as a useful complement to the EDPR chapter on ICT industry and RD, largely inspired by PREDICT data.	31/05/2017	JRC contributions to policy documents

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Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
												22	2018 Country fact sheets	Production of country factsheets summarising with tables and graphs the most relevant data and trends related to the supply side of ICT in the 28 MS economy + Europe. This output is not planned as part of PREDICT3, it is a complementary production enhancing the use of collected and additional new data. It comes as a useful complement to the EDPR chapter on ICT industry and RD, largely inspired by PREDICT data.	31/05/2018	JRC contributions to policy documents
												23	2017 Contribution to the evaluation of H2020	Our contribution will mix the validation of (our) evaluation instruments, their implementation and the analysis of the results. This activity will encompass numerous exchanges with CNECT F4, Chef de ligne for the H2020 evaluation (ICT part); meetings VC, review of documents, etc. We can hope to be associated to the co-authoring of the conclusions	31/12/2017	JRC contributions to policy documents
												24	2018 Contribution to the evaluation of H2020	Our contribution will mix the validation of (our) evaluation instruments, their implementation and the analysis of the results. This activity will encompass numerous exchanges with CNECT F4, Chef de ligne for the H2020 evaluation (ICT part); meetings VC, review of documents, etc. We can hope to be associated to the co-authoring of the conclusions	31/12/2018	JRC contributions to policy documents
												25	Contribution to ESTAT Manual for data collection	EUROSTAT G4 is mandated to revise the ICT and RD data collection and processing. It has invited ou team to contribute directly to the task. The long term aim is to produce a new Manual of ESTAT regarding the data collection and processing. The task will consist in a Task Force , VC, ws, authoring and review of documents. ESTAT considers this as a main strategic exercise.	31/12/2018	JRC contributions to policy documents
												26	Contribution to Big Data and free flow strategies	Our team contributes, with its experience and in collaboration with other projects (Open Knowledge), to the various tasks forces concerned by Big Data and Free Flow of data issues at JRC, EUROSTAT, CNECT. Observable outputs are largely dependent on the decisions taken in those TF.	31/12/2018	Validated methods, Reference methods and measurements
												27	Big Data competences development	The Project, in collaboration with the other projects of B.6 will pursue its development and testing of Big data tools, applied to the PREDICT, eDSM and new Innovation-oriented WPK. This effort is organised under the umbrella of the GEODIT research area. It marks a fundamental methodological effort to enhance the span of usable data and the analytical capacity of the whole Project. Methodological progresses are expected to be tested and documented by end 2017	31/12/2017	JRC technical reports
												28	Interactive functionalities on the web	The aim is to improve our dissemination tools by enhancing with visualisation and interactive functionalities. This is strongly reacted to the earlier Del on Big Data, but also to the presence of a communication officer in the team.	31/12/2017	Scientific information systems and databases
484 - INSPIRE JRC B.6	3786 - ELISE European Location Interoperability Solutions for E-government	Interoperability is the ability of disparate organisations to interact towards mutually beneficial and agreed common goals, involving the sharing of information and knowledge between them, through their business processes, by means of data exchange between their ICT systems (Decision (EU) 2015/2240). Location information, and the interoperability of its data and services, underpins many EU and national policies. Despite having notable value, there are obstacles to location information's efficient sharing and reuse. ELISE will support Digital Single Market, Better Regulation and Public Sector Modernisation goals by developing and testing EU-wide, cross-sector interoperability frameworks and solutions for the sharing of location data and services, applying INSPIRE in sectors beyond the environment. The WP will support the eGovernment Action Plan (2016-20), including Action 19 'Accelerate the deployment and take-up of the INSPIRE Directive data infrastructure', apply the principles of the European Interoperability Framework (EIF), and contribute to the Rolling Plan for ICT Standardisation in terms of location interoperability. Over 5 years, ELISE will coordinate and implement the geospatial component of the ISA2 Programme (Action 4.1), helping to deliver core programme objectives. ISA2 facilitates eGovernment interoperability for EU public administrations, and their interactions with businesses and citizens, through the development and adoption of ICT-based frameworks and solutions. ELISE deliverables include studies, tools, guidance, applications and support services. More specifically, these include guidance and tools for geospatial information management, building of INSPIRE. Ready-for-operation pilots in different sectors (e.g. energy, transport, marine) and "common data services" (e.g. gazetteer of geographic names, address register) are also foreseen to test concepts, demonstrate feasibility and explore the benefits of interoperable approaches towards operational solutions. ELISE will act as the "geospatial knowledge base" for ISA2 and Commission services by adding location aspects to the EIF's legal, organisational, semantic and technical views and by supporting assessments of the ICT implications of new	JRC.B.6 Francesco PIGNATELLI	2.1.a	DIGIT	JRC	Margarida ABECASIS	CNECT ENER ENV ESTAT GROW MARE MOVE	- EuroGeographics CC EU - Candidate Countries EU EEA - European Environment Agency MS EU - Member states EU UN-GGIM - United Nations initiative of Global Geospatial Information Management	01/01/2016 31/12/2021	INS-RS	201701	Geospatial Knowledge Base Service- Inception	Plan for a Geospatial Knowledge Base service offering (i) landscape analysis in policy areas and Member States to determine needs and best practices; (ii) support to policy makers through the policy lifecycle, in particular for ICT assessments of new legislation; (iii) support to implementers in applying best practices; (iv) promotion of best practice solutions across the ISA2 programme; (v) package of awareness-raising and training. Outputs also contribute to the EC ICT Standardisation Plan.	30/11/2017	JRC technical reports
												201702	ELISE Digital Single Market Package- inception	Policy analysis report (based on SWOT, gap analysis and DSM specialist opinion) of interoperability issues related to geospatial information management relevant to DSM goals, including barriers to the free flow of location based data. This is further developed in terms of the barriers to business creating new products and services, including a plan aligned to the DSM timetable, with inputs from the finalised EULF transportation pilot.	31/10/2017	JRC technical reports
												201703	ELISE Common Data Services: EU Gazetteer scoping	A report outlining the business case for a gazetteer of geonames/addresses as a common EU data service underpinning many e-government processes, including the scoping of options, taking into account existing data sources, links with other base registers, licensing options and pricing mechanisms. This will include an analysis of demand at the European level and of the supply, including feasibility (as iterative developments), added value and fitness-for-purpose compared to similar services.	30/06/2017	JRC technical reports
												201704	ELISE Better Regulation package - inception	A report outlining the composite methodology for assessing location interoperability aspects of new legislation and how to apply best practices on legal, organisational, semantic and technical interoperability to policy proposals. More specifically, this will involve adding location interoperability aspects to the Better Regulation tool for the assessment of ICT Implications of New Legislation led by DIGIT, as well as a benefits assessment approach.	01/12/2017	JRC technical reports
												201705	Location interoperability tools and guidance	This deliverable involves a package of open source software solutions and guidelines to support INSPIRE implementation and its use in other sectors, developed by the ARE3NA ISA Action. Key aspects include cross-sector INSPIRE/e-government solutions related to access control, geospatial data and service validation tools and the developing an approach to sharing INSPIRE data as linked data and related standards.	15/12/2017	Scientific information systems and databases
												201801	ELISE DSM Package - guidance and pilot development	The deliverable will address key issues for location interoperability and the DSM through guidance on open geospatial data, location privacy, data/service licensing and the promotion of partnerships between the public and private sector to address socio-organisational issues, such as improved workflows and business models. This will be further tested through pilots in key policy areas which will offer evidence about the use of appropriate standards.	30/11/2018	JRC technical reports
												201802	ELISE Common Data Services - Initial phase	This deliverable will involve the outcome of the first series of iterations of the foreseen EU Gazetteer, following the feasibility study 201703, including delivery of prototype services and early adopter feedback. This will also involve a feasibility study for a second common data service such as an EU open mapping service, including barriers and benefits arising from open data sources.	31/10/2018	Scientific information systems and databases
												201803	Energy and Location Pilot for Better Regulation	A report on the pilot to demonstrate how local authorities can meet the reporting requirements of the Energy Performance of Buildings Directive (EPBD), the Energy Efficiency Directive (EED) and the Covenant of Mayors (COM) Strategic Environmental Action Plans (SEAPs) using INSPIRE data and services. The pilot will involve close collaboration on the methodology with the JRC F07 Unit, and will reuse assets created by other EU initiatives and projects.	14/12/2018	Science-for-policy reports
244 - CSPI JRC.E.3	3792 - QuantumTech Quantum Technology Study	Technologies which make direct use of quantum effects (uncertainty, superposition, entanglement etc.) are emerging and are expected to have a high impact in secure communications, sensing, metrology and, on a longer timescale, computation. Within Europe, there is a clear need to drive commercial exploitation of the excellent quantum science base. The Commission is taking preparatory steps for an intended FET flagship in quantum technologies, with ramp-up from 2018, and the JRC team is working with the relevant services (see notes). The goal of the JRC Quantum Technology Study is to give the European institutions the best foresight achievable to inform policy decisions for this developing field, for the flagship itself and more widely. We draw on the knowledge of selected stakeholders, with knowledge of the technology and/or applications and policy aspects, striving to	JRC.E.2 Adam LEWIS	2.1.a	CNECT	JRC	Aymard DE TOUZALIN	GROW RTD	ETSI - European Telecommunications Standards Institute (ETSI) EURAMET - European Organisation of Metrology (EURAMET)	01/01/2016 30/12/2017	INS-RS	1	Final Report of Quantum Technology Study	A comprehensive report of the study, describing the process, results and what has been concluded regarding possible policy implications of developments in quantum technologies, highlighting subsectors where a policy response is expected to be required more quickly. The report will also consider options for a future JRC role in quantum technologies.	30/06/2017	Science-for-policy reports
												2	Report on test of ultracold atom gravimeter	Tests of ultracold atom gravimeter for detection of underground objects (pipes and underground service chambers and small test objects at depths of ~ 10cm) will be conducted at Ispra by external collaborators from MSC RISE project Q-Sense 081156, led by Uni. of Birmingham, to which we have committed. It is one of the most promising applications for quantum-based sensors and could be commercialized quite quickly. JRC staffs task is only to prepare test field (see separate risk assessment).	15/10/2017	JRC technical reports
												3	Analysis of the quantum technology industry	An analysis considering quantum technology companies, markets, products and intellectual property, comparing the situation in the EU and third countries.	31/12/2017	External study reports
												4	Report on role for JRC in Quantum Technology	Possible roles for the JRC in the field of quantum technology will be considered, based on the foresight of the likely future requirements for European policy obtained in the study. This analysis will be conducted by application domain. The resources and competences needed to fill various roles will be assessed.	30/12/2017	JRC internal reports

2.1.b development of IT tools and methodologies to analyse the radio spectrum inventory and the security of digitally connected objects (Internet of Things) and of new technologies (e.g. 5G, Quantum Technologies);

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244 - CSPI JRC.E.3	4020 - ARMOUR Large-Scale Experiments of IoT Security & Trust	The combination of prominence of business logic vulnerabilities, uncertainty of the expected behaviours and large-scale and dynamic dimension in IoT systems make existing security testing frameworks, methods, techniques and tools not	JRC.E.3 Gianmarco BALDINI	2.1.b	CNECT	CNECT	Mr Georgios Tselentis - DG CNECT (DDG1.E.4)			01/02/2016 31/01/2018	CON-IA	402002	Security and Privacy in the IoT lifecycle	Study of the security and privacy aspects in IoT application lifecycle, including an analysis of the challenges and potential approaches/solutions to support the lifecycle of IoT applications, as foreseen as deliverable D4.5 of the ARMOUR project by Month 24 of the project.	15/12/2017	JRC technical reports
332 - CORSA JRC.E.2	4833 - 5G-IOT Testbed 5G Testbed for Internet of Things (IoT)	5G technologies and Internet-of-things are two key enablers for the future vision of a digital Europe. Whereas 5G focuses on the communications networks, IoT focuses on the communications architecture for an all-digital society of people, objects and services. Integration and tests of the two technologies is essential for their successful deployment and standardization. 5G refers to the next generation of digit communications networks which will be the key enabler of strategic growth industries in a Connected Europe and beyond. Communications demands of smart cities, intelligent transport systems and an integrated public safety infrastructure require 10-100 times improvements in network performance e.g. speed, capacity and latency than what is possible in the current 4G networks. Internet of Things (IoT) refers to the vision of a global network of connected objects that enables pervasive interaction between not only people but also the objects around us. IoT intends to provide a basic ICT architecture for the so-called 'verticals': Smart Cities, intelligent transport, Industry 4.0 and Smart Home.	JRC.E.2 Pravir CHAWDHRY	2.1.b	CNECT	JRC	PAVLOS FOURNOGERAKIS	ENER GROW MOVE	CEPT - Conference of European Posts and Telecommunications Administrations (CEPT) ETSI - European Telecommunications Standards Institute (ETSI)	01/01/2017 31/12/2018	INS-UR	1	5G Testbed - Use case: Ultra-dense Small Cells	This work package will focus on preparing a 5G Test bed for a 'small cell' scenario where the objective is to respond to ultra-high capacity of traffic demand coupled with number of users concentrated in a small area. Typical use cases are: shopping centres, museums, sports arena, conference venues. The testbed will validate one of the candidate frequency bands foreseen for 5G.	30/11/2017	Technical systems
												2	Assessment for massive IoT Deployment	This task will focus on a use case of massive IoT deployment, in partnership with the Italian Ministry for Economic Development. The testbed will evaluate technological readiness, present performance and future requirements for this scenario.	30/11/2017	Science-for-policy reports
												3	Big data applications of IoT for Smart Cities	Use cases such as wide-area environmental monitoring, road traffic sensor networks and mobile phone traffic are sources of big data in the Smart Cities use case of IoT. This deliverable will assess the impact of 24x7 stream of such data on the IoT communications network requirements.	31/12/2018	JRC technical reports
												4	Time-critical data requirements for 5G/IoT	Security-sensitive use cases such as public protection disaster relief (PPDR) and self-driving cars are time-critical applications where IOT architecture needs to be adapted for time-critical data in high bandwidth and wide area coverage. The testbed will address the technical requirements of such applications.	29/09/2018	JRC technical reports
												5	5G for enhanced eMobility - Preparatory steps	In conjunction with the eMobility projects in JRC, this task will test the integration of 5G communications technologies with electrical vehicles infrastructure as part of the vertical 'automotive industry / smart transportation'. There will be a long lead time in preparing the underlying elements in 5G area as well as eMobility activities in JRC before integration and test activity could be undertaken in 2018.	15/12/2017	JRC technical reports
332 - CORSA JRC.E.2	4835 - Spectrum Competence Technical Expertise in Modern Spectrum Management	A harmonised EU Spectrum policy is one of the main elements of the Digital Single Market. Spectrum decisions have a direct long-term impact on not only the fast growing electronic communications sector (DG CNECT) but also the emerging smart infrastructures ("the verticals") such as intelligent transport (DG MOVE), Connected objects / Internet of Things (DG CNECT), Industry 4.0 (DG GROW), Smart Grid (DG ENER), eHealth (DG SANCO, DG CNECT). In the ongoing Telecom Framework review, the Commission is aiming to respond to the future societal needs through a modern approach to spectrum management in a timely and efficient manner. Following successful collaboration with JRC on the Spectrum policy, DG CNECT have proposed JRC to act as a technical competence centre for modern spectrum management. This will help the Commission to resolve a variety of technical questions that emerge when evaluating new proposals and initiatives on spectrum sharing and future coordination of spectrum allocation in harmonised bands. EU-level preparations for a common position at the forthcoming World Radio Conference WRC-19 of International Telecommunications Union have already started to which technical assessment of candidate frequency bands for 5G communications is one of the priorities. Likewise, DG CNECT need to rely on JRC's in-house expertise in order to evaluate the progress on its mandates and draft standards at the European level, mainly at Conference of European Postal and Telecommunications Administrations (CEPT) and European Telecommunications Standards Institute (ETSI). More recently, the EU advisory entities on spectrum matters such as Radio Spectrum Policy	JRC.E.2 Pravir CHAWDHRY	2.1.b	CNECT	JRC	Andreas GEISS	GROW HOME MOVE	CEPT - Conference of European Posts and Telecommunications Administrations (CEPT) ETSI - European Telecommunications Standards Institute (ETSI) ITU - International Telecommunication Union	01/01/2017 31/12/2018	INS-RS	1	Technical Studies for 5G Spectrum	Next generation mobile communications are termed as 5G ("5th Generation"). This deliverable will assess new developments in 5G technologies, evaluation of spectrum options for 5G and spectrum sharing for 5G. Work will be based on reviews of contemporary academic and industrial achievements in communications technologies with greatest potential impact on achieving 5G goals (high throughput, low latency, high speed ultra reliability, high density, ...).	30/11/2017	JRC technical reports
												2	GSM-R Evolution	The rail industry has started to prepare for the next generation of railway communications system, as the GSM standard is being replaced by 4G/LTE. The new system should start to be implemented in 2022. Much technical work will be needed in order to define the best technologies and the most suitable spectrum. One of the options, supported by DG CNECT, is to rely on commercial mobile networks. JRC input is requested by DG CNECT in assessing options in this area.	30/06/2017	JRC technical reports
												3	Visible Light Communication Potentials	Visible light communication (VLC) is an innovative technique for wireless data communication using the light waves. Related technology is known as Li-Fi, rhyming with all-pervasive Wi-Fi that is based on radio waves. The two technologies could play complementary roles in future wireless networks. This deliverable is based on experimental studies on a VLC test bed, to assess maturity, performance, robustness and security.	30/11/2017	Technical systems
												4	Workshop on Modern Spectrum Management	This workshop will involve spectrum experts, regulators and industrial stakeholders to assess the role of new approaches to spectrum management such as spectrum sharing. It will enable sharing of experiences through invited presentations of case studies, pilots and experiments, as well as on-going consultations on new initiatives by the EU Member States.	31/10/2017	Training
												5	Airborne spectrum measurements	To assess the occupancy of radio spectrum in a large built up area such as a city, airborne surveys can provide an efficient way to survey the radio waves. This deliverable will be based on a prototype spectrum survey platform that could be deployed on a variety of airborne vehicles, such as balloons and drones. The know-how and results will be shared with national spectrum authorities.	30/06/2017	JRC technical reports
												6	Migration strategies from GSM-R to 4G/LTE for Rail	With the evolution of wireless communications standard for railways to adopt high speed 4G technology in the long term, there is a practical challenge of switching from the present GSM-R technology to the 4G/LTE technology in future. This deliverable will assess migration strategies for this transition to help the readiness of the operators.	30/09/2018	Science-for-policy reports
												7	Drone detection through RF signatures	The proliferation of drones (UAVs) pose serious potential risks for public safety and security. The capability to reliably detect drones is therefore of utmost importance for regulators and law enforcement institutions. MSs are beginning to face these challenges. Focus of this deliverable will be on the development of a database of drones' RF "fingerprints" and testing their detection capability in the EMSL laboratory. The work is of potential interest to DG HOME.	30/12/2017	Technical systems
2.1.c cybersecurity analyse data protection and privacy issues of the new telecommunication paradigms, strengthen the information base on counterfeiting and provide policy options to introduce the privacy by design approach in the development of the new communication and online services;																
244 - CSPI JRC.E.3	561 - CyberSec Cyber-Security in the DSM	This WP provides support, through scientific research and investigations, to a set of policy packages in the area of cyber-security and privacy. More in details, it provides support to the revision of the e-Privacy directive for what concerns art.14(3) (privacy and security by design and end to end security of terminal services), art. 5(3) for what concerns the cyber-security of smart-devices, the invasiveness of mobile apps and data leakages and art.(4) for what concerns the security of new application level telecommunication services. The WP will also support point 3.4 of the DSM strategy (COM(2015)192), reinforcing trust and security in digital services & in the handling of personal data with a study analysing the cybersecurity issues which might be of obstacle to the development of an open and free digital market with particular attention to 1) the cybersecurity challenges introduced by mobile services & applications and the mechanisms to empower the citizen against these threats, 2) the raising threats linked to online user profiling (geoblocking, mobile tracking, mobile and IoT user profiling etc.). The activities will move along the following three areas: -Centralised vs. Decentralised cyber-security and privacy in an increasingly interconnected environment (IoT) -Online tracking, cyber-security issues and	JRC.E.3 Igor NAI FOVINO	2.1.c	CNECT	JRC	Pierre Chastanet (D.HoU CNECT.H4)	ENER GROW HOME JUST		01/01/2014 31/12/2018	INS-RS	56114	Cybersecurity in fully interconnected environments	The Internet of Things is completely changing the way in which citizens approach and use the cyber-space: less barriers, unregulated flows of information, less direct control on the smart-devices. This deliverable aims at analysing: (1) Centralised vs Decentralised information flow and control of IoT under a cyber-security perspective (2) Cyber-Security evaluation of IoT in big data context (3) Firmware cyber-security issues (4) Mitigation techniques and policy options in the DSM context	15/12/2017	Science-for-policy reports
												56115	Security and Privacy of the mobile DSM	This study will combine, in line with results obtained in previous deliverables, reverse engineering, static and dynamic analysis techniques to characterize potential cyber-security and privacy threats contained in mobile applications with the aim of putting at disposal (1) to end-users, new means to better understand their possible exposure to cyber-risks and (2) to the partner DG (CNECT), a clear view of the cyber-security problem' size and technically viable mitigation option	15/12/2017	JRC technical reports
												56116a	Cyber-security in IoT and Mobile Devices	The results of the research activities conducted to support deliverables 56114 and 56115 will be published in peer-reviewed journals and conference proceedings	15/12/2017	Article contribution to periodicals or to conference proceedings listed in SCOPUS
												56117	Cyber-Security in online network security	Communication services are quickly evolving from the traditional telecommunication paradigms to application layer services (e.g. skype) oriented to both human-to-human and machine-to-machine communications. This study will proceed, to explore the cyber-security issues of this domain, proposing possible mitigation techniques and policy options supporting the Commission' Public-Private Partnership on cybersecurity in the area of technologies and solutions for online network security.	15/12/2018	JRC technical reports

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
		-Cyber-Security of smart-devices (included malicious mobile apps and firmware behaviors) These topics have been co-identified together with the colleagues of DG.CNECT H4 to support their policy needs in the areas previously described. The support is provided by conducting on-field research on cyber-security issues of the new										56118	Online tracking and mitigation techniques	The DSM strategy (sec. 3.3) recognises the role of online platforms (search engines, social media, app stores etc.) in online tracking and targeted advertisement. This study will applying apps and web analysis to investigate on the risks to which the end user is exposed for what concerns online tracking, categorizing the types of cyber-security threats, the source of information leak and possible mitigation techniques. It will contribute to the DSM policies and to peer reviewed publications	14/05/2018	JRC technical reports
244 - CSPI JRC.E.3	2761 - DPAD Digital Privacy and Data Protection	The Digital Privacy and Data Protection (DPAD) work package will carry out several lines of research in the area of online privacy and data protection, in direct support of the ePrivacy directive and the General Data Protection Regulation (GDPR) entered into force in May 2016. This work package provides scientific and technical support in the practical implementation of some of the rights introduced by the GDPR, namely the right of data portability, the right to be forgotten and the requirement of notification of data breaches to supervisory authorities and data subjects. In support of articles 33, 34, 60 and 61 of the GDPR, this WP will support the collaboration between Member States' Data Protection Authorities (DPAs) in the collaborative response to pan-European Personal Data Breaches. In close collaboration with the DPA network and following up on the results and conclusions of the pan-European Personal Data Breach Exercise, the WP will study viable architectures and technical measures to support agile collaboration and secure exchange of information between DPAs. The WP will also provide direct support to articles	JRC.E.3 JOSE IGNACIO SANCHEZ MARTIN	2.1.c	CNECT	JRC	Pierre CHASTANET - (D.HoU CNECT.H4 Trust and Security)	HR JUST	EP - European Parliament	01/01/2015 31/12/2018	INS-RS	1	Privacy of Citizen Online Communications	This JRC Technical Report will analyse the current generation of digital citizen communications, in particular email and instant messaging, providing concise technical recommendations to mitigate the identified privacy risks. It will also analyse the level of adoption of privacy and security measures by digital providers and develop guidelines to enhance the protection of citizen's personal data. It will contribute to the DSM policies and	15/12/2017	JRC technical reports
												2	Privacy safeguards and online anonymity	This JRC Technical report will present a study of the state of art of the techniques currently used by digital providers to profile citizens and track their activities online, for example to deliver targeted advertisements, analysing as well the new emerging techniques that go beyond the traditional usage of cookies. It will analyse existing privacy safeguards and research into new techniques capable of mitigating these threats, contributing to the DSM policies and to peer reviewed publications.	15/12/2017	JRC technical reports
												3	DPA Data Breaches Information Sharing and Cooperat	The purpose of this deliverable is to contribute from a technical perspective to the effective cooperation between Member States' DPAs, in particular in the context of a collaborative response to pan-European Personal Data Breaches, by exploring possible technical approaches and developing proof-of-concept solutions in order to evaluate the extent of their effectiveness and adoption by the DPA community, following up on the conclusions of the EU pan-European Personal Data Breach Exercise.	14/12/2018	Technical systems
												4	Scientific support to the right of data portabilit	This JRC Technical report will present the results of the analysis of the technical challenges and opportunities identified in the practical application of the GDPR rights of data portability and data erasure by European citizens in the current ecosystem of online digital services. The report will also propose and analyse technical solutions capable of facilitating the practical implementations of these rights in the DSM.	14/12/2018	JRC technical reports
												5	Online anonymity and privacy risks	The results of the activities conducted to support deliverables 27611 and 27612 will be published in peer-reviewed journals and conference proceedings	15/12/2017	Article contribution to periodicals or to conference proceedings listed in SCOPUS
244 - CSPI JRC.E.3	4443 - SECI Measures to Support the competitiveness and innovation of the European Cybersecurity Industry	DG CNECT requested in the CIS of the JRC work programme that the JRC carried out this A.A. in support of their initiative to build a Contractual Public-Private Partnership (cPPP) in the European	JRC.E.3 JOSE IGNACIO SANCHEZ MARTIN	2.1.c	CNECT	CNECT	Pierre CHASTANET - (D.HoU CNECT.H4 Trust and Security)	ENER HOME MOVE		31/03/2016 30/01/2017	CON-AA	1	Supporting Measure for cPPP	This deliverable will support DG-CNECT in the creation of the Public Private Partnership for the cyber-security industry with a set of studies on standardisation issues in cyber-security and on the use of labeling mechanisms to boost the European cyber-security market	30/01/2017	JRC technical reports
332 - CORSA JRC.E.2	4832 - RSPP-2016 Support to Radio Spectrum Policy programme 2016-17	To provide technical and scientific service to DG CNECT on the implementation of the Radio Spectrum Policy Programme (RSPP) in support to Digital Single Market objectives. The programme aims to promote more efficient use of the radio spectrum and to identify additional capacity with harmonised spectrum for wireless broadband services. Task 1: Radio Spectrum Inventory. Update and maintain spectrum data from all MSs to help the Commission in identifying harmonised spectrum bands for future spectrum planning, e.g. wireless broadband services. Task 2: Spectrum coexistence studies towards regulatory and standardization processes. Provide regulatory and standardization input to international regulatory bodies such as ETSI and ITU, based on coexistence studies. Focus on experimental verification of the coexistence (a) between next	JRC.E.2 Pravir CHAUDHRY	2.1.c	CNECT	CNECT	Andreas GEISS			05/09/2016 04/09/2017	CON-AA	1	Test and evaluation of spectrum sharing scenarios	The work is relevant for the current discussions on the Telecom Framework Review. Also important in the context of spectrum requirements for future 5G networks where needs for sharing with other services and applications can arise. Testing advanced future spectrum sharing scenarios, in both unlicensed and licensed spectrum access modes. Relevant frequency band would be tested (2.3-2.4 GHz, 5 GHz). Also applicable to 4G/WiFi coexistence tests under Licensed Shared Access (LSA) conditions.	31/08/2017	Science-for-policy reports
												2	Maintenance of the Radio Spectrum Inventory Tools	In line with RSPP and Commission Implementing Decision 2013/195/EU, this work item will ensure a continuous upload of spectrum usage data from EFIS database as well as data directly transferred by Member States to JRC, including the upload of data from electronic questionnaires filled in by CEPT members. (a) Updated Radio Spectrum Inventory Tools System (Version 3). (b) Upload of additional information received from Member States and EFIS including data from electronic questionnaires.	31/08/2017	Technical systems
												3	Assess QoE measurement tools for broadband networks	In the context of assessing quality of fixed and mobile broadband networks, JRC developed a crowd-sourcing app called Netbravo. The purpose of this work item would be to compare and assess capabilities and performance of this app against other crowd-sourcing apps (e.g. those sponsored by MNOs) in measuring the overall Quality of Experience (QoE) of the user with mobile signal. A further objective is to eventually integrate the app Netbravo into the QoS Mapping project (SMART 2014/0016).	31/08/2017	Validated methods, Reference methods and measurements
244 - CSPI JRC.E.3	4861 - SECI 2017 Measures for the competitiveness & innovation of the European Cybersecurity Industry - 2017	This administrative arrangement is the follow up of the SECI 2016 A.A.. It will support with technological activities the co-design of supporting measures for the competitiveness & innovation of the European Cybersecurity Industry accompanying the activities of the Contractual Public-Private Partnership (cPPP) established in 2016. The foreseen activities will move in the areas of standardization, security compliance, labelling and identification and mitigation of zero-day	JRC.E.3 Igor NAI FOVINO	2.1.c	CNECT	CNECT	Pierre CHASTANET			01/01/2017 30/12/2017	CON-AA	1	Intermediate Report	This deliverable reports the activities carried out together with DG-CNECT to identify the proper measures to boost the competitiveness and innovation of the European Cybersecurity Industry. It will include landscape activities in the cyber-security standardisation and cyber-security/privacy labeling sectors.	14/07/2017	JRC technical reports
												2	Standardisation of the cyber security industry	This deliverable aims at supporting the standardisation in the cyber-security industry according to what foreseen by the cPPP established in 2016 by the Commission through DG-CNECT. It will include activities aiming at (1) clustering cyber-security industry domains (2) Identifying proper measures to boost the cyber-security industry in Europe through standardisation and labeling initiatives	30/12/2017	JRC technical reports
2.1.d technical support related to the interoperability of e-infrastructures (supporting the digital European Research Area) and open access (supporting open science); use of the convergence of big data with online tools (supporting citizen science) and assessment of the interoperability of energy services (in support of smart grids).																
486 - OK-DDE JRC.B.6	977 - OpenData Open Data, Knowledge & Information Management	This WPK facilitates the implementation the JRC Data Policy, and ensures access to JRC data in accordance with the Commission Decision on the Reuse of Commission Documents (2011/833/EU) and the Open Access principles of Horizon 2020. It also explores how to increase the use and added value of Open Data, and will assess scenarios for future operation of the JRC data catalogue infrastructure. The WPK supports the Better Regulation guidelines (SWD(2015) 111) by ensuring that evidence gathered is made available to the public, thereby facilitating increased transparency, accountability and coherence of policymaking. With the aim of establishing good data management practices within the JRC, it further develops the JRC's infrastructure for the JRC Data	JRC.B.6 Anders FRIIS-CHRISTENSEN	2.1.d	CNECT	JRC	Marta NAGY-ROTHENGASS	ESTAT OP RTD	EEA - European Environment Agency	02/01/2017 31/12/2019	INS-RS	201701	Updated Data Policy Implementation Guidelines	An updated version of the implementation guidelines laid down in the JRC Data Policy, based on the feedback from its initial implementation. It will contain further clarifications and cover areas that are not properly addressed in the existing guidelines. This deliverable further supports the continued developments of Open Data standards such as DCAT AP.	01/10/2017	JRC technical reports
												201702	Updated JRC Data Catalogue infrastructure	An updated and improved JRC Data Catalogue infrastructure. The deliverable will include an assessment of scenarios for the future operation and governance of the JRC Data Catalogue infrastructure, which supports the description and publication of metadata of the data resources in the JRC. It further provides metadata for the EU Open Data Portal and potentially for other initiatives of the Commission.	15/12/2017	Scientific information systems and databases
												201703	Pilot on Linked Data	A proof-of-concept to show how JRC data can be represented as Linked Data in compliance with the five-star scheme for Open Data. This exercise will be carried out by involving JRC data teams who maintain datasets that can effectively be published as Linked Data. This work will also contribute to other activities on Linked Data at the JRC and the Commission.	15/12/2017	Scientific information systems and databases
												201801	Revision of the JRC Data Policy	A review of the JRC Data Policy is foreseen, to address issues identified during the first three years of its operation.	31/07/2018	JRC technical reports
												201802	Updated Data Policy Implementation Guidelines	An updated version of the implementation guidelines laid down in the JRC Data Policy, based on the feedback from the continued implementation of the JRC Data Policy. The new version will contain further clarifications compared to the 2017 update, and will cover areas that are not properly addressed. This deliverable further supports the continued developments of Open Data standards such as DCAT AP.	01/10/2018	JRC technical reports

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		JRC's main mission is to provide data Catalogue), and provides management guidelines for data policy implementation throughout the data lifecycle - from planning and acquisition to publishing. It ensures the availability of JRC data through the JRC Data Catalogue and the EU Open Data Portal, and investigates novel approaches for the reuse of Open Data, such as linked data technologies and new methods for improving data discoverability and exploration.										201803	Updated JRC Data Catalogue infrastructure	An updated and improved JRC Data Catalogue infrastructure. The deliverable includes a full data catalogue infrastructure operations manual and systems documentation, which facilitates the handover of the operation of the JRC Data Catalogue infrastructure. The catalogue infrastructure supports the description and publication of metadata of the data resources of JRC Institutes. It further provides metadata for the EU Open Data Portal and potentially for other initiatives of the Commission.	15/12/2018	Scientific information systems and databases
												201804	Linked data study	The study will highlight the methodology and benefits of using Linked Data for data publication, as well as its possible limitations. The work will build on deliverable 2017-3.	15/12/2018	Article contribution to periodicals or to conference proceedings listed in SCOPUS
												201805	Innovative approaches for increasing data reuse	In order to exploit the full potential of Open Data, ample metadata need to support full discovery and reuse of data. Ensuring high quality and completeness of metadata represents a great challenge. The scope of the work is focused on innovative approaches for the automated quality control and enrichment of metadata (e.g. annotations and provenance). The deliverable includes a thorough review of the barriers and state-of-the-art solutions.	30/06/2018	JRC technical reports
486 - OK-DDE JRC.B.6	3826 - EWOC New data sources and citizens science platform	This work package identifies challenges that are, for example, related to the heterogeneity of data collected by the Internet of Things (IoT), and provides solutions for integrating selected data sources. It examines the integration of Public Sector Information (which is increasingly available thanks to Open Data policies) with dynamic data streams from novel sources, such as sensors, civil society, and the commercial sector. It develops methodologies and demonstrates their combined use for selected European policies, and reflects on the implications for established information flows and processes with existing stakeholders. These demonstrator-driven reflections contribute to the free flow of data initiative. The demonstrators will first contribute to the Environmental Knowledge Community (EKC), and will be extended to other policy areas depending on our findings and policy interests. For data collected from citizens, we take our investigations one step further by providing an information platform for Citizen Science and by demonstrating its value for European policymaking at the intersection of the Better Regulation and	JRC.B.6 SVEN SCHADE	2.1.d	CNECT	JRC	John MAGAN	ENV ESTAT JRC RTD	EEA - European Environment Agency RADI-CAS - Institute of Remote Sensing and Digital Earth of the Chinese Academy of Sciences	02/01/2017 31/12/2019	INS-UR	201701	Citizen Science Platform (second release)	2nd release of the information platform providing access to Citizen Science data, tools, and applications of the JRC and selected EU-funded projects. This includes providing access to demonstrators for the monitoring of invasive alien species and participatory sensing in protected sites (Natura 2000), which are developed with the partnering DGs and agency of the Environmental Knowledge Community (EKC). Basis for discussion on the requirements to support other Units of the JRC, such as JRC.I.1.	30/06/2017	Scientific information systems and databases
												201702	Using new data sources for policymaking	Report about the potential benefits and limitations of integrating public sector information with data streams from novel sources, such as mobile phone data, online platforms, the IoT and citizens' contributions. This includes findings and lessons learned from demonstrating the use of Citizen Science for the monitoring of invasive alien species and participatory sensing in Natura 2000 sites in the context of the EKC, and reflections related to the free flow of data.	31/12/2017	JRC technical reports
												201801	Citizen Science Platform (third release)	Third release of the information platform that provides access to Citizen Science data, tools, and applications of the JRC and selected EU-funded projects. The platform will showcase successful demonstrators and support other Units of the JRC. Includes a sustainability plan and a study of the feasibility of migrating the platform to an operational environment that can ensure its continued maintenance and function.	30/09/2018	Scientific information systems and databases
												201802	Feasibility studies on the use of new data sources	Presenting solutions that are driven by the integration of public sector information with data streams from novel sources, considering feasibility assessments given ethical, legal and organisational constraints to the free flow of data. Including findings and lessons learned from demonstrating the use of Citizen Science for socio-economic policies, e.g. addressing the Urban Agenda (Pact of Amsterdam) that makes use of citizens' knowledge in addressing urban priorities.	31/12/2018	Article contribution to periodicals or to conference proceedings listed in SCOPUS
332 - CORSA JRC.E.2	4306 - SWAP Smart Wireless Access Point	The objective of this project is to develop a proof of concept for a Smart Wireless Access Point (SWAP) to enable unrestricted growth of high-speed networks, applications, and services in the connected society. SWAP will integrate several	JRC.E.2 Detlef FUEHRER	2.1.d	CNECT	JRC	DINNETZ Mattias	CNECT GROW		01/01/2016 31/12/2017	INS-PC	430603	Proof of coexistence SWAP RLANs & Copernicus	A demonstration will be made at the end of the project to show the proof of coexistence between SWAP RLANs (prototypes) and Copernicus signals.	30/06/2017	Technical systems
												430604	IPR applications filed	Application(s) will be filed for a patent and/or registered trademark, as appropriate, to protect the IPR generated by the project.	30/06/2017	Technical systems
4942 - SMARTBUILD JRC.E.4	4953 - INSTECH Innovative Sensor Technologies	Whereas telecommunications have impacted many aspects of people's lives, civil infrastructures and the built environment are yet to fully benefit from the digital revolution. INSTECH focuses on the analysis and deployment of embedded ICT system architectures to support the development of wireless diagnostic systems, which can be used to improve the security and performance of ad-hoc wide-area industrial and societal infrastructures in support to EC policies. This WPK will deal with the interaction of communication protocols and electronic components. Analytical studies and prototype development will be developed to simulate the dynamics, structure and network connectivity based on the distance-weighted topology of wireless sensor networks. We will also study the feasibility of wirelessly connected spatially-distributed sensors networks	JRC.E.4 Graziano RENALDI	2.1.d	CNECT	JRC	Roif RIEMENSCHNEIDER	MOVE TAXUD		01/01/2017 31/01/2019	INS-RS	1	Host Tracking Platform for embedded systems	Integration of diagnostic systems onto platforms for remote visualization of embedded, mobile or ad-hoc, ICT networks. Develop a basic server to query status of remote sensor-equipped systems. Analysis, interpretation and presentation of measurements and events from sensor-equipped wireless networked systems that are geographically deployed over a convenient outdoor area. The testbed live data will be composed by automatically collected information and on demand remote system queries.	31/12/2017	JRC technical reports
												2	WSN Communication Optimization Through Feedback	Scalable low energy distributed Wireless Sensor Networks (WSN) are limited by inefficient communication protocols that shows their limits in scalability and energy efficiency in large geographically dispersed systems, like in urban areas or in infrastructures. Live data and communication packets are analysed and algorithms are developed for the optimal adaptive communication through feedback.	31/12/2018	JRC technical reports
												3	Data Visualization for citizen awareness	In conjunction with external partners from Art and Design Schools in Europe, it will be studied how to integrate wireless sensor technology and data collected at city level to inform and raise consciousness of urban environmental performance that impact citizens in their cities.	30/09/2018	Technical systems
4942 - SMARTBUILD JRC.E.4	4962 - DYSTECs Dynamics and Structure of Complex Sensor Networks	Computational capacity and data generation rates are changing the way we collate and examine data. Data from wireless sensor networks will play a fundamental role in developing the EU's ICT programme in many industrial and social areas. The scope of DYSTECs is to develop a prototype data analysis platform for distributed data-gathering systems, in order to understand the future implications for the design of geographically distributed sensor networks towards more efficient, sustainable and resilient buildings, cities and infrastructures.	JRC.E.4 Flavio BONO	2.1.d	CNECT	JRC	Roif RIEMENSCHNEIDER	GROW TAXUD		01/01/2017 31/12/2019	INS-RS	1	Global scale intermittent distributed connectivity	Analysis of hypothetical connectivity of wirelessly interconnected networks and infrastructures deployed over large regions. Up/low margins to interconnectivity profiles. Graph and percolation theories overlaid on GIS platform to space-based data studying intermittent connectivity at a large wide area scale (bounds of connectivity and latency for low energy communication protocols and signal percolation). Implications for resilience and vulnerability of network and component design.	15/12/2017	JRC technical reports
												2	Urban dynamics through WSN monitoring	Urban systems can be represented as complex networks; these can be examined using data obtained from distributed heterogeneous wireless sensors to provide insights on urban dynamics. Data obtained from these sensor networks will be examined by developing alternative processing strategies (e.g. integrating GIS and graph theory). The enhanced knowledge retrieval will provide more efficient and timely support for policy decision-making.	21/12/2018	JRC technical reports
141 - TEM JRC.C.6	5164 - Big Data Big Data horizontal support to JRC	Support to the JRC Community of practice on Big Data; support to the JRC Lead Scientist on Big	JRC.C.6 Panayotis CHRISTIDIS	2.1.d	JRC	JRC	n/a			01/09/2016 31/08/2019	INS-RS	1	Annual report JRC Community of Practice	Description of the activities of the JRC Community of Practice on Big Data	30/11/2017	JRC technical reports
244 - CSPI JRC.E.3	5902 - Happy Onlife Do-It-Together Happy Onlife game-based learning	JRC researchers have conceived and developed the Happy Onlife product as a peer and media edutainment toolkit promoting safe and responsible uses of ICT among adults and children (8 - 12 yrs old). It comprises a set of resources and best practices to raise awareness about ethical and educational challenges of ICT, including online safety risks for privacy, cybersecurity and cyberbullying affecting children's life. The objective of this proposal is to develop low cost services for peer and media education, behavioral assessment and iterative content management supporting and prompting the	JRC.E.3 Monica GEMO	2.1.d	JRC	JRC	n/a			01/03/2017 31/08/2018	INS-PC	1	Societal engagement for cybersecurity awareness	Report containing recommendations for best practice on peer and media education and behavioral assessment of opportunities and risks for privacy, cybersecurity and cyberbullying affecting children's life. The recommendations will be produced from experiences in four countries (BE, IT, PT, RO).	31/08/2018	JRC technical reports
												2	Happy Onlife system update	This is an updated release of Happy Onlife software enhanced with an iterative management process for content updates, translation, reporting by non-technical educational users (e.g. more diversity in themes across the 8-12 age range, new content for other domains, age ranges, like elderly, etc.) and quality improvement of the Happy Onlife resources	31/08/2018	Technical systems
		(AirSensEUR PoC) is a joint activity shared between units C.5 (Air and Climate) and B.6 (Digital Economy). The objectives of the work										D1	Steps needed to transform the AirSensEUR prototype	This deliverable will identify and summarise the activities needed in order for the currently existing JRC prototype to become an operational platform. The emphasis would be put on technological aspects of the platform, particularly emphasising on the open hardware and open source software components of the platform.	30/06/2017	JRC technical reports

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486 - OK-DDE JRC.B.6	5940 - AirSensEUR AirSensEUR Platform	A) Fill existing gaps of the currently existing prototype, ensuring that AirSensEUR becomes a fully functional operational platform. No new features will be added. The work package team will focus on ensuring that the currently existing prototype is fit for purpose and delivers in accordance with its objectives. B) Reuse AirSensEUR components in other domains, in order to maximize the effect from the already developed tools and technological lessons learned. The work package team plans to identify other areas, such as indoor monitoring, noise, precision farming, and develop at least one IoT-based prototype.	JRC.B.6 ALEXANDER ALEXANDROV KOTSEV	2.1.d	ENV	JRC	n/a	CNECT GROW	EEA - European Environment Agency UNEP - United Nations Environment Programme (UNEP)	09/02/2017 30/06/2018	INS-PC	D2	Maturation of the AirSensEUR platform	This task will implement concrete activities in response to the findings of D1, ensuring that the existing prototype becomes an independent plug-and-play system. All source code and supporting materials will, in accordance with the logic of the project be released as open source (EUPL).	30/11/2017	Technical systems
												D4	Feasibility for migration to other domains	The overarching context for this deliverable is defined by the recent EC Communication of "Building a European Data Economy" (SWD(2017)2). The AirSensEUR prototype will, within this broader context, be analysed with an emphasis on the reusability of the results in domains different from air quality. The opportunities to establish an IoT platform that can be deployed independent from the domain of application will also be investigated.	31/10/2017	JRC technical reports
												D5	IoT prototype based on AirSensEUR	An IoT prototype based on AirSensEUR will be developed and deployed, following the findings from D4 of the WPK. As many of the components of AirSensEUR will be used. The IoT prototype will be accompanied by a quantification of the workload necessary for reusing each of the existing components outside the air quality domain.	18/05/2018	Technical systems
3 A resilient Energy Union with a forward-looking climate change policy																
3.1 Climate action																
3.1.1 Mitigation																
3.1.1.a economic and climate modelling/assessments - design and implement domestic and international climate policies and strategies to keep global warming well below 2°C; further develop in-house capacity to carry out such assessments;																
143 - CCE JRC.C.6	1070 - HELIX High-End Climate Impacts and eXtremes	This FP7 project will look into the climate impacts at the world scale. IPTS will lead the integration of biophysical impacts into an economic model (workpackage 5).	JRC.C.6 Juan Carlos CISCAR MARTINEZ	3.1.1.a	CLIMA	RTD	Maddalene Dali, DG CLIMA; Tom van Ierland, DG CLIMA	ECHO		01/11/2013 31/10/2017	CON-IA	4	Final global climate impact assessment	Global impact assessment, considering the ISI-MIP impacts, energy, transport and those from migration and food security.	30/08/2017	Project management related documents/reports identified as outputs of the JRC Work Programme
142 - Energy Economics JRC.C.6	2026 - CLIMA2015	This Administrative Arrangement (CLIMA2015) DG CLIMA makes extensive use of modelling capacity to prepare its policies. To assess the impact of climate change policies it applies economic models.	JRC.C.6	3.1.1.a	CLIMA	CLIMA	J. Niili, CLIMA A.4	ENER		01/01/2015	CON-AA	3	Report	Report	31/12/2017	JRC technical reports
142 - Energy Economics JRC.C.6	5033 - CLIMA 2017 Support to the development of EU and international GHG mitigation	DG CLIMA makes extensive use of modelling capacity to prepare its policies. To assess the impact of climate change policies it applies economic models.	JRC.C.6 Hans Peter RUSS	3.1.1.a	CLIMA	CLIMA	MILES PERRY	ENER		01/11/2016 31/12/2019	CON-AA	D1	Inception Report	Summary report describing the workplan for the project as discussed with the policy DG CLIMA.	01/05/2017	Science-for-policy reports
142 - Energy Economics JRC.C.6	5083 - PostCOP21 Global Mitigation Scenarios post COP21	This work package provides (a) analytical capability and quick-reaction support to the global emission abatement scenarios used by DG CLIMA in the UNFCCC negotiation rounds and (b) produces with tentative yearly periodicity the world energy analysis contribution to the Global Energy	JRC.C.6 Hans Peter RUSS	3.1.1.a	CLIMA	JRC	Willem VAN IERLAND			01/01/2017 31/12/2020	INS-RS	Deliverable1	Progress Report	Technical report describing the advances in the modelling as well as maintenance and data work carried out throughout the year in order to enhance the analytical capability of the unit.	31/12/2017	JRC technical reports
142 - Energy Economics JRC.C.6	5083 - PostCOP21 Global Mitigation Scenarios post COP21	This work package provides (a) analytical capability and quick-reaction support to the global emission abatement scenarios used by DG CLIMA in the UNFCCC negotiation rounds and (b) produces with tentative yearly periodicity the world energy analysis contribution to the Global Energy	JRC.C.6 Hans Peter RUSS	3.1.1.a	CLIMA	JRC	Willem VAN IERLAND			01/01/2017 31/12/2020	INS-RS	Deliverable2	Progress Report 2018	Technical report describing the advances in the modelling as well as maintenance and data work carried out throughout the year in order to enhance the analytical capability of the unit.	31/12/2018	Science-for-policy reports
3.1.1.b GHG emissions from agriculture and LULUCF - monitor, report and verify energy-related, agricultural and forestry emissions to meet legal obligations at EU and international level; modelling and other analyses on how to integrate the assessment of these emissions into EU and international legislation; GHG emissions and mitigation options in agriculture; compiling global emissions inventories;																
442 - AGFORCC JRC.D.5	985 - Agri4Climate GHG emissions, climate change impacts, mitigation and adaptation in agriculture	Within AGFORCC, Agri4Climate assesses the impacts of agriculture on climate change, and the impact of climate change on agriculture. Agri4Climate produces the EU greenhouse gas (GHG) emissions inventory for agriculture. The Common Agricultural Policy Regionalised Impact (CAPRI) and other models are used to evaluate mitigation and adaptation options for climate policy related to agriculture. Crop models and data are used to perform systematic analysis of agricultural crop yields and production under climate change conditions, including the evaluation of adaptation measures to avoid climate change impacts on agricultural production.	JRC.D.5 Franciscus DENTENER	3.1.1.b	CLIMA	JRC	Peter WEHRHEIM, DG CLIMA HoU A2; EDOARDO TURANO, DG CLIMA A3; Ignacio Seoane, DG AGRI, HoU H4	AGRI ENV	EEA - European Environment Agency MS EU - Member states EU UN FCCC - UN Framework Convention on Climate Change (UNFCCC)	01/01/2017 31/12/2018	INS-UR	201701	GHG inventory for agriculture.	Annual contribution to the European Union's GHG inventory for the agricultural sector in support of the JRC/CLIMA Memorandum of Understanding "Implementation of the current reporting and review requirements under the Kyoto protocol and the UNFCCC and preparation for fulfillment of future monitoring, reporting and verification (MRV)	27/07/2018	Science-for-policy reports
												201702	GHG and LCA module, consumption based emissions	Publication on the inclusion of GHG emissions and lifecycle analysis (LCA) in the CAPRI model, including updates on GHG emission trends according to the UNFCCC categories and LCA assessment for EU countries. GHG impact assessment of the Common Agricultural Policy (CAP) or mitigation policy proposals (under discussion). A new methodology and data needs to move from measuring emissions from a country's territory towards consumption-based per capita GHG emission targets.	30/10/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												201703	Research on agriculture - climate change modelling	Research on improving the modelling of climate change impacts on crops and adaptation options. Testing of modelling assumptions, improving consistent bias correction, including for ozone and nutrients. Systematic testing of the impact of adaptation options on crop yields.	23/11/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												201704	Scenario simulations crop yields in EU	Assessment of climate change impacts and adaptation options for agricultural production in Europe through biophysical agricultural modelling, including broadened analysis of the scenarios delivered by PESETA-3 and PESETA-4.	30/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												201705	Improved emission accounting from agriculture	A methodology to account for the spatial and temporal variability in GHG emissions from agriculture, with a focus on nitrous oxide (N2O) emissions. This methodology will be based on process understanding and simulations with biophysical models. The results will feed into CAPRI-Spatial, to allow for detailed assessments of GHG emissions at high spatial resolution.	03/07/2017	JRC technical reports
701 - NC-Forest JRC.D.1	1000 - IFORCE International Forest Resources and Carbon Emissions	In the context of the European Union's fight against global warming, IFORCE will continue to develop methods to benchmark the monitoring of forest resources and carbon emissions, with a focus on tropical regions and Europe. Assessments will be carried out to allow for an improved understanding of how forest resources can support the (often competing) demands for economic and ecological services, especially when confronted with increasing threats, such as climate change. IFORCE will further develop reference methods for the assessment of forest cover changes in tropical regions from Earth Observation data. IFORCE will continue to focus on forest degradation and look at forest regrowth issues with international and national institutional partners, such as UN-FAO and CIFOR, and national forest inventory or REDD services from a number of countries or regions including Brazil, Colombia, Central and Eastern Europe, and the Congo Basin.	JRC.D.1 Frederic ACHARD	3.1.1.b	CLIMA	JRC	Mr Peter WEHRHEIM, HoU CLIMA.A.2	DEVCO ENV GROW	FAO - THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO) COMIFAC - Commission des Forets d'Afrique Centrale (COMIFAC) Forest commission of central africa EEA - European Environment Agency	01/01/2014 31/12/2018	INS-RS	201701	Information on tropical forest resources	Easily accessible database of up-to-date information (measurements) on forest coverage, deforestation, forest degradation, historical trends and the impact of human activities on forests, at different geographical and time scales in the Tropics. JRC activities of development of the OFAC database will end in 2017.	31/12/2017	Scientific information systems and databases
												201702	Methods to measure forest degradation & emissions	Validated reference methods for the assessment of forest cover changes (with a focus on forest degradation and forest regrowth) and the estimation of carbon emissions and sinks from tropical forest cover changes in tropical regions (focus on Brazil, Colombia, Eastern Africa, continental Southeast Asia); new analysis module and related technical reports or scientific publications.	31/12/2017	Validated methods, Reference methods and measurements
												201703	Ad hoc scientific support to customer DGs	Ad hoc scientific support to DG CLIMA through an MoU on the monitoring of carbon emissions from tropical deforestation in relation to REDD+, including participation in expert meetings. Ad hoc scientific support to DG GROW and the EEA through an MoU with DG GROW on the European forest and global land mapping component of Copernicus services, including contributions to technical specifications or tender evaluations.	31/12/2017	JRC contributions to policy documents
												201704	Scientific publications	Scientific publications related to the development of methods and production of information on forest resources.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												201801	Information on tropical forest resources	Easily accessible database of up-to-date information (measurements) on forest coverage, deforestation, forest degradation, historical trends and the impact of human activities on forests, at different geographical and time scales in the Tropics.	31/12/2018	Scientific information systems and databases

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Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
		Including Brazil, Colombia, Central America, Africa, and continental Southeast Asia. New analysis module will be developed to allow the estimation of carbon emissions from disturbances in tropical forests which are needed for the implementation of REDD+ activities in the framework of the UNFCCC Paris agreement. Such methods will support the execution of ReCaREDD (AA with DEVCO aimed at capacity building in partner countries) and the development and implementation of future services of the Copernicus programme.														
442 - AGFORCC JRC.D.5	1729 - LUC4C Land-use change: assessing net climate forcing, and options for climate change mitigation	In a world that faces population growth, changing consumption patterns and increased affluence, whilst striving to achieve an equitable and acceptable level of well-being for all people.	JRC.D.1 Alessandro CESCATTI	3.1.1.b	CLIMA	RTD	Beatriz YORDI (Clima.A3)	ENV		01/11/2013 31/10/2017	CON-IA	1	Climate impacts of land use change	Report on the biophysical climate effect of changes in land use and land cover at the global scale using a combination of Earth observations of vegetation parameters (e.g. plant functional type, Leaf Area Index) and biophysical processes (e.g. albedo, surface energy budget, radiative budget).	31/12/2017	Article contribution to periodicals or to conference proceedings listed in
442 - AGFORCC JRC.D.5	3763 - LULUCF+ Land Use, Land Use Change, Forestry and Climate	Within the AGFORCC project's aim to support client DGs in understanding how forests mitigate and interact with climate change in the context of EU and international climate policies, the LULUCF WPK contributes to two JRC Key Orientations: (1) 3.1.1a (Delivering GHG emissions reductions), through scientific and technical support to DG CLIMA and Member States (MSs) on the monitoring, reporting and verification of emissions/removals from the Land Use, Land-Use Change and Forestry (LULUCF) sector, and by supporting the integrated modelling of forest carbon dynamics at MS level. (2) 3.1.1b (Earth system science), through the quantification of recent, current and future land-climate interactions supporting the development of forward-looking climate policies based on comprehensive evidence to this end, the project assesses how the climate influences the temporal trends of the land-carbon budget at continental and global scales, and the combined (biogeochemical and biophysical) impact of land-use change on climate.	JRC.D.1 Giacomo GRASSI	3.1.1.b	CLIMA	JRC	DG Climate Action, Unit A2 "Climate finance and deforestation" Peter Wehrheim		EEA - European Environment Agency IPCC - Intergovernmental Panel on Climate Change UN FCCC - UN Framework Convention on Climate Change (UN-FCCC)	01/01/2017 30/12/2018	INS-RS	1	EU LULUCF greenhouse gas inventory for 2017	Fulfillment of the EU reporting obligations for the LULUCF sector, as part of the EU GHG Monitoring Mechanism (Regulation 525/2013), including the following sub-deliverables (e.g. meetings, reports, documents, publications): -Checks and improvements of MS LULUCF inventories -Writing the LULUCF chapter of the EU National Inventory Report -Participation in the UNFCCC expert review process - Scientific publications on LULUCF and forest-and-climate issues	31/12/2017	JRC contributions to policy documents
												2	Implementation of LULUCF policies for 2017	Ad-hoc documents, presentations and tools supporting DG CLIMA in design and implementation of LULUCF-related policies: - at EU level: e.g. support during LULUCF working group meetings (Climate Change Committee) on implementing decision 529/2013 and the legislative proposal for including LULUCF in the EU's GHG targets for 2030. - at UNFCCC level: datasets (e.g. LULUCF in INDCs, LULUCF in EDGAR), reports and presentations to assess the contribution of LULUCF in the context of the Paris Agreement.	31/12/2017	Datasets
												3	Trends, sensitivity and vulnerability of the land	Monitoring and modelling the temporal trends, climate sensitivity and vulnerability of the terrestrial carbon budget, accounting for potential land-climate feedbacks. Integration of Earth observations and land-climate modelling to investigate climate impacts on the production of biomass and on the dynamics of terrestrial carbon pools.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in SCOPUS
												4	EU LULUCF greenhouse gas inventory for 2018	Fulfillment of the EU reporting obligations for the LULUCF sector, as part of the EU GHG Monitoring Mechanism (Regulation 525/2013), including the following sub-deliverables (e.g. meetings, reports, documents): -Checks and improvements of MS LULUCF inventories -Writing the LULUCF chapter of the EU National Inventory Report -Participation in the UNFCCC expert review process - Scientific publications on LULUCF and forest-and-climate issues	31/12/2018	JRC contributions to policy documents
												5	Implementation of LULUCF policies for 2018	Ad-hoc documents, presentations and tools supporting DG CLIMA in the design and implementation of LULUCF-related policies: - at EU level: reports, datasets (e.g. JRC LULUCF tool) and presentations (e.g. at the LULUCF working group meeting of the Climate Change Committee) on the implementation of decision 529/2013 and the legislative proposal for including LULUCF in the EU's GHG targets for 2030. - at UNFCCC level: datasets (e.g. LULUCF in INDCs and the EDGAR database), reports and presentations.	31/12/2018	Datasets
												6	Assessment of land-based mitigation options	Assessment of land-based mitigation options based on the combination of the biogeochemical effects (exchange of greenhouse gases) and of biophysical effects (changes in albedo, evapotranspiration, etc.). Integration of experimental evidence and model simulations to provide a global quantification of mitigation potentials and to develop methodologies for the monitoring/reporting/verification (MRV) of the net climate effects of LULUCF.	30/12/2018	Article contribution to periodicals or to conference proceedings listed in SCOPUS
442 - AGFORCC JRC.D.5	3887 - LULUCF EU-PA Support for including LULUCF in the 2030 EU framework and implementing the Paris Agreement	AA expected to start in November 2016, and last 30 months. Tasks: 1) Further improvement of the quality of GHG inventories, through the support of: (a) LULUCF-	JRC.D.1 Giacomo GRASSI	3.1.1.b	CLIMA	CLIMA	DG Climate Action, Head of Unit C3, Land Use and Finance for Innovation, Peter Wehrheim			01/11/2016 30/04/2019	CON-AA	1	Final report	Final report on the three tasks: (i) Improving quality LULUCF GHG inventory; (ii) Follow-up of the legislative proposal for including LULUCF in 2030 EU climate framework; (iii) Supporting the definition of relevant technical processes under the Paris Agreement.	30/04/2019	JRC contributions to policy documents
4855 - GHG-MoVe JRC.C.5	4872 - BoTop Bottom-up emission inventories and Top-down monitoring with measurements and modelling	BoTop establishes greenhouse gas (GHG) emissions trends based on emission inventories, atmospheric flux & concentration measurements and their linkage based on inverse modelling. It relies on the JRC/EDGAR database for emission inventories of greenhouse gases and air pollutants consistently estimated for all world countries with international statistics and on the competences at the JRC/ABC-IS station in Ispra and the San Rossore station, both of the latter aiming at being integrated into the GHG monitoring network of the Integrated Carbon Observatory System -Research Infrastructure, established as a European Research Infrastructure Consortium (ICOS - ERIC). Inverse modelling with the JRC/TM5-4DVAR gives estimates of GHG emissions by combining top-down concentration measurements and the bottom-up measurements in the EDGAR database, in order to verify emissions reported under the Kyoto Protocol. This is also in line with the Copernicus Programme and of use for the Paris Agreement on GHG monitoring/verification. In addition the EDGAR database estimates also the air pollutant emissions for all world regions, which serves the UNECE Convention of Long-Range Transport of Air Pollution, the Gothenburg Protocol to abate acidification, eutrophication and ground-level ozone, the Stockholm Convention on Persistent Organic Pollutants and the Minamata Convention on Mercury. A special outcome of	JRC.C.5 Greet JANSSENS-MAENHOUT	3.1.1.b	CLIMA	JRC	BERGMAN Hans (CLIMA.C.2), VAN IERLAND Willem (CLIMA.C.1), PINTY Bernard (GROW.I.2), ZUNKER Hugo (GROW.I.2), ENV.D.1	ENER ENV GROW	- United Nations Environment Programme- Switzerland ICOS - Integrated Carbon Observation System, European Infrastructure IEA - International Energy Agency UN FCCC - UN Framework Convention on Climate Change (UN-FCCC)	01/01/2017 31/12/2018	INS-RS	201702	Trends in Global CO2 Emissions: 2017 Report	1) Evaluation of the 2015-2016 CO2 emissions trend with the 2017 CO2 report in the report series of PBL-JRC; 2) Extension of EDGAR time series to 2016 (current year-1 for CO2 and non-CO2 GHGs, and release of new data with documentation); update of EDGAR using satellite data.	30/11/2017	Science-for-policy reports
												201703	In situ GHG concentrations & fluxes	As part of the Integrated Carbon Observatory System Research Infrastructure (ICOS-RI) with an Atmospheric Station in Ispra and an Ecosystem Station in San Rossore, we deliver 1) Report and datasets of GHG concentration measurements taken in Ispra, and GHG fluxes from San Rossore / Pisa for 2016 & 2017, in accordance with the ICOS-RI requirements, 2) Full QA/QC check of the dataset before making it accessible to international scientific partners, and 3) full documentation.	30/11/2017	Scientific information systems and databases
												201704	Atmospheric Monitoring & Inverse Modelling of GHG	1) Workshop with DG CLIMA, EEA and EU member states under the mandate of the Climate Change Committee Working Group 1 ("Annual Inventories") and European / international key experts on the use of Atmospheric Monitoring and Inverse Modelling for Verification of Greenhouse Gas (GHG) inventories; 2) Report on current state and further requirements for development of European/global GHG verification system."	30/11/2017	Science-for-policy reports
												201706	Consistent GHG and air pollutant emissions	1) Developing and updating the EDGAR emissions database v4.3.2 and documenting the air pollutant datasets; 2) inclusion of the Land-use, Land-use Change and Forestry sector based on land-cover data (as EDGAR-LULUCF database, of direct use for DG CLIMA); 3) Hg evaluation with the new EDGARv4toxic database; 4) report on the comparison of top down and bottom-up inventories using EDGARv4.3.2 and v4toxic.	30/11/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												201804	Recent Trends in Global CH4	An analysis of Methane trends with: 1) the bottom-up calculated CH4 emissions globally and discussion of the uncertainties in a broader perspective, 2) comparison with observed trends of atmospheric measurements, 3) zoom on some areas with emerging activities, on some new activities (such as unconventional hydrocarbon exploration). This report is of direct interest to the policymakers of DG CLIMA and of DG ENV.	15/12/2018	Science-for-policy reports

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		BoTop is the science for policy report on Methane, which demonstrates on the one hand the GHG verification under the Paris Agreement for DG CLIMA and on the other the hemispheric transport of air pollution under the Convention of Long-Range Transport of Air Pollution for DG ENV.										20180506	Scientific output: bottom-up & top down estimates	I. Regional GHG estimates bottom-up & top down: 1) Scientific analyses of regional GHG emissions and their trends with (a) EDGAR emissions, (b) ABC-IS and San Rossore measurements, (c) inverse modelling of CH4 and N2O, 2) analyzing the consistency between EDGAR bottom-up emissions and top-down estimates using atmospheric concentration measurements (North Italy). II. Bottom-up inventories assessment: 1) Uncertainties of EDGAR GHG, 2) EDGAR upgrade of Air pollutants & Persistent Organic Pollutants	15/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
4855 - GHG-MoVe JRC.C.5	4873 - GHG-VS Towards a robust and comprehensive Greenhouse Gas Verification System	GHG-VS aims to improve the ability to monitor and verify GHG emissions under an international climate agreement by significantly decreasing current uncertainties associated with greenhouse gas emission estimates. In support to EU climate policies GVS provides reliable information on GHG in Europe over appropriate spatial and temporal scales. The final goal is to facilitate the development of an operationalised GHG monitoring, reporting and independent verification system.	JRC.C.5 Greet JANSSENS-MAENHOUT	3.1.1.b	GROW	RTD	B. Pinty (GROW) H. Zunker (GROW) H. Bergman (CLIMA) T. van Ierland (CLIMA)	CLIMA ENER ENV RTD	- EUROPEAN SPACE AGENCY IPCC - Intergovernmental Panel on Climate Change UN FCCC - UN Framework Convention on Climate Change (UN-FCCC)	01/12/2017 30/11/2021	CON-IA	201701	Land-Use, Land-use Change and Forestry Emissions	1) Complete estimate of the LULUCF anthropogenic emissions in a format that is compatible with the Emissions Database for Global Atmospheric Research (EDGAR), 2) documentation with a technical report.	31/12/2017	Scientific information systems and databases
												201801	Blueprint policyrelevant EU GHG monitoring system	1) Establishing of policy-relevant objectives, 2) dialog with stakeholders, 3) Reporting requirements for the different data input streams, making use of the EDGAR-LULUCF input.	15/12/2018	JRC technical reports
												201802	High resolution CH4 inverse modeling setup	1) Technical development of the inverse modeling system to cope with the high spatial resolution, 2) preparation of the input, 3) first simulations to check the setup. (in collaboration with external partner EMPA)	15/12/2018	Scientific information systems and databases
702 - NC-Soil JRC.D.3	5037 - S4CC Soil for climate change	Soil is a massive carbon sink, storing three times as much as the atmosphere (particularly in peatlands). While a detailed knowledge base on soil organic carbon (SOC) stocks and dynamics across the European Union is lacking, it is well understood that land use, management practices and degradation processes at a local level have a direct impact on carbon fluxes, thus reducing flexibility elsewhere for meeting carbon budget targets. This WP evaluates and models SOC dynamics for current land covers/uses driven by policies such as the CAP, the 2030 Climate & Energy framework, the outcomes of the Paris Agreement, the EU Soil Thematic Strategy, together with global initiatives such as the '4 pour mille', SDG targets and the UN Convention to Combat Desertification. Particular attention will be paid to assessing the status of EU and global SOC stocks and changes following land conversion.	JRC.D.3 Arwyn JONES	3.1.1.b	CLIMA	JRC	Simon KAY	AGRI ENER ENV ESTAT	UN FCCC - UN Framework Convention on Climate Change (UN-FCCC)	01/01/2017 30/12/2020	INS-RS	1	Soil organic carbon in a changing environment	Soil organic carbon is a key driver of several soil functions. Changing environmental conditions can affect SOC levels. This deliverable will analyse, measure and model soil data for the monitoring, reporting and verification of SOC dynamics and stocks in relation to policy drivers such as the 2030 Climate and Energy Strategy, and Resource Use Efficiency and for reporting agricultural GHG emissions under the UNFCCC, Kyoto Protocol and Paris Agreement (Tier 1).	31/12/2017	JRC contributions to policy documents
												2	Scenarios for C-flux in EU agricultural soil	Land management affects soil carbon and can either sequester carbon or enhance emissions. WP will assess carbon and N2O fluxes in relation to agricultural practices within the EU, considering climatic variability, land conversion and food security. This deliverable presents land management scenarios for climate change mitigation from plot to regional scales while integrating primary data sources (e.g. LUCAS Soil).	31/12/2017	Science-for-policy reports
												3	Global Soil Organic Carbon Map initiative	FAO/GSP has launched an initiative to support and contribute to the development of the Global Soil Organic Carbon map (GSOC) that will be released by the end of 2017. This activity will support the SDG process in cooperation with, and as requested by, the UNUNCCD. GSOC will be compiled using a distributed approach that will strongly rely on country inputs. To this end, the JRC has been invited by ENV to coordinate, with MS, data specification and guidelines for a harmonised dataset for the EU.	31/12/2017	JRC contributions to policy documents
702 - NC-Soil JRC.D.3	5840 - CIRCASA Coordination of international research	Soil is a massive carbon sink, storing three times as much as the atmosphere (particularly in peatlands).	JRC.D.3 Luca MONTANARELLA	3.1.1.b	CLIMA	RTD	Simon KAY	AGRI ENER		01/01/2018 31/12/2020	CON-IA	202005	JRC contributions to consortium reports	JRC contributions to consortium reports	31/12/2020	JRC technical reports
3.1.1.c vehicle emissions - technical support for implementing and developing policy measures to decarbonise the transport sector; specifically, analysing the realworld fuel consumption and CO2 emissions of light- and heavy-duty road vehicles awarding; support the assessment of eco-innovation CO2 savings and derogations for small-volume manufacturers of cars and vans and assess smart mobility technology innovation																
189 - REDUCO JRC.C.4	3182 - ECOCHAMPS European Competitiveness in Commercial Hybrid and Automotive Powertrains	The overall objective of the ECOCHAMPS project is to develop the knowhow, intellectual property rights and technical capabilities to adequately and cost-effectively achieve efficient, compact, low weight and robust hybrid powertrains for light and heavy duty road vehicles. The role of the JRC is to supervise the work and monitoring the progress of the vehicle manufacturers involved in the project to develop new and more efficient powertrain systems	JRC.C.4 Giorgio MARTINI	3.1.1.c	CLIMA	RTD	Christophe PAVRET DE LA ROCHEFORDIERE	GROW	ACEA - European Automobile Manufacturers Association CLEPA - European Association of Automotive Suppliers EUCAR - European Council for Automotive R&D (EUCAR)	01/05/2015 30/04/2018	CON-IA	1	Scientific publications and outreach activities	This deliverable will include all the other outputs connected to the activities of the WPK3182 (scientific publications, oral presentations, meeting minutes, software, data, etc.)	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												2	Proposal to enhance CO2 declaration methods for HC	On the HD side, the currently envisaged CO2 declaration methods like VECTO and HILS need validation and adaptation for hybrid commercial vehicles (HCV). An enhancement of the VECTO tool cannot be achieved within the scope of the project. Thus, using the experience gained from the collaboration with the OEMs and Suppliers in this project, the JRC will identify the key issues and propose inputs, methods and outputs in view of a future CO2 monitoring tool covering HCVs.	31/10/2017	Scientific and policy reports
												3	Final report of the project	The report will summarize the main technical outcomes resulting from the activities carried out in the project	27/04/2018	JRC technical reports
209 - MODELISM JRC.C.4	3325 - Smart Mobility Innovation Smart Mobility Technology Innovation Scenarios	The work-package "Technology Innovation Scenarios" analyses with its modelling tools transport technology innovation scenarios in support of EU policies targeting CO2 reduction from transport. Specifically it maintains tools and models for the "Review of Regulations setting emission performance standards to establish post-2020 targets for cars and vans", an Action of the "Roadmap for the Energy Union" [COM(2015) 80]. As the Commission's regulatory proposal can have a great impact on the competitiveness of the EU industry and the environmental sustainability of transport it is important to underpin it with robust	JRC.C.4 CHRISTIAN THIEL	3.1.1.c	CLIMA	JRC	Edoardo Turano	EPSC GROW MOVE		01/01/2016 30/12/2019	INS-RS	3	Portfolio analysis of transport decarbonisation	Report on model-based portfolio scenarios in support of road transport decarbonisation, analysing uncertainty in techno-economic and scenario assumptions. Special focus of this report will be on the gaps that will remain beyond technology innovation-based reduction	31/12/2017	Science-for-policy reports
												4	Updated tools for mobility technol. scenarios 2017	Updated DIONE fleet impact model, CO2 cost curve tool, ERMES tool and links and support to vehicle simulation tools Compas, Vecto, JEC Fleet + Fuels tool and WW methodology	31/12/2017	Scientific information systems and databases
												5	Decarbonising goods road transport	Report on model based portfolio scenarios in support of goods road transport decarbonisation in support of appropriate CO2 reduction targets.	31/12/2018	Science-for-policy reports
												6	Updated tools for mobility technol. scenarios 2018	Updated DIONE fleet impact model, linked to CO2 cost curve tool, with a view to enable assessment of social equity impacts	31/12/2018	Scientific information systems and databases
189 - REDUCO JRC.C.4	3460 - Road_CO2 CO2 emissions from light and heavy duty road transportation	This institutional WPK supports the work carried in the framework of the AA n. 3379 with DG CLIMA (WPK 3471). In particular, the activities of the WPK focus on those aspects of the future CO2 legislations requiring anticipation and scenario analyses. Activities carried out in this WPK involve and are not limited to the following topics: 1) Future architectures of hybrid vehicles and their impact on fuel consumption and CO2 emissions 2) Characterization of the "gap" between type-approval and in-use fuel consumption and CO2 emissions and identification of possible strategies to deal with it 3) Identify the greenhouse potential of additional pollutants (e.g. N2O and CH4) and build policy recommendations considering whether or not they should be considered in the future policies	JRC.C.4 BIAGIO CIUFFO	3.1.1.c	CLIMA	JRC	Susanna Lindvall	ENV GROW	ACEA - European Automobile Manufacturers Association CLEPA - European Association of Automotive Suppliers EUCAR - European Council for Automotive R&D (EUCAR)	01/01/2016 31/12/2018	INS-RS	1	Review of the Eco-Innovation scheme	In order to be appealing to automotive industry, the Eco/innovation scheme needs revision in the way the CO2 reduction savings are certified and to incorporate additional types of vehicles (e.g. LCVs and multi-stage vehicles)	30/06/2017	Science-for-policy reports
												2	Approach to verify VECTO results	Report on the technical issues faced in the development of a suitable approach to verify VECTO results during type-approval. Final report	31/12/2017	JRC technical reports
												3	Future of CO2 transport policy	Report summarizing the activities carried out to identify viable solutions to reduce and keep under control the gap between type-approval and real-life CO2 emissions and fuel consumption.	30/06/2017	Science-for-policy reports
												4	Updates and assessment of CO2MPAS	Report summarizing the results of CO2MPAS validation and usage. The report will also present the new features developed in CO2MPAS	30/06/2018	JRC technical reports
												5	Scientific publications and outreach activities	This deliverable will include all the other outputs connected to the activities of the WPK3460 (scientific publications, oral presentations, meeting minutes, etc.)	29/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
189 - REDUCO	3471 - CO2_SUPPORT	The Work-Package is linked to the Administrative Arrangement signed between the JRC and DG	JRC.C.4						ACEA - European Automobile Manufacturers Association CLEPA - European Association of	01/01/2015		1	Review of Technical Guidelines for Eco-Innovations	The Technical Guidelines for the assessment of eco-innovations should be updated on a regular basis to be agreed between DG CLIMA and the JRC. Where necessary, they should be up-dated to cover also light commercial vehicles	31/12/2017	Science-for-policy reports
												2	Summary of the Eco-Innovations Assessment 2017	Assessment of the applications for eco-innovations submitted by automotive manufacturers and suppliers in the framework of Regulation (EU) No 510/2011 and Regulation (EC) No 443/2009. 2017	31/12/2017	JRC technical reports
												3	Administrative Arrangement Final Report	Final report on the work carried out on to support DG CLIMA in the framework of the AA 2015-2018	20/07/2018	Science-for-policy reports

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
JRC.C.4	development and implementation of CO2 from road vehicles	Clima on the subject: The Work-Package is composed by five parts: 1) Eco-innovations: assessment of new proposal for eco-innovations; review the technical guidelines 2) Derogations for small volume manufacturers: assessment of derogations applications 3) Heavy-duty vehicles: steer and support the development and validation of VECTO 4) Future of CO2 transport policy: defining policy Objective of the work-package is to assess the possibility to use CO2MPAS and Green Driving tools developed by the JRC-STU to develop a reliable trip planner able to minimize users fuel	BIAGIO CIUFFO	3.1.1.c	CLIMA	CLIMA	Susanna Lindvall	ENV GROW	Automotive Suppliers EUCAR - European Council for Automotive R&D (EUCAR)	31/07/2018	CON-AA	4	Scientific publications and outreach activities	This deliverable will include all the other outputs connected to the activities of the WPK3471 (scientific publications, oral presentations, meeting minutes, software, data, etc.)	30/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
209 - MODELISM JRC.C.4	5880 - U-SAVE U-SAVE: fuel-sAVING trip planner		JRC.C.4 BIAGIO CIUFFO	3.1.1.c	CLIMA	JRC	Susanna Lindvall	ENV GROW	ACEA - European Automobile Manufacturers Association	01/02/2017 31/12/2017	INS-PC	1	U-SAVE trip planner	The U-SAVE trip planner will be delivered in the form of a web-based application and a smartphone application which is used as an inboard simplified navigation system	31/12/2017	Scientific information systems and databases
												2	U-SAVE Final Report	A final report summarizing the work carried out will close the PoC activity	31/12/2017	JRC technical reports
3.1.1.d alternative fuels for transport - assess the environmental sustainability, technological development and costs of bioenergy and biofuels and of associated GHG emissions savings, including well-to-wheel analyses and support for alternative fuels legislation;																
195 - ALFA JRC.C.4	678 - SUS-AL Sustainability of alternative fuels	The aim of this WP is to assess the environmental sustainability, technological development and costs of GHG savings for a range of biofuels and bioenergy pathways expected to be relevant in the post-2020 timeframe, including advanced biofuels, drop-in fuels and other alternative fuels. The assessment will be carried out following an attributional life-cycle analysis perspective, expanded to include non-energy uses of the biomass, land use, economic and technological performances. The work package contributes to the horizontal activity "BIOECONOMY" (WP2300). Using the results of the modelling framework set in that context, this WP will provide an environmental impact assessment of complex and large scale policy scenarios. It also contributes to the assessment of technology implementation in the framework of existing Administrative Agreements (NER300 and Low Carbon Energy Observatory). This WP supports the development of new policy for sustainable bioenergy and revision of existing legislation.	JRC.C.4 Luisa MARELLI	3.1.1.d	CLIMA	JRC	Sarah Sheridan (CLIMA C1); Ariane De Dominicis(SG D3); Bernd Kuepker (ENER C1); Ruta Baltause (ENER C1); Viviane Andre (ENV F4); RTD G3: Maria Georgiadou and Thomas Schlecker	AGRI ENER ENV GROW MOVE RTD		01/01/2016 31/12/2018	INS-RS	1	Environmental sustainability	Environmental Sustainability and climate impacts of advanced biofuels and bioenergy. Assessment of environmental and climate impacts (through attributional LCA analysis) of the use of woody biomass, industrial, agricultural/ food residues and algae for energy, materials (bio-chemicals etc.) and food/feed purposes. The study includes assessment of technological development and assessment of availabilities, likely/realistic energy use pathways, and indirect effects of usage.	31/12/2018	JRC contributions to policy documents
												2	Costs of GHG savings of biofuels and bioenergy	GHG emissions estimates can be combined with cost analysis (e.g. on capital and operational costs) to provide costs of GHG savings of advanced biofuels and bioenergy. The aim of this work is the determination of the unit cost for the reduction of GHG emissions, an important parameter for policy makers in order to determine the most cost-effective way to pursue climate change mitigation.	21/12/2017	Science-for-policy reports
												3	Life Cycle Analysis of alternative transport fuels	Assessment of environmental and climate effects of different fuels technologies by means of attributional LCA. The study includes: -fuels indicated in policy documents such as for example hydrogen/fuel cells, electric vehicles etc. -"drop-in fuels", such as Hydrotreated Vegetable Oil (HVO), Fischer-Tropsch biodiesel, oleochemical processes of oilseeds crops, algae, tallow. - Other fuels which may become relevant (e.g. renewable hydrogen use for oil refineries), upon request of interested DGs.	31/12/2018	JRC technical reports
												4	GHG savings non-bio alternative fuels	Support to DG CLIMA to fulfill requirements of art.7.6 Fuel Quality Directive for the development of the methodology and calculation of default GHG emissions values for alternative transport fuels of non biological origin, also incorporating carbon capture.	31/12/2017	JRC contributions to policy documents
												5	Scientific publications on biofuels and bioenergy	Scientific publications on the topics of: - GHG savings and production costs of first and second generation biofuels - R&D trends and future perspectives on advanced biofuels and bioenergy technologies	20/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												7	Environmental impact assessment of European bioeco	The work takes stock of the results obtained from the modelling effort in the framework of the BIOMASS project of the JRC. Various techno-economic models within JRC are coupled to obtain an integrated framework that will be used to assess the environmental impacts of several policy scenarios.	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
195 - ALFA JRC.C.4	3120 - DEFAULT VALUES 2 Support the implementation of Dir 2009/28/EC on promotion of use of energy from renewable sources	The project provides technical assistance to DG ENER to fulfil Commission's obligations under the Directive 2009/28/EC and to facilitate the implementation of the sustainability scheme. This implies :	JRC.C.4 Luisa MARELLI	3.1.1.d	ENER	ENER	AnRuta Baltause (ENER.C.1); Bernd Kuepker (ENER.C.1)	CLIMA MOVE		19/12/2014 18/06/2017	CON-AA	1	Calculation of new and updated pathways	Perform calculations of biofuels, bioliquids and biomass production pathways as identified and defined by the JRC, based on the guidance set out in the Directive and in the Communication from the Commission on voluntary schemes and default values in the EU biofuels and bioliquids sustainability scheme.	30/06/2017	Science-for-policy reports
												3	Support to DG ENER for the evaluation of reports	Technical support in evaluating Member State's reports in context of compliance with Article 19.2.	30/06/2017	JRC contributions to policy documents
195 - ALFA JRC.C.4	3560 - WTW Well-to-Wheels (WTW) Analysis for Reference Vehicles and European Fleet	WTW V5 assesses the energy and greenhouse gas (GHG) balance for the fuels/energy carriers suitable for road transport powertrains, comprising and integrating the fuel production pathway (Well-to-Tank, WTT) and the powertrain configuration and efficiency (Tank-to-Wheels, TTW). It consists of: - Cost analysis with a view to estimate the cost of substituting conventional fossil fuels (as baseline) with an alternative. TTW costs are based on a price differential based on techno-economic analysis - Life-cycle assessment on materials cycles is performed for selected pathways (electromobility) - Analysis of heavy-duty vehicles is included - Scenario analysis and associated impacts on regulatory mandates for the uptake of alternative fuels in the transportation sector at time horizon 2020 and 2030 - Assessment of supply projections of fuel alternatives at European and global scales WP 3560 is deployed jointly with EUCAR and CONCAWE, consulting stakeholders' associations as relevant.	JRC.C.4 Laura LONZA	3.1.1.d	CLIMA	JRC	Alexandre PAQUOT (CLIMA.C.4); Daniela ROSCA (MOVE.C.1); Keir FITCH (MOVE.C.2); Liam BRESLIN (RTD.C.2)	ENER GROW MOVE RTD	ANL - Argonne National Laboratory CONCAWE - CONservation of Clean Air and Water in Europe EUCAR - European Council for Automotive R&D (EUCAR)	01/01/2016 30/06/2018	INS-RS	1	Well-to-Wheels (WTW) V5	WTW V5 integrates: (i) Well-to-Tank (primary energy transformation to fuel production), and (ii) Tank-to-Wheels analysis (in-use fuel efficiency/GHG emissions) for each fuel/energy carrier-vehicle combinations. The overall impact of fuel and vehicle choices can be assessed only by considering the entire pathway. WTW V5 also assesses energy efficiency/GHG reduction potential of using non-fossil energy sources in (iii) non-road modes, and (iv) non-transportation sectors.	30/06/2018	Science-for-policy reports
												2	Well-to-Wheels (WTW) V5 - COST	Analysis to estimate the cost of substituting conventional fossil fuels with an alternative. The first step is to define a baseline for conventional gasoline and diesel fuel and other fossil fuel. Crude oil price is the primary input, determining the general level of energy prices. TTW costs are based on a price differential between "base" vehicles and alternatives estimated via a techno-economic analysis. The cost assessment is made at two time horizons: 2015 and 2025 via scenario analysis	30/06/2018	Science-for-policy reports
												3	Well-to-Wheels (WTW) V5 - LCA	LCA approach applied to selected pathways (e.g. electro-mobility pathways) accounting for the energy efficiency and GHG emissions of relevant materials cycles. This activity is carried out in close collaboration with US ANL GREET.	30/06/2018	Science-for-policy reports
												4	Well-to-Wheels (WTW) EU-US	Comparative analysis of WTW reference exercises in Europe and US. The joint work will result into (i) draft report by 31/12/2016, (ii) final report by 30/06/2017	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												5	Fleet&Fuels (F&F) 2020 Revision+2030 New Scenarios	Provision of robust scientific impact assessment of conventional and alternative transportation fuel demand and supply scenarios on the EU regulatory framework and targets at time horizon 2030. (31/12/2017) Recent EU regulatory developments have the potential of changing important aspects of the RED and FQD and the resulting market responses. (31/12/2016) Road transport demand and supply is primarily considered; other transport modes are also assessed.	30/06/2018	Science-for-policy reports

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												6	EU Electricity Mix	Discussion on data and calculation of EU electricity mix	31/05/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
3.1.1.e support the operations of climate innovation funds - technical support for the knowledge sharing facility of the NER 300 funding programme, management of NER 300-related communication activities as well as provision of support for the design and implementation of its successor, the Innovation Fund.																
246 - RIC KM JRC.C.7	4580 - NER 300 II Innovative low-carbon energy demonstration projects	Assess the progress achieved by demonstration projects of innovative renewable and carbon capture and storage technologies, co-funded by the NER300 programme, through the scientific and technical review of the projects' knowledge sharing reports on an annual basis; and evaluate their compliance against the requirements of the NER 300 Decision with regard to knowledge sharing. Processing and knowledge management as well as knowledge dissemination of project information to the SET-Plan community, RES and CCS sectors, and the public.	JRC.C.7 ANDREAS UHLEIN	3.1.1.e	CLIMA	CLIMA	Kerstin LICHTENVORT, Peter WEHRHEIM	ENER RTD	SET-Plan Com - SET-Plan Community	01/01/2017 31/12/2019	CON-AA	1	Report on RK submissions 2017	The report outlines the key lessons learnt from the assessment, and a reasoned recommendation and supporting evidence for each project considering the knowledge sharing requirements	27/04/2017	Science-for-policy reports
												2	Annual report 2017	Annual report consolidating: a) all L2 relevant knowledge; b) aggregated/anonymised L1 information; c) project fiches. In addition to providing a picture of the year in question, these reports shall also trace over time key tendencies and the evolution of projects and relevant knowledge gained	27/09/2017	Science-for-policy reports
												3	Report on publications & outreach activities 2017	Report summarising all public dissemination and outreach activities (presentations, meetings, events, webpostings)	28/12/2017	Science-for-policy reports
												4	Report on RK submissions 2018	The report outlines the key lessons learnt from the assessment, and a reasoned recommendation and supporting evidence for each project considering the knowledge sharing requirements	27/04/2018	Science-for-policy reports
												5	Annual report 2018	Annual report consolidating: a) all L2 relevant knowledge; b) aggregated/anonymised L1 information; c) project fiches. In addition to providing a picture of the year in question, these reports shall also trace over time key tendencies and the evolution of projects and relevant knowledge gained	27/09/2018	Science-for-policy reports
												6	Report on publications & outreach activities 2018	Report summarising all public dissemination and outreach activities (presentations, meetings, events, webpostings)	28/12/2018	Science-for-policy reports
3.1.2 Increasing resilience to climate change																
3.1.2.a Assess climate change impacts (economic and non-economic), vulnerability, resilience, and adaptation options in the EU and globally to support the review and update of the EU adaptation strategy and to meet the objectives of the Sendai framework for Disaster risk reduction (DRR) and the Sustainable Development Goals. In conjunction with the Knowledge Management Centres on DRR, on Migration, and on Territorial																
143 - CCE JRC.C.6	1074 - Integrated-CCMA Integrated Multisectoral Climate Mitigation Policy Assessment	The work package focuses on the analysis of the economic effects onto the overall economic structure (both at EU and global levels) of climate-protecting policy measures (mitigation climate policy), taken within energy-intensive sectors. The emphasis is the analysis of the mitigation policy scenarios, using the multisectoral GEM-E3 model.	JRC.C.6 Juan Carlos CISCAR MARTINEZ	3.1.2.a	CLIMA	JRC	Tom van Ierland, DG CLIMA	DEVCO ENER ENV		01/07/2013 31/12/2020	INS-RS	2	Progress report	Technical report describing the advances in the modelling as well as maintenance and data work carried out throughout the year in order to enhance the analytical capability of	31/12/2018	JRC technical reports
												4	Progress report	Technical report describing the advances in the modelling as well as maintenance and data work carried out throughout the year in order to enhance the analytical capability of the unit, mainly related to mitigation climate policy and air quality. This 'container deliverable' also includes the contribution to the relevant Commission impact assessments and the related scientific publications.	31/12/2017	JRC technical reports
4846 - ADAPTATION JRC.E.1	3808 - SUCCAST Support to Climate Change Adaptation Strategy	The Paris Agreement (COP21) calls for keeping global warming well below 2°C and putting more efforts into adaptation. One of the three priorities of the EU Strategy on adaptation to climate change is to promote better informed decision-making by addressing existing gaps in the knowledge on climate change impacts and adaptation. In 2017, the DG for Climate Action will report on the Adaptation Strategy adopted in 2013, aiming to put in place a reinforced Strategy in 2018. In view of the post-Paris challenges and EU milestones, the ADAPTATION Project aims to increase the knowledge base on climate risk assessment, adaptation, vulnerability and resilience. To this end the project will •Support the revision and development of a reinforced Adaptation strategy •by generating single and multi-hazard risk scenarios – comprising social, economic and environmental impacts – in view of global change; •by appraising adaptation strategies for increasing the resilience of European societies to extreme weather and climate events. •Support EU policies on disaster risk reduction by integrating disaster risk reduction/management and climate change adaptation to ensure synergy and full coordination with the disaster risk management policies that the EU and the Member States are developing. •Support EU migration and security policies by assessing the relationship between climate disasters and migration and develop tools to project future potential migration flows in view of climate change. •Deliver output of relevance for the IPCC Special Report on 1.5°C global warming •by producing high-level scientific publications on the impacts 1.5°C warming and potential adaptation costs. The project ADAPTATION will further support international frameworks such as the United Nations Office for Disaster Risk Reduction (UNISDR), Sendai Framework for Disaster Risk Reduction, the UN Framework Convention on Climate Change, and the UN Sustainable Development Goals.	JRC.E.1 Luc FEYEN	3.1.2.a	CLIMA	JRC	BEATRIZ YORDI AGUIRRE	DEVCO ECHO ENV REGIO	EEA - European Environment Agency EEAS - European External Action Service IPCC - Intergovernmental Panel on Climate Change UN FCCC - UN Framework Convention on Climate Change (UN-FCCC) UN ISDR - United Nations International Strategy for Disaster Reduction (UN-ISDR)	01/01/2016 31/12/2018	INS-RS	2017001	Climate hazards in Europe under climate change	Evaluation of changes throughout the 21st century in multiple climate hazards at European scale in view of climate change. This involves the generation and analysis of projections of climate extreme indicators derived from climate simulations, hydrodynamic modelling, and extreme value analysis.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in
												2017002	EU damage, vulnerability and exposure database	Development of a harmonized database on hazard damage, vulnerability and exposure for Europe regions across different hazards. This involves the collection of observed damages on past climate hazards in Europe as well as on exposed assets and their vulnerability to climate hazards. This will make use of available disaster databases such as EM-dat and on earlier work at the JRC and in collaboration with INFORM.	01/12/2017	Scientific information systems and databases
												2017003	Impacts of climate hazards in Europe	Improved methods will be developed to assess the socio-economic and environmental impacts of climate hazards through the integration of climate hazard projections with updated exposure and vulnerability information	01/12/2017	JRC technical reports
												2017004	Global exposure layers	Development of global exposure layers for global hazard impact analysis. This involves the collection and cataloguing of relevant datasets (e.g., land use, population, settlements) and the development and application of tools for the cataloguing, spatial interpolation, statistical analysis and validation of information.	31/12/2018	Scientific information systems and databases
												2017005	Multi-criteria assessment of CC adaptation options	Development of a multi-criteria framework based on social, environmental and economic data to assess the multi-faceted impact of climate change and different adaptation options. A trade-off analysis will be undertaken to identify potential contradictory behaviours of the different criteria and policies. A first study will be carried out for selected sectors at European level.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in SCOPUS
												201801	Climate risks and adaptation options for Europe	Development of scenarios of climate risks throughout the 21st century in view of climate change and appraisal of adaptation options. Climate risk scenarios will be based on the improved impact assessments methods. The analysis for adaptation will take stock of the latest information in literature on the cost and effectiveness of different strategies and translate this information to derive indicative costs and benefits of adaptation in Europe.	30/06/2018	Science-for-policy reports
												201802	Evolution of climate hazards at global scale	Development and application of tools to assess dynamics in climate hazards at global scale in view of global warming and other drivers of change. This involves the analysis of climate hazard indicators derived from climate and hydrodynamic simulations for different regions around the world. Particular attention will be given to less developed regions and small island developing states.	14/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
201803	Climate and Migration	Understand the relationship between climate disasters and migration and develop tools to project future potential migration flows in view of climate change (in support of EU migration and security policies).	01/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)												
541 - SEED JRC.E.1	3882 - PESETA-3 Projection of economic impacts of climate change in sectors of the EU based on bottom-up analysis 3	The aim of the PESETA study is to provide a consistent multi-sectoral assessment of the impacts of climate change in Europe and evaluate a range of potential adaptation strategies. The project methodology has two distinctive features. Firstly, it is based on bottom-up impact models results that take into account the relationship between climate change and impacts in a structural way, modelling all the relevant interactions and mechanisms. Secondly, the assessment is made in a consistent way, where all impact models use the	JRC.E.1 Luc FEYEN	3.1.2.a	CLIMA	CLIMA	-Dail Maddalena (CLIMA)	ECHO ENER ENV GROW REGIO		01/01/2016 30/06/2017	CON-AA	201701	Final report: economic integration and spillover	Report on the economic integration and spillover analysis of the integrated biophysical impacts Collaborating Units: H.1, H.3, H.4, J.1, J.4	01/04/2017	Project management related documents/reports identified as outputs of the JRC Work Programme
												201702	Final report of AA PESETA-III	Report presenting the findings of the Project "Climate Impacts and Adaptation in Europe, focusing on Extremes, Adaptation and the 2030s" (Del 16b) including abstracts for policy makers of the sectoral studies.(Del 17). Collaborating Units: H.1, H.3, H.4, J.1, J.4	01/07/2017	Science-for-policy reports

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442 - AGFORCC JRC.D.5	4208 - CZESAM Concurrent Climate Extremes and Shocks on global Agricultural Markets	The exploratory project (EP) CZESAM investigates concurrent climate extremes that can occur over the most important areas of agricultural production of the world and their effects on global agricultural markets. The EP develops new approaches to characterise the spatio-temporal evolution of concurrent global climate extremes to analyse the impacts of these rare and extreme phenomena on the global agricultural markets in terms of consumption, production, trade patterns and resilience of the key (in terms of agricultural production) regions of the world. It applies a multi-model approach to estimate crop yields and a global partial agro-economic equilibrium model (Aglink-COSIMO), run stochastically, to estimate the economic impacts. Finally, CZESAM analyses the available observations and the CMIP5 climate model simulations to assess how these extremes will change under different climate scenarios.	JRC.D.5 ANDREA TORETI	3.1.2.a	CLIMA	JRC	Peter WEHRHEIM, DG CLIMA HoU A2; Pierluigi LONDERO, DG AGRI HoU E2	AGRI DEVCO ENV RTD TRADE	FAO - THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO) EEA - European Environment Agency OECD - Organisation for Economic Co-operation and Development (OECD) UN FCCC - UN Framework Convention on Climate Change (UN-FCCC)	01/04/2016 31/03/2018	INS-ER	1	Concurrent Climate Extremes. How, when and where?	Identification of extremes relevant for agricultural impacts and identification of the key regions of the world. Development of novel statistical approaches to characterise global concurrent extremes. Analysis of available observations covering the last decades and analysis of projected changes for the next decades (under different scenarios) by using climate model simulations. Development of worst-scenario case studies.	30/06/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)	
												2	Impacts on crop yields of concurrent extremes	Improvement of the representation of extremes in current crop-modelling. Multi-model assessment of impacts on crop yields of concurrent extremes as defined by the worst-scenario case studies and by climate projections.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)	
												3	Induced shocks on the global agricultural markets	Definition of a set of key experiments with different policy strategies to assess the impacts of concurrent extremes on global agricultural markets. Development of new strategies in stochastic agro-economic modelling. Assessment of production, consumption, trade patterns in key agricultural regions of the world under extreme conditions with the partial equilibrium model Aglink-COSIMO. Analysis of the identified shocks and potential implications for stability, food security and trade agreements.	28/02/2018	Science-for-policy reports	
												4	Final report and booklet for policymakers	Scientific summary of the main results of the project, highlights and open issues. Summary for policymakers of the main findings of the project.	30/06/2018	Science-for-policy reports	
4846 - ADAPTATION JRC.E.1	4903 - PESETA4-Biophysical Projection of biophysical and direct climate impacts in the EU based on a bottom-up analysis - 4	Impacts from climate change impose significant costs on the EU and regional economies, and therefore form obstacles to growth and decrease Europe's or a region's competitiveness. Appropriate adaptation strategies need to be developed to	JRC.E.1 Luc FEYEN	3.1.2.a	CLIMA	CLIMA	BEATRIZ YORDI AGUIRRE	AGRI ECHO ENV REGIO	EEA - European Environment Agency IPCC - Intergovernmental Panel on Climate Change UN FCCC - UN Framework Convention on Climate Change (UN-FCCC)	01/07/2017 31/12/2018	CON-AA	1	Scenarios for impact models	Development of scenarios to drive biophysical impact models, including projections of climate change as well as of other drivers of change such as land use and water use.	31/12/2017	Scientific information systems and databases	
												2	Sectorial impacts and adaptation options	Coherent scenarios of risks for different sectors and appraisal of adaptation options across Europe	31/12/2018	Science-for-policy reports	
143 - CCE JRC.C.6	4982 - PESETA4-Economics Economics of Climate Impacts and Adaptation	Climate impacts are expected to affect Europe, requiring the design of the appropriate adaptation policies to reduce those impacts. The main purpose of this activity is to support DG CLIMA in the economic analysis of impacts and adaptation, in the context of the European Adaptation Strategy, and following the previous JRC PESETA	JRC.C.6 Juan Carlos CISCAR MARTINEZ	3.1.2.a	CLIMA	CLIMA	BEATRIZ YORDI AGUIRRE	AGRI ENV REGIO	EEA - European Environment Agency IPCC - Intergovernmental Panel on Climate Change UN FCCC - UN Framework Convention on Climate Change (UN-FCCC)	01/07/2017 31/12/2018	CON-AA	D1	Socio-economic scenarios for PESETA 4	Projections on GDP and population will be generated to feed the various impact models of the PESETA 4 studies, including also the PESETA4-Biophysical. This 'container deliverable' also includes the related scientific publications.	20/12/2017	Scientific information systems and databases	
												D2	Economic analysis of impacts	This report will integrate the impacts of this project with those from the PESETA4-Biophysical under a consistent economic setting, producing economic projections of impacts. This 'container deliverable' also includes the related scientific publications.	28/09/2018	Science-for-policy reports	
143 - CCE JRC.C.6	5035 - CC Impact Adaptation Climatic Change Economic Impact and Adaptation Assessment	This work package addresses the economic analysis of climate change biophysical and social impacts, providing a harmonised approach to quantify them in terms of vulnerability, value at stake, social groups at risk, damaging mechanisms and assessment of adaptation options. It is geared towards the policy priorities of DG CLIMA on adaptation, and builds on the knowledge and	JRC.C.6 Juan Carlos CISCAR MARTINEZ	3.1.2.a	CLIMA	JRC	n/a			01/01/2017 30/12/2020	INS-RS	1	Progress Report 2017	Technical report describing the advances in the modelling as well as maintenance and data work carried out throughout the year in order to enhance the analytical capability of the unit, mainly related to climate impact and adaptation modelling. This 'container deliverable' also includes the related scientific publications.	31/12/2017	JRC technical reports	
												2	Progress Report 2018	Technical report describing the advances in the modelling as well as maintenance and data work carried out throughout the year in order to enhance the analytical capability of the unit, mainly related to climate impact and adaptation modelling. This 'container deliverable' also includes the related scientific publications.	31/12/2018	JRC technical reports	
3.1.3 Climate science and observations																	
3.1.3.a advance our understanding of how climate change interacts with other parts of the Earth's system (e.g. ice and forests) and translate the findings into policy guidelines.																	
4856 - ARCTIC JRC.C.5	1700 - ICE-ARC Ice, Climate, and Economics	The project is embedded in the FP7 ICE-ARC project that aims to understand and quantify the impact of the ongoing change in the Arctic and Boreal environment. Climate change at northern	JRC.D.1 Alessandro CESCATTI	3.1.3.a	CLIMA	RTD	R Beatriz YORDI (HoU A3)	ENV MARE	UNEP - United Nations Environment Programme (UNEP)	01/01/2014 31/12/2017	CON-IA	1	Climate impacts of Arctic warming on land	Report on the observed and future trends of vegetation productivity and GHG exchange at northern latitudes in response to the accelerated Arctic warming, using a combination of Earth observations of land properties (e.g. LAI, albedo, GPP) and outputs of biogeochemical land surface modelling.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in	
4855 - GHG-MoVe JRC.C.5	5360 - Val-MEI VALIDation of regional Methane	The overall objective of this project is to develop an improved methodology to quantify regional CH4	JRC.C.5 Peter BERGAMASCHI	3.1.3.a	CLIMA	RTD	H. BERGMAN, A. DANILA (DG CLIMA)	ENER ENV	ICOS - Integrated Carbon Observation System, European	01/07/2017 30/06/2019	CON-IA	201801	013C-CH4 and 0D-CH4 data set	Dataset of atmospheric 013C-CH4 and 0D-CH4 measurements at Ispra and derived sources signatures for individual events	31/12/2018	Scientific information systems and	
3.2 Energy																	
3.2.a energy-climate-economy modelling develop, validate, and run models for climate-energy-economy system, including development and maintenance of necessary databases or of other available energy models to the Commission; carry out relevant techno-economic analysis, in particular mapping latest evidence on techno-economic costs for energy supply and demand technologies; provide support for impact assessments																	
142 - Energy Economics JRC.C.6	1982 - MAREO Modelling and Analysis of Renewable Energy Options and Policies	The purpose is specific AA agreed with DG ENER is to improve the representation and characterization of the renewable energy sector in the JRC-C.6 modelling tools POTENCIA and POLES. The JRC will run the models to conduct scenario analyses upon request of DG ENER C. The overall objective is therefore to further	JRC.C.6 Hans Peter RUSS	3.2.a	ENER	ENER	Bernd Kuepker DG ENER.C.1			01/06/2014 31/05/2017	CON-AA	3	Final report	A final report shall be delivered, providing an explanation of the activities performed and detailed changes made to the model describing in detail the tasks undertaken. The report shall include an analysis of the impacts these changes have on the modelling results. The final report will be delivered 36 month after the signature of the administrative arrangement having taken account of the comments on the draft final report	29/05/2017	JRC technical reports	
142 - Energy Economics	2025 - Energy Scenarios	The project comprises the activities related to This work package aims at developing, updating and maintaining the European Energy Efficiency Platform (E3P), as the EU one-stop-shop delivering data and analysis on energy efficiency policies and technologies. It foresees the successive delivery of four releases of the E3P until December 2018. The improvements included will follow the initial plan and will also take into account users' feedback as they are continuously collected and analysed. It will also ensure that relevant JRC data are shared with the energy efficiency community and that the energy efficiency experts can upload and share data too, develop and implement a data quality procedure together with the E3P community in order to extend the E3P content validation procedure to all dataset, investigate interoperability with other data providers in order to ensure that discoverability, visualisation and elaboration of large datasets from other data providers are available to E3P users and research how the use of big data can improve energy efficiency modelling and policy, e.g. with higher time-resolutions or higher spatial granularities, and identify tools and IT developments needed for the integration of big data in the E3P. Activities will be carried out to engage the community of energy efficiency experts to contribute to the European Energy Efficiency Platform. Dedicated communication activities for gathering on one hand energy efficiency experts that can provide input (e.g. datasets, analysis, models) to the E3P knowledge base and on the other hand European Commission policy experts as well as Member States, regional and local experts searching for community-validated and directly accessible knowledge. Annual E3P conferences, in 2017 and in 2018, will be	JRC.C.6	3.2.a	ENER	ENER	Kostis SAKELLARIS DG CLIMA			15/08/2015	CON-AA	1	Improved modelling of	Delivery of modelling scenarios, including baseline scenario and various policy scenarios	20/12/2017	JRC technical reports	
326 - EE-E3P JRC.C.2	3549 - E3P - development Development of the European Energy Efficiency Platform	This work package aims at developing, updating and maintaining the European Energy Efficiency Platform (E3P), as the EU one-stop-shop delivering data and analysis on energy efficiency policies and technologies. It foresees the successive delivery of four releases of the E3P until December 2018. The improvements included will follow the initial plan and will also take into account users' feedback as they are continuously collected and analysed. It will also ensure that relevant JRC data are shared with the energy efficiency community and that the energy efficiency experts can upload and share data too, develop and implement a data quality procedure together with the E3P community in order to extend the E3P content validation procedure to all dataset, investigate interoperability with other data providers in order to ensure that discoverability, visualisation and elaboration of large datasets from other data providers are available to E3P users and research how the use of big data can improve energy efficiency modelling and policy, e.g. with higher time-resolutions or higher spatial granularities, and identify tools and IT developments needed for the integration of big data in the E3P. Activities will be carried out to engage the community of energy efficiency experts to contribute to the European Energy Efficiency Platform. Dedicated communication activities for gathering on one hand energy efficiency experts that can provide input (e.g. datasets, analysis, models) to the E3P knowledge base and on the other hand European Commission policy experts as well as Member States, regional and local experts searching for community-validated and directly accessible knowledge. Annual E3P conferences, in 2017 and in 2018, will be	JRC.C.2 ISABELLA MASCHIO	3.2.a	ENER	JRC	Paul HODSON (HoU, ENER C)	CLIMA ENV GROW RTD			01/01/2016 31/12/2018	INS-UR	10	Big Data for Energy efficiency	Investigate how the E3P could be used to manage big data and unconventional data sources to improve the energy efficiency policy-making process and anticipate policy needs.	28/02/2018	JRC technical reports
													11	NREAPs and PRs database update	Unit C2 has established and continuously update a database sourced on EU Member States reporting under the Renewable Energy Directive related to the current and expected development of renewable energy sources in each EU MS in their electricity, heating/cooling and transport sectors. This includes also regularly update in order to include all new data provide during each year from all EU Member States. The database is open and accessible online.	31/12/2017	Scientific information systems and databases
													12	NREAPs and PRs database continuation and update	C2 has established a database of NREAPs and progress reports related to the current and expected development of renewable energy sources in each EU MS in their electricity, heating/cooling and transport sectors. The database is updated every two year and it is transformed into a web-query structure in order to make it available to stakeholders and research community for their own purposes.	31/12/2018	Scientific information systems and databases
													5	E3P - releases	E3P releases will be developed including additional features and taking into account user feedback. release 2 (Q1/2017) will provide the user with a larger set of mathematical operations on datasets and improved visualisation tools (charting and mapping multiple datasets) release 3 (Q4/2017) will allow the users to perform additional elaborations on datasets and create indicators. In 2018 additional releases will further improve the interoperability between the E3P and other data providers.	31/12/2017	Scientific information systems and databases
													7	E3P engage policy-makers	A communication plan will be designed and implemented, with the support of an external communication expert, to ensure that energy efficiency policy-makers at European, national, regional and local level are aware of the potentialities of the E3P and are encouraged to make use of the E3P knowledge, contribute to exchanges and request specific content as needed. The plan will include communication actions addressing policy-makers at the different geographical levels and different specificities.	31/12/2017	External study reports
													8	E3P engage experts	A communication plan will be designed and implemented, with the support of an external communication expert, to ensure that energy efficiency experts in Europe and worldwide are aware and encouraged to contribute to the building of the E3P knowledge and ultimately to contribute to the European policy-making process for energy efficiency. The plan will include communication actions addressing firstly large data and knowledge providers (international organisations, research institutions, industry)	31/12/2017	External study reports
													9	Data quality procedure	In collaboration with relevant standardisation organisations (e.g. CEN/CENELEC) and JRC units involved in Data Management, methodologies for the assessment of data quality will be outlined and implemented in the E3P.	30/06/2018	JRC contributions to standards

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142 - Energy Economics JRC.C.6	5030 - EnergyScenarios 2017 Economic analysis of energy scenarios 2017	This is the second part of the AA Energy Scenarios WPK 142. It is a continuation of the work, which is already described in the technical specification of that first AA.	JRC.C.6 Hans Peter RUSS	3.2.a	ENER	ENER	Stefaan Vergote, HoU DG ENER.A.4	CLIMA		15/10/2017 13/12/2018	CON-AA	d0	Progress report	Report describing energy scenarios as analysed with the tools covered under the contract and other work carried out.	10/12/2017	JRC technical reports
												d1	Overview Report	Report describing energy scenarios as analysed with th tools covered under the contract.	31/12/2018	Science-for-policy reports
142 - Energy Economics JRC.C.6	5034 - EEP European energy policy economic assessment	The European Commission DG ENER and DG CLIMA make extensive use of energy-economy modelling capacity to prepare and analyse energy policies and investigate their ex-post or ex-ante impacts. Several units within DG ENER and other Commission services have deployed modelling	JRC.C.6 Hans Peter RUSS	3.2.a	ENER	JRC	Stefaan VERGOTE	CLIMA		01/01/2017 30/12/2020	INS-RS					
3.2.b energy security carry out security, safety, risk and techno-economic assessments of the EU's energy supply from conventional and unconventional resources (oil, natural gas); integrate resilience to the adverse impacts of climate change. This work includes security of supply, transmission and distribution of gas and of electricity, as well as the safety of offshore oil and gas operations, including tools for accident reporting and																
429 - SEC-GAS JRC.C.3	487 - EUGas Gas Transmission Network Modeling	Develop a hydraulic model for the EU Gas Transmission Network (EUGas) to analyse normal operation of the network at EU and at regional level (set of neighbouring MS), but also the effect of gas crises, including the resilience of the network (network flexibility & emergency planning), as well as reliability aspects. EUGas shares data with two other ancillary dedicated mass-balance models: ProGasNet (risk, reliability and vulnerability analysis) and GEMFLOW (study of gas crises at EU level). The models developed in this WP are used and will be used in support of the development of the Energy Union and its Roadmap. More specifically they have already been used during 2015 and 2016 in support of the implementation of Regulation 994/2010 on security of gas supply, in support of the Impact Assessment on the and the Liquefied Natural Gas (LNG) and Storage Strategy and of the European Programme for Critical Infrastructure Protection (support to Directive 2008/114/EC). A part of this WP is also dedicated to study the Liquefied Natural Gas (LNG) Supply chain and the role of Gas Storage in energy security. Both, LNG and gas storage have been identified as key elements to cope with gas crises. A deep understanding of both may help improving the strategy to keep them in the market and enhancing their contribution to security of supply.	JRC.C.3 Ricardo BOLADO LAVIN	3.2.b	ENER	JRC	Stefan MOSER	CLIMA COMP DEVCO ENV GROW HOME	Tech Serv - Member States and their Technical Services/type approval authorities	01/01/2014 30/12/2018	INS-RS	3	Further extension & consolidation of EUGas	After the extension done during 2016, a new neighbouring area will be added to the model. The most likely area is the Balkans. Acquire the needed data (network data, demand per node, pressure restrictions, etc.). A number of scenarios will be run to test the resilience of the network in this region and neighbouring EU MS (EL, BG, RO, HU, HR). This deliverable will also include the review and update of the entire model (including most recently deployed infrastructure and verification of all data).	30/11/2017	Science-for-policy reports
												4	Scientific output from EUGas WP	Publishable work developed during the second half of 2016 and 2017 will be submitted to scientific journals for publication. Likely subjects to publish can be related to the importance of storage and /or LNG to deal with gas crises, the use of the flexibility of the medium pressure network to help in case of gas scarcity, or the reasons to provide supporting hydraulic computations together with the arithmetic N-1 estimation for the Infrastructure Standard (Regulation 994/2010).	20/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												5	Development of further capabilities in ProGasNet	The ProGasNet model is a probabilistic model that aims to simulate the EU gas transmission pipeline network behavior. It pays special attention to reliability issues and takes into account key facilities such as compressor stations, LNG terminals, UGS, production sites, etc. Most needed improvements will be proposed (introduction of pressures, introduction of down times of facilities, time dependence, etc.). A selection of them will be implemented after a feasibility study.	31/10/2017	Science-for-policy reports
												6	Extension of EUGas to more neighbouring countries	Neighbouring countries are crucial for transit gas to the EU. Further extension of EUGas to neighbouring countries is required. After the addition of Ukraine to EUGas in 2016 and the Balkan States in 2017, a new region / country will be added in 2018, most likely Turkey, because of its strategic importance as gas transit country to the EU. Resilience scenarios will be run.	30/11/2018	Science-for-policy reports
												7	Study of new natural gas applications	The recent decrease by roughly 20% in EU gas demand between 2010 peak year and 2014 provide room for allocating gas to other areas of demand. This, together with more restrictive environmental regulations in maritime traffic and ports may foster the gasification of the merchant fleet. A study will be developed about technology needs, possible bottlenecks and other related problems and opportunities concerning the gasification of the merchant fleet.	01/12/2018	Science-for-policy reports
324 - EU-EIM JRC.C.3	488 - MMEIP Market Models for Energy Infrastructure Projects	This work package (WP) develops a framework of different techno-economic models (e.g. global TIMES model TIAM & JRC EU-TIMES) to analyse the multidimensional aspects of energy security, such as access to energy sources or shocks to the energy system (e.g. abrupt supply changes). It will assist decision making taking into account synergies and trade-offs between energy security and EU policy goals, especially with short to mid-term implications. This WP coordinates the horizontal activities in the area of Security of Supply, including GIS and data gathering and processing (e.g. infrastructure projects, national and cross-border). This WP contributes to the implementation of the Energy Union Roadmap initiatives, especially to the generation of the 3rd and 4th lists of Projects of common interest (PCIs) and the Infrastructure Forum.	JRC.C.3 TILEMAHOS EFTHIMADIS	3.2.b	ENER	JRC	SIKOW-MAGNY Catharina (ENER), SZOLYAK Adam, ERMACORA Florian (ENER B3)	CLIMA COMP DEVCO ECFIN ENV FISMA SG	Tech Serv - Member States and their Technical Services/type approval authorities	01/01/2016 30/12/2018	INS-RS	3	Study on international oil and gas markets	Report on the inter-links between European and international oil markets with emphasis on security of supply (e.g. disruption scenarios). Furthermore, the inter-relations between oil and gas markets will be explored with an emphasis on security of supply.	04/12/2018	Science-for-policy reports
												4	Scientific paper presenting results	Results from the analysis conducted within the WPK will be presented in a scientific paper. In particular, issues regarding the European security of energy supply from the oil-gas nexus will be presented.	12/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												488172	Modelling electricity and gas systems	Extension of the JRC TIMES Energy Trade Model to allow a full integration of electricity and gas networks and markets. This will allow assessing the inter-links between energy markets (e.g. cross-elasticities of prices) as well as examine co-dependencies which are of particular importance for security of supply. This extension would be done by coupling the existing model to one with a higher level of granularity.	02/03/2017	Science-for-policy reports
301 - HyRIs JRC.C.3	489 - SAFE-OIL Safety of Offshore Oil and Gas Operations	The objectives and the activities of this work package are: 1. the identification of risk factors in specific areas of offshore activity (i.e., the Mediterranean Sea, the Baltic Sea, the Arctic Sea, the Black Sea, the Caspian Sea). 2. the review of existing risk assessment methodologies for offshore oil and gas installations used in the EU and their role in the security of energy supply. 3. the proposal and the comparison of alternative metrics for the presentation of risks and for supporting risk reduction/risk acceptance decisions. This work-package supports the project's objectives as it determines the requirements that have to be met by hydrocarbon production	JRC.C.3 Stefano TARANTOLA	3.2.b	ENER	JRC	Stefan Moser, HoU, ENER-B.4, Joerg Koehli, ENER-B.4	ENV GROW MARE	- Health and Safety Executive - Health and Safety Laboratory - UK - POLITECNICO DI TORINO - NORWEGIAN UNIVERSITY OF SCIENCE AND TECHNOLOGY - National Centre for Scientific Research Demokritos	01/01/2016 31/12/2018	INS-RS	1	Report on existing Risk Analysis methods	Interim report that includes: - Overview of existing Risk Analysis methods for offshore installations and operations - Definition of a case-study and application of the different methods - Comparison of results with reference to specific risk scenarios	31/12/2016	Science-for-policy reports
												2	First set of risk metrics	Final report which includes a first proposed set of metrics for the assessment and presentation of offshore risks.	31/12/2017	JRC technical reports
												3	Report with workshop conclusions and follow-up	Workshop with experts in risk assessment of offshore installations from the scientific community, the industry and policy makers from Member States and the Commission.	31/12/2017	Conferences and workshops organized by the JRC
												5	Risk assessments methods in offshore operations	Publication of a peer-reviewed article on risk assessment methods used in the offshore industry.	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												2	Impacts of unconventional gas production	Study the potential evolution of global unconventional gas production and evaluate the impact on the European gas market under different scenarios. In addition, study the impact of that evolving market onto the security of gas supply.	30/09/2017	Science-for-policy reports
												D15	An overview of hydraulic fracturing update 2018	This report presents an update of the studies carried out in 2013 and 2015, reviewing hydraulic fracturing and alternative fracturing technologies. For each identified technique an overview is given. The technique is then briefly explained, and its rationale (reasons for use) is identified. Potential advantages and disadvantages are identified, and some considerations on costs are given. Finally, the status of the technique (for instance, commercially applied, being developed, concept, etc.) is given for its application to shale gas production.	30/09/2018	Science-for-policy reports
												D16	Technological advances in hydraulic fracturing	The production of shale gas is rapidly developing and achieving significant technological and economic efficiency gains all along the production chain: faster and cheaper drilling, longer lateral wells, more efficient fracturing and more fracturing stages leading to higher initial production rates and higher estimated ultimate recovery per well, more wells per pad, more efficient water and waste water management. This report attempts to review and analyse such advances.	31/01/2018	Science-for-policy reports

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301 - HyRIs JRC.C.3	490 - UH Unconventional Hydrocarbons	Unconventional hydrocarbons are a potential resource contributing to EU energy supply security and economic growth. The Work Package will address energy security, technological, economic and policy aspects, including stakeholder engagement. The first focus will be on shale gas. Activities focus on complementing and providing support to the Member States, including management and dissemination of the technical and scientific knowledge collected.	JRC.C.3 Ulrik VON ESTORFF	3.2.b	ENER	JRC	Ame ERIKSSON	CLIMA ENV GROW RTD	- International Association of Oil and Gas Producers EGS - Eurogeosurveys EP - European Parliament MS EU - Member states EU	01/01/2016 31/12/2019	INS-RS	D19	Investment analysis of unconventional hydrocarbons	resources come from different aspects: on one side it goes on the UH resource assessment together with data on production potential, decline curve, maximum extraction rate; the volatility of the level of gas price strongly affects the business case of UH project extraction; social acceptance, finally, represent an additional source of uncertainty around the success of the project development. This study aims at including these aspects into an investment analysis for a selected Coal Bed Methane projects in Europe. We assess the profitability of investments in unconventional hydrocarbon resource development projects in selected European countries. We follow the traditional analytical framework already applied in previous works on investment analysis of shale gas projects (Weijermars 2013.) by including the calculation of the Net Present Value, Internal Rate of Return (IRR), the Benefit-Cost ratio (BCR) and the Unit Cost. Each of those financial indicators gives valuable information on the profitability of the investments (NPV), its minimum return rate beyond which the project shows negative profits (IRR) and profitability indicators that assess the financial resources used in the project compared to the benefits (BCR and UC). The uncertainty around the future commercial availability of unconventional hydrocarbon resources come from different aspects: on one side it goes on the UH resource assessment together with data on production potential, decline curve, maximum extraction rate; the volatility of the level of gas price strongly affects the business case of UH project extraction; social acceptance, finally, represent an additional source of uncertainty around the success of the project development. This study aims at including these aspects into an investment analysis for a selected Coal Bed Methane projects in Europe. We assess the profitability of investments in unconventional hydrocarbon resource development projects in selected European countries. We follow the traditional analytical framework already applied in previous works on investment analysis of shale gas projects (Weijermars 2013.) by including the calculation of the Net Present Value, Internal Rate of Return (IRR), the Benefit-Cost ratio (BCR) and the Unit Cost. Each of those financial indicators gives valuable information on the profitability of the investments (NPV), its minimum return rate beyond which the project shows negative profits (IRR) and profitability indicators that assess the financial resources used in the project compared to the benefits (BCR and UC).	31/03/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
271 - EWSI JRC.C.3	918 - ELECTRA European Liaison on Electricity grid Committed Towards long-term Research Activities	JRC contributions to FP7 ELECTRA project, aiming at reinforcing the EERA Joint Programme on Smart Grids: JRC contributes to 1- aligning and steering the national research programs and consolidating the results of those programs in support of the European strategic energy	JRC.C.3 Evangelos KOTSAKIS	3.2.b	ENER	RTD	Patrick Van Hove (RTD.G.2); Manuel Sanchez Jimenez (ENER.B.3)		- SINTEF ENERGIFORSKNING AS - Institute of Power Engineering - INESC PORTO - INSTITUTO DE ENGENHARIA DE SISTEMAS E COMPUTADORES DO PORTO - Universität Oldenburg	01/12/2013 30/11/2017	CON-IA	1	Flexibility options	Design of the economically optimal coordinating control between power system operators for flexibility options	31/08/2017	JRC technical reports
												2	Evaluation and validation of the ELECTRA concepts	Evaluation and validation of the ELECTRA concepts and recommendations for further testing and validation of 2030 integrated frequency and voltage control approaches	30/11/2017	JRC technical reports
272 - SGER JRC.C.3	1050 - CRSG Cyber Resilience in Smart-Grids	To improve understanding of the behavior and vulnerabilities of smart-grid systems by carrying out studies using the EPIC laboratory. Experiments are primarily focusing on the cybersecurity and resilience aspects in smart-grids in collaboration with Unit F.03 of the JRC IET. A large focus is on the study of the Smart Grid Reference Architecture and associated IEC smart-grid standards	JRC.E.2 Thierry BENOIST	3.2.b	ENER	JRC	Manuel SANCHEZ JIMENEZ	CNECT HOME	ENISA - European Network and Information Security Agency	01/01/2014 31/12/2018	INS-RS	1	Analysis of first results on comm. in smart-grids	To analyse the first results and benefit of the demonstrator/test case in EPIC of a communication topology used in smart grids as part of the Smart Grid Reference Architecture	30/06/2017	JRC technical reports
												2	Deeper analysis on comm. in smart-grids	To deeper analyse results of the demonstrator/test case in EPIC of a communication topology used in smart grids as part of the Smart Grid Reference Architecture	22/12/2017	JRC technical reports
												3	Setup an operational testbed for cybersecurity	To setup an operational cybersecurity testbed in the EPIC to assess resilience and security of Smart-Grid based on the Reference Architecture. This testbed is a component of the initiative on the JRC Federation of lab.	21/12/2018	Technical systems
												4	Opening access of EPIC Laboratory to EC-wide users	To enable the access of a larger user's community of the EPIC laboratory within the European Commission services, including the CERT-EU TF	21/12/2017	Scientific information systems and databases
429 - SEC-GAS JRC.C.3	1942 - RSGS-II Technical Assistance, Analysis and Input to Support The Implementation of Regulation 994/2010	Support to DG ENER in the implementation of the Regulation 994/2010 on Security of Gas Supply. It includes the analysis of the gas security of supply situation in the EU and individual Member States.	JRC.C.3 Ricardo BOLADO LAVIN	3.2.b	ENER	ENER	SINOBAS Beatriz	ENV GROW HOME		14/07/2014 13/07/2017	CON-AA	2	Review of MS Plans - 3	The review and assessment of the second update of the Plans will be done attending to the conformity to the minimum requirements established in the Regulation and will also include the analysis of preventive and emergency measures that have a cross-border effect.	30/06/2017	Scientific and policy reports
301 - HyRIs JRC.C.3	1961 - SGST Shale Gas S&T	The work package will carry out scientific activities in the unconventional gas and oil field in support to policy making services of the European Commission; assess Europe's resources in cooperation with geological surveys; analyse the energy market as well as broader economic impacts; evaluate the technical and economic framework conditions for the development of a European shale gas industry; facilitate international knowledge sharing.	JRC.C.3 Ulrik VON ESTORFF	3.2.b	ENER	RTD	W. Schneider, V. Kogionas, J. Schuppers (RTD G.2); A. Jevsejenko (CLIMA C.1)	CLIMA ENER ENV GROW	EGS - Eurogeosurveys	12/02/2015 11/09/2017	CON-AA	1	EU Atlas - Final Resource Assessment	The resource assessments will be performed at the level of shale gas basins. Data will be aggregated at a suitable level (for public use), as far as possible homogenised so as to be expressed in a common framework; wherever possible, provided with uncertainty ranges (e.g. P10/P50/P90) on potential resource estimates.	15/06/2017	Science-for-policy reports
												2	Unconventional Hydrocarbons Energy Markets	Evaluation of the technical and economical framework conditions for the development of a European UH Industry	15/03/2017	Science-for-policy reports
												3	Scientific publications and outreach activities	International knowledge sharing activities, including: 1 Invitation of hors-EU experts 2 Participate to relevant conferences 3 Organise dedicated workshops, in relation to the Network 4. Setup and maintain European Science and Technology Network on Unconventional Hydrocarbon Extraction website	28/02/2017	Conferences and workshops organized by the JRC
324 - EU-EIM JRC.C.3	2749 - INTERCON Intercontinental Electricity Infrastructures	Starting from the ambition of a stronger EU role in global energy markets, the objective of the WPK is to assess the potential for interconnecting the EU electricity (transmission) infrastructure with remote electricity systems. Generation and transmission systems located in America, Africa, Asia and distant offshore areas will be considered. Possible (mega)projects will be evaluated, in line with objectives 1.3, 4 and 8 of the EU-EIM Project. Integration of renewable energy sources will be a key issue. Further, geographical, climate and geopolitical aspects will be addressed. A potential interconnection with China will be studied in depth as concrete plans for this link are currently under discussion. The resulting mega-infrastructure will be modeled. Evaluation techniques will include techno-economic assessment, cost benefit	JRC.C.3 Philip MINNEBO	3.2.b	ENER	JRC	Ms Catharina SIKOW-MAGNY	DEVCO SG		01/01/2017 31/12/2018	INS-UR	D1	Overview of potential interconnections	The report will present potential, promising mega-projects connecting the EU electricity grid with remote systems in North America, East Asia, North Africa and remote offshore areas. Geographical, climate and geopolitical aspects will be considered. Knowledge obtained from the OTG Exploratory Research Project (2015-2016) will be used.	16/12/2017	Science-for-policy reports
												D2	An EU - China electricity interconnection	The report will focus on the potential benefits for the EU from an electricity transmission interconnection with China. Real options theory and traditional cost-benefit analysis will be applied.	30/06/2018	Science-for-policy reports
												D3	Techno-economic model of an EU-China power grid	The article will present the results of a techno-economic model (in Plexos software) of the complete supergrid including the EU and China transmission networks and the interconnecting line(s).	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												1	Proposal for a Generation Adequacy Assessment	Science for Policy Report aiming at identifying a suitable generation adequacy assessment to provide a consistent assessment approach across the Internal Electricity Market (IEM), taking account of: a) The potential for regional approaches b) The impact of developments in terms on integrated network and market operation across the IEM c) The importance of ensuring sufficiently detailed generation adequacy assessment are available to decision makers at national level (excerpt from AA with ENER)	09/09/2017	Science-for-policy reports

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JRC.C.3	Assessment Administrative Arrangement	to propose a suitable generation adequacy methodology to provide a consistent assessment approach across the Internal Electricity Market (EM)	SILVIA VITIELLO	3.2.b	ENER	ENER	(ENER.B.2), Andras Hujber (ENER.B.2)		Transmission System Operators	09/03/2017	CON-AA	2	Spatial and temporal value of electricity	This study shows negative NPV values for the investment in PHS technology in two Italian zones. The analysis of the private value of the investment should be accompanied by the assessment of its social value. PHS operation, despite being costs minimizing, does not guarantee optimality in terms of environmental impact. On the other side, upgrade investment projects are profitable and improve environmental quality. Policy incentives in support to one technology would intervene if its social value	09/06/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
272 - SGER JRC.C.3	3041 - AnyPlace Adaptable Platform for Active Services Exchange	AnyPLACE aims at developing a modular, secure and flexible smart metering platform to support exchange of services between end-users, equipment manufacturers and service providers (market representatives, electricity network)	JRC.C.3 Anna Maria MENGOLINI	3.2.b	ENER	ENER	Manuel Jimenez Sanchez (ENER.B.3)		- INESC PORTO - INSTITUTO DE ENGENHARIA DE SISTEMAS E COMPUTADORES DO PORTO	01/01/2015 31/12/2017	CON-IA	1	Policy and regulatory	Based on solutions developed and results achieved, regulatory recommendations and standardization guidelines that allow an efficient and timely deployment of flexible smart metering platforms in EU member states will be provided.	31/12/2017	Science-for-policy reports
271 - EWSI JRC.C.3	3476 - RPSMI Regional power systems and markets integration	This Work Package aims to support the implementation of the Energy Union Roadmap's Actions on "Infrastructure" (interconnection developments), "Electricity" (security of supply measures), "Industrial competitiveness" and "Cross cutting measures" by: - providing data, analysis and intelligence on future transmission systems and electricity Projects of Common Interest. - developing scenarios and assessing merits and options for the development of transmission systems and electricity highways in Europe and beyond. - building and integrating advanced steady state and dynamic models of the power system, with special focus on the interfaces/interactions between inter-continental (super) grids, the Baltic	JRC.C.3 SILVIA VITIELLO	3.2.b	ENER	JRC	Matti Supponen (ENER.B.2), Beatrice Coda (ENER.B.1)	SG		01/01/2016 30/12/2018	INS-RS	1	Regional analyses in Central North Europe	Power system regional market and security analyses in Central-North Europe, with special focus on the Baltic region. The regional assessment will also consider market integration and energy security challenges linked to the implementation of the EU's climate policies and initiatives.	30/05/2017	Science-for-policy reports
271 - EWSI JRC.C.3	3476 - RPSMI Regional power systems and markets integration											2	Renewable integration in transmission grids	Renewable integration options and security of supply issues in transmission grids	15/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
271 - EWSI JRC.C.3	3476 - RPSMI Regional power systems and markets integration											3	Regional analyses in Central South Europe	Power system regional market and security analyses in Central-South Europe, with special focus on the regions in and/or bordering with the Mediterranean area. The regional assessment will also consider market integration and energy security challenges linked to the implementation of the EU's climate policies and initiatives.	30/05/2018	Science-for-policy reports
301 - HyRIs JRC.C.3	3881 - UHC-Nexus The Unconventional Hydrocarbons and Environment Nexus	This work package supports the Commission's initiatives under the umbrella of the European Science and Technology Network on Unconventional Hydrocarbon Extraction. Based on crosscutting collaboration at the JRC, it aims to deliver information to better understand the impact of the exploitation of unconventional hydrocarbons (UHC) on natural resources, with a special focus on water and the atmosphere. It considers the nexus between water quality and UHC exploitation by hydraulic fracturing operations. It focuses on approaches to determine baseline parameters before fracturing takes place and to monitor these parameters during and after fracturing, with the final objective of defining agreed methodologies and standards for the measurement of these parameters. It also provides an overview of the air pollution caused by shale gas exploration in the	JRC.D.2 Bernd GAWLIK	3.2.b	ENV	JRC	Christian WIMMER	CLIMA ENER	EGS - Eurogeosurveys ENV EU - Environmental authorities of the Member States and Candidate Countries US-EPA - US Environmental Protection Agency	01/01/2016 31/12/2018	INS-RS	201702	Air pollutant emissions from hydraulic fracturing	JRC technical report on the analysis of air pollutant emissions from hydraulic fracturing of gas and oil including an overview of the air pollution problematic from shale gas exploration, a summary of the findings of the experimental study performed at 3 USA shale gas sites as well as an outlook with recommendations for a European experimental study.	31/12/2017	JRC technical reports
301 - HyRIs JRC.C.3	3881 - UHC-Nexus The Unconventional Hydrocarbons and Environment Nexus											201703	The NORM-dimension in UHC	In addition to traditional chemical issues, operations of hydraulic fracking have to be assessed with regard to the issue of naturally occurring radioactive materials (NORM). To better address the need for measurement based studies on NORM issues in the shale gas sector, a technical report investigating the radiometric measurement dimension involving spectrometric methods is envisaged. Normative: Council Directive 2013/59/Euratom	31/12/2017	JRC technical reports
301 - HyRIs JRC.C.3	3881 - UHC-Nexus The Unconventional Hydrocarbons and Environment Nexus											201801	UHC Monitoring Activity Tracker	Evaluation and gap analysis of policy relevant results from the H2020 projects on water monitoring related to unconventional hydrocarbon exploitation including set-up of an UHC network on Monitoring, which acts as knowledge base for chemical monitoring. Work aims at a close operational collaboration with US GS and EPA, thus giving life to a close interaction on standardisation and harmonisation. The activity will build on observations and findings of EU-wide campaign conducted in 2017	30/06/2018	Science-for-policy reports
271 - EWSI JRC.C.3	4340 - Baltics' Integration Integration of the Baltic States into the EU electricity system	New power highways connecting the Baltic countries with Finland, Poland, and Sweden will expand the EU cross-border electricity exchange capacity leading to higher energy independence and higher security of supply in the EU. The purpose of this work package is to perform a cost-	JRC.C.3 Gianluca FULLI	3.2.b	ENER	ENER	Andreea Tanasa			01/03/2016 30/12/2017	CON-AA	2	Peer-reviewed journal article	a peer-reviewed article, based on the report of Deliverable 1. The article will contain the main findings of the analysis.	30/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index
301 - HyRIs JRC.C.3	4520 - UH Database Development and maintenance of the European unconventional hydrocarbons database	The purpose of the work to be carried out under this Arrangement is to perform the development and maintenance of the European unconventional hydrocarbons database (hereafter referred to as UH database) and to integrate it into the European Unconventional Hydrocarbons Portal (hereafter referred to as Open ECHO) with the scope of providing support to DG ENV. The main goal of the Arrangement is to create an interactive data repository, to be called UH database, supported by a set of visualisation tools	JRC.C.3 Ulrik VON ESTORFF	3.2.b	ENV	ENV	Christian WIMMER	ENER RTD	- International Association of Oil and Gas Producers IEA - International Energy Agency MS EU - Member states EU	01/01/2017 31/12/2020	CON-AA	1	Final Concept/Structure of the UH database	A Technical Report on the final concept of the UH database will be delivered	30/09/2017	JRC technical reports
301 - HyRIs JRC.C.3	4520 - UH Database Development and maintenance of the European unconventional hydrocarbons database											2	Live online UH database	A technical system released online with public access	30/04/2018	Technical systems
301 - HyRIs JRC.C.3	4520 - UH Database Development and maintenance of the European unconventional hydrocarbons database											3	Comparability criteria	A technical report on the comparability criteria	28/02/2018	JRC technical reports
301 - HyRIs JRC.C.3	4520 - UH Database Development and maintenance of the European unconventional hydrocarbons database											4	Update tool	A technical system for performing database updates	30/04/2018	Technical systems
301 - HyRIs JRC.C.3	4520 - UH Database Development and maintenance of the European unconventional hydrocarbons database											6	GIS analysis and statistics tool	A technical system containing GIS analysis and a statistical tool	31/07/2018	Technical systems
301 - HyRIs JRC.C.3	4520 - UH Database Development and maintenance of the European unconventional hydrocarbons database											7	Visualization Tool	A technical system containing the database graphic interface	30/04/2018	Technical systems
301 - HyRIs JRC.C.3	4520 - UH Database Development and maintenance of the European unconventional hydrocarbons database											8	Infographics	A technical system containing infographics	31/12/2018	Technical systems
301 - HyRIs JRC.C.3	4520 - UH Database Development and maintenance of the European unconventional hydrocarbons database											9	First draft database compatibility	A technical report on the database compatibility (first phase of compatibility checks before final concept)	30/09/2017	JRC technical reports
324 - EU-EIM JRC.C.3	4620 - SASOS Societal appreciation of security of energy supplies	The purpose of this work package (WP) is to provide support to DG ENER's activities on assessing how much value European society attaches to security of energy supplies. One of the main objectives of European energy infrastructure policy is to contribute to smart, sustainable and inclusive growth, by developing modern and high-performing trans-European networks which take into account expected future flows, thus benefiting the entire internal energy market in terms of improving competitiveness on the global market and economic, social and territorial cohesion, in a period when the energy sector is undergoing major changes and faces new challenges which have a major impact on preserving the existing high level	JRC.C.3 TILEMAHOS EFTHIMIADIS	3.2.b	ENER	ENER	Adam SZOLYAK	COMP ECFIN ENV FISMA SG		16/05/2016 14/09/2017	CON-AA	46201	Review of definitions and evaluation methodologies	This report shall provide a critical literature review on the various definitions of security of supply across sectors and focus groups in an attempt to compare and consolidate the mainly used definitions. The report shall also review certain evaluation methodologies for energy security (e.g. cost-interruption surveys, estimating customer damage functions). Finally, it will review the main studies which aim at uncovering the (perceived) value of energy supply.	01/09/2016	Science-for-policy reports
324 - EU-EIM JRC.C.3	4620 - SASOS Societal appreciation of security of energy supplies											46203	Conduction of surveys	To assess the societal appreciation of security of supply, customised surveys will be conducted in certain Member States, where each one will be in a different level of energy security (in relative terms). This task will be sub-contracted and this Deliverable will be a report which will provide in-detail the tasks conducted by the contractors and the results (number of respondents, raw data etc).	15/05/2017	JRC technical reports
324 - EU-EIM JRC.C.3	4620 - SASOS Societal appreciation of security of energy supplies											46204	Societal appreciation of energy security	Based on the findings of the previous tasks, mainly the surveys' results, a report will be produced with the results and conclusions, including monetization of security of supply in view of the policy priorities. If needed, this Deliverable will be supported by external partners.	15/08/2017	Science-for-policy reports
271 - EWSI JRC.C.3	4972 - CMSA Capacity mechanisms and system adequacy	This Work Package aims to support the implementation of the Energy Union Roadmap's Actions on "Infrastructure" (interconnection developments), "Electricity" (security of supply measures), "Industrial competitiveness" and "Cross cutting measures" by: - providing data, analysis and intelligence on generation and power system adequacy. - contrasting techno-economic options (involving interconnectors, storage and demand response) for balancing the future power system. - building models of the power system and market, with special focus on the interfaces/interactions between inter-continental (super) grids, regional	JRC.C.3 MARTA PONCELA BLANCO	3.2.b	ENER	JRC	Matti SUPPONEN	COMP		01/01/2017 31/12/2018	INS-RS	1	System adequacy definitions and methodologies	Review of system adequacy definitions and evaluation methodologies	30/05/2017	Science-for-policy reports
271 - EWSI JRC.C.3	4972 - CMSA Capacity mechanisms and system adequacy											2	Balancing resources and demand response	Role of balancing resources and demand response in system adequacy	30/05/2017	Science-for-policy reports
271 - EWSI JRC.C.3	4972 - CMSA Capacity mechanisms and system adequacy											3	System adequacy definitions and applications	Critical comparison of system adequacy definitions and evaluation methodology application	30/06/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
		The purpose of this Work-package is to provide DG ENER with Technical Assistance and Scientific Support to the implementation of Directive 2013/30/EU on Safety of Offshore Oil and Gas Installations This work-package supports the project's objectives as it determines the requirements that										1	Operational version of VICOS	Further development of the VICOS platform to make it operational: - For the market place, implementation of automatic "search and match" algorithms for the search of experts - For the database of experts, implementation of the following functionalities: confidentiality management, messaging module, import/export profile of experts, Multilingual expert profile module, historical version module, quality management tool - Implementation of a system of notification richer in functionality	31/12/2017	Scientific information systems and databases

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
301 - HyRIs JRC.C.3	5019 - VICOS Virtual Centre of Offshore Safety Expertise	have to be met by hydrocarbon production industries in terms of health and safety. The work-package will develop a fully operational version of the "Virtual" Centre of Offshore Safety Expertise (VICOS). VICOS will coordinate the provision of additional resources to Member States competent authorities. The expertise on ICT tools available in the team and the knowledge on the functioning of the competent authorities will be central to the implementation of VICOS and for the organization	JRC.C.3 Stefano TARANTOLA	3.2.b	ENER	ENER	Stefan MOSER			01/01/2017 31/12/2018	CON-AA	4	Technical Secretariat of the EUOAG	This is an ongoing activity for which the JRC has received mandate from the Commission. The JRC takes care of organising the meetings of authorities and plenary sessions with industry and their associations. Publish the minutes of the meetings. Disseminate official information to the competent authorities of the Member States	31/12/2018	JRC technical reports
												6	Update of SyRIO software	The SyRIO software version 1.0 is operational in 2016. We expect many feedbacks from the Competent authorities and by operators. On the basis of these feedbacks the JRC will upgrade SyRIO to comply with the authorities' requests. This will be the last production of the code by JRC, and no further support will be provided	31/12/2018	Scientific information systems and databases
												7	Update of SPIROS software	The SPIROS software beta version will be available at the end of 2016. We expect many feedbacks from the Competent authorities and the Commission. On the basis of these feedbacks the JRC will have to upgrade SPIROS and publish the first operational version	31/12/2018	Scientific information systems and databases
324 - EU-EIM JRC.C.3	5740 - PCI 2017 Support the identification of relevant projects of PCI's	The purpose of this work package is to support DG ENER's activities on the identification and evaluation of Projects of Common Interest in the European Energy Infrastructure, notably in the categories of electricity, natural gas, and smart grids. This action is related to the provisions of the Regulation (EU) No 347/2013 on guidelines for trans-European energy infrastructure and the work of the regional energy infrastructure working groups, which is calling for the adoption of electricity transmission and storage and gas Projects of Common Interest across the Union necessary to implement the energy infrastructure priority corridors and areas, as set in Annex I Regulation (EU) 347/2013	JRC.C.3 TILEMAHOS EFTHIMIADIS	3.2.b	ENER	ENER	Renato STELLA	CLIMA COMV DEVCO ECFIN ENV SG	ACER - European Agency for the Cooperation of Energy Regulators (ACER) ETSO-E - European Network of Transmission System Operators	01/01/2017 31/12/2018	CON-AA	5740D1	Assessment framework for electricity and gas	Development of the assessment framework for Projects of Common Interest in the field of electricity transmission and storage as well as gas transmission and storage and LNG regarding their contribution to the criteria specified in the Regulation i.e. market integration, sustainability and security of supply and based on the output of the cost-benefit analyses performed by ENTSO-E, ENTSO-G and the project promoters.	31/05/2017	Science-for-policy reports
												5740D2	Results for electricity	Report regarding the results of the application of the assessment framework on the eligible project proposals in the area of electricity transmission and storage for possible inclusion in the third European Union-wide list of projects of common interest, on the basis of the regional lists of eligible candidate projects of common interest, as established in the Regulation	09/06/2017	Science-for-policy reports
												5740D3	Results for gas	Report regarding the results of the application of the assessment framework on the eligible project proposals in the area of gas transmission and storage and LNG for possible inclusion in the third European Union-wide list of projects of common interest, on the basis of the regional lists of eligible candidate projects of common interest, as established in the Regulation	09/06/2017	Science-for-policy reports
												5740D4	Assessment framework smart grids	Report "Assessment framework for Projects of Common Interest in the field of Smart Grids Deployment" on the updated methodology to evaluate the economic, social and environmental impacts of Smart Grids Projects of Common Interest.	28/02/2017	Science-for-policy reports
												5740D5	Results for smart grid projects	Report on the evaluation of candidates Smart Grid Projects of Common Interest, aimed to assist the Group in the selection of projects to be included in the third European Union-wide list of PCIs.	10/05/2017	Science-for-policy reports
												5740D6	Report on ENTSO-E methodology	Report by the Directorate on alignment of the JRC assessment framework to the ENTSO-E methodology with regards to the evaluation of Smart Grid PCI candidates for the PCI list 2019.	31/12/2018	Science-for-policy reports
3.2.c internal energy market assess the development of energy infrastructure and energy markets in the EU, including design of the retail market, new deal for energy consumers and protection of vulnerable consumers, integration of LNG and gas storage, super power grids, smart power grids (including interoperability and smart-metering), flexibility requirements and gas networks, and the new market design initiative; support																
340 - FINSTAR JRC.B.1	2843 - DEMA Detection Energy Market Abuse	In the context of the Energy Market Union priority, DEMA will develop quantitative analyses in support to DG ENER ongoing and foreseen initiatives associated to the wholesale energy market integrity and transparency project (ACER-REMIT project), whose primary objective is to deter market manipulations. The work will be developed in collaboration with Unit G2 and ACER will provide data. Selected experts in the field of energy market would also contribute. The problems to explore, linked to the early stage of the ACER-REMIT project, are: (i) Collecting and organizing the energy market data into a coherent database; (ii) Defining requirements to achieve a suitable trade-off between data privacy and dissemination	JRC.B.1 Andrea PAGANO	3.2.c	ENER	ENER	Andras Hujber, ENER-B2		ACER - European Agency for the Cooperation of Energy Regulators (ACER)	23/05/2016 19/05/2017	CON-AA	MoDoMA	MODELS FOR THE DETECTION OF MARKET ABUSES	The deliverable will provide a definition of statistical patterns relevant to the detection of market distortions and conduct an evaluation of possible methodological gaps with respect to ACER needs. The work relies on the availability of a representative set of data to be provided by ACER. Two main aspects would be considered: 1. Definition of statistical patterns relevant to the detection of market distortions (G2) 2. Evaluation of possible methodological gaps with respect to ACER needs (G1)	01/05/2017	Science-for-policy reports
												WhEMIT	WHOLESALE ENERGY MARKET INTEGRITY AND TRANSPARENCY	The deliverable explores the impact that transparency might have on potential energy market manipulation, in view of making ACER's commercially non sensitive trade database available for scientific purposes. Requirements to achieve a suitable trade-off between data privacy and dissemination policy will be proposed. Two aspects would be considered: 1. Estimation of concentration indexes in markets (G1) 2. Definition and computation of variability indices of prices on a given energy market (G2)	01/05/2017	Science-for-policy reports
221 - PSM JRC.C.7	3288 - PMSM Power market and storage modelling	The objectives of this WP are to carry out analyses related to the European power markets, to provide model based support to policy DGs, and to disseminate models and databases as open source/open data to the public. In particular the WP analyses the role of flexibility and storage technologies within a future decarbonised power system with high shares of renewable energy. The deliverables of the WP will be based on the development, maintenance, application and dissemination of the following models and databases: o Dispa-SET, a unit commitment and dispatch model of the European power system, o SPIRIT, a single unit price-taker model that optimises the operation of storage or power generation units in a market context, o EMHIREs, a meteorological derived high resolution RES-E generation time series database, o JRC PPD, a database of European power plants. On the basis of its knowledge and competences, the JRC is also supporting DG ENER on the development of METIS (a short term model of the European energy system developed for DG ENER by a consortium, contract ENER/C2/2014-639), by supervising the work done by the contractors (software development and analyses of policy issues) and providing DG ENER with technical advice regarding modelling issues. In addition, the WP channels the contribution of the JRC to IRENA the European Academies of Science Advisory Council (EASAC), IAEA and the research collaboration agreement with EdF - Ares(2015)538366. The models are developed internally in order to (i) bridge existing gaps in the set of tools available at the JRC, (ii) increase the flexibility and readiness of the JRC to anticipate policy needs, (iii) increase the transparency on the methods and data used	JRC.C.7 ANDREAS ZUCKER	3.2.c	ENER	JRC	Kostis SAKELLARIS (ENER.A.4), Matti SUPPONEN (ENER.B.2), Jean-Marie BEMTGEN (ENER.C.2), Arnaud MERCIER (ECFIN.DDG2.B.4), Gwennael JOLIFF-BOTREL (RTD.G.1)	ECFIN RTD	SET-Plan Com - SET-Plan Community	01/01/2016 30/12/2018	INS-RS	1	Modelling-related support to policy DGs 2016	Scientific reports based on Dispa-SET and/or SPIRIT in support to ad-hoc (e.g. analysis of the financial viability of specific prosumer schemes) or expected requests from policy DGs and the SET-Plan community (e.g. contribution to the IA on the implementation of the internal electricity market package), including support to the development of the METIS model commissioned by ENER.A.4 (tender N°ENER/C2/2014-639) and the AA on generation adequacy (N°ENER/B2/FV2014-742/SI2.702110 - AA JRC).	31/12/2016	JRC contributions to policy documents
												1	Modelling-related support to policy DGs 2017	Analysis based on the application of Dispa-SET, SPIRIT and METIS, using the EMHIREs or JRCPPD databases, in support to policy DGs. - Viability of specific prosumer schemes, adequacy of RES-E support schemes for DG ECFIN B.4. - Support to the development and application of the METIS model (based on the license(s) offered to JRC by ENER.A4) including the review of deliverables and the provision of data. - Contribution to the the AA on generation adequacy (N°ENER/B2/FV2014-742/SI2.702110 - AA JRC)	31/12/2017	JRC contributions to policy documents
												2	Role of energy storage in the energy system 2017	Case study on of the impact of thermal storage and competing options on the flexibility of the power system (in cooperation with WP 3487).	31/12/2017	Science-for-policy reports
												2	Role of energy storage in the energy system 2016	Follow-up of the implementation of the SET-Plan, report on the flexibility requirements and market implications in a future low-carbon power system with higher shares of renewable power generation sources.	31/12/2016	Science-for-policy reports
												3	Power market and storage modelling 2016	Improve Dispa-SET and SPIRIT according to the needs of policy DGs (e.g. with stochastic features, price formation mechanisms, capacity planning/investment module, and links to other JRC models such as JRC-EU-TIMES or LISFLOOD), in order to study the implications of integrating higher shares of renewable power generation in the energy markets, as well as the interaction of these sources with storage and other generation sources. Final result to be delivered as JRC reports. Development and dissemination of models and databases: - Additional features for Dispa-SET (e.g. better representation of thermal storage, self consumption). - Adapt SPIRIT for thermal storage. - EMHIREs database for new wind/PV scenarios. - JRC Power plant database.	31/12/2016	Scientific information systems and databases
												3	Power market and storage modelling 2017	Development and dissemination of models and databases: - Additional features for Dispa-SET (e.g. better representation of thermal storage, self consumption). - Adapt SPIRIT for thermal storage. - EMHIREs database for new wind/PV scenarios. - JRC Power plant database.	31/12/2017	Scientific information systems and databases
												4	Modelling-related support to policy DGs 2018	Analysis based on the application of Dispa-SET, SPIRIT and METIS, using the EMHIREs or JRC-PPD databases in support to policy DGs.	31/12/2018	JRC contributions to policy documents
												4	Scientific publications 2016	Scientific publications and collaborations Peer reviewed articles resulting from the above-described modelling activities and the scientific cooperation established with EdF (Ares(2015)538366). PhD thesis on electricity storage in power markets Aimed at researching: (i) the value provided by storage to the energy system, (ii) the capital expenditures at which storage could be profitable, and (iii) the benefits of nodal pricing. The thesis will be based on Dispa-SET.	31/12/2016	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
5	Role of energy storage in the energy system 2018	Case study on of the impact of storage technologies and competing options on the flexibility of the power system.	31/12/2018	Science-for-policy reports												

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
		(with the goal of producing fully open-source models and data), (iv) enhance significantly the internal know-how of the JRC by reducing the dependency from external consultants and proprietary software (reducing also administrative burdens related to procurement and contractual needs. This work is needed for supporting the impact assessments, communications and implementation (after adoption in 2017/2018) of the following initiatives related to the Energy Union Actions on: a new energy market design - COM(2015)340, a new deal for energy consumers - COM(2015)339, the strategy on heating and cooling - COM(2016)51, and the forthcoming renewable energy package. The geographical scope of the models is Europe (EU + neighbouring countries).										6	Power market and storage modelling 2018	Development of models and databases: - Additional features for Dispa-SET - Adapt SPIRIT for thermal storage. - EMHIRE database for new wind/PV scenarios. - JRC-PPD power plant database. - Additional databases, e.g. on demand for electricity.	31/12/2018	Scientific information systems and databases
												7	Scientific publications 2017	Peer reviewed articles resulting from the above-described modelling activities and the scientific cooperation established with EdF (Ares(2015)538366).	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												8	Scientific publications 2018	Peer reviewed articles resulting from the above-described modelling activities and the scientific cooperation established with EdF (Ares(2015)538366).	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
272 - SGER JRC.C.3	3440 - PSES Privacy and cyber-security in the Energy Sector	(1)Analysing technological means to facilitate the energy transition through smart grids and smart home applications, under a cyber-security and privacy perspective (2)Studying the application of the virtual-currency and distributed ledger paradigms to create a seamless internal energy market that benefits citizens The WP will support the Smart-Metering Data Protection Impact Assessment recommendation (2014/724/EU) and the Best Available Technique process (2012/148/EU): (1) Providing technical advice to DG-ENER on the testing phase of the DPIA testing phase (2) Chairing the follow-up of the Best Available	JRC.E.3 Igor NAI FOVINO	3.2.c	ENER	JRC	Manuel Sánchez-Jiménez	CNECT GROW		01/01/2016 14/12/2018	INS-RS	3	Smart-House Cyber-Security and Privacy	This deliverable will investigate on the "last mile" issues related to the interactions between smart-house devices, smart-metering systems and smart-grids under cyber-security, privacy and safety perspective. To achieve this goal the G.6 IoT platform will be integrated together with the Energy Interoperability laboratory to conduct on-field network and interoperability analysis. The results will be used to provide support to energy package policies and standardisation efforts.	14/12/2018	JRC technical reports
												344003	Micro-Generation, Cyber-security and Privacy	This deliverable aims at exploring the use of the distributed ledger paradigm to incentive the participation of the citizen to a truly free, open and interoperable energy market, producing a feasibility study and a first demo testbed. The activity will also start to analyse privacy, cybersecurity and big-data issues of the smart-home in the Energy market context. This deliverable will support point4.1, 4.2 and 4.3 of the DSM (COM(2015)192) and point 2.2 of the Energy Union package (COM(2015)80	14/11/2017	JRC technical reports
												344004	BAT Follow-up	The JRC signed an A.A. with DG-ENER to technically support the recommendations (2014/724/EU) and (2010/75/EU) till mid 2016. This deliverable is intended to extend the support to these policies to December 2018, and to continue to provide support to the establishment of the Energy Cyber-Security Strategy where JRC is already contributing as member of the steering committee and as member of the Energy cyber-security platform	14/12/2018	Science-for-policy reports
272 - SGER JRC.C.3	3478 - SGI Smart Grid Interoperability	This work package aims to support the implementation of the Energy Union Roadmap's Actions on "Infrastructure" (interconnection developments), "Electricity" (security of supply measures), "Industrial competitiveness" and "Cross cutting measures" by - providing data, analysis and intelligence on smart grid interoperability. - mapping competencies, infrastructure and facilities of smart grid laboratories at EU level and beyond. - analysing the role of ICT standardisation in enabling smart grid interoperability, grid management and distribution automation. - studying the role of cybersecurity in the protection of critical infrastructure and in ensuring security of supply in smart grids. - running the JRC-Ispra branch of a network of laboratories, with specific focus on smart grids and electric vehicle interoperability, in order to scientifically support the development of European energy and electricity policies in that area.	JRC.C.3 Evangelos KOTSAKIS	3.2.c	ENER	JRC	Manuel Sanchez Jimenez (ENER B.3)	GROW		01/01/2016 30/12/2018	INS-RS	1	Smart grid labs inventory	This deliverable aims at expanding the mapping exercise of competencies, infrastructure and facilities of smart grid laboratories developed at EU level and beyond.	31/12/2017	JRC technical reports
												2	Reference networks for real time simulation	This work improves the existing knowledge about the distribution system operators (DSO) and their networks across the European Union and provides a small set of Representative Networks which can be used by other researchers as a base for their analysis in future studies.	30/12/2017	JRC technical reports
												3	Smart grid-PV-electric vehicle interoperability	Smart grid, PV and electric vehicle test case, focused on the possible use of energy from PV for the charging of electric vehicles by means of the appropriate management of the smart grid. It will be based on scenarios of the CEN-CENELEC-ETSI working group and recognised European and international standards.	13/07/2017	Technical systems
												4	Electric Vehicle to grid testing and simulation	Smart grid and electric vehicle test cases focused on the interactions between smart grids and electric vehicles in order to provide demand response services by either returning electricity to the grid or by suppressing their charging rate. The concept allows V2G vehicles to provide power to help balance loads. It will be based on scenarios of the CEN-CENELEC-ETSI working group and recognised European and international standards.	30/12/2018	JRC contributions to standards
												5	Smart Grid Communication emulation	Cross-JRC activity aimed at interconnecting the JRC C.3 smart grid laboratory with the JRC E.2 cyber security laboratory and emulating the communications topology of smart grids. It will be based on scenarios of the CEN-CENELEC-ETSI working group and recognised European and international standards.	31/12/2017	JRC contributions to standards
												6	Distribution automation platform	Smart grid distribution provides two-way communications to connect substations and grid device. Smart capability of the distribution network enables the automation of a centralized SCADA and Distribution Management System (DMS) applications such as substation automation, SCADA, line switch automation and voltage monitor. On-demand management is also part of the distribution automation platform of the grid.	30/10/2018	Technical systems
												7	Scientific publications	1) Article on SG-EV interoperability: Smart grid-Electric Vehicle interoperability and integration test case 2) Article on Microgrid testing and simulation. Assessing microgrid technologies through analytical simulations and laboratory emulations. Integration of small energy sources into a microgrid. 3) Article on SStatistical methodology for experiments design. Further developments concerning a statistical methodology for the design of experiments.	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
272 - SGER JRC.C.3	3480 - EDSC Emerging Distribution Systems and Consumers	This work package aims to support the implementation of the Energy Union Roadmap's Actions on "Electricity" (Market design) and "Retail" (New deal for Energy consumers) and of the Smart Specialisation Platform by: - assessing (big) data and providing analyses and intelligence on emerging electricity distribution systems - monitoring smart grid developments in Europe with special focus on active consumers, demand side management, vulnerable consumers, energy communities, retail market dynamics and emergent distribution system architectures (micro grids); - employing social-technical simulation tools (i.e. agent based) to analyse the interaction between smart grid infrastructure (smart grid technologies + electricity network), consumer (demand side	JRC.C.3 Anna Maria MENGOLINI	3.2.c	ENER	JRC	Manuel Sanchez Jiménez, DG ENER.B.3	CNECT GROW JUST REGIO		01/01/2016 11/12/2018	INS-RS	1	Smart grid projects outlook	The JRC smart grid projects database will be continuously updated. A special focus will be given to the analysis of vulnerable consumers and emerging energy communities. NB: due	30/09/2017	Science-for-policy reports
												2	Retail Energy Market Simulation tool (REMS)	The Retail Energy Market simulation tool will model the interaction between the electricity prosumers and the market focusing on: switching rates, market shares of different electricity contracts, energy savings etc.	30/09/2017	Science-for-policy reports
												3	Smart grid Socio-techno-economic assessment	The deliverable will focus on socio-techno-economic analyses over emerging energy communities.	30/12/2017	Science-for-policy reports
												4	Smart grid analyses for Smart Specialisation	Report supporting the efficient and effective use of smart grid public investment in research and innovation in the framework of the Smart Specialisation Platform.	24/11/2017	Science-for-policy reports
												5	Distribution System Observatory	The JRC distributions system observatory will be updated and further analysed to include trends, developments and lessons learned in EU	15/11/2018	JRC technical reports
												6	Reference Distribution Network Development	Assessment of policy options linked to distributed generation penetration, demand response integration via representative distribution network models.	28/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)

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Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
		management proposals, involve consumers, and other market stakeholders; - conducting independent performance assessments and cost-benefit analyses of smart grid projects in Europe focusing on scalability & replicability studies, energy communities and knowledge sharing & communication actions.										7	Prosumer performances through agent-based models	Peer-review paper on Consumer/prosumer performances through agent-based modelling	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
272 - SGER JRC.C.3	3481 - ERMISH Electricity Retail Market and Smart Home Integration	This work package aims to support the implementation of the Energy Union Roadmap's Actions on "Electricity" (Market design), "Retail" (New deal for consumers), "Industrial competitiveness" and "Cross-cutting measures" by - providing data, analysis and intelligence on Electricity Retail Markets and Smart Home Integration. - developing and interlinking load simulation tools and agent-based models to capture the behaviour of electricity consumers. - assessing performances and interfaces of the smart grid cyber and physical layers. - running the JRC-Petten branch of a network of laboratories, with specific focus on smart home integration and distributed energy resources, in order to scientifically support the development of European energy and electricity policies in that area.	JRC.C.3 Miguel OLARIAGA-GUARDIOLA	3.2.c	ENER	JRC	AILIO Eero (ENER B.3); CRAYE Matthieu (ENER A.3)	CLIMA CNECT DEVCO ENV GROW HOME	Tech Serv - Member States and their Technical Services/type approval authorities	01/01/2016 30/12/2018	INS-RS	1	Demand response test case	Development of a laboratory test bed to simulate Demand Response use cases based on price, load or peak load shifting stimulus. F03's real time simulation systems and Advanced Metering Infrastructure will also be integrated in the test bed to allow the assessment of interoperability aspects. The test bed will be based on scenarios of the CEN-CENELEC-ETSI working group and recognised European and international standards.	29/09/2017	JRC contributions to standards
												2	Consumer behaviour test case	Development of a laboratory test bed for the integration of consumer/prosumer performances through agent-based modelling in the assessment of demand response related use cases. The test bed will be based on scenarios of the CEN-CENELEC-ETSI working group and recognised European and international standards.	01/06/2018	JRC contributions to standards
												3	Retail market integration	Retail electricity markets and the impact of consumer/prosumer load will be studied through the creation of a test system. Different models will be integrated under the smart grid/smart home laboratory test bed including local generation and storage, local energy, end-user services, DSO and retailers functions and considering the impact of demand response programmes and consumer behaviour.	01/06/2018	Technical systems
												4	Interoperability assessment lab	Design, construction and implementation of a Smart Grid Interoperability laboratory in Petten. The facility will count with a Smart Home laboratory, micro-grid, including PV and battery storage infrastructure, a real time simulation system and hardware in the loop testing capabilities. It will serve to assess interoperability aspects of the integration of smart home and retail market in smart grids with a focus on the consumers/prosumers active role in the new energy market.	01/12/2017	Technical systems
												6	Real time simulation platform	Development of a geographically-distributed real-time simulation platform by interconnecting the systems in Petten (OPAL) and Ispra (RTDS) using the Intersite link of the Geant network for data exchange. It includes the development of the specific hardware and software interfaces that will allow the execution of distributed models using both systems in synchronization. A technical report describing the concept, methodology technical aspects and use cases will be produced.	01/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												7	Interoperability assessment methodology	Technical report describing the methodology to be used in the laboratory to carry out the interoperability tests, including a technical description of the integration of the different test beds and laboratories (Petten, Ispra and EPIC) and the creation of the use cases templates and repository. Different examples in the areas of the work package will be also presented. The methodology will be developed specifically for the laboratory based on the CEN/CENELEC/ETSI reference architecture.	01/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
324 - EU-EIM JRC.C.3	3520 - AFEIP Assessment Framework of Energy Infrastructure Projects	Energy infrastructure projects will be deployed in the coming years as a key contributor to the achievement of the Energy Union. These projects will have to be evaluated with regards to the different dimensions considered in the Energy Union Strategy and the related policies. There is a need to develop a methodological approach to assess project proposals from the techno-economic viewpoint, including methodologies for cross-border cost allocations (CBCA) and decision making procedures. This approach will be based on the use of the right models fed by reliable data, which will allow a fair comparison among alternative projects. This WP contributes to the generation of the 3rd and 4th lists of Projects of Common Interest (PCIs) and the Infrastructure Forum. In addition, the methodological approach could be used for other priorities of the Energy Union: Initiative to strengthen the Energy Community; Strengthen Euromed cooperation on gas, electricity, energy efficiency and renewable sources; Report on the European Energy Security Strategy.	JRC.C.3 TILEMAHOS EFTHIMIADIS	3.2.c	ENER	JRC	Catharina SIKOW-MAGNY	CLIMA COMP DEVCO ECFIN ENV	Tech Serv - Member States and their Technical Services/type approval authorities	01/01/2016 31/12/2018	INS-RS	3	Monetisation of security of supply: methodological	This report will design a methodological approach for evaluating society's willingness-to-pay for the security of energy supply. In particular, it will build upon the methodology of WPK SASOS to include more consumer categories (e.g. large sectors) and enable its application on a pan-European scale. The relevant existing literature will also be thoroughly reviewed.	30/12/2017	Science-for-policy reports
												4	Monetisation of security of supply: pan-EU survey	Building upon the results of WPK SASOS, this report will present the data and conclusions of an extended pan-European survey of society's willingness-to-pay for the security of energy supply.	30/12/2018	Science-for-policy reports
												5	Consumer appreciation of security of supply	Results of the pan-European survey of society's willingness-to-pay for the security of energy supply.	15/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												6	CBCA for int. energy infrastructure projects	The report will develop a methodology for the cost allocation of international energy infrastructure projects. This issue is of particular importance for the Projects of Common Interest. A workshop will be organised for exchanging views on the relevant methodologies with external experts.	22/12/2017	Science-for-policy reports
												7	Governance of int. energy infrastructure projects	This report will provide insights and best practices for the governance and decision making processes of international energy infrastructure projects.	28/09/2018	Science-for-policy reports
221 - PSMM JRC.C.7	4204 - WATERFLEX Water Resources Providing Flexibility to the European Power System	This WP is a joint exploratory research project run with unit H1 that aims at holistically assessing the water-energy nexus in a low carbon energy system. As a result of this project, the power system model Dispa-SET used in WP 3288 will be improved with the addition of a mid-term hydro-thermal coordination model, water-related constraints for the cooling of thermal power plants, and better hydro-related data. The work within this WP will consist of a soft coupling between the LISFLOOD hydrological model and the power system model Dispa-SET. The aim of the coupling is to understand the impac	JRC.C.7 Ignacio HIDALGO GONZALEZ	3.2.c	ENER	JRC	Matti Supponen (ENER.B.2), Jean-Marie BEMTGEN (ENER.C.2), Gwennael JOLIFF-BOTREL (RTD.G.1)	ENV RTD	SET-Plan Com - SET-Plan Community	01/01/2016 31/12/2017	INS-ER	1	Hydro-related modelling 2017	Improved versions of the Dispa-SET power system model (with more accurate representation of hydrological constraints and hydropower-related data) and the LISFLOOD hydrological model (taking energy uses of water into account).	31/12/2017	Scientific information systems and databases
												2	Water-energy nexus report 2017	JRC reports on the water-energy nexus and the implications of the limitations of the water system on the European Power System.	31/12/2017	Science-for-policy reports
												3	Scientific publications 2017	Peer-reviewed journal publications (e.g. on power system sensitivities resulting from historical and future climate scenarios and environmental impacts of hydropower expansion).	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
324 - EU-EIM JRC.C.3	5082 - GMF Gas Market Framework	A liquid, well diversified, hub-based gas market is considered as a key contributor to Energy Security. The delay in the implementation of the third package has been identified by different stakeholders as the most important contributor to not achieving such a good quality market in the EU and neighbouring countries. Proposals for a Gas Target Model (GTM) for the EU have been developed and updated along the last years by ACER and by the Florence School of Regulation. The GTM must be accompanied by the adequate	JRC.C.3 Anca COSTESCU	3.2.c	ENER	JRC	Stefan MOSER	COMP DEVCO ECFIN GROW		01/01/2017 31/12/2020	INS-RS	D1	State of implementation of the Gas Target Model	Review of the Gas Target Model and the implementation of the Third Energy Package (gas) in the EU, including definition of market areas, present and expected market players and situation of Network codes implementation. Follow up of progress in the coming years, identifying possible deficiencies. Attention to the different types of contracts and hub design in the gas market. Review of gas price formation mechanism.	15/12/2017	Science-for-policy reports
												D2	Data sources and models for gas demand and prices	The deliverable will focus on the identification and selection of data sources regarding gas demand and gas prices in the EU. It will include a review of structure of the demand, a study of available models to analyse demand and prices and a study of relations with other markets (electricity, oil, other regions).	30/12/2018	Science-for-policy reports

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271 - EWSI JRC.C.3	5094 - GEMD Greek Electricity Market Design	The purpose of this Administrative Arrangement between JRC and SRSS is to provide support on issues related to Electricity Market reforms in Greece. The scope of this project is to help the Greek Energy Regulator to implement significant reforms in the Greek electricity market with the aim of adapting the latter to the EU target model. More specifically, the support activities cover the following areas and topics: Codes and Manuals, Compliance of Codes to the Target Model, Proposals on market power mitigation measures, Validation of IT systems adopted or developed by the System and Market Operator, Structure of the Dry-Run Period for market arrangement, Establishment of a Clearing House and a Credit House, Auction-based Capacity Mechanism, Framework for Demand Response.	JRC.C.3 TILEMAHOS EFTHIMIADIS	3.2.c	SG	SG	KASPAR RICHTER	ENER		14/12/2016 14/12/2018	CON-AA	11	Market design for the market operator	a. Forward Market – Products with Physical Delivery Obligation and Settlement in Day Ahead Market – including interface with Day-Ahead Market – offers and bids, clearing algorithm, gates, etc. b. Day-Ahead Market – including Nomination interfaces with Forward Market and Intra-Day Market – offer and bids, clearing algorithm according to CACM requirements (PCR), gates, procedures etc. c. Intra-Day Market – including interfaces with Day-Ahead and Balancing Market - offers and bids, etc.	08/08/2017	External study reports
												12	Market codes for Forward, Day-Ahead, and Intra-day	Market Codes for Forward Market, Day-Ahead Market and Intra-Day Market. The text will include all the necessary details required for the participation on each of the above market segments. These are to support the market operator.	08/08/2017	JRC technical reports
												13	High-level advice on IT specs for various markets	General high-level advice on the IT specs for Forward Market, Day-Ahead Market and Intra-Day Market – On the basis of the detailed level market design and the market codes, JRC will give high-level advice in form of a short report on the general functional design of the IT specifications, pointing out which functions should be implemented and how the different elements/features should interact (i.e. data input/output, processing, etc.).	01/09/2017	JRC technical reports
												21	Market design for the TSO	Detailed Level Market Design a. Balancing Market – Market Participation, Integrated Scheduling Process, Balancing Energy, Capacity provision and Imbalances including settlement. b. Interconnection Congestion Management - TSO activities related to pre and post coupling procedures for Day-Ahead and Intraday Market, procedures related to the Forward Capacity Allocation Market, Nomination Platform.	08/08/2017	External study reports
												22	Market codes: balancing and congestion management	a. Balancing Market Code – Market Participation, Integrated Scheduling Process, Balancing Energy, Capacity provision and Imbalances including settlement. b. Interconnection Congestion Management (chapter in Operational Code) - TSO activities related to pre and post coupling procedures for Day-Ahead and Intraday Market, procedures related to the Forward Capacity Allocation Market, Nomination Platform.	08/08/2017	External study reports
												23	High-level IT specs for various markets (TSO)	High-level advice on IT Functional Design Specifications: a. Balancing Market: High-level advice on IT Functional Design Specifications for Integrated Scheduling Process. b. Balancing Market: High-level advice on IT Functional Design Specifications for Balancing Energy and Capacity provision. c. Balancing Market: High-level advice on IT Functional Design Specifications for Balancing Market and Imbalances calculations and clearing and settlement. d. Interconnection Congestion Management.	01/09/2017	JRC technical reports
												3	Gas balancing platform study and roadmap	Based on a study by Fluxys, RAE would like to obtain an independent view on the gap analysis performed, and furthermore, receive the basic structure and main elements for deriving a roadmap that would lead to full compliance with the Network Codes, so as to gradually move towards a well-functioning gas market.	31/12/2017	JRC technical reports
												4	Potential market power mitigation measures	A report on potential measures on market power mitigation to be assessed by the regulator. A key output of this report should be the analysis of the value of the hedging ratio and its impact on competition.	01/07/2017	JRC technical reports
												5	Establishing a Clearing House and a Credit House	Scope, role, responsibilities, and financial viability for both (potential) Clearing and Credit houses.	01/08/2017	JRC technical reports
												61	Adequacy study	Assessment of the TSO's adequacy study, underlying the capacity mechanism proposal, and its compliance with the ENTSO-E standards. Technical assistance on the amendment of this study, if required.	02/04/2017	JRC technical reports
												62	Flexibility requirements	Technical assistance on defining the methods and criteria of a potential study of flexibility requirements to be performed by ADMIE, based on similar studies by other TSOs (e.g. Belgium and Ireland).	01/05/2017	JRC technical reports
												63	Auction-based capacity mechanism	Report on key design parameters in the auction-based capacity mechanism, to be assessed by RAE.	01/07/2017	JRC technical reports
												64	Auction documents	Technical assistance to TSO on drafting the auction documents.	01/08/2017	External study reports
												65	Assessment of the auction results	Assessment of the auction results, to be conducted immediately after the auction.	05/06/2018	JRC technical reports
167 - GasTEST JRC.C.1	5340 - NGLLOBE Natural Gas for Low Carbon Energy	The European Commission has developed a sustainable alternative fuels strategy to support the development of appropriate refuelling infrastructure and associated standards. The Alternative Fuels Infrastructure Directive 2014/94/EU (AFID) requires Member States to adopt and publish national policy frameworks (NPFs) on the refuelling infrastructure and supports the use of common technical specifications for recharging and refuelling stations. The WPK will, at the request of DG MOVE, focus on the development and application of a	JRC.C.1 Eveline WEIDNER RONNEFELD	3.2.c	ENER	JRC	K. Kovacs	MOVE		01/01/2017 31/12/2018	INS-RS	NG1	Standardisation work on natural gas quality	Pre-normative work, study of the impact of identified values of H-gas quality parameters not yet or insufficiently established in EN16726:2015 on the whole gas supply chain on the basis of technical and fact based findings with the purpose of supplying information and recommendations on the parameters in question to CEN/TC 234 for the future revision of EN 16726:2015. For this 3-year project, annual interim reports will document progress.	31/12/2018	Science-for-policy reports
												NG2	Support to implementation of Directive 94/2014	Support implementation of the Deployment of Alternative Fuel Infrastructure directive by monitoring progress on national implementation. Focus is the status of national framework programmes. Work will include a mapping of the existing CNG and H2 refilling stations in the EU, with detailed technical indicators (manned vs. unmanned, flow back-to-back capacity,...). JRC reports back to DG MOVE on the national status and issues an annual report.	31/12/2017	JRC contributions to policy documents
3.2.d energy efficiency support the implementation of the EU legislation in areas of renewable energy and energy efficiency, including on the efficient heating & cooling; provide technical support for the development of the legislative framework for the time period after 2020; analyse the development and deployment of energy efficiency technologies; assess technology innovation in energy-intensive industries; support the																
		The objective of this WPK is to assess the role of technology innovation and the policy options for the reduction of energy consumption of end-use products. The WPK focuses in particular on supporting EU sustainable product policies, in particular the Eco-design and Energy Labelling and indirectly the										1	Report on Smart and Connected Appliances	Science for Policy Report report including information on latest technological developments, communication protocols, standards and consumer acceptance. Focus is also on end-user interfaces and consumer behaviour. The report will be based on the findings of a dedicated scientific expert workshop and the EEDAL'17 conference on energy saving, energy storage and demand response potential offered by smart and connected end-use appliances (lighting, appliances, ICT, air-conditioners, water heater).	31/10/2017	Science-for-policy reports
												11	Methods to evaluate policy induced energy savings	Peer reviewed articles investigating new and innovative methods to assess energy savings due to energy efficiency policies based on econometric modelling. Focus will be also on EU products policy achievements (e.g. Eco-design, the Energy Label, etc.). Comparative study on the strengths and weaknesses of financial instruments will complete this analysis (e.g. fiscal instruments, loans, grants, feed-in-tariff, risk pooling, equity financing, green bonds, carbon trading, etc.).	30/09/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)

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326 - EE-E3P JRC.C.2	607 - EEinPr Energy Efficiency in Products	Circular Economy. These are key EU energy efficiency policies in the third pillar of the Energy Union, i.e. the moderation of the energy demand. These policies are expected to deliver by 2020 half of the energy efficiency target. The WPK analyses the current energy consumption of key products in different sectors and the technical and economic energy efficiency potential, including the typical load profiles of electricity consumption. The WPK will also develop methodologies and indicators to measure energy savings. Finally the WPK investigates innovative policies, financing and business models for the adoption of high efficient equipment and systems through energy saving companies (ESCOs). Special emphasis will be placed on Information and Communication Technologies (ICT), motors and drives, smart and connected appliances, and lighting. In ICT the research is focused on technologies to reduce the fast growing energy consumption associated to the internet and cloud computing usage. In particular covers broadband equipment and data centres, including servers, storage and networking equipment. The work on data centres is not yet covered by the Eco-design measure and therefore of particular importance due to the uniqueness of this research at European level. Of particular importance are the further development of the European Codes of Conduct for energy efficiency in ICT as a unique research and implementation action carried out with collaboration with major industry stakeholders and research centres. The WPK includes the participation in and contribution to the development of international (IEC) and European standards (CEN/Cenelec) on energy efficiency measurement methods. This WPK makes public the findings in JRC reports, including the Status Report on Energy Efficiency, and peer-review publications. The data collected in this WPK will feed into the JRC Energy Efficiency Platform (E3P), thus contributing to its success. This work is needed because no other public or private institution is able to carry it out in an independent manner. Stakeholders, including key manufacturers, stress the important role of the JRC in energy efficiency in products.	JRC.C.2 PAOLO BERTOLDI	3.2.d	ENER	JRC	NUIJ Robert (ENER.C.3)	CLIMA CNECT ENV GROW JUST	- European Telecommunication Network Operators' Association CEN - European Committee for Standardization CENELEC - European Committee for Electrotechnical Standardization (CENELEC) EDCA - European Data Center Association ETSI - European Telecommunications Standards Institute (ETSI) IEA - International Energy Agency IEC - International Electrotechnical Commission ISO - International Organization for Standardization (ISO) ITU - International Telecommunication Union	01/01/2014 31/12/2018	INS-RS	13	Assessment of smart energy systems for prosumers	With the adoption of on-site generation consumers will be transformed in prosumers. Consumers are still lacking tools, standards and guidelines for the selections, operation, cost assessment and financing of these new technologies. The report investigates the new technologies, new services, new tariff structures and business models to foster self-generation, storage and demand response as presented at EEDAL'17. Policies and regulatory frameworks to enable the transition will also be identified.	31/10/2017	Science-for-policy reports
												14	Sustainable Social Practices	This deliverable analyses sustainable energy policy options associated with a reorganization of social practices. Traditional sustainable energy policies are designed by focusing on a reduction of the energy inputs needed for energy services. This deliverable analyses the limitations of this policy approach and shows how it can be complemented with policies focused on re-organising consumption by changing social practices (e.g. related to urban transportation, food production and consumption).	31/05/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												15	Report on SSL	Report on SSL, where the most recent market and technology information will be presented. The major focus would be on street and indoor lighting applications, including business models (e.g. energy service companies, public private partnership, etc.) to foster the installation of SSL by public authorities. The deliverable also includes the preparation of the the IECEB'18 Conference, which is mainly focused in SSL. T	31/07/2017	Science-for-policy reports
												2	Progress report on ICT Code of Conducts	The European Codes of Conduct are pre-normative and pre-regulatory European initiative in collaboration with research institutes, experts and industry to improve energy efficiency in ICT. Currently there are 5 European Codes of Conduct: Broadband Equipment, External Power Supplies, Digital TV Services, Data Centres and UPS. Under this deliverable the technical specifications will be revised in agreement with stakeholders. The deliverables are Technical Reports, including best practices examples	31/10/2017	JRC technical reports
												4	Support to the Eco-design and Energy Labelling	Support to the Eco-design and Energy Labelling Directive is provided. It includes participation in IS groups, follow up of ISCs and when required CEN/Cenelec technical committees. It will focus on technology, standards and market developments, trends and data, which will be collected through the scientific coordination of the EEDAL'17 and EEMODS'17 conferences. The focus is on the following equipments: ICT, smart appliances, electric motors, professional refrigerators and Solid State Lighting.	31/12/2017	JRC technical reports
												6	Appliance Energy Consumption and Stock Model	Energy consumption data collection for individual equipment/appliance (lighting, electric motors, white goods, ICT, etc.) based on equipment/appliance sales and the installed stock data. The data is collected from market sales data available and literature search. Additional information will be collected through analysis of in-situ energy consumption monitoring campaigns. This deliverables includes the creation of a stock model to assess the impact of EU product policies.	30/06/2018	Science-for-policy reports
												7	Market Assessment of Energy Service Companies	The deliverable will present a detailed analysis of the current market of Energy Service Companies (ESCOs) in the EU Member States and other countries. The market assessment includes the analysis of the barriers and drivers for the development of the national ESCO markets, as well indicators (e.g. number of projects, level of investments, sector covered, etc.) on the developments of each national market. The report will particularly focus on Energy Performance Contracting.	30/06/2018	Science-for-policy reports
												8	Status Report on Energy Efficiency	The Energy Consumption and Energy Efficiency Report is produced every two years to summarise the status of energy consumption and energy efficiency trends in EU-28, in the four main energy consuming sectors: residential, tertiary, transport. The analysis includes also consumption drivers such as economic activity, population, heating/cooling demand household and building characteristics and energy prices. It is based on a simple econometric model and decomposition analysis using Eurostat data.	31/10/2018	Science-for-policy reports
326 - EE-E3P JRC.C.2	748 - EFIS Energy efficiency in industry and energy supply	The objective of this WPK is to assess the role of technology innovation including large scale deployment of technology best practices in the reduction of energy consumption and greenhouse gas emissions in the European energy-intensive industries and its impact on the industrial competitiveness. This is achieved by analysing the evolution of the industry up to 2050 in different scenarios. The analyses will be carried out in detailed bottom-up models at facility level and with a European coverage. Special emphasis will be put on the pulp and paper industry and on the dissemination of the results previously obtained in the analysis of other energy intensive industries (mainly the chemical industry). The close follow-up of the technology innovation trends in the industry serves to assess the role of energy efficiency as a contribution to the moderation of the energy demand (third pillar of the Energy Union) and contributes to the analysis of the role of price formation of the ETS in the uptake of low carbon and energy efficient technologies, that is an component of the fourth pillar of the Energy Union. Moreover, identifying missed cost-effective investments supports the design of policies aimed to overcome the barriers that precluded those investments; this is identified as the way forward in the 2016's state of the Energy Union package. The objectives of the Energy Efficiency project regarding the energy-intensive industries are fully	JRC.C.7 JOSE ANTONIO MOYA RIVERA	3.2.d	ENER	JRC	HODSON Paul (ENER.C.3)	CLIMA GROW RTD		01/01/2016 31/12/2018	INS-RS	1701	Scenarios for the pulp and paper industry	Report analysing the role of technology innovation to reduce greenhouse gas emissions and energy consumption in the pulp and paper industry up to 2050. The model will follow a bottom up approach at facility level.	01/11/2017	Science-for-policy reports
												1702	Technology Innovation in Industry	Study gathering common findings from all previous JRC related models and studies about energy intensive industries, identifying the barriers that limit the achievement of potential innovative technologies.	15/12/2017	Science-for-policy reports
												1705	Scientific publications and outreach activities	Peer-review papers; about the diffusion of clean technologies in energy-intensive industries, and about prospective energy efficiency and GHG emission scenarios for an energy-intensive industry. This deliverable will also include any of the following output (e.g. interim reports, presentations, conference proceedings, participation to workshops etc.)	30/11/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												1801	Technology progress in the cement industry	Report about the technology progress made by the cement industry in last 15 years; and its implications for EU policies	31/12/2018	Science-for-policy reports
												1802	Database about the European pulp & paper industry	Database with information at facility level about the pulp and paper industry in the EU. They include the technologies currently used with their feedstock and energy consumptions and GHG emissions	30/08/2018	Scientific information systems and databases
												1804	Scientific publications and outreach activities	This deliverable will include any of the following output (e.g. interim reports, peer-reviewed scientific publications, presentations, conference proceedings, participation to workshops etc.)	28/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
		By contributing to a 40% of total final energy consumption and 36% of CO2 emissions, buildings is the most important sector with respect to energy efficiency policies. At the same time it is the most challenging one, as many different aspects play a role (economic, engineering, behavioural, health) and because of the number of linkages with other sectors (urban areas, mobility, products and										10	Modelling new NZEB building in EU	The report will present the results of the modelling and simulation for the calculation of optimal NZEBs level in different EU locations/climatic zones for new buildings. The report will be based on the JRC contributions to the definition and finalisation of European standards for the implementation of the EPBD. It will analyse the definitions and performances assessment of building components (including the integration of renewable energies). Innovative standards, energy monitoring systems and test methods for NZEBs and smart buildings will be developed in the frame of the relevant CEN committees. Future innovative technologies will be investigated.	31/03/2017	JRC technical reports
												11	Standards and future building technologies	The report will follow-up a work done for DG ENER, and will examine the latest development of MS in the application of nZEB concept and will examine possible challenges and benefits from a transition to a concept of Net Zero Energy Districts (NZED), where shared renewables or district heating can offer a more efficient and sustainable option than the focus on the energy balance of the individual building. The report will review and summarise examples of successful NZED in Europe.	30/09/2017	JRC technical reports
												12	From nZEB to NZED concept	The report will follow-up a work done for DG ENER, and will examine the latest development of MS in the application of nZEB concept and will examine possible challenges and benefits from a transition to a concept of Net Zero Energy Districts (NZED), where shared renewables or district heating can offer a more efficient and sustainable option than the focus on the energy balance of the individual building. The report will review and summarise examples of successful NZED in Europe.	31/07/2017	Science-for-policy reports
												13	Architectural analysis of efficient buildings	A architectural composition analysis of best Practice high efficient buildings will be carried out, in order to identify common elements, barriers and drivers to energy efficiency, with the aim of better integrating energy efficiency and architectural design in the EU building stock	30/11/2017	JRC technical reports

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
326 - EE-E3P JRC.C.2	793 - EIB Energy in Buildings	sectors (residential, tertiary products and appliances) and because of the social importance of houses. In addition, buildings has the potential to have a central role in the transition of EU citizens from energy consumers to energy prosumers, with growing possibilities of integrating energy savings, energy production and energy storage technologies. The work package explores different pathways and challenges in transforming the EU buildings stock, both in terms of energy efficiency and renewable energy production. Robust scientific methodologies will be developed using and/or generating data to assess: energy savings and production potential; technologies, including the economics of their implementation; current policies including regulations as well as financial and economic instruments and their impact. The analysis of social issues and health implications of building renovation will contribute to an holistic view of the building sector.	JRC.C.2 DANIELE PACI	3.2.d	ENER	JRC	Paul Hodson (ENER.C.3), Marzena Rogalska (GROW.G.1), Mikel Landabaso Alvarez (REGIO)	CLIMA CNECT ECFIN GROW REGIO	CEN - European Committee for Standardization IEA - International Energy Agency	01/01/2014 31/12/2018	INS-RS	2	Modelling new nZEB	The article will show and discuss building energy simulation results for cost-optimal options in different EU locations and for combinations of building energy technologies and products.	31/10/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												4	Positive Energy Buildings design competition	A design competition will be launched as a show-case for low-cost innovative design options of positive energy houses for young families to offer concrete examples to policy makers. Participants are asked to design innovative projects merging affordability, comfort/quality of life and energy performance. Selected projects will be awarded. The report will present the main findings, best practices and lessons learned from the competition.	28/02/2018	JRC technical reports
												5	BuildAtlas	This deliverable includes detailed data collection on the EU building stock, energy consumption and production and energy efficiency technologies. BuildAtlas will include interactive web maps and open GIS layers on energy in buildings. This deliverable will contribute to the European Energy Efficiency Platform and will be developed in coordination with the EU Building Stock Observatory, at DG ENER.	31/03/2018	Scientific information systems and databases
												6	Building Stock Model	Development of a JRC in-house model of the EU building stock to be used for projections and scenario analysis, especially for impact assessment studies. This model will be linked to energy models and economic models.	31/07/2017	Scientific information systems and databases
												7	High energy performance, indoor comfort and health	The deliverable investigates the relation between high-energy performance buildings, indoor air quality and health. Effects of improved air tightness in new buildings and inadequate ventilation and poorly maintained ventilation systems in existing buildings will be assessed as well as impacts of bad insulation, or inadequate heating and cooling. The effects on comfort and health will be taken into account and monetized, also in terms of productivity gain / loss. Joint deliverable with Dir.F	30/06/2018	Science-for-policy reports
326 - EE-E3P JRC.C.2	1903 - EEHCP Review national assessments on energy efficiency potential in the heating and cooling sector	JRC shall provide DG ENER with technical assistance, analysis and input to support the implementation of Article 14 of Directive 2012/27/EU on energy efficiency. The JRC should also contribute to the development of related policies for the strengthening of the EU energy efficiency framework on heating, cooling and electricity supply. The activity during 2017 will primarily be to evaluate the national assessments of Member States' energy efficiency improvement potentials performed through Cost-Benefit analysis in the heating and cooling sectors and to evaluate the national exemptions from the CBA obligation. The main task of JRC is to judge whether the Comprehensive assessment of a Member State complies with the EED Art14 from a technical point of view. At the end of the AA (mid 2017) a workshop will be organised in which the lessons learned from the review will be shared with Member States. The Member States have a legal obligation to perform a Comprehensive assessment according to the Energy Efficiency Directive Article 14. It contributes to improving energy efficiency, decarbonisation, increasing security of supply. It also contributes to the circular economy by	JRC.C.7 Johan CARLSSON	3.2.d	ENER	ENER	Eva HOOS (ENER.C.3)	CLIMA GROW RTD		01/08/2014 31/07/2017	CON-AA	3	Final report	Final report providing an account of the activities performed during the project.	30/06/2017	Science-for-policy reports
												4	Scientific publications and outreach activities	Any of the following type of outputs, e.g. interim reports, peer-reviewed scientific publications, presentations, conference proceedings, participation to workshops.	30/06/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												5	Evaluation of type exemptions	Evaluation and recommendations on the type-exemptions under Article 14(6) (nuclear, CCS, peak load/ back-up and industrial/ district heat installations /networks based on heat and distance thresholds). The report will include the evaluation of Member States' notifications and recommendations for the most appropriate heat and distance thresholds and verification protocols for peak load and back-up installations.	30/06/2017	Science-for-policy reports
												5	Validation workshop	Report on a JRC organised workshop to validate the JRC proposed methodology for the implementation of the Comprehensive Assessment and the installation level cost-benefit analysis.	30/09/2015	Scientific and policy reports
												5	Evaluation of type-exemptions	Evaluation and recommendations on the type-exemptions under Article 14(6) (nuclear, CCS, peak load/ back-up and industrial/ district heat installations /networks based on heat and distance thresholds). The report will include the evaluation of Member States' notifications and recommendations for the most appropriate heat and distance thresholds and verification protocols for peak load and back-up installations	31/12/2016	Science-for-policy reports
326 - EE-E3P JRC.C.2	2023 - TSSEED Technical/scientific Support to the EED and EPBD	The Energy Efficiency Directive is a key EU policy to reach the 2020 energy efficiency target. It requires Member States (MSs) to adopt a number of specific policies, to prepare every 3 years a National Energy Efficiency Action Plan (NEEAP) and to report annually on the energy savings achieved and allowing a strong monitoring by the Commission. The Energy Performance in Buildings Directive requires strong implementation of policies in the buildings sector by MSs. The present WPK is related to the AA TSSEED with DG ENER and it includes the JRC support to DG ENER for the effective implementation of the EED and EPBD by MSs and the monitoring of the MSs' progresses towards the 2020 energy savings (e.g. assessment of MS contributions, such as NEEAP, Building Renovation plans or annual reports). The WPK includes the support for the revision of the EED and EPBD as well contribution to the major EU financial initiative for energy efficiency the Smart Financing for Smart Buildings. While the other WPKs in this project cover specific sectors such as building, products, industry, heat and cooling and are investigating technologies and policies, this WPK is covering the direct support to policy for the monitoring and revision of the two Directives, the EED and the EPBD, and the monitoring of MSs' progresses towards the 2020 target. Due to the need of independence and impartiality in assessing the MSs implementation the JRC is the best placed scientific organisation to carry out this task. In addition the JRC has the needed scientific competences having analysed the MSs NEEAPs since 2008 and having created the template as well as the evaluation framework. A new AA with ENER to continue the support to the EED and EPBD and the Energy Union Governance is foreseen to start in December 2017 at the conclusion of the present AA with a 3 year duration and a total budget of 2.1 M Euro.	JRC.C.2 PAOLO BERTOLDI	3.2.d	ENER	ENER	BIERER Axel (ENER) <Axel.BIERER@ec.europa.eu>	CLIMA	CEN - European Committee for Standardization EEA - European Environment Agency EP - European Parliament IEA - International Energy Agency	08/12/2014 07/12/2017	CON-AA	10	EU web-service for supplying climatic data	Maintenance of the EU web-service for supplying climatic data for building energy performance calculations and Action Plan for a new EU web-service for supplying climatic data	30/11/2017	Scientific information systems and databases
												11	Good practices of local /regional one-stop shops	Review of the existing good practices in terms of dedicated local or regional one-stop-shops to support the development, financing and implementation of energy efficiency projects. The review gives an overview of the business models behind these schemes and investigate their connection with the local financing community. Recommendations on how to further deploy/replicate these schemes across Europe will be developed.	30/11/2017	Science-for-policy reports
												12	Energy efficiency financing	Scientific review of all existing EU studies on the two critical aspects related to energy efficiency financing: -the impact of energy efficiency improvements on the value of buildings -the impact of energy efficiency on the payment default risk	30/11/2017	Science-for-policy reports
												2	Decomposition and other econometric analysis	A decomposition analysis to assess the energy savings from 2005 due to energy efficiency measures was developed in 2016 based on available ESTAT data for all MSs. The methodology will be further developed, discussed with DG ENER, MSs and other stakeholders. The output a simple and robust methodology which can be easy to understand. Other econometric methods like the Granger causation analysis or data envelopment analysis will be explored to better assess energy efficiency progress of MSs.	31/05/2017	Science-for-policy reports
												4	Support to the implementation of EED Article 8	Report on the quality and implementation practices of energy audits as described in Annex VI of the EED, based on synthesis of previous studies on the implementation of Article 8. Issues to be analysed, among others: how do MS define non-SME; what is their approach towards multinationals; how do they ensure the proportionality and representativeness of the audits, in particular with regard to enterprises having several buildings. The report will also include a presentation of best practices.	30/11/2017	Science-for-policy reports
												6	Report on Split Incentives	Identification of best practices in tenant and condominium laws for removing split incentives, this activity will be carried out in consultation with consumer organisations and other stakeholder and it will also include a dissemination workshop	31/07/2017	Science-for-policy reports
												8	Data on regional building stock characteristics	The JRC will provide to DG ENER data on the characteristics at municipal level for some Member States in the line with the list of indicators produced for the EU Building Stock Observatory (e.g. number of buildings, floor area, age of buildings, ownership, status and tenure, level of occupation and other indicators more directly related to energy consumption etc.).	30/11/2017	Datasets
		The main objective of this WPK is to provide technical and scientific support to the Covenant of Mayors Initiative, having in mind the specific nature of the Covenant, the different experience and conditions encountered by towns and cities as well as the large number of signatories which have joined the initiative. The WPK allows assessing the contribution of the local and regional level to the achievement of the										11	Technical report on the Pact of Islands	Technical report assessing the compliance of the Pact of Islands and related methodologies with the CoM and guiding local authorities how to comply with the CoM commitments.	28/02/2017	JRC technical reports
												12	Emission inventories and reporting	Technical report with proposals on how to improve the robustness/clarity of the CoM inventory approach and the consistency/accuracy of the signatories emission inventories and reporting	14/04/2017	JRC technical reports
												13	Comparative analysis of inventories	Technical report on the results of the comparative analysis between the CoM and Compact of Mayors bottom-up inventories and the top-down distribution of national emission inventories for the Covenant of Mayors activity sectors	31/05/2017	JRC technical reports

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337 - DeCarbLocal JRC.C.2	2266 - CoM West 2 Covenant of Mayors West 2	EU Energy Policy's goals. This will be done through an overall assessment of the initiative, based on data from SEAPs and monitoring reports, in order to evaluate the policies adopted by local and regional governments. One key task will be the evaluation of submitted SEAPs, providing feedback to cities: the criteria were designed to allow for the assessment of a high number of incoming SEAPs in a consistent manner, focusing on the compliance of the SEAP with the CoM formal commitments and methodological principles, by looking at the emission reduction target, at the Baseline Emission Inventory, at the set of actions addressing the key sectors of activity. It also includes an analysis of the completeness and consistency of the data inserted in the SEAP template, to allow the construction of a database useful for the overall monitoring of the initiative at the EU level. Other key tasks will be the overall assessment of the CoM, resulting in the release of a yearly publication, based on submitted SEAP/monitoring templates: JRC will focus on the analysis of policies and measures, of the most important sectors covered by SEAP actions, on the financial instruments to allow a transition to low-carbon cities and on the planned/achieved energy savings by policy. JRC will also support DG ENER in the adaptation of the Covenant framework to the new 2030 targets (i.e. a 40% emission reduction target plus a commitment on adaptation), by adjusting its tools and methodology accordingly.	JRC.C.2 PAOLO BERTOLDI	3.2.d	ENER	ENER	Ariane VALENTA (ENER.B.3)	CLIMA CNECT	CoR - Committee of the Regions	19/03/2015 18/09/2017	CON-AA	14	CoM Energy Performance Indicators	Report the analysis of the reported energy data in SEAP and monitoring reports up to Sept 2016. Indicators on energy performances will be produced.	31/03/2017	Science-for-policy reports
												2	Overall assessment of impact of the CoM Initiative	Report on the overall evaluation of the CoM Initiative after 10 years of operation. Assessment of the energy savings, CO2 emission reduction, and impacts on job creation and financial savings for cities. The CoM initiative contribution to the EU energy and climate 2020 goals will be modelled and forecast. The report will also include the best practices in terms of energy savings, financial solutions and other indicators.	22/12/2017	Science-for-policy reports
												4	Revision of the Guidebook "How to develop a SEAP"	The existing SEAP Guidebook will be adapted to the 2030 targets, including adaptation	31/07/2017	JRC technical reports
												5	Analysis of policies in transports sector	Analysis of cities policy measured in the transport sector as described in the SEAPs.	12/09/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												6	Most used tools for building emission inventories	Evaluation of existing tools for building emission inventories with recommendations on the compliance of those tools with the Covenant methodology and the relevance of using them for building monitoring emission inventories. Recommendations on how to ensure and check the consistency between emission inventories for various years.	29/06/2017	JRC technical reports
												7	Methodologies for the Global Covenant GhG Protocol	Analysis and comparison of methodologies used by other schemes such as C40 and Compact of Mayors. Proposal for global harmonised methodology for carbon emissions and energy consumption. Technical input and solid arguments provided to other organisations in view of a worldwide recognition of the Covenant of Mayors Methodology and usage as a basis for further development towards standardized GHG protocol for cities.	31/08/2017	JRC technical reports
												9	Web automatic check of monitoring templates	JRC developed web application for the automatic check of monitoring templates submitted by cities to be fully operational and with automatic feedback provided to signatories which submitted monitoring templates	30/09/2017	Scientific information systems and databases
221 - PSMM JRC.C.7	2270 - HRE2050 Heat Roadmap Europe 2050	This WP is the contribution of the JRC to the H2020 project "Heat Roadmap Europe 2050" (HRE2050, CSA 695989), which aims at developing model-based sustainable heating and	JRC.C.7 Ignacio HIDALGO GONZALEZ	3.2.d	ENER	ENER	Kostis Sakellaris (ENER.A.4), Eva HOOS (ENER.C.3), Gwennael JOLIFF-BOTREL	RTD	SET-Plan Com - SET-Plan Community	01/03/2016 28/02/2019	CON-IA	1	Combining scenarios in energy system tools	Report describing the energy scenarios resulting from combining the JRC-EU-TIMES and EnergyPLAN tools	31/07/2017	Science-for-policy reports
												2	Evaluation of EU heating and cooling scenarios	Methodology report comparing the scenarios between the annual JRC-EU-TIMES and the hourly EnergyPLAN tools.	31/07/2018	Science-for-policy reports
437 - SAFE&CLEAN-CONSTRUCT JRC.E.4	2743 - E4Buildings E4Buildings	The project aims to develop innovative Cement Based Composites in which embed Phase Change Materials. The resulting physical properties make this product ideal to store energy (heat) into building envelopes, reducing the peak of heat fluxes, hence the energy consumption for heating and cooling. Each phase of the product	JRC.E.4 MARCO LAMPERTI TORNAGHI	3.2.d	ENER	JRC	Robertus Wilhelmus NUJ	ENV GROW	CEMBUREAU - European Cement Association TBE - Tiles and Bricks of Europe (TBE)	02/01/2017 31/08/2017	INS-ER					
												3	Report on integrated energy networks	Study of the interactions between heating & cooling systems and the electricity grid in particular identification of solutions that can provide benefits to both systems (e.g. using surplus electricity to generate heat, stability of electric networks, heat storage when electricity prices are low or negative etc.). The aim is to provide policy insights and recommendations that could be relevant at European, national or local level (e.g. grid operators).	30/11/2018	Science-for-policy reports
												4	1st update of methodology for Art 14 of EED	First update of the methodology for the Comprehensive assessment of efficient heating and cooling potentials in the context of art 14 of Directive 2012/27/EU on energy efficiency (EED), to take stock of the experience gained through the review of the 28 national comprehensive assessments carried out in 2016-17. Indeed as foreseen by EED art 14, the assessment shall be updated every five years at the request of the Commission (i.e. in 2020).	30/06/2017	Science-for-policy reports
												5	Long term projections of district h&c performance	Techno-economic projections until 2050 for relevant large-scale district heating and cooling (h&c) technologies. It will complement the 2016 report for individual h&c solutions in the residential and tertiary sectors, and will allow energy modelling activities in the EU to benefit from improved description of district h&c systems, thereby leading to more accurate models and better informed policy-making. These data will also underpin the Energy Technology Reference Indicators (ETRI).	30/11/2017	Science-for-policy reports
												6	2nd update of methodology for Art 14 of EED	2nd update of the methodology for the Comprehensive assessment of efficient heating and cooling (h&c) potentials in the context of art 14 of Dir. 2012/27/EU on energy efficiency (EED). We will incorporate latest JRC work and new developments in the domain. This shall facilitate the comprehensive assessment by MS, and increase its comprehensiveness, relevance and accuracy, foreexample by taking into account the impact on the electric grid of the choices made for h&c systems.	30/11/2018	Science-for-policy reports
												7	Reporting and monitoring tool for EED art 14	Reporting and monitoring tool for MS's Comprehensive assessment. Currently, differences in methodologies and reporting formats hinder the systematic and in-depth analysis of MS's comprehensive assessment of efficient heating and cooling potentials in the context of EED art 14. We will devise a (non-mandatory) common reporting format that could be used by MS, and which will be coupled to a tool for rapid (informal) feedback to MS, in-depth analysis of the data, and generation of relevant knowledge	30/11/2018	Scientific information systems and databases
												35483	Smart Cities article	Based on the analysis of the data collected in the Smart Cities catalogue and as a follow up of the work carried out on International Telecommunication Union standardisation activities on "Methodology for the environmental impact assessment of ICT at city level", the JRC will analyse the pilot implementation of the ITU standard (tbc) and complement this knowledge with the JRC Smart Cities catalogue compiled through the E3P.	30/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												35484	Big data and new data sources for energy	The use of big data and unconventional data source for energy efficiency policies will be investigated with the aim of complementing existing data sources (ESTAT, Odyssey Mure, EEA) with higher spatial granularity (up to local level data) and higher time-resolution (near-real time). E.g. climatic data with up to hourly time resolution or space earth observation data will be considered for the modelling and the improved assessment of energy consumption in buildings, districts and local levels.	31/12/2018	Science-for-policy reports
35485	Citizens' engagement in smart energy communities	The creation of community-based energy initiatives represents a new policy option to face the challenges of energy transition. Policies that can be designed and implemented to stimulate these initiatives will therefore be analysed and critically assessed based on already existing best practice examples and on the insights provided by complex system theories. New conservation policies envisage the active involvement of citizens.	31/12/2018	Science-for-policy reports												
		The WPK will focus on cladding systems characterised by a high amount of Thermal Energy Storage Aggregates (TESAs). The cladding	JRC.C.2 ISABELLA MASCHIO	3.2.d	ENER	JRC	Paul HODSON	CNECT DIGIT ENV ESTAT REGIO		01/01/2016 31/12/2018	INS-UR	4	Energy and Location report	A report on the pilot to demonstrate how local authorities can meet the reporting requirements of the Energy Performance of Buildings Directive (EPBD), the Energy Efficiency Directive (EED) and the Covenant of Mayors (COM) Strategic Environmental Action Plans (SEAPs) using INSPIRE data and services. The pilot will involve close collaboration on the methodology with the JRC F07 Unit, and will reuse assets created by other EU initiatives and projects. In collaboration with unit B6	31/12/2017	JRC technical reports
												2	Demo application design	Design of a "demo application" inside the JRC for a portion of a new building and/or for retrofitting part of an existing one will be performed. The techniques needed to assess the performance of the proposed solutions will be drafted.	20/12/2018	JRC technical reports

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437 - SAFE&CLEAN-CONSTRUCT JRC.E.4	4922 - THE IDEA Thermal Envelope for an innovative Dynamic Efficient Approach	systems are built based on recent and successful exploratory research results (E4iBuildings). The use of TESAs will increase thermal inertia of the material thanks to the presence of particular Phase Change Materials (PCMs) currently considered as waste product of several industrial processes, like bio-based PCM products that promise to be successful, both for economic and environmental reasons. The WPK will consider the upscaling	JRC.E.4 MARCO LAMPERTI TORNAGHI	3.2.d	ENER	JRC	Robertus Wilhelmus NUJ	ENER ENV REGIO	- Building Research Institute CEMBUREAU - European Cement Association TBE - Tiles and Bricks of Europe (TBE)	01/01/2017 31/12/2019	INS-UR	SP1	A preliminary study on the impact of PCMs material	A scenario development for the impact evaluation of PCMs technologies and efficiency for the EU28 built environment, considering the geographic dimension will be addressed and commented. The possibility of inserting regionally defined acceptance criteria into standard will be explored.	15/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
3.2.e low carbon energy technologies carry out techno-economic assessments of renewable energy technologies and their cost-effective deployment, including by using geo-spatial tools and by analysis of relevant renewable energy scenarios and support of the implementation of the revised directive; perform pre-standardisation work on photovoltaic and other renewable energy technologies; prepare a web-based CO2 Storage																
167 - GasTEST JRC.C.1	518 - P2H Safety and standardisation aspects of power-to-hydrogen technologies	The conversion of (renewable) electricity to hydrogen, also referred to as power-to-hydrogen (P2H), enables the long-term storage of energy. When hydrogen is injected into the gas grid it will increase the share of renewable energy in the natural gas grid, and from there in the end-use applications of transport, heat and industry, where achieving higher-renewable shares is technologically more difficult and more expensive. The WPK will contribute to the development and implementation of EC policies related to energy storage (FuCellHy project objective). For supporting standardisation, the WPK will support ENER in the follow-up of the P2H activity included in the 2017 Annual Union Work Programme on Standardisation (SWD(2016)185)	JRC.C.1 Eveline WEIDNER RONNEFELD	3.2.e	ENER	JRC	T. Constantinescu (DG ENER), P. Vansson (DG RTD G2)	GROW	CEN - European Committee for Standardization IEA-HIA - IEA HIA International Energy Agency Hydrogen Implementing Agreement IPHE - Partnership for Hydrogen and Fuel Cells in the Economy ISO - International Organization for Standardization (ISO) US DoE - US Department of Energy (DOE) - FUEL CELLS AND HYDROGEN JOINT UNDER	01/01/2016 31/12/2018	INS-RS	4 D1 D2 D3	Scientific publications and outreach activities Report on R&D priorities on hydrogen safety Support to deployment of H2 technologies PNR priorities for P2H technologies	The outputs consist of underpinning scientific work: 1) scientific publications 2) conference contributions Identification of R&D safety priorities for the deployment of hydrogen technologies in collaboration with International Association HySafe and USDoE Report to support FCH community on guidance on design of hydrogen safety systems. The public acceptance of hydrogen and fuel cell systems and infrastructure depends on their safety engineering design. Guidance will be provided to end-users on the choice of sensor type suitable to the application and the placement of hydrogen safety sensors. The admixture of hydrogen to natural gas will affect all end-users of natural gas. The key research needs to ensure the safety and performance of gas burners and other appliances will be identified in a dedicated workshop. In addition, the legal framework regarding P2H will be analysed.	31/12/2018 01/07/2017 31/12/2018 31/12/2018	Article contribution to periodicals or to conference proceedings Science-for-policy reports JRC technical reports JRC technical reports
243 - REEU+ JRC.C.2	755 - RE-PORT Monitoring Actual and Foreseeable Renewable Energy Deployment	This WPK monitors the actual deployment trends of renewable energy (RE) in Europe, by means of the analysis of data reported by EU Member States as required by the Renewable Energy Directive complemented with other various available sources such as Eurostat, European Environment Agency, EurObserv'ER. The expected development of renewable energy is assessed using data coming from models as EU JRC TIMES, PRIMES. It provides also the data infrastructure for consolidating and validating the renewable energy deployment with Member States agencies and the International Renewable Energy Agency (IRENA). The project supports the Strategic Energy Technology Plan (SET-Plan) in regard to assessing the development of some key technologies, in particular PV technology e.g soft-cost of PV systems, assessment of PV market, assessment of policy and regulatory framework. The WPK contributes to the IEA - Photovoltaic Power System Programme (PVPS) Task 1 "Strategic PV Analysis and Outreach" following the evolution of the PV development analysing its drivers and the diversity of PV support schemes in regulatory environment around the globe.	JRC.C.2 MANJOLA BANJA	3.2.e	ENER	JRC	Mrs Paula ABREU MARQUES (ENER.C.1), RTD G3	ESTAT RTD	IEA - International Energy Agency IRENA - International Renewable energy Agency	01/01/2014 31/12/2018	INS-RS	1 10 11 15 16 2 3 4 5 8 9	Snapshot of RE in the EU - Volume 3 Analysis of RE technologies development in EU-Vol4 PV Status Report 2018 Bioenergy in Albania Evaluation of the MS RE policy measures RE in Europe for climate change mitigation - Vol.2 Analysis of RE technologies in EU - Vol.3 PV Status Report 2017 Contribution to the SET-Plan Information System Snapshot of RE development in EU - Vol.4 RE in Europe for climate change mitigation - Vol 3	This deliverable will provide a snapshot of renewable energy development in each EU Member State and European Union as a whole during period 2005-2014 as well as the expected progress up to 2020. The analysis will be based on EU Member States reporting under the Renewable Energy Directive complemented with other available data sources as Eurostat, EEA and EurObserv'ER. This deliverable will provide an analysis of the progress of renewable energy technologies/sources during period 2005-2016 and the expected development up to 2020. Annual PV status report provides an independent assessment of the PV market, investments, industrial policies deployment, technology development and assessment of regulatory and policy framework conditions for current and future developments. Update 2018 This deliverable aims to provide an overview of the current and future biomass categories projections in Albania as reported in the national and sectorial strategies and progress reports. It will summarise the latest findings in scientific literature about biomass use for energy purposes in Albania, including potential future impact. Based on EU Member State reporting under the Renewable Energy Directive an evaluation of the Article 22 (1) b, e, f on the different provisions such as support schemes and other measures applied to promote energy from RES and their development, improving administrative procedures to remove regulatory and non-regulatory barriers for RES development; measures in transition, distribution and grid connection bearing and sharing costs is performed. This deliverable will provide an analysis of GHG emission saving in each EU Member State and EU as a whole, during period 2013-2014, due to the use of renewable energy in three sectors: electricity, heating/cooling and transport based on EU Member States reporting under the Renewable Energy Directive. Trends since 2009 will also be provided. The progress during period 2005-2014 and the expected development up to 2020 of each renewable technology/source in each EU Member State and European Union as a whole will be analysed based on the EU Member States reporting under the Renewable Energy Directive. Annual PV status report provides an independent assessment of the PV market, investment, industrial policies deployment, technology development and assessment of regulatory and policy framework conditions for current and future developments. Update 2017 Contribution to the biennial report "Reference Indicators for Energy Technologies 2017" that will present the current and the expected developments of the operational and economic performance of the energy technologies addressed by the integrated SET-Plan. This contribution will include technologies as solar, biomass and hydropower. Renewable energy development during period 2005-2016 and the expected progress up to 2020 in each EU Member State and EU as a whole will be analysed in this deliverable. Analysis will be based on EU Member States reporting under the Renewable Energy Directive complemented by other available data sources as Eurostat, EEA, EurObserv'ER. The role of renewable energy in the reduction of GHG emissions during period 2015-2016 will be the focus of this deliverable based on the EU Member States reporting under the Renewable Energy Directive. An overview of this contribution over a 7-year period, 2009-2016, will be provided.	31/01/2017 31/12/2018 31/12/2018 31/12/2017 31/12/2017 31/03/2017 30/09/2017 31/12/2017 30/06/2018 30/09/2018	Science-for-policy reports Science-for-policy reports Science-for-policy reports Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI) Science-for-policy reports Science-for-policy reports Science-for-policy reports Science-for-policy reports Science-for-policy reports
219 - Photovoltaic Energy JRC.C.2	1717 - CHEETAH Cost-reduction through material optimisation and Higher EnErgy output of solAr photovoltaic modules	CHEETAH aims at 1- solving specific bottlenecks in the R&D Joint Program of EERA-PV, 2- strengthening the collaboration between PV R&D performers in Europe through sharing of knowledge, personnel and facilities, and 3- accelerating the implementation of developed technologies in the European PV industry. Within CHEETAH, JRC leads the task 12.5 on standardisation.	JRC.C.2 Nigel TAYLOR	3.2.e	RTD	RTD	GETSIOU Maria (RTD.G3)		- FORSCHUNGSVERBUND BERLIN E.V. - EUROPEAN PHOTOVOLTAIC INDUSTRY ASSOCIATION DTU - Technical University of Denmark - Danmarks Tekniske Universitet CEA - Commissariat à l'Energie Atomique et aux Energies Alternatives ECN - Energy Research Centre of the	01/01/2014 31/12/2017	CON-IA	2 3	European agenda on research infrastructures Updated guidelines for standards for next gen PV	This study aims at listing R&D needs that the PV sector on the short, medium and long term. These needs will be compared with the facilities available and a European agenda on research infrastructure needs will be thus prepared, taking also into consideration the guidelines developed for the PV TP Strategic Research Agenda (SRA) roadmap. A comprehensive status report on standards for PV systems and priorities for development work. This will bring together the innovative expertise from the R&D organisations as well as opinions of industry. A mid-term report will be produced as a separate deliverable that will be handled only internally and will serve as a main benchmark for the final report.	31/12/2017 31/12/2017	Science-for-policy reports JRC technical reports
219 - Photovoltaic Energy JRC.C.2	2146 - PhotoClass Towards an energy-based parameter for photovoltaic classification	An improved PV efficiency metric will be developed, based on energy output in European climatic conditions and including uncertainty evaluations. This will allow an energy yield risk assessment to be made, which is currently not possible. System planners and investors can exploit the results to optimise their services.	JRC.C.2 Ewan DUNLOP	3.2.e	ENER	RTD	Gustav WINROTH (RTD.D.2)		CENELEC - European Committee for Electrotechnical Standardization (CENELEC) IEC - International Electrotechnical Commission PV Ind EU - Photovoltaic industry EU	01/05/2014 30/04/2017	CON-IA	116 515 521	D1.1.6 Feasibility study D5.1.5 Reports to standardisation organisations D5.2.1 Training course	1.1.6 Report on the feasibility study on including wind speed and spectral data into the geospatial model Nov 2015 Delivery of reports to relevant standardisation organisations, etc. completed 1 training course organised and held	30/11/2015 30/04/2017 30/04/2017	Scientific and policy reports Scientific and policy reports Training
		The opportunities provided by renewable energies in Europe for a low carbon society are assessed by means of geographical analysis with GIS, integrating resource, technology and economic data. The availability and exploitability of biomass resources for energy are assessed, with special emphasis on Europe and its regions, employing a mix of statistical and geographical methodologies.										1	Economics of biogas development	Resource mapping with GIS and spatial analysis of resources will be used to provide insight into the economics of biogas production, integrating cost and technology data, resource mobilisation and infrastructure data with market conditions (energy prices, support schemes and incentives) in the EU.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
243 - REEU+ JRC.C.2	3449 - GIS-RE Geo-Information System for Renewables	tools and models for a geo-spatial analysis of the technical and economic potential of different biomass feedstock categories. This WP provides scientific evidence for the implementation and the foreseen review of the renewable energy EU policy, the implementation of the Energy Union Package and the policy framework for climate and energy in the period from 2020 to 2030 in the EU related to the transition to a low carbon energy system, by providing information on the bioenergy resources. This WP also will work in close cooperation with other JRC horizontal activities, providing spatial explicit data and performing technical and economical analysis of biomass resources and biomass supply and demand for different uses, in relation to bioenergy technologies (e.g. JRC study on biomass supply and demand, Bioeconomy Observatory and Low Carbon Energy Observatory). The WP will address the interactions between water, energy and food, assess the opportunities for energy generation from water treatment and the impact of water availability on bioenergy and tackle the main energy challenges in the conditions of increasing water scarcity, exacerbated by climate change. The results obtained here can be replicated in other areas of the world (such as Africa, Latin America etc.) and in specific regions in support of regional development (Danube, Baltic or Adriatic and Ionian Region), etc.	JRC.C.2 NICOLAE SCARLAT	3.2.e	ENER	JRC	Ruud Kempener (ENER.C.1)	AGRI CLIMA GROW RTD	IEA - International Energy Agency IRENA - International Renewable energy Agency	01/01/2017 31/12/2018	INS-RS	2	RE assessment in Europe	Continuous update of geographical information layers of the availability of bioenergy resources in Europe by means of data collection, harmonization and application of feasibility and sustainability constraints. This integrates various GIS layers with the aim to evaluate the technical and economic potential, to be compared with the actual deployment.	31/12/2018	JRC contributions to policy documents
												3	Bioenergy Geospatial Info System	A bioenergy info system will integrate various biomass resources layers, which will be made available online with a spatial resolution of 1 km. The different layers will be aggregated onto a single database to provide information on different biomass feedstocks and connected spatial information for land use/land cover, terrain data, soil and infrastructure data. This provides a comprehensive overview of the available biomass feedstock enabling geo-spatial analysis.	31/12/2017	Scientific information systems and databases
												4	Energy potential of wastewater treatment	Cleaning wastewater require significant water consumption, while provide a significant potential for generating energy through anaerobic digestion. We will be combining statistical and geospatial data for mapping of the potential for energy production from wastewater treatment in the EU.	31/12/2018	Scientific information systems and databases
												5	Mapping bioenergy crops potential	Mapping spatial distribution of the potential of energy crops in the EU considering various ecological factors (climate, soil properties and terrain data) and various constraints. This will allow to evaluate the full potential of biomass to contribute to the achievement of the 2030 renewable energy targets.	31/12/2018	Scientific information systems and databases
												7	Review of Renewable Energy Geospatial Info Systems	This deliverable will provide a review of the available Geographical Information System (GIS) mapping activities, data sources and web tools available for Europe, covering various renewable energy sources, such as biomass, solar, wind, marine and geothermal energy. This will investigate to what extent various datasets are available and could be further developed into a portfolio of solutions at local level providing info on the availability of various renewable energy resources at local level.	31/07/2017	JRC technical reports
												8	Renewable energy Geospatial Info System	A renewable energy info system will integrate various layers (such as biomass, solar, wind, as well as maritime and geothermal energy), aggregated into a single platform to gather information on renewable energy resources at local level, aiming to provide integrated energy system solutions at local level. This will identify local opportunities and constraints and provide solutions for spatial planning at local, regional and national level for higher RES integration into energy systems.	31/12/2018	Scientific information systems and databases
243 - REEU+ JRC.C.2	3477 - PV-GIS PV Geographical Information System	This work package on assessing PV resources and their cost-effective conversion is the most advanced major pillar of the future geospatial renewable information tool (see del. 1). Due to its advanced maturity in resource assessment, this work package will in addition deal with the challenges of integrating photovoltaics (PV) into the electricity supply system i.e., complementarity with intermittent wind and hydro resources (del. 1) and the assessment of PV electricity self-consumption by household and industrial consumers with and without battery storage (Del. 2). Building on the experience with off-grid PV system simulation a new model will be developed for solar thermal collector performance (del. 4), which will then be integrated into the geospatial tools (del. 5). The work package will deliver also simulated data as input to energy models (e.g. JRC EU TIMES). The work package will also analyse the potential of PV on buildings in Europe and will contribute with datasets to building energy performance models (feeding into work package 793.Energy in Buildings).	JRC.C.2 THOMAS HULD	3.2.e	ENER	JRC	ENER C.1 - Paula Abreu	DEVCO	IRENA - International Renewable energy Agency	31/12/2016 31/12/2018	INS-RS	1	Data provision for GIS tools	Data layers on solar energy potential will be developed in order to be used to complement the information system developed in GIS-RE.	31/12/2017	Scientific information systems and databases
												2	Scientific publications	Geospatial data on PV energy production will be combined with data on electricity consumption to estimate the potential for electricity self-consumption for various types of electricity consumers throughout Europe. Another study will focus on adding PV on rooftops in Europe. The study will use ultra-high-resolution geospatial data to estimate the PV potential of every roof.	30/06/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												3	Solar energy resource for the world	Solar radiation data with high spatial and temporal resolution are necessary for solar energy performance studies, and for studying issues about PV energy self-consumption and smart grids. The existing data sets covering Eurasia and Africa will be extended to the rest of the world using satellite data. The PVGIS services will then also be available to the world, and can be of particular to developing solar electricity in developing countries.	31/12/2018	Datasets
												4	Model for solar thermal domestic hot water heating	Existing models for solar thermal water heating systems seriously outdated. We propose a new model based on a look-up table approach using detailed calculations of system performance. The resulting model will be accurate but fast enough that it can be used for geospatial calculations and implemented in PVGIS and the geospatial renewable energy tool (deliverable 1)	30/06/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												5	Maps of solar thermal system performance	Based on the model developed in Deliverable 4 geospatial maps of solar thermal hot water system performance will be produced, and the models and data will be implemented in PVGIS.	31/12/2018	Scientific information systems and databases
												6	Contribution to IEA PVPS Task 16	Contribution to the International Energy Agency's PVPS Task 16: "Solar resource for high penetration and large scale applications". Studies of improved assessment of solar radiation measurements from large networks of solar radiation sensors	30/06/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												7	Contribution to IEA PVPS Task 16	Contribution to the International Energy Agency's PVPS Task 16: "Solar resource for high penetration and large scale applications". Study of the quality of spectrally resolved solar radiation products from satellite data.	30/06/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												8	Study of PV-wind mini-grids	Building on the expertise on PV and off-grid applications of Unit C.2 and the knowledge of wind power of Unit C.7, a study will be performed of the advantages of combining wind and PV to power mini-grids for rural electrification in developing countries. This work will also have contributions from a visiting scientist from ISAC-CNR (Lecce, Italy).	30/09/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
241 - OSCK JRC.C.7	3869 - OS-EU Open science for the Energy Union	The Energy Union is a priority of the Commission. The JRC supports policy making in the area of energy with independent evidence throughout the whole policy cycle. Scientific evidence and knowledge for policy making relies on data and information and the JRC needs to have access to up-to-date and reliable data and information related to energy. The WPK will develop common platforms and tools for the collection, depository, access and use of data and information related to energy. It will make existing data, information available to the respective users which may range from JRC experts to policy makers. Open Science will be the	JRC.C.7 ANDREAS UHLEIN	3.2.e	ENER	JRC	Magdalena Andreea STRACHINESCU OLTEANU (ENER C2), ABREU MARQUES Paula (ENER C1), VELKOVA Maria (CLIMA C4), Piotr TULEJ (RTD G3)	CLIMA ENER MARE RTD	SET-Plan Com - SET-Plan Community	01/01/2017 31/12/2018	INS-RS	040	Common platform for database management (2017)	Management of the databases of the unit. A common platform or warehouse for data and information collection, depository, use and access will be identified or developed. For the time being, the WPK will manage the databases of C.7 only but in the long term, the aim is to manage all DB of Dir. C or at least have access to all databases by C.7. The platform will accommodate the various levels of access needed (Dir. C, JRC, Commission, the general public).	31/12/2017	Scientific information systems and databases
												041	Report on energy data, information & models (*17)	This deliverable will present an authoritative review of European energy data, information systems and models. The first part of this report will focus on power system models, delivering an inventory of European models, presenting their modelling structure and data requirements.	31/12/2017	Science-for-policy reports
												042	Scoping paper on databases and information systems	A mapping of existing databases and information systems in Dir. C will be performed identifying i) customer needs related to database outputs, ii) database users, iii) needs for update and maintenance, and iv) data and information sources for the content. The scoping paper will summarise the finding and present a management strategy, possibly in cooperation with H2.	30/09/2017	Science-for-policy reports

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
		guiding principle, meaning that the aim is to make as much data and information available as possible. The WPK will manage the databases of unit C.7 and it will also manage the (online) information										043	Report on energy data, information & models (18)	This deliverable will present an authoritative review of European energy data, information systems and models. The second part of this report will focus on energy data, delivering an inventory of European energy data and information, with a focus on i) data availability, ii) open access data, iii) data reliability (e.g. data validation and data updating).	31/10/2018	Science-for-policy reports
569 - BIOECONOMY JRC.D.1	5053 - BioenerAsMod Bioenergy assessment and modelling	This Work Package will contribute to the assessment of the bioenergy within the EU bioeconomy, defining trends and perspectives. This assessment, with a focus on biomass, will address different biomass feedstock categories (solid biomass, waste, biogas, liquid biofuels, etc.) in three final energy uses - electricity, heat and transport. The assessment will consider various sources of information available (NREAPs, AEBIOM, Biogas Energy Association, EurObserver, Eurostat, etc.). The WPK will target also the analysis of the options to fully couple the forestry and energy models.	JRC.C.2 MANJOLA BANJA	3.2.e	ENER	JRC	Mrs Paula ABREU MARQUES (ENER.C.1), RTD G3	RTD		01/01/2017 31/12/2018	INS-RS	1	Assessment of bioenergy within EU Bioeconomy	Assessment of biomass use and bioenergy production in the EU, analysis of progress made, trends and perspectives within a EU bioeconomy.	31/12/2017	Science-for-policy reports
												2	Assessment of bioenergy within EU Bioeconomy - 2018	Assessment of biomass use and bioenergy production in the EU, analysis of progress made, trends and perspectives within a EU bioeconomy (2018 Update).	31/12/2018	Science-for-policy reports
												3	Comprehensive coupling of forest and energy models	Further develop the coupling of the JRC-EU-TIMES energy model with the in-house forestry models under the soft-coupling scheme as a step towards a coherent, joint commodity layout for forestry and energy models.	31/12/2017	Science-for-policy reports
												4	Comprehensive coupling of forest and energy models	Enhance the capacity of the JRC-EU-TIMES model to discriminate different types of wood. Implement more detailed modelling of the wood to energy pathways, enabling the JRC-EU-TIMES model to shape more representative distribution of wood commodities across the energy end use sectors.	31/12/2018	Science-for-policy reports
												5	Coupling of JRC-EU-TIMES with forestry models	The JRC-EU-TIMES energy model will be soft-coupled to the JRC in-house forestry models in order to create a coherent, joint commodity layout for forestry and energy models	31/12/2017	Article contribution to periodicals or to conference proceedings listed in SCOPUS
3.2.f energy Research, Innovation & Competitiveness (RIC) - Support the implementation of the Research and Innovation and Competitiveness (RIC) dimension of the Energy Union, through the management of relevant knowledge and available scientific data; support the integrated SET Plan through a strengthened information system (SETIS) and the ACEI (Accelerating Clean Energy Innovation) strategy. Develop indicators that																
142 - Energy Economics JRC.C.6	735 - ESM Energy Systems Modelling	The objective of this WP is to model possible future pathways for low-carbon technologies at system level and to disseminate data and best practices among users of TIMES/MARKAL models. The TIMES family of energy system models, building on software developed under the IEA ETSAP Implementation Agreement, is used in more than 50 countries. The JRC represents the European Commission in ETSAP and contributes to the "Nordic Energy Technology Platform". The JRC-EU-TIMES, which is developed within this WP, is at the basis of the following activities providing technology projections for the European energy system: - Providing analysis to the SET-Plan Community (supporting Project 246). - The Low Carbon Energy Observatory - LCEO (WP 2140) (AA with DG RTD); - The Exploratory Project EREBILAND (WP 2744); - The Institutional Project BIOMASS (WP 2300). - The Horizon 2020 project "Heat Roadmap Europe 2050" (WP 2270) - The Smart Specialisation Policies in the field of Energy (AA) - SSP-ENER (WP 3021) - Modelling Energy Technology Pathways for the Western Balkans in the framework of the JRC Enlargement and Integration Action led by JRC A.5 The execution of this WP is needed in order to deliver the activities and commitments described above, which aim at supporting the Energy Union Action on Research, Innovation and Competitiveness. The geographical scope of the JRC-EU-TIMES model is Europe (EU + neighbouring countries).	JRC.C.7 ANDREAS ZUCKER	3.2.f	ENER	JRC	Andreea STRACHINESCU (DG ENER.C.2), Gwennael JOLIFF-BOTREL (DG RTD.G.1)	RTD	IEA - International Energy Agency SET-Plan Com - SET-Plan Community	01/01/2014 31/12/2018	INS-RS	1	JRC-EU-TIMES energy system model 2017	Continuous improvement and dissemination of the model logic (e.g. improving the representation of specific sub sectors such as the oil refining industry) and its databases (e.g. potentials for renewable energy).	31/12/2017	Scientific information systems and databases
												2	Support to communities of practice 2017	Support of different fora relevant for the European users of TIMES/MARKAL models. - Representation of the European Commission in the IEA ETSAP Implementation Agreement. - Contribution to the Nordic ETP - Capacity building for users of the JRC-EU-TIMES model in EU MS and neighbouring countries	31/12/2017	Science-for-policy reports
												3	JRC-EU-TIMES based policy report 2017	Report on challenges and opportunities for wind energy in Europe within an energy system perspective, based on new study on potentials for wind power applications in Europe and neighbouring countries.	31/12/2017	Science-for-policy reports
												4	JRC-EU-TIMES energy system model 2018	Continuous improvement and dissemination of the model logic (e.g. representation of specific sub sectors) and its databases (e.g. potentials for renewable energy).	31/12/2018	Scientific information systems and databases
												5	Support to communities of practice 2018	Support of different fora relevant for the European users of TIMES/MARKAL models. - Representation of the European Commission in the IEA ETSAP Implementation Agreement. - Contribution to the Nordic ETP - Capacity building for users of the JRC-EU-TIMES model in EU MS and neighbouring countries	31/12/2018	Science-for-policy reports
												6	JRC-EU-TIMES based policy report 2018	Scenario pathways for low carbon energy technologies (e.g. heating and cooling scenarios, related to WP 2270).	31/12/2018	Science-for-policy reports
												7	Scientific publications and outreach activity 2017	Peer reviewed articles resulting from the above-described modelling activities (including the support to the communities of practice).	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												8	Scientific publications and outreach activity 2018	Peer reviewed articles resulting from the above-described modelling activities (including the support to the communities of practice).	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
246 - RIC KM JRC.C.7	765 - SETIS SET-Plan Information System	SETIS underpins the SET-Plan, one of the main instruments of implementation of the fifth dimension of the Energy Union framework strategy, by operating the monitoring and reporting mechanism which manages the knowledge necessary for its implementation and further development. The main deliverables of the project are the annual input to the state of the Energy Union report (SOEUR) and the annual/biannual SET Plan implementation reports. In addition, SETIS currently coordinates 2 of the 3 Work packages of the Low Carbon Energy Observatory and supplies data and background knowledge on research and innovation (R&I) indicator analysis to JRC units. SETIS follows the progress of the SET-Plan implementation, ensuring transparency and facilitating decision-making by providing supporting knowledge, independent of national and industrial interests. It produces annual reports on EU energy innovation trends and the progress of the SET-Plan implementation, as well as biannual reports on reference indicators reflecting the state-of-the-art in low carbon energy technologies and the EU energy technology trade balance. SETIS contributes to the annual SOEUR indicators that monitor EU energy R&I, such as the level of investment in R&I, trends in patents, and the number of researchers active in the energy sector. In collaboration with the IEA and EPC, methodologies are developed to collect, harmonise and process statistics and provide robust results at the desired level of granularity. SETIS also supports the Research & Innovation & Competitiveness (RIC) dimension of the Energy Union.	JRC.C.7 Aiki GEORGAKAKI	3.2.f	ENER	JRC	Ms. Magdalena Andreea STRACHINESCU OLTEANU (ENER.C.2); Ms. Gwennael JOLIFF-BOTREL (RTD.G.1); Mr. Piotr Jaroslaw TULEJ (RTD.G.3); Ms ABREU MARQUES Paula (ENER C.1);VELKOVA Maria (CLIMA C.4);Ruud KEMPENER (ENER C.1); Bogdan ATANASIU (ENER C.1)	CLIMA RTD	CSLF - Carbon Sequestration Leadership Forum IEA - International Energy Agency IRENA - International Renewable energy Agency SET-Plan Com - SET-Plan Community	01/01/2015 31/12/2018	INS-RS	1	EU Energy Innovation Trends - 2017 Edition	This annual report will present: an analysis of annual investments for R&I in energy at EU level for 2015, at national level for 2014, and in the private sector for 2012, by technology, SET-Plan Action and Energy Union R&I priority; a comparative assessment of EU public investments against main international competitors; an analysis of patent trends in energy technologies based on 2012 and partial 2013 data; and, an initial assessment of researchers working on energy R&I.	29/12/2017	Science-for-policy reports
												10	Scientific articles on energy technology R&I	Peer-reviewed papers in the areas of: (1) socio-economic and techno-economic assessment of ocean, wind, geothermal and CCUS. (2) The European innovation landscape in energy, relevant drivers and barriers; methodological considerations for the monitoring of corporate R&I expenditure - including flows from parent companies to (international) subsidiaries, statistical analysis of patent to track early invention trajectories, and the indicator based assessment of specific technologies.	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												2	SET-Plan Implementation Progress Report - 2017	This annual report will present: the actions carried out by the SET-Plan in the course of 2017, addressing in particular the development of implementation plans of the 10 SET-Plan Actions as agreed with the Member States and the industrial and academic stakeholders; a review of progress of setting up joint actions that support the implementation of SET-Plan; an overview of the priorities of major national R&I programmes on energy; and a presentation of relevant 'flagship' projects.	29/12/2017	Science-for-policy reports
												3	Reference Indicators for Energy Technologies 2017	This biennial report, produced based on expert workshops and in-house assessments, will present the current status and expected future developments of the operational and economic performance of the energy technologies addressed by the integrated SET-Plan. This will be achieved through the use of suitable indicators, which can also serve as input to systemic energy modelling activities. The produced set of technology indicators will also underpin the 10 SET-Plan Actions.	30/12/2017	Science-for-policy reports
												4	EU energy technology trade - 2017 Edition	This biennial report will present information on imports and exports of energy technologies in the EU, in both monetary and capacity terms, which can be used as a measure of European competitiveness.	29/12/2017	Science-for-policy reports
												5	Input to the 2017 State of the Energy Union Report	This is the chapter on research and innovation, contributed by the JRC/SETIS to the 2017 State of the Energy Union report. More specifically, SETIS will provide data, charts and assessments of the public and corporate R&I investments in energy technologies, an analysis of patent trends and an assessment of the number of researchers active in the energy sector.	30/11/2017	JRC contributions to policy documents

JRC 2017- 2018 WORK PROGRAMME																					
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category					
		<p>comprehensiveness of the information and the governance of the Energy Union. The work for EURICS consists of: bibliometric indicators on quality, productivity and collaborations in scientific work; and analysis of relevant import – export trade data balances.</p> <p>The energy-specific R&I indicators are at a level of geographical and technological disaggregation beyond that of publicly available statistics. Thus the work is both unique and necessary, as there is no other comprehensive source available to provide this knowledge to stakeholders.</p> <p>The operation of SETIS involves the collection of sensitive information, thus the need for trust, confidentiality, impartiality and effective governance necessitate that this activity is carried out by the Commission. The JRC is best suited to this task in view of the requirement for a high level of scientific competence on energy issues, which is not present within the partner Commission services.</p>																			
												6	CO2 storage Atlas	Book format of the European CO2 storage atlas, based on data that underpin the online version, in partnership with the European Geological Surveys (EGS). Containing: An update of the database with data from different geological surveys; an evaluation of storage capacity of each MS; information about the CO2 storage development plan and an analysis of the European storage infrastructure; information on data availability and sit characterisation; estimation methodology; data on underlying geology	31/12/2017	Science-for-policy reports					
												7	EU Energy Innovation Trends - 2018 Edition	This annual report will present: an analysis of annual investments for R&I in energy at EU level for 2016, at national level for 2015, and in the private sector for 2013, by technology, SET-Plan action and Energy Union R&I priority; a comparative assessment of EU public investments against main international competitors; an analysis of patent trends in the various energy technologies, based on 2013 and partial 2014 data; and, an initial assessment of researchers working on energy R&I.	31/12/2018	Science-for-policy reports					
												8	SET-Plan Implementation Progress Report - 2018	This annual report will present: the actions carried out by the SET-Plan in the course of 2018, addressing in particular the execution of implementation plans of the 10 SET-Plan Actions as agreed with the Member States and the industrial and academic stakeholders; a review of progress of joint actions that support the implementation of SET-Plan; an overview of the priorities of major national R&I programmes on energy; and a presentation of relevant flagship projects.	31/12/2018	Science-for-policy reports					
												9	Input to the 2018 State of the Energy Union Report	This is the chapter on research and innovation, contributed by the JRC/SETIS to the 2018 State of the Energy Union report. More specifically, SETIS will provide data, charts and assessments of the public and corporate R&D investments in energy technologies, an analysis of patent trends and an assessment of the number of researchers active in the energy sector.	30/11/2018	JRC contributions to policy documents					
3.3 Safe and secure use of nuclear energy																					
3.3.1 Safety of nuclear reactors and nuclear fuels																					
3.3.1.a collection, analysis, and assessment of nuclear power plants' operational experience worldwide, and dissemination of information to the Member States' regulatory authorities;																					
268 - NUCLEOS JRC.G.10	494 - CLEARINGHOUSE European Clearinghouse on Operating Experience for Nuclear Power Plants (NPP)	<p>More than 400 nuclear power reactors are now operating worldwide. They have generated a vast amount of operating experience, increasing every year. Using effectively this accumulated knowledge is crucial to improve the safety of current reactors and to design safer and more competitive new reactors. The objective is to lay a bridge between the repositories of operating experience data on one side, and the policy makers and decision-makers in the nuclear industry on the other side.</p> <p>The work package will set the foundation for a nuclear operating experience knowledge base with the ultimate aim to become the one-stop shop that translates the massive amount of data contained in databases and websites into understandable findings, ready to be used in nuclear safety policy support.</p> <p>This will be achieved through collaboration with member states by means of the European Clearinghouse, a network of nuclear safety authorities enhancing collaboration in operating experience feedback programs. In particular, the work package complements the operating experience programs of the member states by providing insights derived from the event reports issued by nuclear plants around the world. The members of the Clearinghouse network choose the subjects to review, which are then developed within the work package and presented as topical operating experience reports. These reports include a comprehensive, worldwide review of hundreds or thousands of events, an effort that could not be undertaken by most individual regulators. As the operating experience programs of regulators are mainly focussed in the feedback from their own nuclear power plants, the Clearinghouse brings to them a valuable international perspective, with lessons learned derived from a wider statistical base.</p> <p>In addition to the topical reports, the work package includes as well a number of activities contributing to the management and dissemination of knowledge related to nuclear operating experience</p> <p>(i) A quarterly newsletter summarizing the latest events reported by nuclear power plants worldwide,</p> <p>(ii) Organisation of training in topics related to nuclear operating experience</p> <p>(iii) Development of web modules summarizing the most significant lessons learned around a number of «hot issues»</p> <p>(iv) Compilation and synthesis of event analyses based on Probabilistic Safety Analysis</p> <p>(v) Support the regulatory bodies in member states to prepare nuclear plant event reports aimed at the international community</p>	JRC.G.10 MIGUEL PEINADOR VEIRA	3.3.1.a	ENER	JRC	Ivo ALEHNO			01/01/2016 31/12/2018	INS-RS										
									- Consejo de Seguridad Nuclear - Federal Agency for Nuclear Control BNSA NRA - Агенцията за ядрено регулиране - Bulgarian Nuclear Regulatory Authority ASN - Autorité de sûreté nucléaire BMU - Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit CNCAN - Comisia Nationala pentru Controlul Activitatilor Nucleare (RO) ENSI - Swiss Federal Nuclear Safety Inspectorate HAEA - ORSZÁGOS ATOMENERGIA HÍVATAL - Hungarian Atomic Energy Authority IAEA - International Atomic Energy Agency (IAEA) ILENT - Inspectie Leefomgeving en Transport (NL) - Human Environment and Transport Inspectorate NEA-OECD - Nuclear Energy Agency (OECD) PAA - Panstwowa Agencja Atomistyk SSM - Strålsäkerhetsmyndigheten - Swedish Radiation Safety Authority SUJB - Státni úrad pro jadernou bezpečnost (CZ) - The State Office for Nuclear Safety UJD SR - Úrad jadrového dozoru (SK) - Nuclear Regulatory Authority of the Slovak Republic VATESI - Valstybinė atominės energetikos saugos inspekcija - State Nuclear Power Safety Inspectorate												
												2017D01	TOER report on Control Rods	A technical review of operating experience reported by nuclear power plants worldwide regarding events related to control rods and their driving mechanisms (a system to control reactivity in a nuclear power plant)	30/06/2017	JRC technical reports					
												2017D02	TOER report on flooding	A technical review of operating experience reported by Nuclear Power Plants worldwide regarding events related to flooding, from both external as well as internal sources)	31/12/2017	JRC technical reports					
												2017D03	A Review of DC Power Operating Experience in NPPs	A technical review of operating experience reported by nuclear power plants worldwide regarding events related to DC power.	30/06/2017	JRC technical reports					
												2017D04	Use of Research Reactors OPEX in Power Reactors	Events reported by research reactors worldwide to the IAEA's Incident Reporting System for Research Reactors will be assessed in order to identify lessons learned applicable to power reactors.	31/12/2017	JRC technical reports					
												2017D05	Quarterly newsletters (2017)	Quarterly newsletter featuring a screening of worldwide operational event information to identify and timely disseminate applicable insights of importance to the organisations participating to the EU Clearinghouse on OE. (4 reports per year)	31/12/2017	JRC technical reports					
												2017D06	Training activities (2017)	Training on two topics related to nuclear operating experience for the benefit of the European Nuclear Safety Authorities (one week training per topic) Topic 1: Root Cause Analysis and Events investigations Topic 2: to be determined	31/12/2017	Training					
												2017D07	Draft IRS Reports (2017)	Clearinghouse review or draft of IRS (Incident Reporting System) reports submitted by Clearinghouse member safety authorities to the IAEA/OECD-NEA IRS. this deliverable is prepared only on request (expected number of reports is 5 per year).	31/12/2017	JRC technical reports					
												2017D08	Scientific publications and outreach activity 2017	This deliverable will include peer-reviewed scientific publications based on the topical studies, as well as the dissemination of Clearinghouse activities (workshops, conference proceedings, etc.)	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)					
												2017D09	Top Ten Lessons Learned (2017)	Web modules containing the most significant lessons learned grouped around a number of «hot issues». Three modules are expected to be completed in 2017: Issue 1: to be determined Issue 2: to be determined Issue 3: to be determined	31/12/2017	Scientific information systems and databases					
												2017D10	Synthesis Report on PSA-based Event analyses 2017	A synthesis report describing the activities carried out during the year to compile and disseminate the results of PSA-based event analyses carried out by other stakeholders.	31/12/2017	JRC technical reports					
												2017D11	Nuclear Operating Experience Knowledge Base	A concept study exploring the feasibility and possible structure of a knowledge base on nuclear power plants operating experience	31/12/2017	JRC technical reports					
												2017D12	Clearinghouse Operating Experience database	The database contains reports from events occurred in nuclear power plants around the world.	31/12/2017	Datasets					
												2017D13	STRESA Database	Storage of Thermal-Reactor Safety Analysis Data (STRESA) is a general-purpose database to store documents and data coming from any type of plant or experimental facility as well as from code calculations.	31/12/2017	Datasets					
												2018D01	TOER report on topic 2018/1	A technical review of operating experience reported by nuclear power plants worldwide regarding events related to a topic to be chosen in 2017	30/06/2018	JRC technical reports					
												2018D02	TOER report on topic 2018/2	A technical review of operating experience reported by nuclear power plants worldwide regarding events related to a topic to be chosen in 2017	31/12/2017	JRC technical reports					
												2018D05	Quarterly newsletters (2018)	Quarterly newsletter featuring a screening of worldwide operational event information to identify and timely disseminate applicable insights of importance to the organisations participating to the EU Clearinghouse on OE. (4 reports per year)	31/12/2018	JRC technical reports					
												2018D06	Training activities (2018)	Training on two topics related to nuclear operating experience for the benefit of the European Nuclear Safety Authorities (one week training per topic) Topic 1: Root Cause Analysis and Events investigations Topic 2: to be determined	31/12/2018	JRC technical reports					
												2018D07	Draft IRS reports (2018)	Clearinghouse review or draft of IRS (Incident Reporting System) reports submitted by Clearinghouse member safety authorities to the IAEA/OECD-NEA IRS. this deliverable is prepared only on request (expected number of reports is 5 per year).	31/12/2018	JRC technical reports					
												2018D08	Scientific publications and outreach activity 2018	This deliverable will include peer-reviewed scientific publications based on the topical studies, as well as the dissemination of Clearinghouse activities (workshops, conference proceedings, etc.)	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)					
												2018D09	Top Ten Lessons Learned (2018)	Web modules containing the most significant lessons learned grouped around a number of «hot issues». Three modules are expected to be completed in 2018: Issue 1: to be determined Issue 2: to be determined Issue 3: to be determined	31/12/2018	Scientific information systems and databases					
												2018D20	Synthesis Report on PSA-based Event analyses 2018	A synthesis report describing the activities carried out during the year to compile and disseminate the results of PSA-based event analyses carried out by other stakeholders.	31/12/2018	JRC technical reports					
3.3.1.b research on structural materials for analysis and modelling of ageing of components and structures with a view to improving residual lifetime assessment techniques;																					

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
179 - SALTO JRC.G.I.4	448 - IntAg-LWR Integrity and Ageing of present Light Water Reactors and future Water cooled Reactors	IntAg-LWR aims at consolidating safety relevant knowledge, collecting and exchanging relevant data and performing research into open issues concerning the integrity assessment and ageing of present and advanced light water reactors (LWRs, Generations II, III and III+), with a view to the environmental degradation of nuclear materials and structural components during long-term operation (LTO). The WP is supporting the NUGENIA association at the organizational and operational level, to coordinate and integrate European research on the safety of nuclear installations. In addition the WPK contributes to IAEA plant life management activities (via consolidating relevant knowledge, data exchange and organisation of joint workshops/conferences), to round-robin exercises on degradation of nuclear materials and integrity assessment of reactor components (organised by OECD-NEA or ECG-COMON (=expert group of European nuclear corrosion specialists)) and to CEN initiatives on harmonisation of codes & standards related to the design of LWRs. Also IntAg-LWR contributes to direct joint research activities with nuclear organisations of EU member states and the US NRC and US DOE under the I-NERI Program. IntAg-LWR will maintain strong links with competitive WPK of SALTO, i.e. SOTERIA and INCEFA+, which are dealing with specific degradation mechanisms of LWRs.	JRC.G.I.4 Oliver MARTIN	3.3.1.b	ENER	JRC	Ivan POULEUR, Jean-Claude VENCHIARUTTI	RTD	- Nuclear Research Institute Rez IFRAM - International Forum for Reactor Ageing Management CEN - European Committee for Standardization ECG-COMON - European Cooperative Group on Corrosion Monitoring of Nuclear Materials EDF - Electricité de France GIF - Generation-IV International Forum IAEA - International Atomic Energy Agency (IAEA) NEA-OECD - Nuclear Energy Agency (OECD) NRG - Nuclear Research and consultancy Group, NRG NUGENIA - Nuclear Generation II & III Association SNETP - Sustainable Nuclear Energy Technology Platform (SNETP) USNRC - United States Nuclear Regulatory Commission VTT - Technical Research Centre of Finland	01/01/2014 31/12/2018	INS-RS	171p	NUGENIA Position Paper on HPLWR	This document summarizes the current R&D status and challenges of the High-Performance LWR, which is the European super-critical water reactor (SCWR) design. Following the inclusion of the SCWR into NUGENIA lately the purpose of this document is to inform the NUGENIA community and other stakeholders about this reactor concept. Its content (complete or partial) will be included in the next revision of the NUGENIA Global Vision document (=NUGENIA Roadmap), which is due in 2018.	15/12/2017	Science-for-policy reports
												171s	Corrosion behaviour of stainless steels	This article summarises the results of the GIF round-robin exercise on corrosion behaviour of stainless steels in high temperature high pressure water environments.	15/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												172p	Revision of ENIQ Recommended Practice 1	ENIQ Recommended Practice (RP) 1 provides guidance on the influential and essential parameters for an in-service Inspections (ISI) of nuclear power plants (NPP). ENIQ RPs are documents used by NPP operators as guidance documents for ISI and are acknowledged by nuclear regulators. The current version of ENIQ RP1 is from 2005 and needs revision.	15/11/2017	Science-for-policy reports
												172s	SCC initiation of austenitic alloys in LWR cond.	This article summarises the results of the NUGENIA project MICRIN+ on stress corrosion cracking (SCC) initiation of stainless steel 304/316L and Ni based alloy 182 in LWR conditions.	15/10/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												173p	Revision of ENIQ Recommended Practice 2	ENIQ Recommended Practice (RP) 2 provides guidance on the strategy and contents for technical justifications for the qualification of in-service Inspections (ISI) of nuclear power plants (NPP). ENIQ RPs are documents used by NPP operators as guidance documents for ISI and are acknowledged by nuclear regulators. The current version of ENIQ RP2 is from 2010 and needs revision.	15/11/2017	Science-for-policy reports
												173s	Residual stresses in DMWs of French PWRs	This article summarises the results of JRC's residual stress measurements of Mock-up 2 of the ex-FP7 project MULTIMETAL and makes comparison with corresponding computational results performed by Areva-F. Mock-up 2 of the finalised FP7 project MULTIMETAL is a weld mock-up resembling a dissimilar metal weld (DMW) as it can be found in the primary piping of operating French PWRs. This DMW has stainless steel as filler material and a stainless steel butting layer.	15/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												174p	Proceedings of surveillance database workshop	A workshop on surveillance databases is planned in 2017 in Petten hosted by JRC. A significant number of nuclear organisations in Europe and the world run databases on surveillance data (incl. JRC with Mat DB) and the idea is to bring all these organisations together for exchange of experience and to provide participants with an overview on who has what.	30/11/2017	JRC technical reports
												175p	Datasets from experiments running within IntAg-LWR	This deliverable covers all results and data generated in experiments running within IntAg-LWR, mostly experiments in JRC Petten's corrosion lab AMALIA. These will be stored in JRC material database MatDB. This task is a continuous exercise throughout the year.	15/12/2017	Datasets
												181p	NUGENIA Global Vision - 2018 Update	This document is the NUGENIA roadmap and summarises the R&D challenges for present and future LWRs. It is revised every 3 years to include the new R&D challenges and remove old ones, if they have been covered and solved by recent R&D projects running within NUGENIA or other networks or nuclear organisations. The next update of the NUGENIA Global Vision is foreseen for 2018.	15/12/2018	Science-for-policy reports
												182p	Revision of ENIQ Recommended Practice 10	ENIQ Recommended Practice (RP) 10 provides guidance on qualification of inspection personnel for nuclear power plants (NPP). ENIQ RPs are documents used by NPP operators as guidance documents for ISI and are acknowledged by nuclear regulators. The current version of ENIQ RP10 is from 2010 and needs revision.	15/11/2018	Science-for-policy reports
												183p	Revision of ENIQ Recommended Practice 8	ENIQ Recommended Practice (RP) 8 provides guidance on qualification levels and approaches for in-Service Inspections (ISI) of nuclear power plants (NPP). ENIQ RPs are documents used by NPP operators as guidance documents for ISI and are acknowledged by nuclear regulators. The current version of ENIQ RP8 is from 2005 and needs revision.	15/11/2018	Science-for-policy reports
												184p	Datasets from experiments running within IntAg-LWR	This deliverable covers all results and data generated in experiments running within IntAg-LWR, mostly experiments in JRC Petten's corrosion lab AMALIA. The generated data will be stored in JRC's material database MatDB. This task is a continuous activity throughout the year.	15/12/2018	Datasets
179 - SALTO JRC.G.I.4	3161 - SOTERIA Radiation effects in nuclear structural materials for safe long term operation of LWR	SOTERIA aims to underpin safe LTO (60 years) with an improved understanding of phenomena occurring in RPVs and in reactor internals facing environmental stresses. Operators and regulators are the target customers. SOTERIA will combine use of advanced modelling tools with exploitation of experimental data from advanced microstructural examination techniques in correlation with mechanical properties.	JRC.G.I.4 IGOR SIMONOVSKI	3.3.1.b	ENER	RTD	Rita Lecbychova (HoU RTD.G.4), Takis Manolatos	RTD	- University of Manchester - VATTENFALL AB - UNIVERSITAT POLITÈCNICA DE CATALUNYA - AREVA NP GMBH* - Tecnatom - Nuclear Research Institute Rez AMEC - AMEC Consulting CIEMAT - Centro de Investigaciones Energéticas Medioambientales y Tecnológicas CNRS - Centre National de la Recherche Scientifique EDF - Electricité de France HZDR - Helmholtz-Zentrum Dresden-Rossendorf e.V. IAEA - International Atomic Energy Agency (IAEA) IRSN - Institut de Radioprotection et	01/09/2015 31/08/2019	CON-IA	2	Grain boundary fracture properties	A report on the measurement of the grain boundary fracture properties	28/02/2017	JRC technical reports
												3	Database of grain boundary fracture properties	A database of grain boundary fracture properties and description of the test procedures	31/05/2017	Validated methods, Reference methods and measurements
												4	Grain boundary fracture simulations	Development of a polycrystalline model that explicitly accounts for individual grains, their shapes and crystallographic orientations: 1) incorporation of calibrated grain boundary material properties for cohesive zone approach, 2) incorporating irradiation effects into the crystal plasticity law and 3) study of channelling effects on the remote stress for IASCC GB cracking.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												5	Software integration platform	The developed tools will be built in a "Software Integration Platform". Such platform will be used as a framework to: • Store and test the versions of codes and databases of experimental results • Integrate them in a high performance computing parallel environment • Implement coupling schemes using several codes in the same simulation • Develop end-user applications, allowing to re-use modules from one code to others • Provide pre- and post-processing tools, with flexible visualisation tools	30/12/2018	Scientific information systems and databases
												20171	Data model and formats	Data model and formats for fatigue data compliant with ISO 12106 (release versions) Production versions of computer-readable implementations of the ISO 12106 testing	28/02/2017	JRC technical reports
20172	Test matrix for testing phase 2 (air and LWR)	A common test matrix for the second phase of the tests in air and LWR environment for the common material	31/03/2017	JRC technical reports												
20174	XML interface for data transfer (release)	An XML interface for data transfer enabling every partner to transfer data files from their test facility to MatDB online in the common data format (production version). A production version of software that will allow data formatted according to the computer-readable versions of the ISO 12106 testing standard to be imported directly into the MatDB database.	31/03/2017	Scientific information systems and databases												
20175	CEN Workshop Agreement	Final report of the CEN Workshop on the development of computer-readable data formats compliant with ISO 12106:2003	30/04/2017	Validated methods, Reference methods and measurements												
179 - SALTO JRC.G.I.4	3162 - INCEFA+ Increasing Safety in NPPs by Covering gaps in Environmental Fatigue Assessment	INCEFA+ delivers new experimental data and new guidelines for assessment of environmental fatigue damage to ensure safe operation of nuclear power plants. Austenitic steels will be tested for the effects of mean strain, hold time and material roughness on fatigue endurance in Light Water Reactor environments. The data will be collected in an online fatigue database and a CEN workshop will be held. A procedure for estimating environmental fatigue degradation will be developed.	JRC.G.I.4 MATTHIAS BRUCHHAUSEN	3.3.1.b	ENER	RTD	Mr. Panagiotis MANOLATOS, RTD DDG3 G4 (Panagiotis.MANOLATOS@ec.europa.eu)	RTD	- Nuclear Research Institute Rez AMEC - AMEC Consulting CEA - Commissariat à l'Energie Atomique et aux Energies Alternatives CIEMAT - Centro de Investigaciones Energéticas Medioambientales y Tecnológicas EDF Energy - EDF Energy IRSN - Institut de Radioprotection et Sûreté Nucléaire LEI - LIETUVOS ENERGETIKOS INSTITUTAS - Lithuanian Energy Institute	08/06/2015 07/06/2020	CON-IA	20171	Data model and formats	Data model and formats for fatigue data compliant with ISO 12106 (release versions) Production versions of computer-readable implementations of the ISO 12106 testing	28/02/2017	JRC technical reports
												20172	Test matrix for testing phase 2 (air and LWR)	A common test matrix for the second phase of the tests in air and LWR environment for the common material	31/03/2017	JRC technical reports
												20174	XML interface for data transfer (release)	An XML interface for data transfer enabling every partner to transfer data files from their test facility to MatDB online in the common data format (production version). A production version of software that will allow data formatted according to the computer-readable versions of the ISO 12106 testing standard to be imported directly into the MatDB database.	31/03/2017	Scientific information systems and databases
												20175	CEN Workshop Agreement	Final report of the CEN Workshop on the development of computer-readable data formats compliant with ISO 12106:2003	30/04/2017	Validated methods, Reference methods and measurements

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
401 - RSMW JRC.G.III.8	5281 - SAEXFUEL SAEXFUEL	SAEXFUEL is a dedicated initiative by European partners as an indirect Action to perform and	JRC.G.III.8 Dimitrios PAPAIOANNOU	3.3.1.b	ENER	RTD	M. Boella		NUGENIA - Nuclear Generation II & III Association PSI - Paul Scherrer Institute - CEA - Direction des Sciences de la Matière DSM / DAPNIA / SPHN	01/07/2017 31/12/2020	CON-IA	201801	Test matrix for testing phase 3 (air and LWR) Testing fuel pin under impact	A common test matrix for the third phase of the tests in air and LWR environment for the common material The preliminary design studies for a dynamic testing facility will be provided to partners	30/04/2018 31/08/2018	JRC technical reports JRC technical reports
3.3.1.c improvement of the safety assessments of innovative reactor designs in synergy with the Generation IV International Forum (GIF);																
63 - SANSIF JRC.G.I.3	24 - INET Fuel contract PIE on INET Pebble fuel elements	The resistance of HTR pebble bed fuel against a severe accident (loss of cooling accident scenario) is to be tested. For this purpose, five INET (Tsinghua University, China) pebbles irradiated in HFR will be transported to ITU (early 2016) for investigation. The outcome of this work will be used to qualify and license the fuel for the new built PELGRIMM addresses minor-actinide (MA) bearing fuel developments for GIF Fast Reactor Systems. JRC activities and objectives are:	JRC.G.III.8 Paul BOTTOMLEY	3.3.1.c	JRC	n/a	Contract 31339		- INSTITUTE OF NUCLEAR AND NEW ENERGY - AREVA NP GMBH - RESEAU EUROPEEN POUR L'ENRICHISSEMENT DU MOLENEUR	31/03/2016 31/10/2018	CON-TW	250 251	Final report Technical report on experimental results	This report will summarize all practical information required for the fuel qualification by Chinese safety authorities. It will merge KuFA results and associated ceramographic results on intact and (possibly) defective particles. The different results achieved during the INET PIE fuel will be merged in a publication.	31/07/2018 31/12/2017	JRC technical reports JRC technical reports
63 - SANSIF JRC.G.I.3	120 - PELGRIMM PELGRIMM - Pellets versus pebbles irradiation. Manufacturing	PELGRIMM addresses minor-actinide (MA) bearing fuel developments for GIF Fast Reactor Systems. JRC activities and objectives are:	JRC.G.I.3 DANIEL FREIS	3.3.1.c	RTD	RTD	Mykola Dziubinsky (RTD)		- AREVA NP GMBH - RESEAU EUROPEEN POUR L'ENRICHISSEMENT DU MOLENEUR	01/01/2012 30/06/2017	CON-IA	201701	Final report	Final report of the project summarising the main achievements.	30/06/2017	JRC technical reports
63 - SANSIF JRC.G.I.3	449 - MaCoSyMA Materials, Components, Systems and Methods for Advanced Nuclear Systems	The objective is to support the development and qualification of materials, components, structures and associated assessment methods for next generation nuclear reactors through pre-normative research. This is crucial to ensure that nuclear reactors are designed in accordance with the highest safety standards and best engineering practices to allow competitive costs. The Work Package provides input to the development of Design Rules and Assessment Procedures incorporated into Design Codes such as RCC-MRx and R6, development and validation of test procedures, development of multi-scale physics based models and evaluation of alternative approaches for rapid testing of components under irradiation. The Work Package integrates modelling and experimental work related to high temperatures, irradiation, liquid metal embrittlement and weld integrity. A feasibility study will be initiated to evaluate the possible contribution of JRC in the simulation of neutron irradiation by high energy ion beams and their effect on the mechanical properties of structural components. The project is strongly linked to JRC contribution to the EERA Joint Programme on Nuclear Materials and support to the design and construction of prototypes and demonstrators proposed by SNETP. Close collaboration with European and international standardization organization such as CEN and ISO is also essential. The work package also provides the underpinning research to international organizations such as GIF, CEN and OECD/NEA. JRC contributes with its unique scientific competence and laboratories. Moreover, JRC is viewed by other partners as a facilitator towards integration and harmonization of the European nuclear materials research.	JRC.G.I.4 Karl-Fredrik NILSSON	3.3.1.c	RTD	JRC	Mykola DZUBINSKY, Scientific / Technical Project Officer in RTD.DDG3.K.4 (Fission) Unit, mykola.dzubinsky@ec.europa.eu	GROW	- University of Manchester - Nuclear Research Institute Rez AREVA NP - AREVA NP Main Company CEA - Commissariat à l'Energie Atomique et aux Energies Alternatives CEN - European Committee for Standardization CIEMAT - Centro de Investigaciones Energeticas Medioambientales y Tecnológicas EDF Energy - EDF Energy EERA - European Energy Research Alliance ENEA - Agenzia Nazionale per le Nuove Tecnologie, L'energia e lo Sviluppo Economico Sostenibile ESNII - European Sustainable Nuclear Industrial Initiative GIF - Generation-IV International Forum IAEA - International Atomic Energy Agency (IAEA) KAERI - Korea Atomic Energy Research Institute KIT - Karlsruhe Institute of Technology NC2I - Nuclear Cogeneration Industrial Initiative NRG - Nuclear Research and consultancy Group, NRG PSI - Paul Scherrer Institute SCK-CEN - Belgian Nuclear Research Centre (SCK-CEN) SNETP - Sustainable Nuclear Energy Technology Platform (SNETP) US DoE - US Department of Energy (DOE) VTT - Technical Research Centre of Finland	01/01/2014 31/12/2018	INS-RS	2017CENWS064Final 2017ETNADesign 2017EUColl 2017GIF 2017INERIDatFormat 2017JPNMSP1 2017MatDB 2017PbMat 2017ResStress 2017SciPub 2017WELLMET 2017XRemov e1 2017XRemov e2 2017XRemov e3 2018EUColl 2018GIF 2018JPNMSP1 2018SciPub	Final Report CWA: CEN/WS 64 phase 2 Design and Safety report ETNA irradiation facility Outreach activities European collaboration Annual Reports EURATOM contributions to GIF I-NERI DIASM Data Formats EERA JPNM Subprogramme 1 Annual Report 2017 Materials Database Design of Nuclear Reactors Mechanical Properties of steels in liquid lead Residual Stresses in Welded Components Scientific publications and outreach activities WELLMET 2017 Deliverables JRC contribution to GIF-LFR and OECD Expert group JRC Contribution GIF-VHTR + related NEA activities EURATOM contribution to GIF SFR projects Outreach activities European collaboration Annual Reports EURATOM contributions to GIF EERA JPNM Subprogramme 1 Annual Report 2018 Scientific Publications and outreach activities	Final report for CEN/WS 64 Phase 2 Workshop agreement. The Workshop provides Code Evolution proposals and associated pre-normative R&D proposals. This report will summarize the main findings and recommendations from the WS. Design and Safety report which will describe in detail the ETNA irradiation facility to irradiate nuclear material and fuel at the HFR and which is necessary for approval of the facility for irradiation. This deliverable will include the following technical and internal reports on: Status report on Jules Horowitz Reactor activities, Contribution to SNETP pillars (strategy documents for ESNII and NC2I) and the HFR Annual Report 2016 a) Annual report on Euratom participation in GIF, including the GIF Expert Group and Policy Group activities, the yearly Euratom-GIF Coordination Meeting and the implementation, coordination and technical activities of Euratom for GIF projects, methodology working groups and systems. The report is drafted at JRC level closely involving all concerned units and in particular JRC.A.7; b) Scientific report summarizes the annual EURATOM contribution to the GIF Lead-cooled Fast Reactor System Steering Committee and OECD Expert Group on Liquid Metal Technology c) Scientific report summarizing the annual EURATOM contribution to the GIF Very High Temperature Reactor System Steering Committee and Fuel and Fuel-cycle project. Related OECD and IAEA activities are also covered. Development of Standards-compliant data formats in the scope of the I-NERI project on a digital infrastructure for advanced structural materials. Such data formats are needed for an efficient use of the data in a database. This report summarizes the work performed and new planned activities related to EERA JPNM SP1 in 2017 Uploading of data generated in MaCoSyMA to the web-based database MatDB for re-use by the scientific community in the spirit of Open Data. The data can be referenced and the research community can find the data through DOI. Technical report on measurements of mechanical behaviour of candidate structural materials and welds considered for European heavy liquid metal (HLM) cooled reactors, MYRRHA and ALFRED performed in 2016 and 2017. The focus will be on relatively thick walled welded components of 316L and 316L(N), in support to the development of the RCC-MRx design code. This activity has been proposed as an EERA JPNM Pilot Project Technical report on measurements of mechanical behaviour of candidate structural materials and welds considered for European heavy liquid metal (HLM) cooled reactors, MYRRHA and ALFRED performed in 2016 and 2017. The focus will be on relatively thick walled welded components of 316L and 316L(N), in support to the development of the RCC-MRx design code. This activity has been proposed as an EERA JPNM Pilot Project This includes various technical reports and publications. 1) Recommendations for Mechanical tests of fuel claddings; 2) Relaxation models for bolting steels; 3) Advanced models for Creep-fatigue crack growth; 4) On Modelling of shear localization in F-M steels by a multi-scale approach; 5) preliminary results of MARINE irradiation 6) Recommendation on the use of ion irradiation to simulate the modification of mechanical properties of materials by neutrons. JRC is the coordinator of the EERA JPNM Pilot Project WELLMET which aims to qualify welded components for HLM degradation. This includes 2 Deliverables in 2017. D1.1: Selection of candidate materials, welding processes and welding procedures (month 12) D1.2: Weld and specimen specifications and basic characterisation (month 18) Scientific report summarizes the annual EURATOM contribution to the GIF Lead-cooled Fast Reactor System Steering Committee and OECD Expert Group on Liquid Metal Technology Scientific report summarizing the annual EURATOM contribution to the GIF Very High Temperature Reactor System Steering Committee and Fuel and Fuel-cycle project. Related OECD and IAEA activities are also covered. The scientific report summarizes the annual EURATOM contribution to the GIF Sodium-cooled Fast Reactor projects on Advanced Fuels (GIF SFR AF), System Integration & Assessment (GIF SFR SIA) and Safety and Operation (GIF SFR S&O) This deliverable will include the following technical and internal reports on: Status report on Jules Horowitz Reactor activities, Contribution to SNETP pillars (strategy documents for ESNII and NC2I) and the HFR Annual Report 2017 a) Annual report on Euratom participation in GIF, including the GIF Expert Group and Policy Group activities, the yearly Euratom-GIF Coordination Meeting and the implementation, coordination and technical activities of Euratom for GIF projects, methodology working groups and systems. The report is drafted at JRC level closely involving all concerned units and in particular JRC.A.7; b) Scientific report summarizes the annual EURATOM contribution to the GIF Lead-cooled Fast Reactor System Steering Committee and OECD Expert Group on Liquid Metal Technology c) Scientific report summarizing the annual EURATOM contribution to the GIF Very High Temperature Reactor System Steering Committee and Fuel and Fuel-cycle project. Related OECD and IAEA activities are also covered. This report summarized the work performed and new planned activities related to EERA JPNM SP1 in 2018 This includes various technical reports and publications. The number and content depend on the progress.	31/08/2017 31/03/2017 30/12/2017 31/12/2017 30/11/2017 15/12/2017 15/12/2017 15/12/2017 31/12/2017 30/09/2017 15/12/2017 15/12/2017 15/12/2017 20/12/2018 31/12/2018 15/12/2018 15/12/2018	JRC contributions to standards JRC technical reports JRC technical reports Science-for-policy reports JRC contributions to standards JRC technical reports Datasets Validated methods, Reference methods and measurements Validated methods, Reference methods and measurements Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI) JRC technical reports JRC technical reports JRC technical reports JRC technical reports JRC technical reports Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
												2018XRemov e1	JRC Contribution to GIF VHTR + related activities	Scientific report summarizing the annual EURATOM contribution to the GIF Very High Temperature Reactor System Steering Committee and Fuel and Fuel Cycle project. Related OECD and IAEA activities are also covered.	31/12/2018	JRC technical reports
												2018XRemov e2	JRC contribution to GIF-LFR and OECD Expert group	Scientific report summarizing the annual EURATOM contribution to the GIF Lead-cooled Fast Reactor System Steering Committee and OECD Expert Group on Liquid Metal Technology	31/12/2018	JRC technical reports
												2018XRemov e3	Euratom contribution to GIF SFR projects	The scientific report summarizes the annual EURATOM contribution to the GIF Sodium-cooled Fast Reactor projects on Advanced Fuels (GIF SFR AF), System Integration & Assessment (GIF SFR SIA) and Safety and Operation (GIF SFR S&O).	31/12/2018	JRC technical reports
												2018XRemov e4	Euratom contribution to GIF SFR projects	The scientific report summarizes the annual EURATOM contribution to the GIF Sodium-cooled Fast Reactor projects on Advanced Fuels (GIF SFR AF), System Integration & Assessment (GIF SFR SIA) and Safety and Operation (GIF SFR S&O).	31/12/2018	JRC technical reports
63 - SANSIF JRC.G.1.3	480 - MATISSE MATISSE: Materials' Innovations for a Safe and Sustainable nuclear in Europe	In MATISSE JRC contributes to the EERA JPNM strategy documents (Vision paper, Roadmaps for fuel and structural Material and Deployment Strategy) and where it leads the tasks on the Vision Paper and Deployment Strategy. JRC is leader for the WP on support to safety of ESNII reactors w.r.t. i) creep-fatigue ii) coatings iii) fuel-cladding interaction iv) material degradation in heavy liquid metal. The JRC technical contribution is mainly on creep-fatigue and fuel cladding interaction. MATISSE is closely integrated with the activities in EERA JPNM.	JRC.G.1.4 Karl-Fredrik NILSSON	3.3.1.c	RTD	RTD	Mykola Dzubinsky		- CENTRUM DOPRAVNIHO VYZKUMU - Catholic University of Leuven - Centro Sviluppo Materiali S.p.A. - UNIVERSITAET STUTTGART - CNR - ITALIAN NATIONAL RESEARCH COUNCIL - CEA - Commissariat à l'Energie Atomique et aux Energies Alternatives - CEN - European Committee for Standardization - CIEMAT - Centro de Investigaciones Energéticas Medioambientales Tecnológicas - CNRS - Centre National de la	01/11/2013 31/10/2017	CON-IA	20171	JPNM Deployment Strategy D1.21	JRC contribution to the EERA JPNM strategic vision paper including a detailed R&D roadmap and deployment strategy in line with the SET-PLAN and in particular with the	28/02/2017	Science-for-policy reports
												20172	Report on creep-fatigue crack growth (D5.13)	A synthesis report on developed and applied computational models for creep-fatigue crack growth with comparison of predictions with tests performed and recommendations for engineering applications (Matisse Del. 5.1.3)	15/04/2017	Scientific and policy reports
												20173	Creep-fatigue materials database (D5.14)	Uploading of creep-fatigue test data generated in the MATISSE project using IET's web-enabled data base MatDB with DOIs. This will ensure traceability and re-use of the data (Matisse Del. 5.1.4)	01/09/2017	Datasets
												20174	Synthesis for assessment fuel-cladding interaction	A synthesis report that summarizes the models and data for fuel cladding interaction including key difference between LWR and fast reactors (SFR and LFR), identification of gaps and guidelines for assessments and outline of assessment procedure.	15/09/2017	JRC technical reports
269 - ND-Applications JRC.G.2	507 - ND-CHANDA Challenges in nuclear data for innovative solutions to safety of nuclear energy	Competitive project CHANDA is a sustainable pan-European integrated research initiative combining the nuclear data infrastructures and capabilities, available in the EU to contribute to increasing the safety of nuclear systems at EU and international level (C/96/29-2009/71,2011/70). This project combines the SN3S contributions to CHANDA: besides an extensive research programme SN3S is leading 3 out of 13 Work Packages and provides one of 3 Domain Coordinators.	JRC.G.2 Arjan PLOMPEN	3.3.1.c	ENER	RTD	DG RTD G4 Roger Garbil		- University of Bucharest - National Technical University of Athens - ANSALDO NUCLEARE S.P.A. - NPL Management Ltd - University of Oslo - ISTITUTO SUPERIOR TECNICO - JOHANN WOLFGANG GOETHE-UNIVERSITAET FRANKFURT AM MAIN - JOHANNES GUTENBERG UNIVERSITAET MAINZ - Nuclear Physics Institute	01/12/2013 30/11/2017	CON-IA	10	Final report on CHANDA transnational access.	A final report will be made on the transnational access and scientific visitor program of the CHANDA project by the JRC WP coordinator. This report will contribute to the final reporting for CHANDA.	15/11/2017	JRC technical reports
												11	2nd Neutron Resonance Analysis School	The second CHANDA neutron resonance analysis school will be organised in Geel in accordance with the deliverable of CHANDA WP13.	01/10/2017	Training
												12	JRC contribution of CHANDA WP8	JRC contributes to WP8 of CHANDA with new capability development for inelastic and elastic scattering measurements at its GELINA facility. The achievements will be summarised in a report for the CHANDA project coordinator.	30/11/2017	JRC technical reports
												9	Improved cross sections for MYRRHA	Recommendations will be made to the OECD-NEA Joint Evaluated Fission and Fusion (JEFF) data library project concerning the evaluations to be adopted to allow best estimates in MYRRHA safety analyses. This responds to the request of the MYRRHA project of a nuclear data library that is validated, verified and agreed by the international nuclear data project JEFF. It constitutes the final deliverable of the CHANDA WP10 which is coordinated by JRC.	15/11/2017	JRC technical reports
63 - SANSIF JRC.G.1.3	2252 - MYRTE Fuels for transmutation in dedicated facility	Within the scope of a facility to transmute minor actinides, new fuels must be synthesised and their properties determined. Within this project ITU will synthesise (U,Am)O ₂ -x fuels for minor actinide recycling and determine safety relevant properties during storage and normal and off normal operation. Furthermore, the coolant (Lead	JRC.G.1.3 Rudy KONINGS	3.3.1.c	RTD	RTD	R. Lecbychova RTD G.4		01/04/2015 31/03/2019	CON-IA	20171	LBE interaction with (U, Am) O ₂ -x	Should a pin breach occur during irradiation, the fuel will be directly exposed to the LBE coolant. No chemical interaction is desired. A dedicated study of potential interactions will be made at typical operating temperatures of the reactor coolant (500°C) and with LBE with two different oxygen contents. Oxygen content in LBE is an important operating parameter, and in this case two extreme conditions will be deployed, i.e. in LBE with a very low oxygen content, and one with a saturated oxygen.	31/12/2017	JRC technical reports	
3.3.1.d generation of reference samples and scientific data on the safety performance and development of codes and modelling for safety assessment of both conventional and innovative nuclear fuels in operational, transient and accident conditions;																
63 - SANSIF JRC.G.1.3	128 - META TPW Irradiation Effects on Properties and	JRC will perform Post Irradiation Examination (PIE) of metal alloy fuel containing Np, Am, Cm	JRC.G.1.3 PHILIPP POEML	3.3.1.d	JRC	n/a	Rudy KONINGS		CRIEPI - Central Research Institute of Electric Power Industry	01/04/2011 31/03/2019	CON-TW					
269 - ND-Applications JRC.G.2	502 - ND-Reactor Dosimetry Improving the international reactor dosimetry standards of the IAEA IRDFF-library	Reactor dosimetry determines a.o., the operational life time of reactor components and fuel and therefore for reactor safety (C/2009/71, C/2011/70, 2012/C 327/01). Reference dosimetry standards are kept by the IAEA in the International Reactor Dosimetry library for Fission and Fusion (IRDFF). This project contributes to the IAEA-CRP on validation of key dosimeter reactions of the IRDFF through improved characterisation of the neutron-sources used to develop and test these dosimeters. At the new tandem accelerator laboratory MONNET new reference fluence instrumentation is developed to facilitate accurate characterisation of measurement equipment (WPK 504 EUFRAT). In this WPK the focus is on accurate new techniques for reactor dosimetry cross section determinations, the demonstration of their validity and actual production runs for reference and new dosimeters of interest to member states. The WPK further explores follow-up to the IAEA/IRDFF suggestions for better benchmark spectrum averaged cross sections in the fission spectrum of U-235 or Cf-252. Validation experiments of dosimeter reactions in	JRC.G.2 Arjan PLOMPEN	3.3.1.d	ENER	JRC	DG ENER D2 Nuclear Energy technology, Nuclear waste and Decommissioning		- National Physical Laboratory - Technical University of Vienna - CEA - Commissariat à l'Energie Atomique et aux Energies Alternatives - ENEA - Agenzia Nazionale per le Nuove Tecnologie, L'energia e lo Sviluppo Economico Sostenibile - IAEA - International Atomic Energy Agency (IAEA) - ILL - Institut Laue-Langevin - MS EU - Member states EU - SCK-CEN - Belgian Nuclear Research Centre (SCK-CEN)	01/01/2014 30/12/2018	INS-RS	4	Dosimeter validation experiments at GELINA	Report to IAEA and NEA on the feasibility of experiments in the GELINA target hall for the validation of dosimeter reactions and their use in neutron transport experiments in shields and reflectors of fission and fusion reactors. Near the source GELINA has a high-intensity fission-like neutron spectrum that may be well characterised. Its use for obtaining	31/10/2017	JRC technical reports
												6	Validation of dosimeter data in iron and sodium	Deep penetration of neutrons from a fission source in reactor reflectors, vessels and shields is difficult to predict accurately. This prediction is however critical certainly for new designs for the assessment of damage to structural parts. Benchmarks allowing the validation by the same dosimeters of interest to the final application will be made for Na and Fe using the GELINA fission-like neutron source. The experiments are designed and carried out with CEA and ENEA. The results are openaccess	31/10/2018	JRC technical reports
												7	High quality dosimetry data with MONNET	High quality dosimetry data are requested by the IAEA IRDFF CRP and the involved EU member states. Using the new tandem and recently developed reference equipment new measurements will be performed for the problematic case of the U-238(n,n')U-237 reaction and the new requested case of 117Sn(n,n')117mSn.	30/11/2018	JRC technical reports
												8	Cross section data from reactor spectra	An analysis of systematic effects on cross section data derived from reaction rates in reactor spectra will be presented, which is of relevance to thermal cross sections and resonance integrals. Often such results are at odds with so-called exclusive measurements in which neutron energy is well defined and neutron energy dependence can be inferred. For accurate evaluated cross sections it is essential to understand the underlying effects.	31/10/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
62 - SAF/LWRF JRC.G.1.5	506 - SPECTRE Novel Synthesis technologies for separate effect fuel safety studies and accident tolerant fuels	Safety of nuclear fuel relies on detailed knowledge gained by material preparation, its irradiation and post irradiation examination. Separate effect investigations are an important tool to augment and expand the relevance range of such highly costly studies. This has been recently enabled further by the installation of Spark Plasma Sintering (SPS) providing high density fuel samples with hitherto inconceivable microstructures and compositions (nanograins, volatile fission product inclusions, etc.). SPS yields fuels with nano, sub-micron (including high bump structure observed in irradiated UO ₂ fuel) and micron grains allowing assessment of their mechanical properties in view of real spent fuel, and by doping with 238Pu safety assessment of helium retention/release in UO ₂ as a function of grain size. These separate effect investigations on the material behaviour permit knowledge creation and deepening knowledge, on fuel behaviour leading to improved assessment and advice for policy makers. Furthermore, since the accident at Fukushima in 2011, a world wide initiative on accident tolerant	JRC.G.1.3 MARCO COLOGNA	3.3.1.d	ENER	JRC	M. Boella		- AREVA NP GMBH* - Chalmers University of Technology - CEA - Commissariat à l'Energie Atomique et aux Energies Alternatives - GRS - Gesellschaft für Anlagen und Reaktorsicherheit MBH - IRSN - Institute de Radioprotection et Sûreté Nucléaire - KTH - KUNGLIGA TEKNISKA HOEGSKOLAN - NUGENIA - Nuclear Generation II & III Association - SNETP - Sustainable Nuclear Energy Technology Platform (SNETP) - UKNNL - National Nuclear Laboratories of the UK - Westinghouse - Westinghouse Electric Sweden AB*	01/01/2014 31/01/2018	INS-RS	50620171	SPECTRE status report	An assessment of the results on the synthesis of novel accident tolerant fuels and simfuels and their characterisation (chemical and physical properties, separate effect studies) will be reported and discussed.	31/12/2017	JRC technical reports
												50620172	Other deliverables - publications	The results of the work package will be presented scientific publications in a high quality journal and presented at scientific conferences.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												50620181	SPECTRE final report	The final results of the work package will be reported and discussed, with a focus on the synthesis and properties of novel accident tolerant fuels and simfuels (chemical and physical properties, separate effect studies).	31/12/2018	JRC technical reports
												50620182	Other deliverables - publications	The results of the work package will be presented scientific publications in a high quality journal and presented at scientific conferences.	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
		The thermal properties of fuel are of key importance for the safety assessment of nuclear reactors, as they determine the fuel temperature and thus the margin to fuel melting. A thorough knowledge of these properties and the														
									- Technische Universität München - TECHNICAL UNIVERSITY OF SOFIA - AREVA NP GMBH* - Ente per le Nuove Tecnologie.			62201701	Final report for FUMAC CRP of IAEA	Final report for the (FUMAC) Fuel Modelling under Accident conditions coordinated research project (CRP) of the IAEA	31/10/2017	JRC technical reports

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
62 - SAF/LWRF JRC.G.I.5	508 - LWRSF LWR Fuel Safety	macroscopic and microscopic mechanisms affecting them is thus required, both for virgin fuel materials and irradiated fuels. This WP will contribute to the LWR safety by: - producing high quality thermal property data by experimental investigations of fresh and irradiated UO2 and (U,Pu)O2 and advanced LWR fuels containing additives.	JRC.G.I.3 Dragos STAIUCU	3.3.1.d	ENER	JRC	HoU DG ENER D2	RTD	l'Energia e l'Ambiente- Casaccia - Royal Institute of Technology - VUJE - Nuclear Research Institute Rez - FORTUM NUCLEAR SERVICES - University of Pisa - POLITECNICO DI MILANO - Hungarian Academy of Sciences	01/01/2016 30/12/2018	INS-RS	62201702	Other deliverables-scientific publications	Peer-reviewed publications and conference contributions on fuels thermal properties. Obtain reference data for assessing the effect of individual parameters (e.g. composition, burn-up, irradiation conditions) on safety relevant properties. Samples preparation and measurements for unirradiated and irradiated fuels. The fuels can be UO2, or irradiated high burn-up MOX. Analysis of the results and preparation of peer reviewed articles	31/10/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
64 - SAMP JRC.G.I.3	545 - SIDECAR Simulation of severely Damaged light water reactor Core fuel behaviour	FUKUSHIMA showed the vulnerability of such nuclear reactors in unprecedented events. Severe accident analysis needs detailed investigations on simulated materials, for which the sol gel method is an excellent route with perfect mixing of the elements. These studies focus on the preparation	JRC.G.I.3 ALICE SEIBERT	3.3.1.d	JRC	JRC	n/a	ENER RTD	- Nuclear Regulatory Authority of the Slovak Republic - Hungarian Atomic Energy Authority CEA - Commissariat à l'Energie Atomique et aux Energies Alternatives GRS - Gesellschaft für Anlagen und	01/01/2014 28/02/2017	INS-UR	54520162	Other DELIVERABLES Publications	This deliverable represents a series of publications, reports and conference contributions/proceedings, used to disseminate JRC knowledge created in this work package.	28/02/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index
62 - SAF/LWRF JRC.G.I.5	707 - SACA INST Structural Analysis of Conventional Fuels	JRC will perform detailed examination and safety-relevant scientific analysis of conventional nuclear fuels. High burnup - extended operation, fission product phase distribution, pellet-cladding interaction will be investigated on light water reactor (LWR) commercial fuels. The activities are embedded in partnerships and support Member States organizations (research, safety, industry)	JRC.G.I.3 Thierry WISS	3.3.1.d	ENER	JRC	ENER D.2		- POLITECNICO DI MILANO - AREVA NP GMBH* CEA - Commissariat à l'Energie Atomique et aux Energies Alternatives CRIEPI - Central Research Institute of Electric Power Industry EDF - Electricité de France GRS - Gesellschaft für Anlagen und	01/01/2014 30/12/2017	INS-RS	201701 201702 201703 201704	Electron and Ion Probe Analysis of fuels Characterisation of irradiated fuels CY2016 Annual Report for DOE-ITU I-NERI PhD Thesis on high burnup UO2 fuels	Reports about the assessment of electron microscope, ion microscope and scanning electron microscope measurements of irradiated fuels carried out in 2017. This deliverable covers outputs related to PIE of fuels. Output of the annual activities in the context of the DOE-ITU I-NERI. Investigation of the mechanisms of formation and properties of the high burn up structure in UO2 fuels	30/12/2017 31/12/2017 31/12/2017 31/12/2017	JRC technical reports JRC technical reports JRC technical reports PhD thesis
63 - SANSIF JRC.G.I.3	850 - ESNII+ European Sustainable Nuclear Industrial Initiative	The role of JRC is to contribute to the survey of the activities to develop a strategic approach to Fast Reactors (concepts, implementation, and collaborations), to perform studies in the area of core safety to evaluate the safety parameters of the ASTRID core and to provide new experimental results on material properties of fast reactor fuels, specifically the thermal conductivity of irradiated mixed oxide fuels.	JRC.G.I.3 Dragos STAIUCU	3.3.1.d	RTD	RTD	R. Garbil RTD K.4		SNETP - Sustainable Nuclear Energy Technology Platform (SNETP)	01/09/2013 31/08/2017	CON-IA	201701 238520 358217	D743 Measurements of properties MOX-ir5 Critical review of international cooperation ASTRID core behaviour under ULOF accident	Measurements of properties MOX-ir5 (JRC-ITU) Thermal diffusivity: 2 radial positions, 2 axial positions Heat capacity: 1 position Moved from 2016 to 2017 because the fuel was not yet transported to ITU Survey of activities and schedules on Fast Reactors (SFR, LFR and GFR) developed throughout the world. Critical review of international cooperation synergies and commonalities between different Fast Reactor systems. D 614-1 Evaluation of the ASTRID core behaviour in ULOF beyond sodium boiling	31/10/2017 30/06/2017 30/07/2017	JRC technical reports JRC technical reports JRC technical reports
63 - SANSIF JRC.G.I.3	2245 - SAMOFAR Safety Analysis of Molten Salt Fast Reactor	In the frame of the H2020 project SAMOFAR, the safety of a European design of a molten salt fast reactor (MSFR) will be analysed in a collaboration	JRC.G.I.3 ONDREJ BENES	3.3.1.d	RTD	RTD	HoU, RTD.DDG3.G.4		- POLITECNICO DI MILANO - Delft University of Technology CERCA/AREVA - CERCA/AREVA -	01/08/2015 31/07/2019	CON-IA	201701 201801	Annual report 2017 Annual report 2018	Annual report about the JRC contribution to the SAMOFAR HORIZON2020 project in 2017 Annual report about the JRC contribution to the SAMOFAR HORIZON2020 project in 2018	15/12/2017 15/12/2018	JRC Technical reports JRC technical reports
64 - SAMP JRC.G.I.3	2279 - SAFEST Severe Accident Facilities for European Safety Targets	Improve the capabilities, performances and attractiveness of large research infrastructures built in Europe to solve complex safety issues. Link this facilities forming a pan-European integrated	JRC.G.I.3 Dario MANARA	3.3.1.d	ENER	RTD	B. Schmitz, RTD.DDG3.G.4	RTD		01/07/2014 30/06/2018	CON-IA	3	Status Report 2017	Progress report on SAFEST activities carried out in 2017, with particular regard to Corium experimental research activities. Main beneficiaries: SAFEST partners (mostly CEA and KTH).	31/12/2017	JRC technical reports
62 - SAF/LWRF JRC.G.I.5	2960 - ESSANUF European Supply of Safe Nuclear Fuel	The objective of this project is to create greater security of energy supply and contribute to the security of supply of nuclear fuel for Russian designed pressurized water reactors (VVER) operating in the EU by diversification of fuel	JRC.G.I.5 Paul VAN UFFELEN	3.3.1.d	ENER	RTD	R. Leybchova RTD G.4	RTD		01/09/2015 31/10/2017	CON-IA					
62 - SAF/LWRF JRC.G.I.5	3507 - SACA TPW Structural Analysis of Conventional Fuels TPW	JRC will perform detailed examination and safety-relevant scientific analysis of conventional nuclear fuels. Key safety aspects associated with high	JRC.G.I.3 Thierry WISS	3.3.1.d	ENER	n/a	ENER D.2		CRIEPI - Central Research Institute of Electric Power Industry	01/01/2016 30/03/2018	CON-TW	2	JFY2016 Annual Report	Report describing the results obtained during the reporting period and highlighting progress in understanding of properties and behaviour of very high burnup nuclear fuel.	31/03/2017	JRC technical reports
62 - SAF/LWRF JRC.G.I.5	3983 - NFIR VII NFIR VII	Investigations on safety relevant properties and behaviour of special irradiation fuel disks will be extended to LWR commercial fuel segments for	JRC.G.I.3 Dragos STAIUCU	3.3.1.d	ENER	n/a	ENER D.2		CERCA/AREVA - CERCA/AREVA - France EDF Energy - EDF Energy	01/01/2016 31/12/2021	CON-TW					
64 - SAMP JRC.G.I.3	4981 - MABEL Materials Behaviour under extreme conditions - Simulation of severely damaged reactor cores	In December 2015 the "Paris Climate Accord (COP21)", signed by almost 200 states sets an objective to limit global warming to "well below 2 degrees above pre-industrial levels", for several states nuclear power in the mid-term will make a major contribution to low-carbon electricity generation. In contrast, Fukushima showed a potential vulnerability of modern nuclear reactors in unprecedented events. Safety concerns for reactors under accidental conditions were raised. Paramount for the safety of a nuclear plant is the assessment of the nuclear materials behaviour under hypothetical accidental conditions, and particularly under extreme conditions of temperature, pressure and chemical environment. Therefore the main objectives of MABEL are: 1) to improve the understanding of processes under such extreme conditions and modelling thereof, providing a path to analyse the consequences of an incident or accident and to develop accident management procedures and 2) to appraise mitigation and remediation strategies, an aspect followed up in a sister WPK SADARAC (5106) of the DISARM project (4961) in close liaison with SAMP. (SAMP) deals with high temperature processes during the accident, while SADARAC focuses on low temperature aspects in its aftermath) Objective 1 and 2 will be reached by generating missing (or partially missing) data for reactor materials under extreme conditions permitting advanced and improved modelling and assessment of accident propagation. ITU's is a highly acknowledged EU partner; access to its experimental facilities and collaborations are highly sought and appreciated by member states' research institutions. Advanced material preparation and characterisation techniques and facilities will be implemented, tested and jointly used by several JRC units. Specifically objective 2 will be pursued by measuring properties of simulated (and real) aerosols, particles and, more in general, different kind of materials of interest in the analysis of nuclear incidents or accidents (e.g. KEMS and	JRC.G.I.3 Dario MANARA	3.3.1.d	ENER	JRC	Ioanna METAXOPOULOU	RTD	- Budapest University of Technology and Economics - Delft University of Technology - UNIVERSITA DEGLI STUDI DI ROMA LA SAPIENZA - AREVA NP GMBH* - POLITECNICO DI MILANO CEA - Commissariat à l'Energie Atomique et aux Energies Alternatives EDF Energy - EDF Energy IAEA - International Atomic Energy Agency (IAEA) IRSN - Institut de Radioprotection et Sûreté Nucléaire JAEA - Japan Atomic Energy Agency KIT - Karlsruhe Institute of Technology NEA-OECD - Nuclear Energy Agency (OECD) NRG - Nuclear Research and consultancy Group, NRG NUGENIA - Nuclear Generation II & III Association ORNL - Oak Ridge National Laboratory SCK-CEN - Belgian Nuclear Research Centre (SCK-CEN) SNETP - Sustainable Nuclear Energy Technology Platform (SNETP) SSM - Strålsäkerhetsmyndigheten - Swedish Radiation Safety Authority UKNNL - National Nuclear Laboratories of the UK	01/01/2017 31/12/2019	INS-RS	498120171 498120172 498120173 498120174 498120181 498120182 498120183	Investigations in the U,Zr corium subsystem Investigating the Plutonium corium subsystems Other deliverable - scientific output 2017 Phase transitions in corium subsystems Interaction of MOX and B4C Vaporisation behaviour of nuclear materials Other deliverable - scientific output 2018	Materials containing fission product (FP) simulants (like Cs, I, etc.) and structural component simulants (e.g. Fe) are produced by combination of ITU's unique methods: Sol-gel assisted precipitation together with spark plasma sintering (SPS). These materials will be characterised and investigated by the laser flash (thermophysical) and laser heating FLF method (thermochemical). Special attention is given to the metal-rich part of the subsystem, where experimental data is lacking. The Pu-oxide corium subsystem evaluates the phase diagrams of the Pu,Zr,O-, Pu,Fe,O and Pu,Fe,Zr O-systems. Samples for high temperature investigations will be produced by adequate methods (e.g. sol-gel, powder metallurgy, arc-melting) and characterised by XRD, Raman spectroscopy and, where useful, other methods like NMR or XAS. The high temperature (melting and evaporation) behaviour of these subsystems will then be investigated. This deliverable comprises the scientific output to peer-reviewed papers and contributions to conferences for this WP for the year 2017. The expected topics are Raman investigations on nuclear materials at different temperatures and thermochemical investigations in corium subsystems. In this report, data of high-temperature phase transitions occurring in corium are provided to the French atomic energy commission and radiation protection authority (CEA and IRSN). The general goal of this research is to assess the safety performance of current and future nuclear fuels this deliverable summarises the work on the interaction of MOX and B4C in the frame of MoU with CEA. It includes synthesis efforts for actinide borides from different starting materials using different methods like solid state methods and arc-melting as well as investigations in the high temperature range concerning thermochemical and physical properties of these materials. Experiments simulating the release of radioactive aerosols in the environment as a consequence of nuclear incidents, accidents or dirty bomb detonation will be carried out with the RADES set-up. In addition the vaporisation behaviour of nuclear materials will be studied with the help of a new Knudsen Cell Mass Spectrometry (KEMS) set-up. This new set-up will be completed and put into operation by the end of 2017. This deliverable comprises the scientific output to peer-reviewed papers and contributions to conferences for this WP for the year 2018. The expected topics are investigations in different corium subsystems and advanced characterisation methods.	31/12/2017 31/12/2017 31/12/2017 31/07/2017 31/12/2018 31/12/2018 31/12/2018	JRC technical reports JRC technical reports Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI) JRC technical reports JRC technical reports JRC technical reports Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
62 - SAF/LWRF JRC.G.I.5	5036 - SCK MOX-2 Thermal properties of SCK/CEN uranium-plutonium mixed oxide (MOX)	for 4 irradiated UO2 and MOX fuel samples, corresponding to contract 34361.	JRC.G.I.3 Dragos STAIUCU	3.3.1.d	ENER	n/a	Maurizio BOELLA		SCK-CEN - Belgian Nuclear Research Centre (SCK-CEN) - University of California, Los Alamos National Laboratory - RUSSIAN RESEARCH CENTRE "KURCHATOV INSTITUTE" - POLITECNICO DI MILANO	16/06/2016 31/12/2017	CON-TW	201701	Thermal diffusivity and specific heat measurements	Thermal diffusivity, density and specific heat measurements for 4 irradiated UO2 and MOX fuel samples, corresponding to contract 34361.	31/07/2017	JRC technical reports
												DPF01	Vaporization behaviour in MYRRHA beam tube	In the frame of collaboration agreement with SCK-CEN a study of kinetics of a mercury release from lead-bismuth eutectic (coolant) upon proton beam impact will be done using the unique experimental facility based on laser flash heating. The results will validate the simulation performed at SCK-CEN and will give insight into understanding of incidental scenario once occurring in MYRRHA beam tube.	31/12/2017	JRC technical reports

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
63 - SANSIF JRC.G.I.3	5135 - PROFARM Properties for Safety Assessment of Advanced Fuels and Reactor Materials	<p>The aim of this work package is to provide experimental thermal property data, databases, models and simulation tools for fuels and materials for advanced reactor systems, and to study the interactions of fuels with reactor materials in order to provide a basis for safety assessments of advanced nuclear reactors. The world-wide unique JRC infrastructure and equipment will be used to provide the underpinning scientific results of fuel properties for normal and extreme conditions, for which the boundary limits will be determined by core calculations (collaboration with F4). The results are of key importance to predict the safety limits of reactor concepts selected by the European ESNII platform, mainly focusing on ASTRID, ALFRED, ALLEGRO and MYRRHA designs, and by the Generation IV forum.</p> <p>The work includes the study of the transmutation of minor actinides to short lived isotopes which is a potential technology for a sustainable nuclear fuel cycle in line with the targets of SNETP Roadmap, ESNII and EERA JPNM. After Fukushima, increased attention is given to safety with lessons learned from Light Water Reactors being transposed to fast systems. The foreseen activities are:</p> <ul style="list-style-type: none"> - safety assessment with dedicated samples synthesised, focussing on structure, strength, heat transfer and fuel to coolant/cladding interaction - increasing resilience in abnormal and accident events, building on ITU experience - separate effect studies based on direct laser heating, to determine restructuring that occur during irradiation - upgrade of material properties of mixed oxides in TRANSURANUS fuel performance code - Post Irradiation Examination of fuels and follow up and planning of on-going and new irradiation tests <p>The work will be done in close collaboration with key member state organizations via active participation in EERA JPNM and through bilateral agreements (CEA, SCK, NRG, CNRS).</p>	JRC.G.I.3 ONDREJ BENES	3.3.1.d	RTD	JRC	Mykola DZUBINSKY		<ul style="list-style-type: none"> - Delft University of Technology - Nuclear Research and Consultancy Group - Rheinisch-Westfälische Technische Hochschule Aachen / Aachen University of Technology - IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE - AREVA NP GMBH* - Ghent University - Royal Institute of Technology - FORTUM NUCLEAR SERVICES - CEA - Commissariat à l'Energie Atomique et aux Energies Alternatives - CIEMAT - Centro de Investigaciones Energéticas Medicambientales - Tecnológicas - CNRS - Centre National de la Recherche Scientifique - EDF - Electricité de France - EERA - European Energy Research Alliance - ENEA - Agenzia Nazionale per le Nuove Tecnologie, l'Energia e lo Sviluppo Economico Sostenibile - ESNII - European Sustainable Nuclear Industrial Initiative - FGFAF - Fraunhofer Gesellschaft zur Förderung der Angewandten Forschung E.V. - FZJ - Forschungszentrum Jülich - HZDR - Helmholtz-Zentrum Dresden-Rossendorf e.V. - IAEA - International Atomic Energy Agency (IAEA) - IRSN - Institut de Radioprotection et de Sûreté Nucléaire - KIT - Karlsruhe Institute of Technology - KTH - KUNGLIGA TEKNISKA HOEGSKOLAN - NEA-OECD - Nuclear Energy Agency (OECD) - NRG - Nuclear Research and consultancy Group, NRG - NUGENIA - Nuclear Generation II & III Association 	01/01/2017 31/12/2020	INS-RS	DPF02	Interaction of B4C with oxide fuel	B4C is used in commercial nuclear reactors as part of control rods as a safety feature to stop the chain reaction. Upon accidental conditions B4C may interact with solid oxide fuel and the successive chemical reaction may lead to volatile boron oxides. To understand this phenomena a series of experiments will be performed using a Knudsen cell technique coupled with thermodynamic simulations.	31/12/2018	JRC technical reports
												DPF04	Synthesis and safety tests of MOX composite fuel	Composite fuel samples will be synthesised based on an inert matrix (SiC) with embedded MOX particles produced by sol-gel method. Advanced pressing and sintering methods, such as SPS, will be utilised.	31/12/2017	JRC technical reports
												DPF05	Extension of Transuranus for GenIV fuels	In collaboration with ENEA, POLIMI and KTH, an upgrade of the material properties and models for mixed oxide fuels containing minor actinides, SiC cladding and nitride fuels will be made. This will provide a contribution to the benchmark exercise organised by the OECD/NEA expert group on irradiation behaviour of innovative fuels.	31/12/2017	JRC technical reports
												DPF06	PIE of Metaphix I, II, III fuels - 2017	Outputs of the post irradiation examinations carried out on Metaphix I, II and III fuels. This include technical reports and scientific outputs obtained using a panel of non-destructive and destructive examination techniques.	31/12/2017	JRC technical reports
												DPF07	PIE of Metaphix I, II III fuels - 2018	Outputs of the post irradiation examinations carried out on Metaphix I, II and III fuels. This include technical reports and scientific outputs obtained using a panel of non-destructive and destructive examination techniques.	31/12/2018	JRC technical reports
												DPF08	PIE of FUTURIX 5&6 fuels 2017	Outputs of the post irradiation examinations carried out on FUTURIX 5&6 CerMet fuels. This include technical reports and scientific outputs obtained using a panel of non-destructive and destructive examination techniques.	31/12/2017	JRC technical reports
												DPF09	Caesium and iodine release from nuclear fuel	Caesium and iodine are among the major fission products produced during irradiation of a nuclear fuel. The vaporization behaviour of the main Cs- and I-containing phases that are formed during fission will be studied using Knudsen cell mass spectrometer. The outcome of this investigation will help to better understand the release of fission products during nuclear accident. Comparison of Cs and I release will be made between the solid oxide fuel and molten salt reactor fuel.	31/12/2018	JRC technical reports
												DPF10	Other deliverables-scientific publications 2017	This deliverable represents a series of publications, reports and conference proceedings used to disseminate knowledge generated by the JRC in this work package. The achievements will be presented in one or more scientific presentation.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												DPF11	Other deliverables-scientific publications 2018	This deliverable represents a series of publications, reports and conference proceedings used to disseminate knowledge generated by the JRC in this work package. The achievements will be presented in one or more scientific presentation.	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												62 - SAFILWRF JRC.G.I.5	5242 - ATF COUSIN ATF COUSIN	<p>Within the concept of subsequent safety barriers the fuel cladding is of crucial importance. During normal operation and design basis accidents it safety contains the radioactive inventory and provides a coolable geometry. In case of a hypothetical severe accident its integrity or failure determine greatly the possibility or impossibility of human intervention inside the containment. Therefore, chemical and mechanical interaction of fuel and cladding are not allowed to threaten the integrity of the fuel pin. Fuel-cladding compatibility under operational and accidental conditions is one of the most important criteria for the licensability of a new combination of fuel and cladding materials.</p>	JRC.G.I.3 DANIEL FREIS	3.3.1.d
5242201702	Thermochemical analysis of fuel-cladding interaction	In order to gain a deeper understanding on the chemical interaction between candidate fuels and cladding materials, the results of the interaction tests from Task 4.3 will be analysed and coupled with thermodynamic equilibrium calculations performed according to the CALPHAD method based on the Gibbs energy minimization. Potential reaction products will be identified and predominance phase diagrams will be produced for relevant U-C-Si-N-Fe-Cr-Al systems looking at specific fuel-cladding interaction	31/12/2019	JRC technical reports												
3.3.1.e support the EU's internal policy on nuclear safety by providing technical and scientific assistance for the implementation of the EU Nuclear Safety, Nuclear Waste and Spent Fuel and Basic Safety Standards Directives and related EU policy.																
401 - RSMW JRC.G.III.8	288 - RESPONSIBLE Support to Implementation of Responsible and Safe Management of Spent Fuel and Radioactive Waste	<p>The overall objectives are to promote responsible and safe implementation of spent fuel and radioactive waste management across the EU. For that purpose, the JRC is developing knowledge and tools at the disposition to the Member States when implementing the 2011/70/EURATOM "Waste Directive".</p> <p>A particular activity in this respect is building a Knowledge Management System together with the European and international Actors. The system is managed as an open access WEB space "Knowledge Handbook", where the state-of-knowledge is established, disseminated and kept</p>	JRC.G.III.8 GUNNAR BUCKAU	3.3.1.e	RTD	JRC	n/a		IAEA - International Atomic Energy Agency (IAEA) IGD - TP - Implementing Geological Disposal of Radioactive Waste Technological Platform MS EU - Member states EU NEA-OECD - Nuclear Energy Agency (OECD)	01/01/2014 30/12/2018	INS-RS	5520173	Support MS in implementing the Waste Directive	This is a multi-annual support activity including different activities aiming at supporting the Member States in developing tools for them to implement the "Waste Directive". It includes continued efforts in, amongst others establishing guidance and information	31/12/2017	JRC technical reports
												5520174	Interaction with international organizations	This multiannual activity where JRC is interacting with international organizations, associations and fora includes participation in scientific-technical projects and reviews at the IAEA (for example GEOSAF and WATEC) and OECD-NEA (IGSC), but also legal affairs with corresponding international associations and fora. The specific activities within the overall context will evolve with time.	31/12/2017	JRC technical reports
												IKMS	Integrated Waste Knowledge Management System	An Integrated Knowledge Management System is established in the field of Establishing and Implementing Radioactive Waste Management Programmes. A public web space database will be established. An accompanying report summarizes the status at the end of the "pilot phase", prior to full implementation within Joint Radioactive Waste Management Programming.	31/12/2018	Scientific information systems and databases
		<p>Direct support to DG ENER for the Energy Union actions related to nuclear energy and for the</p>							IAEA - International Atomic Energy Agency			1701	Nuclear waste directive – Nat. Prog. follow-up	The review of National Programmes submitted by MSs in compliance with Directive 2011/70/Euratom has highlighted the need for a better understanding of means of active participation in RW, which is the focus of this report.	31/05/2017	Science-for-policy reports
												1702	Public participation in the energy sector	Report on the situation of public participation in the energy sector, comparative study between Nuclear energy and other low-carbon energy technologies.	30/06/2017	Science-for-policy reports
												1703	Support to DG ENER for the IAEA Conventions	Technical Report for DG ENER in support of the review of national reports prepared under the Convention on Nuclear Safety (provided requests from DG ENER).	30/06/2017	JRC contributions to policy documents
												1704	Support to development of IAEA NS Standards	Support to the development of international standards in Nuclear Safety through support to the IAEA Nuclear Safety Standard Committee (NUSSC), participation in IAEA preparation and review of Draft Safety Standards in the field of Nuclear Reactor Safety (upon request from DG ENER or from the IAEA).	31/12/2017	JRC technical reports
												1705	Support to DG ENER (Article 41-43 EURATOM Treaty)	Technical Report for DG ENER in support of EC viewpoint in relation to the Article 41-43 of the EURATOM Treaty. (provided requests from DG ENER)	31/12/2017	JRC contributions to policy documents
												1706	Support to DG ENER on emerging NS issue	Report for DG ENER in response to request for analysis or briefing on emerging topics that arise on an ad hoc basis during the year (depending on request from DG ENER)	31/12/2017	JRC technical reports
												1707	Support to DG ENER on the Nuclear safety Directive	Technical Report for DG ENER in support of the interpretation and implementation of Art. 8a&b of the revised Nuclear Safety Directive	31/12/2017	JRC technical reports
												1708	Report on Topical Peer Reviews - NSD	Report for DG ENER in support of the review of national reports prepared in the framework of the topical peer reviews required of EU Member States under the revised nuclear safety directive - Council Directive 2014/87/EURATOM (upon request from DG ENER).	31/10/2017	JRC contributions to policy documents

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
268 - NUCLEOS JRC.G.10	493 - NUSP Support to Nuclear Reactor Safety Policy	implementation of EU nuclear reactor safety policy and legislation (EU nuclear safety, spent fuel and radioactive waste & basic safety standards Directives, EURATOM Treaty Art. 41-43, implementation and follow-up of EU and neighbourhood "Stress Tests", Topical Peer Reviews, etc.).	JRC.G.10 Brian FARRAR	3.3.1.e	ENER	JRC	M. Garriba, tel : +(352) 430133861, e-mail : massimo.garriba@ec.europa.eu		Agency (IAEA) MS EU - Member states EU NEA-OECD - Nuclear Energy Agency (OECD) Nuc Ind - Nuclear Industry	01/01/2014 31/12/2018	INS-RS	1710	Scientific publications and outreach activity 2017	Annual Report to DG ENER on international fora: Scientific Report presenting to DG ENER an overview of the JRC-IET Nuclear Reactor Safety Assessment Unit (NRSA) contributions to international Meeting/Committees/Working Group (mainly from IAEA and OECD/NEA) during the year. This report highlights especially the key points related to Nuclear Reactor Safety which could have an impact on EU Nuclear Safety Policies.	31/12/2017	JRC technical reports
												1802	Support to DG ENER on emerging NS issue	Report for DG ENER in response to request for analysis or briefing on emerging topics that arise on an ad hoc basis during the year (depending on request from DG ENER)	31/12/2018	JRC technical reports
												1803	Support to DG ENER (Article 41-43 EURATOM Treaty)	Technical Report for DG ENER in support of EC viewpoint in relation to the Article 41-43 of the EURATOM Treaty, or other ad hoc requests from DG ENER for technical support on specific issues or request for briefing preparation (upon requests from DG ENER)	31/12/2018	JRC contributions to policy documents
												1804	Support to development of IAEA NS Standards	Support to the development of international standards in Nuclear Safety through support to the IAEA Nuclear Safety Standard Committee (NUSSC), participation in IAEA preparation and review of Draft Safety Standards in the field of Nuclear Reactor Safety (upon request from DG ENER or from the IAEA).	31/12/2018	JRC technical reports
												1805	Support to DG ENER for the NSD - Participation in	Report on lessons learned from IRRS missions during the last 3 years	31/12/2018	JRC contributions to policy documents
												1810	Scientific publications and outreach activities	This deliverable will include the following outputs: peer-reviewed scientific publications, conference proceedings, dissemination activities focusing on public participation in radioactive waste management and other energy issues.	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
196 - SINSP JRC.G.I.4	955 - IPA 2012-2014 Support to International Nuclear Safety Policy for EU Enlargement	The project will provide the direct technical and scientific support required by DG ELARG for the programming, preparation, contracting, monitoring and evaluation of the projects of the Instrument for Pre-accession Assistance (IPA), which provides financial assistance for improving nuclear safety in candidate countries for EU accession.	JRC.G.I.4 YNTÉ STOCKMANN	3.3.1.e	NEAR	NEAR	Morten JUNG (NEAR D5)	DEVCO ENER		24/05/2013 31/12/2017	CON-AA	201701FR	Final Report	Final Report, including a summary of all contractual deliverables	31/12/2017	JRC technical reports
												201702QN	Quarterly Notes	Three monthly Progress reports including a summary of all contract deliverables	31/12/2017	Project management related documents/reports identified as outputs of the JRC Work Programme
196 - SINSP JRC.G.I.4	1960 - TAREG 01/13 Support to International Nuclear Safety Policy (INSC AP2013)	The project will provide the direct technical and scientific support required by DG DEVCO for the programming, preparation, contracting, monitoring and evaluation of the projects of the Instrument for Nuclear Safety Cooperation (INSC), which provides assistance for improving nuclear safety and nuclear safeguards in countries outside the EU.	JRC.G.I.4 YNTÉ STOCKMANN	3.3.1.e	DEVCO	DEVCO	A van der Meer	ENER RTD		30/10/2014 29/10/2017	CON-AA	2017FR	Provided Expertise to DG DEVCO	- Final report on the activities of JRC performed under the Administrative Arrangement Tareg 01/13 for	29/12/2017	JRC technical reports
												23	Scientific publications and outreach activity 2017	- Quarterly reports to DG DEVCO - Annual interim report to DG DEVCO	31/10/2017	Project management related documents/reports identified as outputs of the JRC Work Programme
401 - RSMW JRC.G.III.8	2256 - JOPRAD Preparation of "European Joint Programming" in the field of radioactive waste management	Preparation of European Joint Programming of national R&D programmes in the field of radioactive waste management. Development of synergies with programme managers and mapping of R&D organisations throughout the EU, using this as an input for communicating with responsible actors in the MSs and contributing to generating a proposal for a European Joint R&D. The outcome is published in several reports and at the end of the project a workshop will be organised to present the outcome and make a recommendation for a Joint Programme of national R&D programmes in the field of radioactive waste management.	JRC.G.III.8 GUNNAR BUCKAU	3.3.1.e	RTD	RTD	Davies, Christophe	ENER		01/06/2015 30/11/2017	CON-IA	5520161	JRC role in Geological Disposal Joint Programming	The report describes the role of JRC in the forthcoming Joint Programming on Geological Disposal. This role is the result of participation in structuring and defining the overall approach to this Joint Programming, where a proposal that is put forward to the Member States and their key actors in this field.	30/12/2017	JRC technical reports
												5520172	Report on JP Nationally Mandated Actors	JRC-ITU is documenting the Actors in Geological Disposal that are Mandated to represent the respective MS through a responsible ministry and/or the national EURATOM contact. The three types of actors are (i) Waste Management Organizations, (ii) Technical Support Organizations, and (iii) Research Entities (RD&D programme owners and managers). The list of Mandated Actors is established within the CSA JOPRAD, but is a reference list for contacting the MS's.	31/10/2017	JRC technical reports
												5520181	JOPRAD final workshop	Workshop on the final outcome of the JOPRAD project	15/02/2018	JRC technical reports
268 - NUCLEOS JRC.G.10	3804 - SWASDIR Support to DG ENER for the implementation of the Waste Directive	Provide technical support in the review of national programmes and national reports on spent fuel and radioactive waste management submitted to the Commission by the 28 EU as well as technical support in the development of an inventory report	JRC.A.7 MANUEL MARTIN RAMOS	3.3.1.e	ENER	ENER	IOANNA METAXOPOULOU			15/10/2015 31/12/2017	CON-AA					
3.3.2 Safety of spent fuel, radioactive waste management and nuclear decommissioning																
3.3.2.a development of techniques for spent fuel and nuclear waste characterisation and study of the physico-chemical mechanisms relating to the long-term storage of spent fuel and disposal of nuclear waste;																
62 - SAF/LWRF JRC.G.I.5	215 - PIE AREVA Post Irradiation Examination of commercial LWR fuel from German reactors	Post irradiation examinations are performed, both non-destructive and destructive of UO ₂ -, UO ₂ /Gd ₂ O ₃ and MOX fuel rods irradiated at several European power plants. Fretting and shadow corrosion analysis, ceramography and metallography of fuel and cladding are included in the programme. This WP provides most valuable access to and knowledge about the commercial nuclear fuel of today's generation of reactors, allowing to maintain the necessary level of competence to fulfill the overall objectives of the	JRC.G.III.8 Dimitrios PAPAIOANNOU	3.3.2.a	JRC	n/a	n/a		IAEA - International Atomic Energy Agency (IAEA) - AREVA GMBH*	29/08/2012 31/12/2020	CON-TW	21	PIE results of the GUN-B Part-E fuel rods (creep)	Results of the Post Irradiation Examinations of the particular fuel rods campaign (GUN-B Part-E): additional examinations (creep tests) had to be postponed and this deliverable will be completed in 2017	30/11/2017	JRC technical reports
												36	Encapsulation of 10 KKP fuel rods	The segmented fuel rods of previous experiments from NPP Philippsburg will be encapsulated in conformity to the new regulations of packaging for safe transport and storage. After completion of all post irradiation examinations the fuel rod remnants have to be disposed off. Encapsulation of the remnants in thin-walled Zircaloy (Zr) tubes has become common practice of the disposal.	30/06/2018	JRC technical reports
												40	Encapsulation of 17 GUN-B fuel rods	The segmented fuel rods of previous experiments from NPP Gundremmingen will be encapsulated in conformity to the new regulations of packaging for safe transport and storage.	31/12/2018	JRC technical reports
401 - RSMW JRC.G.III.8	366 - MISSLaNS Modular Interface and Surface Science Laboratory for Nuclear Safety	The objective of this work is improve our knowledge of surface reactions of nuclear systems and waste forms (conventional and alternate), which directly determine the long term stability of nuclear waste and intervene in the handling of nuclear materials during operation and decommissioning. Relevant scientific information are acquired by surface spectroscopies and electrochemistry applied to nuclear test systems subjected to well controlled reaction conditions. A laboratory equipment, unique in Europe, has been developed to carry out the complete work in one single instrument. Well defined model systems are synthesized as thin films (mimicking classical oxide fuel but also advanced fuel types such as nitrides) and subjected to a defined reaction environment (water, oxygen, hydrogen, etc.). Surface corrosion, dissolution in the environment, surface-bulk interdiffusion are studied. Their surface stability and disintegration are monitored on-line. Reference samples (e.g. single crystals) will be prepared and analysed, to be compared with the results obtained on thin films having similar composition. They serve as standards to ensure the representativity of the thin films for bulk nuclear systems (waste, fuel, etc.). Spectroscopic information are chosen to support theoretical modelling, needed for unravelling long term predictions. A series of collaborations with member state laboratories have been established for that purpose. Users propose sample systems	JRC.G.I.5 Thomas GOUDER	3.3.2.a	JRC	JRC	n/a	- Delft University of Technology - University of California, Los Alamos National Laboratory - University of Uppsala - University of Stockholm - SKB INTERNATIONAL CONSULTANTS AKTIEBOLAG - Academy of Sciences of the Czech Republic - UNIVERSITY OF BRISTOL - UNIVERSITY OF CAMBRIDGE - University of Manchester - UNIVERSITY OF SHEFFIELD CU - Charles University Prague CEA - Commissariat à l'Energie Atomique et aux Energies Alternatives EU-RL M - European Reference Laboratory for Mycotoxins IAEC - Israel Atomic Energy Commission KIT - Karlsruhe Institute of Technology LBL - Lawrence Berkeley National Laboratory LLNL - Lawrence Livermore National Laboratory	01/01/2016 31/01/2018	INS-UR	21	Status report	Spent fuel model samples (thin films) will be doped with rare earth oxides (e.g. GdOx), which act as surrogates for fission products, to study their influence on surface stability and dissolution. A technical status report will be prepared summarising the results.	31/12/2017	JRC technical reports	
											22	Publication of scientific results	Study of surface corrosion processes of nuclear waste and influence on long-term storage properties. Systems include both conventional oxide and alternate fuel forms (glasses). Diagnostics are based on surface spectroscopies and bulk techniques (such as NMR). Articles in peer-reviewed Journals, presentations in conferences	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)	
											31	Analytical methods	Dedicated analytical methods and procedures will be developed and applied to nuclear system. The use of HREELS, a surface vibrational spectroscopy, for producing reference data for IR and Raman, AFM will be upgraded to operate under protective atmosphere, with electrochemistry sensors and direct attachment to the lab station.	28/12/2018	Validated methods, Reference methods and measurements	
											32	User driven research on surface reactivity	Collaboration with various user groups in member states have been initiated and will be realized over the coming years. They mostly are about surface reactivity and electronic structure of actinides and nuclear materials. They will be carried out in the frame of collaboration agreements (SKB, IAEC), and collaboration with the SUPRACLEAR work package.	30/11/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)	
											33	Experimental Data for Theoretical Modelling	Workshop on the optimization of experimental data for theoretical modelling in nuclear waste disposal. The workshop brings together experimentalists and theoretician to discuss the optimal use of model systems, reactions and techniques for generating data for modellers.	30/11/2018	Validated methods, Reference methods and measurements	

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
401 - RSMW JRC.G.III.8	511 - EFWAS Evolution of fuels and waste forms in storage and disposal conditions	Nuclear materials such as fuels (conventional, advanced) and waste forms (glass, conditioning matrices) are subject to different types of radiation effects modifying their properties during reactor operation, intermediate storage or disposal. In this WP the radiation damage effects (fission, alpha-decay) and the impact of radiogenic inert gases (helium) will be assessed for different materials (actinide doped ceramics or glass, fresh or irradiated fuels samples) using the unique equipment in JRC-ITU (Scanning and Transmission Electron Microscopy for radioactive samples, helium infusion by laser heating) and materials (alpha-doped samples, irradiated fuels) in order to be able to predict their long-term behaviour in storage and disposal conditions	JRC.G.I.3 Thierry WISS	3.3.2.a	JRC	JRC	n/a	RTD	- IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE - Technische Universität München - UNIVERSITY OF SHEFFIELD - SKB INTERNATIONAL CONSULTANTS AKTIEBOLAG AREVA NP - AREVA NP Main Company BAM - Bundesanstalt für Materialforschung und -prüfung (BAM) CEA - Commissariat à l'Energie Atomique et aux Energies Alternatives CNRS - Centre National de la Recherche Scientifique IGD -TP - Implementing Geological Disposal of Radioactive Waste Technological Platform KIT - Karlsruhe Institute of	01/01/2014 30/12/2018	INS-RS	12017	Behaviour of helium in waste forms	The experiment of infusion of helium in waste form will be described as well as the desorption behaviour during thermal annealings	27/12/2017	JRC technical reports
												12018	Impact of radiation damage on ceramics	The effect of alpha-decay damage on spent fuel stability will be assessed by performing experiments on simulated fuels (alpha-doped or actinide bearing fuels). The reports will describe the experiments performed (microstructure evolution monitoring) and the impact of results on the prediction of long term fuel stability.	27/12/2018	JRC technical reports
												22017	Understanding the gas diffusion in waste forms	The diffusion behaviour of noble gases in simulated spent fuels or waste glasses or other ceramics used in the nuclear industry will be evaluated for thermal desorption experiments	29/12/2017	Article contribution to periodicals or to conference proceedings listed in SCOPUS
												22018	Radiation damage in spent fuel	The kinetic effects of alpha-damage formation in uranium dioxide will be assessed and reported in a scientific publication.	28/12/2018	Article contribution to periodicals or to conference proceedings listed in SCOPUS
401 - RSMW JRC.G.III.8	548 - SPAM Spent fuel alteration mechanisms under long-term storage	Objective is to improve the knowledge base for the stability of present and future spent nuclear fuel (SNF) under long-term storage (including interim storage) and disposal conditions. For this purpose, dedicated experiments are performed to study the long-term alteration processes during interim storage and under environmental conditions covering predicted glacial variations and the impact at European repository depths. Additionally, changes of modern fuel types, new compositions and more economical use of fuels (higher burn-up) requires additional understanding of processes controlling the interfacial reactions between SNF and barrier materials which control the radionuclide releases. Such knowledge can only be convincingly achieved through long-term experiments with spent fuel under simulated interim and disposal conditions, complemented by the development of analytical techniques for studies of surface properties (combining physico-chemical techniques with surface spectroscopy), for complex groundwater matrices containing small amounts of long-lived radionuclides and the development of simulated spent fuel types representing 3000-year old SNF. The results and acquired mechanisms of the SNF alteration processes are fed into the EU-national performance assessments and ultimately decrease the radionuclide release uncertainties associated with long-term safety predictions of nuclear waste repositories, supporting implementation of final SNF disposal. In order to ensure accessibility of knowledge for present and future generations, the state of knowledge related to spent fuel stability under disposal conditions is established and documented. For this purpose a workshop with international expertise is aimed for during late 2017. The work package includes support to Member States through collaboration agreements: Sweden, Germany and Spain, etc. It also supports the IGDTF technology platform	JRC.G.III.8 Paul CARBOL	3.3.2.a	JRC	JRC	n/a	RTD	- UNIVERSITAT POLITECNICA DE CATALUNYA - COMMISSARIAT A L ENERGIE ATOMIQUE CEN SACLAY - STUDEVIK NUCLEAR AB - SKB INTERNATIONAL CONSULTANTS AKTIEBOLAG CIEMAT - Centro de Investigaciones Energeticas Medioambientales y Tecnologicas ENRESA - Empresa Nacional de Residuos Radioactivos S.A. FZJ - Forschungszentrum Jülich IRSN - Institut de Radioprotection et Sûreté Nucléaire KIT - Karlsruhe Institute of Technology KTH - KUNGLIGA TEKNISKA HOEGSKOLAN SCK-CEN - Belgian Nuclear Research Centre (SCK-CEN) SNETP - Sustainable Nuclear Energy Technology Platform (SNETP)	01/01/2014 28/12/2018	INS-RS	1	Spent fuel selection and characterisation	Selection of nuclear fuel based on reactor fuel history and experiment requirements followed by preparation (cutting, polishing and mounting) and characterisation of reference fuel samples for studies of fuel stability under repository conditions. Negotiation	31/12/2018	JRC technical reports
												2	Stability of SNF/UO2 under disposal conditions	Quantification of long-term matrix stability and radionuclide release from UO2(U,Pu)O2-fuels, modern Cr2O3-doped, model systems in aqueous solution under various repository conditions. Comparison of results with known behaviour of standard UO2-fuel. Studies of fuel matrix stability towards grain disintegration using O-18 in-diffusion into UO2 fuel and UO2 followed by grain boundary measurements using SIMS, SEM/EBS and FIB-APT. Complex systems studied by thin-film technique and spectroscopy.	27/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												3	Analytical method development (solid and aqueous)	Innovative analytical procedures for determination and as well as localisation, isolation and speciation of long-lived fission products and actinides in nuclear fuels will be developed and validated. Independent analytical techniques such as ICP-MS, ICP-OES, radiometry, electrochemistry and microscopy (SIMS, AFM, OM, SEM/EBS, ToF-SIMS, FIB-TEM, FIB-APT) will be employed for quality assurance of analytical results. Necessary as matrix-matched radioactive reference materials are not existing.	09/12/2018	Validated methods, Reference methods and measurements
												4	Interaction of radicals with UO2 surface	The aim is to determine the role of surface bound radicals on the oxidative dissolution of UO2 as well as on the observed inhibition of this process in the presence of H2. The work is performed within collaboration agreements with the Royal Institute of Technology (KTH) in Sweden and the Research Centre Jülich (FZJ) in Germany.	31/12/2018	JRC technical reports
												5	IRF variation depending on SNF morphology	Quantification of UO2 SNF Instant Release Fraction (IRF) in groundwater and cement waters, as a function of morphological parameters, such as: axial and radial sample position, grain size and irradiation parameters, such as: linear power density and fuel temperature. The study encompasses the stability of SNF under long-term interim storage conditions and is performed in collaboration with ENRESA.	31/12/2017	JRC technical reports
												6	Long-term storage SNF stability in cement water	The influence of morphological and irradiation parameters on spent nuclear UO2 fuel stability under reducing conditions in cement water and simulating long-term storage will be quantified. The work is done in collaboration with ENRESA.	30/12/2018	JRC technical reports
												7	Scientific publications	Scientific publications and conference contributions related to spent fuel behaviour under long-term storage and disposal conditions	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												8	Scientific publications	Scientific publications and conference contributions related to spent fuel behaviour under long-term storage and disposal conditions	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
401 - RSMW JRC.G.III.8	597 - CAST CAST - Carbon 14 Source Term	This multi-national project will investigate the C-14 source term likely from structural materials (cladding steels or Zry, structural materials, resins, graphite) in low and intermediate waste disposal sites. This is important in view of defining effective decommissioning and waste management strategies. The ITU contribution is to take irradiated cladding samples and measure the C-14 content in order to assess upper boundary values for releases and further investigate C-14 forms (gaseous/organic) and the partitioning.	JRC.G.III.8 Paul BOTTOMLEY	3.3.2.a	RTD	RTD	Manuela Lampitelli RTD. K.4	ENER	- AREVA NP GMBH* AMEC - AMEC Consulting CEA - Commissariat à l'Energie Atomique et aux Energies Alternatives CIEMAT - Centro de Investigaciones Energeticas Medioambientales y Tecnologicas EDF - Electricité de France ENRESA - Empresa Nacional de Residuos Radioactivos S.A. IGD -TP - Implementing Geological Disposal of Radioactive Waste Technological Platform KIT - Karlsruhe Institute of	01/10/2013 31/03/2018	CON-IA	212	Technical project progress report	Will describe the progress made in equipment construction, sample preparation and results during 2017 at ITU as contribution to the overall CAST project	31/12/2017	JRC technical reports
												214	Publication of on-going results	Joint project publication for collaborators	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												215	Technical Project Progress Report	Description of project progress (Final report) incl. equipment construction, sample preparation, results and comparison with other results from other collaborators in the CAST project	31/12/2018	JRC technical reports
401 - RSMW JRC.G.III.8	859 - DECOSTOS Decontamination, decommissioning, upgrade of equipment and spent nuclear fuel storage studies	Safety issues associated with extended spent nuclear fuel (SF) storage and retrievability thereafter are a key topic for all countries pursuing direct disposal options of SF. DECOSTOS includes experimental studies on SF in hot cell to assess the structural integrity and behaviour of the SF rod system during and after storage; its response to accidental conditions arising during handling or transportation is measured. Such tests are of high interest for technical safety and licensing organizations. Several links to competitive WP (e.g. SF-BEND, SFTEST), coordinated research projects of IAEA (e.g. SPAR IV), bilateral partnerships with NAGRA (CH), BAM (DE), ESCP project (EPRI, USA), DoE (I-NERI collaboration).	JRC.G.III.8 Dimitrios PAPAIOANNOU	3.3.2.a	JRC	JRC	n/a	- AREVA NP GMBH* BAM - Bundesanstalt für Materialforschung und -prüfung (BAM) BMU - Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit CEA - Commissariat à l'Energie Atomique et aux Energies Alternatives CIEMAT - Centro de Investigaciones Energeticas Medioambientales y Tecnologicas CRIEPI - Central Research Institute of Electric Power Industry EDF Energy - EDF Energy ENRESA - Empresa Nacional de Residuos Radioactivos S.A. GRS - Gesellschaft für Anlagen und	01/01/2014 31/12/2018	INS-RS	63	Drying of wet defect fuel rods	Defect spent fuel rods demand special handling before storage, because they may contain high amounts of humidity/water. ITU in collaboration with other partners is developing a system for drying defect fuel rods filled with cooling water. The system will be installed in a hot cell, tested on a simulated defected fuel rod and used to carry out experiments on irradiated fuel rod segments.	31/12/2018	Article contribution to periodicals or to conference proceedings listed in SCOPUS	
											64	Impact tests on fuel segments	The main question put by European and international authorities involved in nuclear fuel transports to be answered concern the amount of fuel released in case of rod breakage during transport accidents. The recently developed device will be installed in a hot cell and used at the Institute for Transuranium Elements (ITU) to simulate fuel rupture events under impact loads.	31/12/2017	JRC technical reports	
											65	Mechanical loading of irradiated fuel rods	Characterization studies of the spent nuclear fuel rod and of irradiated materials mechanical stability. Recently developed devices will be installed in hot cell and used to apply mechanical loads (bending, compression) up to fuel rupture events.	30/12/2018	Article contribution to a monograph or other periodicals	
											66	I NERI collaboration	Collaboration on SF mechanical testing with DOE (SNL, PNNL), BAM and NAGRA.	30/06/2017	Technical systems	
											67	Contribution to IAEA CRP SPAR IV	Collaboration with IAEA in the frame of the CRP SPAR IV on SF mechanical testing	31/10/2017	JRC technical reports	
401 - RSMW JRC.G.III.8	3984 - SF-Bend 4386 - DISCO Modern Spent Fuel DISsolution and Chemistry in Container (DisCo)	Experimental studies to determine the release of While the scientific understanding of the dissolution of standard spent uranium oxide fuel has reached a certain mature state, new types of fuels with	JRC.G.III.8 JRC.G.III.8 Dietlef WEGEN	3.3.2.a 3.3.2.a	JRC ENER	n/a RTD	n/a RTD, C. Davies	RTD	BAM - Bundesanstalt für Materialforschung und -prüfung (BAM) - POSIVA OY - SVENSK KAERNBRAENSLERANtering AB	01/07/2016 01/07/2017 30/06/2021	CON-TW CON-IA					
401 - RSMW	5147 - SFTEST	Tests will be performed on spent fuel (SF)	JRC.G.III.8	3.3.2.a	JRC			RTD		02/01/2017	CON-TW	1	Progress report	Progress report	31/12/2017	JRC technical reports

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
JRC.G.III.8	Spent Fuel TESTING for extended segments to characterize SF response to		Dimitrios PAPAIOANNOU	3.3.2.a	JRC	n/a	n/a	RTD	for the categorization of nuclear waste	31/12/2018	CON-TW	2	Progress report	Progress report	31/12/2018	JRC technical reports
3.3.2.b studies for the reduction of the radiological toxicity of wastes through advanced separation and transmutation and for the safety assessment of recycling technologies. Determination of scientific data and preparation of reference samples of spent fuel;																
63 - SANSIF JRC.G.I.3	431 - RECON Advanced Fuels: Recovery and Conversion	Advanced reactors only bring sustainability when valuable components are extracted from the irradiated fuel and converted into fresh fuel. Within the SANSIF project, the RECON work package focuses on the recovery and conversion of actinides. Specifically, the chemistry needed to separate, purify and convert uranium, plutonium and minor actinides from spent nuclear fuel is investigated by both aqueous and pyrochemical methods. This aspect of the work package mainly complements the European initiatives largely supported by indirect actions (e.g. the European program in partitioning, SACSESS). To complete the cycle the solutions bearing actinides have to be converted into fresh fuel which can be oxide or nitride/carbide. In addition, it is essential for research activities in this field to secure a supply actinides, which can be converted into the desired form. A small shielded facility to recuperate valuable isotopes from fresh fuel scraps will therefore be commissioned. Set-ups and	JRC.G.III.8 Rikard MALMBECK	3.3.2.b	RTD	JRC	n/a		- Nuclear Research and Consultancy Group - Hungarian Academy of Sciences AREVA NP - AREVA NP Main Company CEA - Commissariat à l'Energie Atomique et aux Energies Alternatives EERA - European Energy Research Alliance ENEA - Agenzia Nazionale per le Nuove Tecnologie, L'energia e lo Sviluppo Economico Sostenibile ESNII - European Sustainable Nuclear Industrial Initiative KIT - Karlsruhe Institute of Technology SCK-CEN - Belgian Nuclear Research Centre (SCK-CEN) SNETP - Sustainable Nuclear Energy Technology Platform (SNETP)	01/01/2016 31/12/2017	INS-UR	1	Publications, Conferences and technical reporting	This deliverable covers scientific publications and conference proceedings in RECON in WP2017	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
											2	Purification of Cm	Separation and purification of Cm from Am. A pure Cm fraction is needed for many institute research purposes and the production of well calibrated neutron sources. This technical report describes the set-up, initial results and final characterisation of the purified Cm solution	31/12/2017	JRC technical reports	
											3	Production of dry actinide chlorides	Research in molten salt based separation systems requires availability of the relevant actinide halide. The work aims at expanding our capabilities to include also conversion of actinide oxides into actinide chlorides by thermal treatment of the oxide under chlorine of hydrochloride gas.	31/12/2017	JRC technical reports	
											4	Secure supply of actinides	Systems will be set-up to recycle actinides from stored and scrap material and for the synthesis of materials, both essential for continuation of activities in this workpackage. The operation conditions on the U/Pu/Am separation unit will be described as well as initial results from the first campaign(s).	31/12/2018	JRC technical reports	
63 - SANSIF JRC.G.I.3	3622 - PyroTU 2016/17 PYROMETALLURGICAL PROCESSES JFY 2016/17	Closing the nuclear fuel cycle and managing the actinides within the cycle is the key strategic issue facing all generations of nuclear systems. In all advanced fuel cycles for the sustainable GenIV systems Pu is needed as a fissile component.	JRC.G.III.8 Laura ALDAVE DE LAS HERAS	3.3.2.b	JRC	n/a	n/a		CRIEPI - Central Research Institute of Electric Power Industry	01/04/2016 31/03/2017	CON-TW	2016	Annual Activity Report JFY2016	Activity report containing the results of the experiment carried out during the Japanese fiscal year 2016. 1) Study on the electrorefining process using reactive cathodes, i.e. solid Al and liquid Ga cathodes, and inert stainless steel cathodes for group recovery of all actinides from irradiated METAPHIX fuel and 2) Qualitative analyses on TMI corium samples after electroreduction tests.	15/12/2017	JRC technical reports
63 - SANSIF JRC.G.I.3	4964 - PyroTU 2017/18 PYROMETALLURGICAL PROCESSES JFY 2017/18	Closing the nuclear fuel cycle and managing the actinides within the cycle is the key strategic issue facing all generations of nuclear systems. In all advanced fuel cycles for the sustainable GenIV systems Pu is needed as a fissile component.	JRC.G.III.8 Laura ALDAVE DE LAS HERAS	3.3.2.b	JRC	n/a	n/a		CRIEPI - Central Research Institute of Electric Power Industry	01/04/2017 31/03/2018	CON-TW	2017	Annual Activity Report JFY2017	Activity report containing the results of the experiment carried out during the Japanese fiscal year 2017. 1) Study on the electrorefining process using reactive cathodes, i.e. solid Al and liquid Ga cathodes, and inert stainless steel cathodes for group recovery of all actinides from irradiated METAPHIX fuel and 2) Qualitative analyses on TMI corium samples after electroreduction tests.	14/12/2018	JRC technical reports
63 - SANSIF JRC.G.I.3	5441 - GENIORS GEN IV Integrated Oxide fuels recycling strategies	Optimisation of the GANEX solvent by modified DGA's The reference GANEX solvent consists at present of a mixture of TODGA and DMDOHEMA dissolved in kerosene. Due to the presence of two different extractants with different properties, its composition is complex. A simplification would be potentially advantageous and could lead to easier fission product handling and backextraction, simplified degradation chemistry and modelling.	JRC.G.I.5 Rikard MALMBECK	3.3.2.b	RTD	RTD	Roger GARBIL		CEA - Commissariat à l'Energie Atomique et aux Energies Alternatives	01/04/2017 31/03/2019	CON-IA	Del54412018 1	Optimisation of the GANEX solvent by modified DGA'	This action will include investigation of extraction properties and limiting conditions in batch extraction tests using Am, Cm and Pu at loading concentrations. Specifically it will focus on - acid dependency / DGA concentration - scouting tests at high Pu loading, up to 40 g/L - FP product behavior - Simplified backextraction, SO3-Ph-BTBP or PTD The expected results will indicate if this route is possible/promising by exploring the limiting conditions in terms of solvent stability at high me	31/03/2019	JRC technical reports
63 - SANSIF JRC.G.I.3	5681 - Pyro TPW JFY2017 Study on the behaviour of minor actinides separation in liquid Ga	Pyrochemical recovery of minor actinides in liquid Ga is a promising process to minimise the environmental impact of long half live nuclides such as minor actinides, Np, Am and Cm, in spent	JRC.G.III.8 Laura ALDAVE DE LAS HERAS	3.3.2.b	JRC	n/a	n/a		CRIEPI - Central Research Institute of Electric Power Industry	01/04/2017 31/03/2018	CON-TW	2	Technical report	Technical report on the study on the behaviour of minor actinides separation in liquid Ga. The report summarises the results on the separation behaviour of minor actinides from fission products and on the determination of the separation factor of actinides/lanthanides at equilibrium state.	15/03/2018	JRC technical reports
3.3.2.c development and assessment of innovative technologies and techniques applied to nuclear decommissioning. Exchange and dissemination of knowledge developed, findings and information.																
4961 - DISARM JRC.G.III.8	259 - ESMDCM-1 Examination of stability of molten and	The objective of this program is to characterize molten and damaged core materials under cooling	JRC.G.III.8 Daniel SERRANO PURROY	3.3.2.c	JRC	n/a	n/a		CRIEPI - Central Research Institute of Electric Power Industry	19/12/2012 31/03/2017	CON-TW	1	Final report	The report summarises the experimental results on corium and spent nuclear fuel stability studies in post Fukushima accidental conditions.	30/06/2017	JRC technical reports
323 - Fukushima-NMS JRC.G.2	517 - ND-Fukushima Neutron Resonance Densitometry for the characterisation of molten Fukushima-Daiichi fuel	The Japanese Atomic Energy Agency (JAEA) selected Neutron Resonance Densitometry (NRD) as one of the most suitable methods to characterise molten fuel during decommissioning of the Fukushima Daiichi nuclear power plants (C/2010/212). The method is based on a combination of Neutron Resonance Transmission (NRTA) and Capture (NRCA) Analysis, two	JRC.G.2 Peter SCHILLEBEECKX	3.3.2.c	ENER	JRC	M. Boella, DG ENER D2 Nuclear Energy technology, Nuclear waste and Decommissioning, and S. Cicarello, DG ENER E5 Nuclear accountability, Methods&evaluation		INFN - ISTITUTO NAZIONALE DI FISICA NUCLEARE IAEA - International Atomic Energy Agency (IAEA) JAEA - Japan Atomic Energy Agency	01/01/2014 30/12/2018	INS-RS	1	NRD quantification of nuclear materials	A report will be delivered to the JAEA partners describing the principles and expected accuracies to quantify the amount of strategic (fissile) material particle-size debris of molten fuel by NRD.	15/10/2014	Scientific and policy reports
												4	An integrated Neutron Resonance Analysis System	A technical report will describe the required components and physical characteristics of an integrated system for on-site application of nuclear resonance analysis.	17/11/2017	JRC technical reports
												5	Options for a demonstration facility	A technical report will describe the available options for a neutron resonance analysis demonstration facility with recommendations on the best way forward.	02/06/2018	JRC technical reports
4961 - DISARM JRC.G.III.8	598 - LIDO Ligands for Decommissioning	Decommissioning is a highly mature industry, with little focus on improvement. Society requires that these activities are less costly, and that the wastes are stored without risk. In this WP, new ligands for decommissioning nuclear installations with high efficiency will be synthesised, with the goal to limit further waste volumes, while improving ligand stability and robustness in radiation fields. Due attention will be given to hydrogen risk in the event of storage without, or prior to, incineration. The project spans from ligand design and synthesis over the complexes and their properties to investigations of possible applications in non proliferation to the environment by remediation. The metal ions to be removed can be fission products (lanthanides, etc.) or actinides from fuel (U, Pu, Np, Am). The development of the ligands stabilising the metal ions in a stable complex environment is a perfect base for internal and external cooperation. Where possible, contacts with JRC operational decommissioning will be established.	JRC.G.III.8 OLAF WALTER	3.3.2.c	JRC	JRC	n/a	RTD	- NUKEM GMBH* - Research Centre Jülich - University of Manchester AMEC - AMEC Consulting AREVA NP - AREVA NP Main Company GRS - Gesellschaft für Anlagen und Reaktorsicherheit MBH HZDR - Helmholtz-Zentrum Dresden-Rossendorf e.V. IAEA - International Atomic Energy Agency (IAEA) IRSN - Institut de Radioprotection et Sûreté Nucléaire KIT - Karlsruhe Institute of Technology NEA-OECD - Nuclear Energy Agency (OECD) NUGENIA - Nuclear Generation II & III Association SCK-CEN - Belgian Nuclear Research	01/01/2014 31/12/2018	INS-RS	598LIDO201 71	LIDO: Ligands and related complex structures 2017	Based on a series of methodological experiments the synthesis and spectroscopic and structural characterisation of new complexes will be reported.	31/12/2017	JRC technical reports
												598LIDO201 72	Other deliverables. Scientific publications 2017	Scientific publications and conference contributions related to methodological experiments on the synthesis and spectroscopic and structural characterisation of new complexes during 2017	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												598LIDO201 81	LIDO: Ligands and related complex structures 2018	Methodological experiments on the synthesis and spectroscopic and structural characterisation of new complexes will be extended to complex stability measurements with respect to applications in decommissioning.	31/12/2018	JRC technical reports
												598LIDO201 82	Other deliverables. Scientific publications 2018	Scientific publications and conference contributions related to methodological experiments on the synthesis and spectroscopic and structural characterisation of new complexes or their complex stability in 2018	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
5120 - NDA4SSD JRC.G.II.7	2280 - Metrodecom Metrology for Decommissioning Nuclear Facilities	Metrodecom is a research project by a consortium of 15 European partners with 45% funding from EURAMET. The main objectives include characterization of materials under decommissioning, measurements for waste segregation and free release, and monitoring of waste repositories. The ITU involvement concerns mainly the measurements of free release (simulated and real) waste streams in collaboration with Unit C1. IRMM is involved regarding development of reference standards.	JRC.G.II.7 Bent PEDERSEN	3.3.2.c	RTD	RTD	n/a		EURAMET - European Organisation of Metrology (EURAMET)	01/09/2014 31/08/2017	CON-IA	4	Workshop and training course	After completing the measurement campaign at the JRC Ispra, a workshop and training course will be hosted by ITU. This course is targeted at decommissioning operators and will focus on the novel instrumentation, protocols and measurement procedures developed during the project. Representatives of measurement systems manufacturers will be invited to the workshop. The workshop will address not only free release measurements but all techniques concerned from the Metrodecom project	31/08/2017	Training
												5	Reporting of findings from FRMF campaign at ISF	The FRMF (free release measurement facility) was successfully installed at the ISF, building 41m, JRC Ispra site. The campaign, scheduled to terminate in December 2016, includes both a series of measurements on simulated waste with known standard sources, as well as real waste from the Ispra site destined for free release (clearance). The MetroDecom activities planned for 2017 includes dismantling and removal of the FRMF device, and reporting according to the project protocol.	31/08/2017	JRC technical reports
												6	Reference materials for calibration	Reference material for the calibration of a Free release measurement facility. Standard Sources for free release and segregation measurements. Production of point sources of reference sources.	31/08/2017	JRC technical reports
5120 - NDA4SSD JRC.G.II.7	2748 - IntelligentShield An intelligent background radiation	This is an approved Exploratory Research Project. Experimental Investigations of an intelligent neutron	JRC.G.II.7 Bent PEDERSEN	3.3.2.c	ENER	JRC	M Boella		IAEA - International Atomic Energy Agency (IAEA)	01/01/2015 28/02/2017	INS-ER	2	Final report	At the end of the 2-year project a final report will be presented to the JRC scientific committee.	28/02/2017	JRC technical reports

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Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
323 - Fukushima-NMS JRC.G.2	3512 - ND-Critical Development of a criticality safety monitor for decommissioning Fukushima Daiichi	Decommissioning of the molten Fukushima Daiichi reactor cores implies changes in the removal process. These changes may lead to accidental criticality. To allow monitoring critical excursions, new instruments are required that may be used under all circumstances especially very high temperatures. Follow-up project from JRC-3509.	JRC.G.2 Franz-Josef HAMBOSCH	3.3.2.c	ENER	JRC	DG ENER D2 Nuclear Energy Technology, Nuclear waste and decommissioning.		IAEA - International Atomic Energy Agency (IAEA) JAEA - Japan Atomic Energy Agency MS EU - Member states EU	01/01/2016 31/12/2017	INS-RS	2	Feasibility of using gamma-rays for criticality.	An evaluation will be presented of the feasibility of using high energy gamma-rays to signal accidental criticality during the removal of the molten core of the Fukushima reactors.	03/11/2017	JRC technical reports
421 - INZSAF JRC.G.II.7	3673 - 3DLDECOM 3D Laser based verification and modelling technologies supporting decommissioning	JRC has a long experience in providing 3D Laser based verification and identifications systems to Nuclear Safeguards organizations. The work has until recent been focused on Design Information Verification of active or commissioned Nuclear installations and on Physical Inventory of nuclear material on nuclear sites. This work-package will, based on a previous analysis, develop optimized tools to assist in decommissioning of Nuclear Sites. The deliverables range from core-level system components to end-user ready systems for management of tagged data into 2D/3D environment as well as specific tools for soil treatment supported by 3D technologies.	JRC.G.II.7 Gunnar BOSTROEM	3.3.2.c	ENER	JRC	ENER D.2 M Boella			02/01/2017 31/12/2018	INS-RS	30	3D Data-management	This deliverable will result in the user requirement system for a 3D based support system for Decom. It includes system components for managing 3D Data in a DB, manipulators to manage data over time and back-end functionalities to assist the development of high-level user tools	30/06/2017	Scientific information systems and databases
												40	3D assisted soil-handling	This is a technical system using the 3D technology to in real-time characterize a limited area of ground. The system will using running 3D sensors, monitor the movement of an excavator and at the same time keep an up-to data record of the surface elevation of the limited area. By feeding into the system, a specific requested soil-map, it will be possible for the system to guide the operator of the excavator where to remove soil and how much.	27/10/2017	Technical systems
												50	User App suite for 3D supported Decom activities	This is the high-level user application which based on the existence of the lower-level application and 3D DB as defined in deliverable 30. With this system, a user/operator/contractor/authority can perform virtual visits to a site, perform measurements, accessing linked documents (document management not included in this project) Data can be visualized in different detail levels and selections can be exported to other third party applications (like BIM SW.) for further processing/management.	31/08/2018	Technical systems
												60	Evaluation Report	An evaluation report should be written where a conclusive evaluation of the system is performed including a benefit against effort analysis.	30/12/2018	JRC technical reports
65 - DANTE JRC.G.10	3684 - NDWM SS International Summer School on Nuclear Decommissioning and Waste	The International Summer School on Nuclear Decommissioning and Waste Management aims at strengthening education on planning and operating	JRC.G.II.7 Kamel ABBAS	3.3.2.c	JRC	JRC	n/a	DEVCO RTD	IAEA - International Atomic Energy Agency (IAEA) NEA-OECD - Nuclear Energy Agency	01/01/2016 31/12/2017	INS-RS	2	Decommissioning Summer School 2017	In September every year ITU-E08 implements the Decommissioning Summer School as a one week training course intended for young professionals and university students.	31/12/2017	Training
283 - RADMED JRC.G.2	4181 - RN-DECOM Metrological tools for nuclear decommissioning	This work package concerns the development of metrological tools needed for radioactivity measurements in nuclear decommissioning in Europe. These metrological tools are reference materials and calibration standards used to validate the radioactivity measurement methods. They are needed to calibrate the instruments that are applied by authorities and companies involved in nuclear decommissioning, as well as by metallurgical industry.	JRC.G.2 Raf VAN AMMEL	3.3.2.c	ENER	JRC	Gianfranco BRUNETTI ENER.d.2; klement Stephan ENER.D.1;	TRADE		01/01/2016 31/12/2018	INS-RS	2	Reference material for metallurgical industry	Metallurgical industry as well as companies involved in nuclear decommissioning need to validate their methods and calibrate their instruments using reference materials. There are relatively few CRMs for this. A disc shaped steel material containing Co-60 will be produced and characterised in 2016-2017. It is foreseen to make a CRM of this material in 2018 should the production prove successful.	31/12/2017	Reference Material
												3	Production of radionuclide reference sources	A scientific article describing a new method of producing radionuclide reference sources suitable for decommissioning and calibration of free release measurement facilities.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												4	Radionuclide reference materials of large area	Study on the possibility of employing a newly developed automatic dispenser for production of large area reference sources suitable for decommissioning of large concrete areas.	31/03/2018	JRC technical reports
4961 - DISARM JRC.G.III.8	5104 - SADARAC Stability, Defueling and Safe Conditioning of Damaged Reactor Cores	The main objectives are the assessment of the stability of damaged core in water (fresh, sea, or with additives), the mechanical properties of the corium, which will impact its unloading from the core, and its treatment, conditioning and weathering. The work package takes a pragmatic approach combining reality with underlying scientific studies to understand individual mechanisms. •Stability of the core materials (corium or fuel in storage ponds) in aqueous media is essential as it cannot be unloaded for several years. It should remain intact, with no migration to the environment The cooling can be borated water as in the reactor reserves, but also emergency supply from rivers or sea, all of which can have different effects on the stability of the corium. These investigations will be made on real fuel and corium from TMI and Chernobyl. Corium is a complicated material, and a full assessment can only be made by separate effect tests on simulated materials (also doped to simulate ageing) •Unloading the core is an important issue. It requires remote operations needing the assessment of the mechanical properties of the corium. The presence of BAC in control rods in some reactors (Fukushima) can lead to very hard materials indeed. This experimental assessment will cover ageing and potential corrosion in the intervening period. •Licensing of geological disposal sites is already challenging for well-known and characterised spent fuel emanating from the NPPs. Remediation of a damaged reactor core requires treatment of the materials and their conditioning into stable waste forms for long term storage. Dissolution in aqueous media will be assessed as well as the separation of the components. Given the challenges.	JRC.G.III.8 Daniel SERRANO PURROY	3.3.2.c	JRC	JRC	n/a	RTD	CRIEPI - Central Research Institute of Electric Power Industry ETSON - European Technical Safety Organisation Network IAEA - International Atomic Energy Agency (IAEA) IRSN - Institut de Radioprotection et Sûreté Nucléaire JAEA - Japan Atomic Energy Agency NEA-OECD - Nuclear Energy Agency (OECD) NUGENIA - Nuclear Generation II & III Association SNETP - Sustainable Nuclear Energy Technology Platform (SNETP)	01/01/2017 31/12/2019	INS-UR	1	Assessment of corium stability in sea water	Based on a series of methodological investigations on the stability of corium in the presence of sea water as coolant over a protracted period of time after an LWR severe accident, the release rate of fission products and fuel components will be determined, and augmented by specific studies on the microstructural alteration and formation of secondary phases, all of which will lead to an initial assessment of stability of corium under these unplanned conditions.	31/12/2017	JRC technical reports
												2	Other deliverables. Scientific publications 2017	Scientific publications and conference contributions related to stability, defueling and safe conditioning of damaged reactor cores during 2017	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												3	Mechanical properties of corium simulants	Mechanical properties of (irradiated) corium simulants and real corium material are investigated by determination of Vickers hardness and Young's modulus with different techniques. Reactions of corium under environmental conditions (ambient atmosphere, contact with injected emergency cooling media) will be specified by consideration of analogues and investigations with surface sensitive methods like photoelectron spectroscopy or electrochemistry and analytical methods exploring the aq. phase.	31/12/2018	JRC technical reports
												4	Stability of corium and SNF in borated water	Complementary to the studies in sea water, based on methodological investigations on the stability of corium and SNF in the presence of borated water as coolant over a prolonged period of time after an LWR severe accident, the release rate of fission products and fuel components will be determined, and augmented by specific studies on the microstructural alteration and formation of secondary phases, all of which will lead to an initial assessment of the corium and the SNF under these conditions.	31/12/2018	JRC technical reports
												5	Other deliverables: Scientific publications 2018	Scientific publications and conference contributions related to stability, defueling and safe conditioning of damaged reactor cores during 2018	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
4961 - DISARM JRC.G.III.8	5106 - NUSIRE Nuclear Site Remediation	NUSIRE deals with remediation of contaminated structures and sites, including end of regular operation, or subsequent to accidental conditions where liability and responsibility goes beyond that of the operator. Remediation and the closely associated site clean-up, decommissioning and restoration, refers to actions taken to reduce the impact from contamination in buildings, areas and in the associated groundwater in order to leave the site suitable for further use. Sustainable remediation balances environmental, social and economic impacts of a project, without compromising human health and environmental standards both at a local level, and for the wider community. A risk-based approach to remediation can assist countries with significant legacy clean-	JRC.G.III.8 Stefaan VAN WINCKEL	3.3.2.c	JRC	JRC	n/a	RTD	ETSON - European Technical Safety Organisation Network IAEA - International Atomic Energy Agency (IAEA) NUGENIA - Nuclear Generation II & III Association OECD - Organisation for Economic Co-operation and Development (OECD)	01/01/2017 30/12/2019	INS-UR	1	Working towards a science for remediation network	The report describes the status of establishing a network on basic sciences for improving remediation technologies. A feasibility assessment of needs will be made, and decisions for course of action taken.	31/12/2017	JRC technical reports
												2	Establishing a science for remediation network	The report describes the outcome of two years efforts towards establishing a network on basic sciences for improving remediation technologies. The key objective of this report is to assess the outcome in view of how to proceed with the actual implementation of such an international R&D network.	31/12/2018	JRC technical reports
												3	Other deliverables. Scientific publications 2017	Scientific publications and conference contributions related to the objectives of NUSIRE WIP	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)

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Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
		up challenges and budgetary constraints to manage effectively their remediation projects. Remediation encounters a series of obstacles, including concurrent activities, inadequate site characterization, poor definition of the problem, poor national policies and regulations, lack in clear definition of clean-up criteria inhibiting cost-effective and timely remediation, lack of waste classification, acceptance criteria and disposal routes for the resulting waste, lack of stakeholder engagement and support and lack in knowledge							SNETP - Sustainable Nuclear Energy Technology Platform (SNETP)			4	Other deliverables. Scientific publications 2018	Scientific publications and conference contributions related to the objectives of NUSIRE WP	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												5	AUTORAD prototype applications for NUSIRE	The report describes the main results obtained for the AUTORAD prototype application for decommissioning and remediation analyses.	31/12/2017	JRC technical reports
5120 - NDA4SSD JRC.G.II.7	5137 - Sup2OPDecom Support to Operational Decommissioning and Waste Management	Support to Operational Decommissioning and Waste Management. The present workpackage emerged from the Workshop on R&D needs for nuclear decommissioning and waste management (ND&WM) which was organized by C1 Unit on May 4th 2016 where all JRC Units involved in the field have participated. ND&WM is becoming one of the priorities of EU and the EU parliament required that JRC builds upon its experience with the decommissioning of JRC nuclear facilities and further reinforces its research to support safe decommissioning in Europe. Several activities in the operational ND&WM in JRC Ispra were well identified in the sense that scientific support would be required. The main activities of the workpackages are: -Support to C1 for ESSOR in-pond characterization of nuclear material rods.	JRC.G.II.7 Kamel ABBAS	3.3.2.c	JRC	JRC	n/a	RTD	IAEA - International Atomic Energy Agency (IAEA)	01/01/2017 30/12/2018	INS-RS	1	Progress Report	The yearly report will be dedicated to the contribution of the E8 Unit to C1 in management of waste in JRC Ispra site	20/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												2	Scientific and technical contributions	At least one scientific paper to an international conference and at least one technical report of achieved results according the set objectives	20/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
5120 - NDA4SSD JRC.G.II.7	5139 - Tomography Tomography for waste management	Tomography for waste management. R&D on gamma tomography applied for spent fuel has deserved an important interest as a very important tool for verification of integrity of fuel assemblies specially in encapsulation facilities prior to final repository. DG ENER together with some MS and in collaboration with several international organizations such as IAEA and DoE has already coordinated several projects in this sense and considerable and valuable research results were already reported however further work is needed to mature the tested methods and tools including	JRC.G.II.7 Eric ROESGEN	3.3.2.c	ENER	JRC	n/a	RTD	IAEA - International Atomic Energy Agency (IAEA)	01/01/2017 31/12/2018	INS-UR	1	Progress Report	This report will give a need assessment of gamma tomography and an overview of the state of the art on the utilization of the gamma tomography for spent fuel and perspectives for waste.	20/12/2017	JRC technical reports
												2	Contribution to a scientific conference	At least one contribution in an international scientific meeting in the field of tomography or imaging technical used in nuclear decommissioning and waste management	20/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
4961 - DISARM JRC.G.III.8	5280 - INSIDER Improved Nuclear Site	Improved Nuclear Site characterization for waste minimization in D&D operations under constrained	JRC.G.III.8 Laura ALDAVE DE LAS HERAS	3.3.2.c	RTD	RTD	RTD; C. Davies		- CANBERRA INDUSTRIES INC - Czech Metrology Institute	01/07/2017 30/06/2020	CON-IA	1	WPK's State-of-Knowledge	WPK's State-of-Knowledge for topics selected in each WPK.	01/09/2018	JRC technical reports
3.3.3 Nuclear emergency preparedness and response (EP&R), environmental monitoring and radiation protection																
3.3.3.a support for Member States an Commission services on the exchange of information in case of emergency and on radiological monitoring and measurements relating to radioactivity in the environment, including hosting, maintaining and developing the related database and reporting system;																
334 - REM&EPR JRC.G.10	713 - N-EP&R Support to Nuclear Emergency Preparedness and Response from REM	The role of the EC in case of R/N unplanned event are: -To ensure that MSs are aware of urgent information received under ECURIE -To ensure the protection of the internal market from contaminated food/feed by urgent implementation of regulation. -To collect and assess all information which is of interest for the EU and to provide feedback; -To assist on request to EU MS and non EU MS -To assess the conformity with EU Legislation and to issue an ad-hoc Regulation or Decision if necessary. JRC provides Scientific and technical support in this role: EURDEP/ECURIE systems allow to trigger the emergency status and to exchange the first information. The medium and long term emergency phases will relay in the transmission by MS labs of the measured radioactivity levels (REMdb). Prognosis, dose assessment and countermeasures assessment can be done using models included in the Decision Support Systems	JRC.G.10 Marc DE CORT	3.3.3.a	ENER	JRC	Costas Constantinou, Vesa Tanner	AGRI DEVCO ECHO SANTE	EU MS R/N emergencies - EU MS Authorities competent for R/N emergencies Env Rad Mon EU - Radioactivity Environmental Monitoring National laboratories and institutes IAEA - International Atomic Energy Agency (IAEA)	01/01/2014 22/12/2018	INS-RS	201701	Beta release of operational JRC R/N EPR	Development of an operational platform by making use of existing and available JRC models and information systems, to address the prediction of the migration of radionuclides in the environment (i.e. typically on agricultural produce to support decision making on economic countermeasures) compatible with the European Crisis Management Laboratory, which currently is focused in non nuclear crisis.	30/12/2017	Technical systems
												201702	Data assimilation and inverse modelling	Development and/or integration of computational tools in existing DSSs for assimilation of atmospheric measurements (e.g., gamma radiation dose rates, concentration) and/or inverse modelling to estimate unknown source term (location, emission rate).	22/12/2017	JRC technical reports
												201703	Improvement of existing DSS for R/N emergencies	Improvement of existing DSS with radiological capabilities (explosions in large buildings, underground stations, uncertain source term information, hidden sources etc.)	22/12/2017	JRC technical reports
												201704	Transport factor assessment using FDMA&REMdb data	On the basis of the radioactivity environmental monitoring data collected by EU MSs and recorded in JRC REMdb, an assessment of transmission factors of some radionuclides in the environment will be done using the FDMT (Food Dose Model Transport) implemented within JRodas and ARGOS Decision Support Systems.	15/06/2018	JRC technical reports
												201801	Development of a knowledge data base	Development of a knowledge database with scenarios and response, including lessons learned from historic events and decision support tools developed in international handbooks such as the European handbooks Development of information material of general nature on radiation emergencies, countermeasures and recovery	21/12/2018	Scientific information systems and databases
334 - REM&EPR JRC.G.10	714 - ECURIE/EURDEP ECURIE/EURDEP	Manage, operate and further develop the European Community emergency support information systems. This support activity (Council Decision 87/600) conceives, develops and tests the ECURIE software and develops and maintains the EURDEP system. In addition, to act as a European scientific focal point for data exchange in case of radiological/nuclear emergency, assistance to EU MSs is provided and international meetings organised. Particular support to be given to the IAEA EP&R projects USIE and IRMIS.	JRC.G.10 Konstantinos BOGUCARSKIS	3.3.3.a	ENER	JRC	Costas Constantinou, Kevin Jackson, Vesa Tanner (ENER D.3)	AGRI DEVCO ECHO SANTE	EU MS R/N emergencies - EU MS Authorities competent for R/N emergencies Env Rad Mon EU - Radioactivity Environmental Monitoring National laboratories and institutes IAEA - International Atomic Energy Agency (IAEA)	01/01/2014 31/01/2018	INS-RS	201702	Beta release of ECURIE 3.0	ECURIE is the official IT tool which EU MSs have to use to notify a nuclear/radiological emergency and subsequently provide information on the status of the emergency. This is a beta version to demonstrate main functionalities.	30/11/2018	Technical systems
												201703	EURDEP workshop	The international scientific workshop intends to bring together the international scientific community in the field to review on what has been achieved so far and to discuss and plan the way ahead to improve the automatic exchange of environmental monitoring data in view of a nuclear/radiological accident.	31/10/2017	Scientific information systems and databases
												201704	REM environmental samples browser	A prototype of a web on-line tool to report all environmental samples collected via the following activities EURDEP, REM database and European Atlas of Natural Radiation. This tool must become a part of the REM website and enable users to search, aggregate and export the natural radioactivity data in the view of interactive maps, PDF downloadable.	30/09/2017	Technical systems
												201802	ECURIE 3	ECURIE is the official IT tool which EU MSs have to use to notify a nuclear/radiological emergency and subsequently provide information on the status of the emergency. This version is a release candidate.	30/11/2018	Technical systems
												201803	REM environmental samples browser	Final version of a web on-line platform to report all environmental samples collected via the following activities EURDEP, REM database and European Atlas of Natural Radiation. This tool becomes a part of the REM website and enable users to search, aggregate and export the natural radioactivity data in the view of interactive maps, PDF downloadable.	30/09/2018	Technical systems
334 - REM&EPR JRC.G.10	715 - REM	The REM data base and its related reporting system is the implementation of the art. 36 of the Euratom Treaty and is a JRC obligation (art 39). The collection and analysis of the environmental	JRC.G.10						Env Rad EU - EU Member State authorities competent for environmental radioactivity	01/01/2014		201701	REM Data Submission Tool training sessions	Up to 2 training sessions on Data Submission Tool will be offered to MSs Competent Authorities in order to support them to comply with their obligation to submit their National Radioactivity Environmental Monitoring results to European Commission.	22/12/2017	Training
												201702	Monitoring Report 2015	Report with quarterly average values of radioactivity levels in airborne particulates, surface water, drinking water, milk and mixed diet for the 28 countries of the European Union (sparse and dense network) for 2015.	30/06/2017	JRC technical reports
												201703	Euratom Article 35-36 Working Group meeting	Manage and organise the Euratom article 35-36 working group meeting(s) (maximum 2 meetings for 2017 depending on the needs of DG ENER D.3 and the EU Member States). The aim of these meetings is to improve the data processing and reporting procedures directly with a representation of the external stakeholders (6 Member States and DG ENER).	22/12/2017	JRC technical reports
												201704	Assistance to Euratom art 35 verification visits	To assist DG ENER D.3 in fulfilling its mandate to inspect monitoring networks within a limited number of Member States. 3 missions (to be confirmed) to EU Member States are planned	22/12/2017	JRC technical reports
												201705	Connection flexibility	To improve and maintain the systems software to exchange and report on environmental radioactivity (routine and emergency systems) and provide adequate technical/user documentation	31/12/2017	Scientific information systems and databases

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
JRC.G.10	Euratom art 36	The collection and validation of environmental radioactivity data, the development of procedures and software and subsequent training is done in close collaboration with all EU national data providers.	Marc DE CORT	3.3.3.a	ENER	JRC	Vesa Tanner, Alan Ryan	SANTÉ	Env Rad Mon EU - Radioactivity Environmental Monitoring National laboratories and institutes	30/12/2018	INS-RS	201801	REM Data Submission Tool training sessions	Up to 2 training sessions on Data Submission Tool will be offered to MSs Competent Authorities in order to support them to comply with their obligation to submit their National Radioactivity Environmental Monitoring results to European Commission.	31/12/2018	Training
												201802	Monitoring Report 2016	Report with quarterly average values of radioactivity levels in airborne particulates, surface water, drinking water, milk and mixed diet for the 28 countries of the European Union (sparse and dense network) for 2016.	30/06/2018	JRC technical reports
												201803	Euratom Article 35-36 Working Group meeting	Manage and organise the Euratom article 35-36 working group meeting(s) (maximum 2 meetings for 2018 depending on the needs of DG ENER D.3 and the EU Member States) The aim of these meetings is to improve the data processing and reporting procedures directly with a representation of the external stakeholders (6 Member States and DG ENER).	22/12/2018	JRC technical reports
												201804	Euratom art 35 verification visits	To assist DG ENER D.3 in fulfilling its mandate to inspect monitoring networks within a limited number of Member States. 3 missions (to be confirmed) to EU Member States are planned	22/12/2018	JRC technical reports
												201805	Monitoring report production services	First release of IT tool to extract REMdb relevant data from the Environmental Radioactivity Monitoring datapool and import into the REM Data Submission Tool	22/12/2018	Scientific information systems and databases
334 - REM&EPR JRC.G.10	2291 - Metro ERM/ENV 57 Metrology for radiological early warning networks in Europe	The MetroERM project aims to deliver metrologically sound measurement of fundamental radiological quantities such as ambient dose equivalent rate, radioactive concentrations in air and ground contamination levels in real time. It will provide the opportunity to comprehensively address the harmonization of the radiological early warning networks in Europe.	JRC.G.10 Marc DE CORT	3.3.3.a	ENER	RTD	Vesa Tanner, Costas Constantinou	ECHO	EU MS R/N emergencies - EU MS Authorities competent for R/N emergencies Env Rad Mon EU - Radioactivity Environmental Monitoring National laboratories and institutes NMI - National Metrology Institutes	01/06/2014 31/05/2017	CON-IA	201701	Harmonisation procedures for EURDEP	Technical concept for the implementation of the harmonisation procedures and algorithms into the EURDEP platform. They will correct dosimetric data for the inherent background of the probes and allow for the subtraction of the cosmic component as well as for site methods to deal with missing information, which would be needed in order to apply harmonisation algorithms. On the one hand, the exclusion of uncorrected dose rate or activity concentration data may lead to an undue loss of overall information, whilst their harmonised inclusion, on the other hand, may generate artefacts and errors in the synoptic picture.	31/01/2017	Article contribution to a peer-reviewed periodical listed in the
												201702	Methods to deal with missing information and data	Report of the results of the airborne radioactivity including the uncertainty budgets at a workshop for comparison participants. The results will be analysed, conclusions will be drawn and possibilities for improvement will be assessed. Once all the results and analysis have been agreed with the comparison participants, JRC will write and submit a paper in a peer-reviewed journal	31/03/2017	JRC Technical reports
												201703	Workshop on the airborne radioactivity comparison	Report of the results of the airborne radioactivity including the uncertainty budgets at a workshop for comparison participants. The results will be analysed, conclusions will be drawn and possibilities for improvement will be assessed. Once all the results and analysis have been agreed with the comparison participants, JRC will write and submit a paper in a peer-reviewed journal	31/03/2017	Training
334 - REM&EPR JRC.G.10	3686 - EANR European Atlas of Natural Radiation	The European Atlas of Natural Radiation is intended to familiarize the public with the radioactive environment, to give a balanced view of the annual dose it may receive from natural radioactivity and to provide reference material and generate harmonized data for the scientific community. It should comprise a collection of maps covering radon-related quantities. In addition, it may support EU Member States with implementing their radon action plans under the new European Basic Safety Standards Directive.	JRC.G.10 Tore TOLLEFSEN	3.3.3.a	ENER	JRC	Vesa Tanner, Alan Ryan, Stefan Mundigl	SANTÉ	Env Rad EU - EU Member State authorities competent for environmental radioactivity Env Rad Mon EU - Radioactivity Environmental Monitoring National laboratories and institutes UNEP - United Nations Environment Programme (UNEP)	01/01/2016 31/12/2018	INS-RS	201701	Collection of natural radioactivity data	Compilation of indoor radon data to extend and update the European Indoor Radon Map Collection of natural radiation data (geological, geochemical, soil etc.) in view of publishing the European Atlas of Natural Radiation. These maps will be presented through scientific publications in peer-reviewed journals and for developing the concept of the European Geogenic Radon Map. Creation of an online database on natural radioactivity. Ongoing activity, deliverable valid for the other years.	30/06/2018	Scientific information systems and databases
												201702	Scientific publications	Publication of the European Atlas of Natural Radiation and ad-hoc papers in peer-reviewed journals on environmental (natural and artificial) radioactivity monitoring. In particular scientific progress on the geogenic radon modelling work is reported in this way. Analysis and comparison of geographical distribution of indoor radon concentrations and lung cancer incidence and mortality in Europe, using data available from two JRC institutes (ITU and IHCP).	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												201703	International workshop on natural radiation	Organization of an international workshop on natural radiation, geogenic radon calculations and identification of radon priority areas. This workshop will provide a scientific discussion forum for the international radon community and reference for Member States authorities in implementing their radon action plan under the European Basic Safety Standards Directive.	30/06/2018	Validated methods, Reference methods and measurements
												201704	Radon risk analysis under JRC project on Fairness	Provide scientific and technical support to increase knowledge and awareness of the radon issue in EU Member States authorities so that they best can comply with the requirements of the European Basic Safety Standards Directive. Support harmonization of radon data across European countries and develop a common protocol. Perform research on building techniques to promote mitigation actions in dwellings and workplaces with elevated indoor radon concentration in order to reduce public exposure.	15/12/2018	Validated methods, Reference methods and measurements
												201801	Consolidation of European Atlas of Natural Rad.	Collection and harmonization of natural radiation data for the European Atlas of Natural Radiation. Compilation of indoor radon data to extend and update the European Indoor Radon Map. These maps will be presented through scientific publications in peer-reviewed journals and for developing the concept of the European Geogenic Radon Map Maintenance of online database on natural radioactivity. Ongoing activity, deliverable valid for the other years.	31/12/2018	Scientific information systems and databases
												201802	Scientific publications	Publication of ad-hoc papers in peer-reviewed journals on environmental (natural and artificial) radioactivity monitoring. In particular scientific progress on the geogenic radon modelling work is reported in this way.	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												201803	Radon in workplaces	Collection and harmonization of indoor radon data from educational workplaces (universities, schools, kindergartens etc.), by contacting national competent authorities identified through the European Indoor Radon Map effort. Creation of a first map of indoor radon concentration in these sites. This activity supports the implementation of the European Basic Safety Standards Directive	31/12/2018	Scientific information systems and databases
												201804	Naturally-occurring radioactive materials	Identification of sites with naturally-occurring radioactive materials in EU Member States. Launch of questionnaire or survey to national competent authorities. Collection of data and creation of an inventory at EU level. This activity supports the implementation of the European Basic Safety Standards Directive.	31/12/2018	Scientific information systems and databases
334 - REM&EPR JRC.G.10	3689 - FS EPR New Regions Emergency Preparedness and Response in new geographical Regions (e.g. NA or Middle East)	Continuation of 2288 in new geographical regions Assessment of the feasibility of establishing (or enhancing existing) regional co-operation on emergency preparedness and response in new regions (e.g. North Africa Region, Middle East) with a view to bringing arrangements and	JRC.G.10 Marc DE CORT	3.3.3.a	DEVCO	DEVCO	HoU DG DEVCO B5	ENER	EU MS R/N emergencies - EU MS Authorities competent for R/N emergencies Env Rad Mon EU - Radioactivity Environmental Monitoring National laboratories and institutes	01/02/2016 31/12/2018	CON-AA	201701	International Workshop on EP&R	An international Workshop/training will be organized in the New Region to disseminate the outcomes of the Needs Assessment on EP&R capabilities performed. The Workshop will include practical exercises with EURDEP/ECURIE and RODOS/ARGOS Decision Support	20/10/2017	Conferences and workshops organized by the JRC
												201702	Final Report for EP&R in New Regions	The final report will include the proceedings of the dissemination workshop, the minutes of the final meeting and the press release as well as a summary of the progress reports, the main achievements of the project and next steps to be done.	08/12/2017	JRC technical reports
3.3.3.b development of severe accident modelling, radiological source term evaluation, accident management of nuclear power plants and enhancement of preparedness for nuclear or radiological incidents through benchmarking of dispersion models.																
226 - NURAMA JRC.G.1.4	206 - CESAM Code for European Severe Accident Management	The project corresponds to JRC-IET contribution to Euratom FP7 CESAM project in collaboration with EU partners. JRC-IET is leading the Work Package 40: Plant Application and Severe Accident Management, consisting in development/validation of ASTEC V2 (Accident Source Term Evaluation Code) reference input	JRC.G.1.4 Stephan HERMSMEYER	3.3.3.b	ENER	RTD	Roberto Passalacqua	RTD	- UNIVERSITAET STUTTGART - VUJE - RUHRUNIVERSITAET BOCHUM AREVA NP - AREVA NP Main Company BARC - Bhabha Atomic Research Centre - Department of Atomic	01/04/2013 31/03/2017	CON-IA	7	JRC-IET contribution to CESAM Deliverable D40.45	JRC-IET is leading the CESAM WP40 and at the same time contributing to this WP40 that aims at developing ASTEC V2.1 input decks for different types of European Nuclear Power Plants. The D40.45 corresponds to the final set of Reference NPP ASTEC input decks.	31/03/2017	JRC technical reports
												PSD201701	Long-Term Management of a Severe Accident in a NPP	This deliverable will include the JRC contribution to the activity performed in collaboration with OECD/NEA for the Status Report on Long Term Severe Accident Management in a NPP. The objectives are:	31/12/2017	JRC technical reports
												PSD201702	Coordinated Response in case of nuclear crisis	Development of a concept paper for a Coordinated Response in case of Nuclear Events or Crises. The aim is to define a consolidated JRC expert response as concerns reactor accident diagnosis and source term evaluation to nuclear events or crises, and to establish a related information system, in support of the EC services, and in line with the existing EC crisis management systems. The work will be performed in synergy with JRC's related crisis and disaster management projects and clusters.	30/06/2017	JRC internal reports

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Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
226 - NURAMA JRC.G.I.4	482 - NURAM NUclear Reactor Accident Analysis and Modelling	<p>The NURAM WPK aims to develop adequate safety assessment and modelling competences for current and innovative Nuclear Power Plants in support of policy DGs and Member States. The work focuses on Reactor Safety, Severe Accidents and Emergency Preparedness and Response Source Term evaluation. It seeks integration and synergies of JRC capabilities in the field by contributing to define a Coordinated Response in case of Nuclear Events or Crises.</p> <p>Main activities and outcomes include:</p> <p>1) Expertise in nuclear safety assessment to provide accident analyses information in the event of a nuclear crisis</p> <p>2) Severe accident and source term analyses for improved emergency preparedness.</p> <p>3) Contribution to the development and application of the European code for Severe Accident analyses and Source Term Evaluation ASTEC</p> <p>4) Providing competence in reactor physics, thermo-hydraulics, reactor dynamics, and coupled multi-physics codes to model NPP behaviour during accident sequences</p> <p>5) Contribution to international developments on Safety Design Criteria and Design Guidelines for advanced and innovative reactors, e.g. performed within projects: Risk & Safety Working Group, and Sodium Fast Reactor Safety Design Criteria Task Force (Phase-II), Safety & Operation and System Integration and Assessment.</p> <p>Work is done in collaboration with European nuclear stakeholders (EU TSOs), in relevant networks (NUGENIA) and with international organizations (IAEA, OECD/NEA).</p>	JRC.G.I.4 Luca AMMIRABILE	3.3.3.b	ENER	JRC	Ivo ALEHNO	RTD	<ul style="list-style-type: none"> - VUJE - Delft University of Technology - Nuclear Research Institute Rez AREVA NP - AREVA NP Main Company - CEA - Commissariat à l'Energie Atomique et aux Energies Alternatives CIEMAT - Centro de Investigaciones Energéticas Medioambientales Tecnológicas - EDF - Electricité de France - ENEA - Agenzia Nazionale per le Nuove Tecnologie, L'energia e lo Sviluppo Economico Sostenibile - ESNII - European Sustainable Nuclear Industrial Initiative - GIF - Generation-IV International Forum - GRS - Gesellschaft für Anlagen und Reaktorsicherheit MBH - IAEA - International Atomic Energy Agency (IAEA) - INRNE - INSTITUTE FOR NUCLEAR RESEARCH AND NUCLEAR ENERGY - BULGARIAN ACADEMY OF SCIENCES - IRSN - Institut de Radioprotection et Sûreté Nucléaire - KIT - Karlsruhe Institute of Technology - LEI - LIETUVOS ENERGETIKOS INSTITUTAS - Lithuanian Energy Institute - NEA-OECD - Nuclear Energy Agency (OECD) - NUBIKI - NUBIKI Nuclear Safety Research Institute Ltd - Hungary - NUGENIA - Nuclear Generation II & III Association - USNRC - United States Nuclear Regulatory Commission - VTT - Technical Research Centre of Finland 	01/01/2014 31/12/2018	INS-RS	PSD201703	Development & Assessment of Safety Standards	The scientific report summarizes the annual EURATOM contribution to the Risk and Safety Working Group (RSWG), the Sodium Fast Reactor Safety Design Criteria Task Force (SFR SDC TF) and the Sodium-cooled Fast Reactor projects System Integration & Assessment project (SFR SIA) and Safety and Operation (SFR S&O) in the development and assessment of safety standards for advanced and innovative reactors	31/12/2017	JRC technical reports
												PSD201801	PIRT in Spent Fuel Pool related accident	This deliverable will include the JRC contribution to the activity performed in collaboration with OECD/NEA to conduct a Phenomena Identification and Ranking Table (PIRT) on Spent Fuel Pool (SFP) in loss of cooling or coolant accidents conditions based on expert opinion elicitation. The objectives are: 1) identify phenomena of high safety importance and of high uncertainty, 2) determine the efficiency of potential mitigation means.	31/12/2018	JRC technical reports
												PSD201802	Protocol of information in case of nuclear crisis	The aim is to define a protocol and set of related information documents as concerns reactor accident diagnosis and source term evaluation to nuclear events or crises, in support of the EC services, and in line with the existing EC crisis management systems. The work will be performed in synergy with JRC's related crisis and disaster management projects and clusters.	30/06/2018	JRC internal reports
												PSD201803	International Assessment of Safety Standards	The scientific report summarizes the annual EURATOM contribution to the Risk and Safety Working Group (RSWG), the Sodium Fast Reactor Safety Design Criteria Task Force (SFR SDC TF) and the Sodium-cooled Fast Reactor projects System Integration & Assessment project (SFR SIA) and Safety and Operation (SFR S&O) in the development and assessment of safety standards for advanced and innovative reactors	31/12/2018	JRC technical reports
												PSD201804	Knowledge database in the event of nuclear crisis	In the framework of the collaboration arrangement with the European Platform on Preparedness for Nuclear and Radiological Emergency Response and Recovery (NERIS) the report will focus on the research project aiming at developing a knowledge database with scenarios and response, including lessons learned from historic events and decision support tools developed in international handbooks in support of the existing decision support systems.	31/12/2018	JRC technical reports
												SCD201701	Development and evaluation of SA analysis in BWR	This PhD thesis deals with the development and evaluation of severe accident codes capabilities against SBO sequences in BWR through a preliminary validation of ASTEC v2.1 capabilities vs. MAAP 5.0.2, to perform severe accident simulation (SBO) of BWR MARK-I type reactors	31/10/2017	PhD thesis
												SCD201702	Scientific publications and outreach activities	This deliverable will include the following outputs: peer-reviewed scientific publications, conference proceedings, dissemination activities focusing on/ in the areas of nuclear safety modelling	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												SCD201801	Scientific publications and outreach activities	This deliverable will include the following outputs: peer-reviewed scientific publications, conference proceedings, dissemination activities focusing on/ in the areas of nuclear safety modelling	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
64 - SAMP JRC.G.I.3	763 - CRS1 Corium and Revaporisation Studies 1	<p>This WP covers experimental studies on degraded and molten irradiated nuclear fuel (corium) from real and simulated severe accidents. A study on molten fuel debris as well as on "hot particles" from the Chernobyl accident is performed. Gamma-spectrometry, tools and sample preparation for in-depth investigations, including measurements by EPMA, SEM, TEM, and Laser Flash are included. Investigations of degraded/molten irradiated fuel rods, and materials from LWR accidents such as TMI-2, and from international programs such as Phébus and VERDON are also performed.</p>	JRC.G.I.3 PHILIPP POEML	3.3.3.b	ENER	JRC	ENER, M. Boella	DEVCO	<ul style="list-style-type: none"> - VATTENFALL AB - AREVA NP GMBH* - VUJE - Institut National de Recherche et de Sécurité - Nuclear Research Institute Rez - UNIVERSITÄT STUTTGART - KFKI Institute for Isotopes - Chalmers University of Technology - TECHNICAL UNIVERSITY OF SOFIA - AECL - AECL Chalk River - Canada - CEA - Commissariat à l'Energie Atomique et aux Energies Alternatives 	01/01/2016 31/12/2018	INS-RS	1	Characterization of ex-vessel corium melt	This deliverable will document the latest results from the study of Chernobyl ex-vessel corium melt.	30/12/2018	JRC technical reports
												100	Review of NRA experiments for boron sublimation	Report describing the results of a literature review and selected thermodynamic calculations to see the effect of boron sublimation behaviour during severe accidents (SA) of fast reactors	31/03/2017	JRC technical reports
												13	State of the art Final report	Final Report describing the state of the art for fuel behaviour in the late stages of in-vessel core degradation (CORESOAR final report)	29/12/2017	JRC technical reports
												88	Handling and conditioning severely damaged fuel	publications and other dissemination output concerning properties and long term behavior of severely degraded / molten nuclear fuel in view of safe decommissioning and remediation.	31/12/2018	Article contribution to periodicals or to conference proceedings listed in SCOPUS
226 - NURAMA JRC.G.I.4	2217 - FASTNET FAST Nuclear Emergency Tools	<p>The work package contains the JRC contribution to the Euratom H2020-NRFP2-2014 FASTNET project in collaboration with partners from EU, North America and IAEA. The project's target is to develop fast prediction tools (computer codes) for Severe Accident progression and Source Term evaluation. These tools will be used in Regulatory Bodies or TSOs crisis centres. JRC-IET will mainly contribute to tools development and validation as well as benchmarking of these tools with SA</p>	JRC.G.I.4 Stephan HERMSMEYER	3.3.3.b	ENER	RTD	Roberto PASSALACQUA	RTD	<ul style="list-style-type: none"> - Norwegian Radiation Protection Authority - Swedish Radiation Protection Authority - UNIVERSITÄT STUTTGART - CIEMAT - Centro de Investigaciones Energéticas Medioambientales Tecnológicas - EDF - Electricité de France - ENEA - Agenzia Nazionale per le Nuove Tecnologie, L'energia e lo Sviluppo Economico Sostenibile - SUEZTRACTEBEL SA - Nuclear Research Institute Rez - IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE - LIETUVOS ENERGETIKOS INSTITUTAS - AREVA NP - AREVA NP Main Company - CEA - Commissariat à l'Energie Atomique et aux Energies Alternatives 	01/10/2015 30/09/2019	CON-IA	3	Scientific report on annual project contributions	JRC-IET contribution to different FASTNET work packages with deliverables in 2017. According to the schedule, this will be contributions to FASTNET	31/12/2017	JRC technical reports
												4	Scientific report on emergency preparedness tools	The report will collect JRC contributions to the FASTNET deliverables - D3.1: Report on extended PERSAN tool - D3.2: Report on the extended RASTEP BBN tool - D3.3: Report on the ASTEC inversion BBN approach - D3.4: Robustness assessment and qualification of the methodology	30/09/2018	JRC technical reports
226 - NURAMA JRC.G.I.4	2218 - IVMR for LWR In Vessel Melt Retention for Light Water Reactors	<p>JRC contribution to the Euratom H2020-NRFP1-2014 IVMR for LWR. The stabilization of molten corium is recognised as essential if a safe and stable state is to be reached following a severe accident. Among the possible options, In-Vessel Melt Retention (IVMR) appears as an attractive solution that would minimize the risks of containment failure. The project aims to ensure and demonstrate adequate safety margins, including identification of efficient technical solutions for the</p>	JRC.G.I.4 Stephan HERMSMEYER	3.3.3.b	ENER	RTD	Roberto PASSALACQUA	RTD	<ul style="list-style-type: none"> - SUEZTRACTEBEL SA - Nuclear Research Institute Rez - IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE - LIETUVOS ENERGETIKOS INSTITUTAS - AREVA NP - AREVA NP Main Company - CEA - Commissariat à l'Energie Atomique et aux Energies Alternatives 	01/06/2015 31/05/2019	CON-IA	3	Scientific Report CFD calculations for IVMR	JRC-IET contribution to IVMR WP2.3, which is split between (i) the analysis of ex-vessel boiling and (ii) the direct assessment of models used in Severe Accident computer codes	31/05/2018	JRC technical reports
												4	Scientific Report on structural mechanics	JRC-IET contribution to IVMR WP2.4, which focusses on the assessment of static and dynamic loads on the RPV and long term evolutions. Calculations and benchmarks will be carried out with Severe Accident computer codes and with structural mechanics code like ABAQUS. The related IVMR deliverable D2.4 is due 31/5/2018.	31/05/2018	JRC technical reports
												8	Scientific publications and outreach activity 2017	- IVMR mid-term project workshop (during 2nd year of project), to be organized by JRC-IET. - Summary of JRC contribution 2017	31/12/2017	JRC internal reports
3.3.4 Nuclear safeguards																
3.3.4.a technical and scientific development of destructive and non-destructive methods and techniques (verification and informatics systems, analytical services, training, special equipment, etc.) and of standards and reference materials to support the Euratom safeguards system. Operation of the Safeguards on-site laboratories and in-field support for Euratom inspections;																
421 - IN2SAF JRC.G.II.7	674 - PROMO Process monitoring of nuclear facilities	<p>Support to DG ENER (and IAEA) for process monitoring at reprocessing and enrichment plants. This includes: Near Real Time Accountancy (NRTA), technical developments, validation and implementation, integration and improvement of safeguards analysis tools, for instance by making use of load cell data acquired at GCEP. The activity includes also the analysis of GCEP load cell data sets, the modelling of centrifuges and cascades for evaluation of GCEP performances. It also aims to develop hardware and software pieces to monitor the working order of the</p>	JRC.G.II.7 Patrice RICHIR	3.3.4.a	ENER	JRC	HoU of DG ENER E1 -P. Meylemans		IAEA - International Atomic Energy Agency (IAEA)	01/01/2014 31/12/2018	INS-RS	201703	Continuous Flow	Evaluation of the possibilities offered by the "continuous flow mode" for tank calibration verification	31/12/2017	JRC technical reports
												201802	Process Monitoring to Support Safeguards in GB II	Paper describing the use of load cell data, accountancy scale measurements and possible system to track the positioning of the cylinder conveyor to support the safeguards activities in the Georges Besse II Gas centrifuge Enrichment Plant.	30/06/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
		<p>Operation and Secretariat of the European Safeguards Research and Development Association, ESARDA. This includes management of Steering Committee</p>										201701	ESARDA management 2017	Reports of the Executive Board meetings Report of the Steering Committee meeting	31/12/2017	JRC technical reports
												201702	ESARDA symposium proceedings	Proceedings of the 2017 ESARDA annual meeting	31/12/2017	Books and monographs with JRC editorship

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
65 - DANTE JRC.G.10	685 - ESARDA ESARDA Operation, Secretariat, Education	networking with members and other organisations; reporting; maintenance and development of communication platforms; editing and publication of the ESARDA Bulletin, Annual meetings programme management and publication of proceedings; interaction with WGs and general follow-up of the association's evolution. Organisation of ESARDA course.	JRC.G.II.7 Filippo SEVINI	3.3.4.a	ENER	JRC	P. Meylemans (ENER.E.1)		ESARDA - European Safeguards R&D Association	01/01/2014 31/12/2018	INS-RS	201703	ESARDA web-site 2017	ESARDA web-site's development	31/12/2017	Scientific information systems and databases
												201704	ESARDA Bulletins	Publication of bulletin's issues	31/12/2017	Books and monographs with JRC editorship
												ESARDA201801	ESARDA management and operation	Notes about ESARDA management and operation meetings; web-site updates	31/12/2018	JRC technical reports
												ESARDA201802	ESARDA Bulletins	Publication of ESARDA Bulletin issues	31/12/2018	Books and monographs with JRC editorship
421 - IN2SAF JRC.G.II.7	686 - AS3ML Set-up of the AS3ML laboratory	AS3ML (Advanced Safeguards Measurement, Monitoring and Modeling Laboratory) is a fully innovative approach to test and develop innovative integrated solutions for the implementation of safeguards in the different types of nuclear installations. The three main pillars that the new laboratory intends to put together are: •Measurement of nuclear material that remains anyway the main tool for NMAC •Monitoring the operation of facilities through an extensive collection of data from multiple types of sensors •Modelling the plant operations in order to be able to analyse the data collected by the monitoring system, compare to expected behaviour and derive conclusion on the appropriate operation of the plant according to declarations Through R&D, Demonstration and Training it is envisaged to achieve a WIN-WIN between inspectors and operators w.r.t. sharing of signals (process parameters) to increase significantly the safeguards effectiveness and efficiency	JRC.G.II.7 Luc DECHAMP	3.3.4.a	ENER	JRC	Head of Unit ENER.E.1-P. Meylemans	IAEA - International Atomic Energy Agency (IAEA)	31/12/2016 31/12/2018	INS-RS	3	Validation of required Data Security in AS3ML	We need to simulate and test the performances and define the requirements for a Secure data exchange systems between the Plant and the head quarter •Verification of data plant transfer through "Data Diode" for plant security reasons. •Encryption/authentication of the data from facility to Inspectorate Head quarter. •Monitoring and tracking of data transfer to insure data coherency.	31/12/2017	JRC technical reports	
											4	Installation of Head Quarters section in AS3ML	A demo and training area for Safeguard Inspectors will be installed where the simulated data are transferred from the "Facility" to the head quarters. This area will be equipped with novel and dedicated analysis and review tools in order to reproduce head quarter office at inspectorate premises. We will be able to reproduce the work that inspector will perform at the head quarters.	31/12/2017	Technical systems	
											5	interim and final storage trainings	The simulation of an storage area is going to be equipped with all the types of sensors include (but not limited to): • Radiation detectors (gamma and neutron) • Surveillance equipment (cameras and lasers) • Weighing scales • Identification devices (bar-code readers, RFID,...) • Localisation devices (RFID, ultrasonic, geo-location,...) • Seals	31/12/2018	JRC technical reports	
											6	interim and final storage training	The simulation of an storage area is going to be equipped with all the types of sensors include (but not limited to): • Radiation detectors (gamma and neutron) • Surveillance equipment (cameras and lasers) • Weighing scales • Identification devices (bar-code readers, RFID,...) • Localisation devices (RFID, ultrasonic, geo-location,...) • Seals Training making use of an Data Historian will be shown	31/12/2018	Training	
5120 - NDA4SSD JRC.G.II.7	710 - NDA-Advanced Advanced NDA Methods and Instrumentation	The main focus is on neutron based detection and interrogation methods for the purpose of mass determination of fissile materials. This includes a study the newly designed BBCC (boron based neutron correlation counter) which will be completed and tested during 2017. Also testing of new detector electronics for high count rates is undertaken in collaboration with LANL. The WP also develops in-house components for neutron and gamma ray detection such as BF3 detectors, fast signal amplifier configurations, and signal digitizers. Active neutron methods are studied in the PUNITA facility (pulsed neutron interrogation test assembly) with emphasis on four specific areas: •Neutron flux distribution in matrix materials (work under MoU JAEA-JRC action sheet no 7) •Applications of delayed gamma rays from neutron induced fission (work under MoU JAEA-JRC action sheet no 7) •Epi-thermal neutron interrogation for detection of SNM (MoU IAEA-JRC tasks B7 and B8) •New fast detector electronics for high count rate applications (MoU US DoE-Euratom action sheet no 59) Passive neutron methods employ new detectors and processing electronics for large detector configurations (e.g. High Efficiency Counter, BBCC, and JRC Drum Monitor) with the purpose to optimize measurement parameters while reducing electrical disturbances. Another activity concerns instrumentation and technology for treaty verification purposes relative to fissile materials. This includes international collaborations through the network IPNDV and in the ESARDA working group. This WP also implements the IAEA task EC A 1778, and the passive neutron course for Euratom inspectors.	JRC.G.II.7 Bent PEDERSEN	3.3.4.a	ENER	JRC	Head of Unit ENER.E.1-P. Meylemans	IAEA - International Atomic Energy Agency (IAEA) JAEA - Japan Atomic Energy Agency NRCN - Nuclear Research Centre Negev, Israel US DoE - US Department of Energy (DOE)	01/01/2016 31/12/2018	INS-UR	10	Collaboration MoU IAEA(Israel)- JRC, tasks B7, B8	The work concerns experimental research at the PUNITA facility in epi-thermal neutron interrogation for detection of special nuclear materials in shielded containers.	31/12/2018	Article contribution to periodicals or to conference	
											11	Boron Based Neutron Correlation Counter	Complete and test the BBCC (boron based neutron correlation counter) counter as a prototype "alternative to 3He" type detector for assay of Pu for safeguards purposes.	31/12/2017	JRC technical reports	
											12	Performance testing of JRC Drum Monitor	A report of experimentally determined performance values for the JRC Drum Monitor needs to be elaborated. This work will be carried out while waiting for the next infield relocation of the instrument according to instructions from Euratom.	31/12/2017	JRC technical reports	
											3	Passive neutron course for Euratom inspectors	Hold the one-week passive neutron course for Euratom inspectors. The course provides the inspector with theoretical background, hands-on measurements with standard instrumentation, as well as experience with the inspection software both for data acquisition and for analysis of small and large fissile samples. The course is offered twice per year both in 2017 and 2018.	31/12/2018	Training	
											5	Active neutron correlation analysis	The Differential Die-Away technique is the standard active neutron technique for mass determination of fissile materials. This task combines the DDA technique with the neutron correlation method as used in passive neutron assay. By this way a lower limit of mass determination can be achieved. The method requires an advanced list-mode analyzer e.g. the MCFA, and a well-tuned experimental facility e.g. PUNITA. First tests on small fissile quantities will be reported in a scientific publication.	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)	
											6	Collaboration MoU US DOE - Euratom, AS no 59.	The action sheet concerns fast neutron detector electronics for high count rate applications. The work concerns testing of a LANL developed amplifier circuit at the PUNITA facility. The two-year AS has yearly reporting of results at JSC June 2017 and JSC June 2018.	31/12/2018	JRC technical reports	
											8	Disarmament Verification technologies & solutions	Active participation in the International Partnership on Nuclear Disarmament verification (IPNDV) and within WG3 (Technical Challenges and Solutions) particularly. The JRC would make use of its knowledge and experience in safeguards and non proliferation re. NDA, Seals and C&S etc. Coordination and development of networks, collaborations and synergies with interested partners e.g. ENER, AWE, IAEA, DOE-NNSA, US, EU universities and laboratories as well as Esarda WGs (NDA,VTM,NANT, C&S..).	31/12/2017	JRC technical reports	
											9	Collaboration MoU JAEA-JRC, action sheet 7.	The work concerns two joint experimental research activities at the PUNITA facility: Neutron flux distribution in matrix materials, and applications of delayed gamma rays from neutron induced fission. Results will be reported at international symposia.	31/12/2018	JRC technical reports	
279 - NTAS JRC.G.II.6	734 - IPANS Improvements in Particle Analysis for Nuclear Safeguards	This project provides cutting-edge technology required for environmental sample analysis for nuclear safeguards and non-proliferation, in co-operation with DG ENER and IAEA. The methods used are under constant improvements to enhance the abilities in detecting undeclared nuclear activities and to verify declared activities. The project also handles the enhancement and maintenance of analytical laboratories with their equipment, in particular the Large-Geometry-SIMS laboratory at ITU with the aim of this being an international reference laboratory for particle analysis. The Project is linked to other work packages mainly due to the provision of analytical work on samples (80-100 samples/year) from DG-ENERGY, IAEA, ABACC, KINAC and the nuclear forensic group at ITU. Work packages; 903 NUFOR, 865 AnSafe and 2641 HPTA & DA Analysis. To characterise these samples a total of 1500-2000 individual tests measurements of	JRC.G.II.6 Magnus HEDBERG	3.3.4.a	ENER	JRC	Paul Meylemans (ENER E.1)	- Seibersdorf laboratories - IAEA - Direction of Military Applications (CEA) EEAS - European External Action Service IAEA - International Atomic Energy Agency (IAEA) JAEA - Japan Atomic Energy Agency	01/01/2014 31/12/2018	INS-RS	7341	Training on LG-SIMS for safeguards	Training of IAEA analysts as described in the EU-IAEA support program task EC-B-01754 "Training on Mass Spectrometry and Other Analytical Techniques". Training is performed for Euratom inspectors as requested.	29/12/2018	Training	
											7344	Improved detection limits for microparticles	Different types of sample planchets used for LG-SIMS analysis have different properties in terms of ionisation efficiency and formation of molecular interferences and hydrogen formation. A study is made to compare different substrates to enhance both the analytical quality and the sensitivity (detection capability of undeclared nuclear activities). In addition the influence of the primary ion beam intensity and its basic properties and primary element is studied	30/12/2018	JRC technical reports	
											7345	Development of swipe sample preparation technique	The sample preparation is critical in environmental samples for safeguards to optimise the quality and detection limits. A project has been started to further develop the design of vacuum impactors used in the sample preparation and to optimise the sample loading. The anticipated outcome is to improve the detection limit with at least a factor of 2.	30/12/2018	JRC technical reports	
											7347	Provision of sample kits to DG-ENERGY	Environmental samples are taken in Euratom inspections of nuclear facilities to validate the absence of non-declared activities. For this, inspection kits are used that are not commercially available. The kits have to be produced in clean room surroundings using tested materials. 30-50 kits are produced within the WP on an annual basis for DG-ENERGY.	30/12/2018	Reference Material	
											7348	Improved instrument control of LG-SIMS	The stability in particle analysis by LG-SIMS is dependent on a number of instrumental and laboratory environment parameters. A surveillance system based on commercially available instruments as well as purpose built systems is to be implemented. The new developed systems mainly to be integrated with a CAMECA IMS 1280 HR LG-SIMS are to be based on micro computer controllers.	30/12/2018	JRC technical reports	

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
		1500-2000 monoenergetic measurements of particles are made.										7349	New measurement methods	New measurement methods will be tested in comparison with existing methods to optimise and to improve uncertainty in the current measurements. This work will also include efforts to further stabilise instrument parameters and test/evaluate new software packages made by the LG-SIMS instrument manufacturer CAMECA. An upgrade of ITU developed software packages for QC and data reduction will also be made.	30/12/2018	JRC technical reports
279 - NTAS JRC.G.II.6	865 - AnSafe Analytical Support to safeguards authorities	A key topic in international Safeguards is the prevention of further spread of nuclear materials that can be used for the production of nuclear weapons. In order to detect undeclared nuclear activities high performance analyses are	JRC.G.II.6 Evelyn ZULEGER	3.3.4.a	ENER	n/a	DG ENER E.S. Lechner		- Seibersdorf laboratories - IAEA ABACC - Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials EEAS - European External Action	11/03/2014 31/12/2018	CON-TW					
421 - IN2SAF 279 - NTAS	998 - EuraSite Maintenance 1695 - OSL Renewal	The purpose of this administrative arrangement is... The purpose of the "OSL Hybrid K-edge Analysis... The project will deal with innovative passive NDA solutions with an emphasis for the verification of the back end of fuel cycle (spent fuel and safeguards of EP and GR. E08 contributed already with the project DEFECT to the implementation and testing of a pilot Single Photon Emission Computer Tomograph SPECT (IAEA projects JNT 1510, JNT A 1955) and will now set up an applicable instrument with very flexible user parameters on the basis of established technical solutions. R&D will be dedicated to the improvement of gamma spectrometry for MOX fuels and covariance investigation in isotopic measurements. Moreover under a request from the IAEA support programme (task EC-A-1362), JRC has been tasked amongst one or two other tasks to investigate the possibility to authenticate canisters through a neutron or neutron/gamma fingerprinting T	JRC.G.II.7 JRC.G.II.6	3.3.4.a 3.3.4.a	ENER ENER	ENER ENER	Head of Unit ENER.E.1-P LIPCSEI Ferenc (ENER)		- BRITISH NUCLEAR GROUP	01/09/2016 01/01/2014	CON-AA CON-AA					
5120 - NDA4SSD JRC.G.II.7	3515 - NDA-Pas Passive NDA techniques for nuclear safeguards		JRC.G.II.7 Hamid TAGZIRIA	3.3.4.a	ENER	JRC	Paul Meylemans - ENER I.01		IAEA - International Atomic Energy Agency (IAEA)	01/01/2016 30/12/2018	INS-RS	201701 201702 201703 Sup2IAEAEuratom	Report on the implementation of safeguards at EPGR Defect Verification with own device in-field Scientific publications Support to IAEA & Euratom	Preliminary design of a NDA system for verification of canisters at Encapsulation Plants and Geological Repositories The document describes field experience with SPECT for VVER-440 fuel, both the method, the instrument and the technical implementation. Publications including articles in peer reviewed journals and contribution to international conferences This task makes available user laboratory access where samples of SNM can be handled and used for the evaluation, characterization, validation and authorization of new equipment. This SNM laboratory is also used for inspector training courses that require access to significant quantities of plutonium and enriched uranium. The task also aims to support the development of accurate MCNP models of existing and future instruments as and when required.	30/06/2017 30/06/2017 31/12/2017 28/12/2018	JRC technical reports Technical systems Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI) Validated methods, Reference methods and measurements
325 - METRO JRC.G.2	3539 - NS RefMat Nuclear reference materials and conformity assessment tools for nuclear safeguards and security	Development of certified actinide reference materials (CRMs) metrological quality/conformity assessment tools for method validation and quality control in nuclear material verification and detecting undeclared nuclear activities fulfilling the JRC's obligation to implement requirements in line with the Euratom Treaty (2012/C 327/01), the Commission Regulation (Euratom) 302/2005 on the application of Euratom safeguards, the Treaty on the Non-Proliferation of Nuclear Weapons (NPT, INFCIRC/540), This work package includes pre-normative research in CRM development, provision of reference measurements, organisation of interlaboratory comparisons and contributions to document standards in the nuclear field aiming at harmonisation, standardisation and innovation (COM(2010)614). These CRMs and assessment tools are provided to customer DGs (JRC BXL MOU 32924 -2012), the International Atomic Energy Agency via the EC Support programme and to Member States	JRC.G.2 Yetunde AREGBE	3.3.4.a	ENER	JRC	ENER-E.1 (Euratom Safeguards)	GROW	- URENCO NEDERLAND BV* - BRITISH NUCLEAR GROUP SELLAFIELD LT - Seibersdorf laboratories - IAEA AREVA NP - AREVA NP Main Company CEA - Commissariat à l'Energie Atomique et aux Energies Alternatives CETAMA - Commission d'ETablissement des Méthodes d'Analyse du CEA (CETAMA) France IAEA - International Atomic Energy Agency (IAEA) IAEA-MEL - Marine Environment Laboratory of IAEA JAEA - Japan Atomic Energy Agency JNFL - Japan Nuclear Fuels Limited (JNFL) - Japan KAERI - Korea Atomic Energy Research Institute LLNL - Lawrence Livermore National Laboratory NBL - New Brunswick Laboratory (NBL), US NMCC - Nuclear Material Control Center (NMCC) - Japan PSI - Paul Scherrer Institute US DoE - US Department of Energy (DOE)	01/01/2016 31/12/2018	INS-RS	1 10 11 12 13 2 4 5 6 7 8 9	IRMM-1027s spike reference material certificate IRMM-049 spike reference material certificates IRMM-049 reference material certification reports IRMM-2019-2029 CRM certification report CRMs for nuclear safeguards IRMM-1027s reference material certification report IRMM-2019-2029 certificate IRMM-1027i spike reference material certificate IRMM-1027i reference material certification report Document standard IRMM-042a spike reference material certificate IRMM-042a reference material certification report	Certificate of the uranium/plutonium Large-Sized Dried (LSD) Spike reference material, labelled IRMM-1027s provided to DGENER Euratom safeguards on-site laboratories in Sellafield and La Hague and to JNFL-Japan Certified Pu-242 isotopic reference material A report on the certification of a new IRMM Pu-242 isotopic reference material A report on the certification of uranium nitrate solutions for method validation and accurate mass spectrometric measurements IRMM-2019-20129 A publication on the development of new CRMs and reference methods required for method validation in nuclear safeguards A report on the certification of a new batch of the uranium/plutonium Large-Sized Dried (LSD) Spike reference material, labelled IRMM-1027s, for fissile material control of irradiated nuclear fuel, provided on a regular basis to EURATOM and international authorities and industry Certificates of uranium nitrate solutions for method validation and accurate mass spectrometric measurements of uranium enrichment and minor uranium isotope ratios in safeguards samples Certificate of the uranium/plutonium Large-Sized Dried (LSD) Spike reference material, labelled IRMM-1027i provided to DGENER Euratom safeguards on-site laboratories in Sellafield and La Hague and to JNFL-Japan A report on the certification of a new batch of the uranium/plutonium Large-Sized Dried (LSD) Spike reference material, labelled IRMM-1027i, for fissile material control of irradiated nuclear fuel, provided on a regular basis to EURATOM and international authorities and industry Contribution to revisions and new draft ASTM standards for mass spectrometry, e.g. the Total Evaporation method and the UFG-double standard method, with the American Society for Testing and Materials (ASTM-International) Committee C26 on Nuclear Fuel Cycle Certified Pu-244 isotopic reference material A report on the certification of a new Pu-244 spike reference material, labelled IRMM-042a	28/04/2017 08/01/2018 05/03/2018 30/01/2018 01/12/2017 22/12/2017 02/11/2017 09/04/2018 03/12/2018 07/05/2018 03/07/2017 03/07/2017	Reference Material Reference Material Validated methods, Reference methods and measurements Validated methods, Reference methods and measurements Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI) Validated methods, Reference methods and measurements Reference Material Reference Material Validated methods, Reference methods and measurements JRC contributions to standards Reference Material Validated methods, Reference methods and measurements
279 - NTAS JRC.G.II.6	3620 - TD-LIS Technical Developments at the On-Site Laboratories	The two On Site Laboratories (Laboratoria In Situ, LIS) located at the reprocessing plants in Sellafield, UK (the OSL) and La Hague, France (the LSS) have been operational for more than 15 years. Some of the equipment is outdated and is in need of refurbishment or replacement. The purpose of the work package "Technical Developments at the On Site Laboratories" is the development of innovative and cutting-edge equipment at ITU, which is tailored to the specific needs of the On Site laboratories and which takes into account the stringent operational boundary	JRC.G.II.6 Lily DUINSLAEGER	3.3.4.a	ENER	JRC	Paul Meylemans (ENER E.1)		- BRITISH NUCLEAR GROUP SELLAFIELD LT - Seibersdorf laboratories - IAEA AREVA NP - AREVA NP Main Company IAEA - International Atomic Energy Agency (IAEA)	01/01/2016 31/12/2018	INS-RS	362001 362003 362004 362005 362006	Semi-automatic separation unit - SASU New technology of HKED at On-Site Laboratories Modification of powder decanting system for LSS Modification of LSS sample jug opener Foil heating device for OSL	A semi-automatic separation unit has been developed in ITU to specifications delivered by the OSLs. The prototype has been installed in an ITU glove box and has been validated. Duplicate systems need to be constructed for installation in the OSLs. This requires site specific modifications to comply with site regulations, including the administrative site-acceptance procedures. SASU serves to automatize repetitive tasks to reduce radiation dose, avoid human errors and gain efficiency. The HKED system at the OSLs is more than 15 years old. The goal is to replace - liquid N2 detectors with electrically cooled ones - NIM electronics by modern Lynx spectroscopy analysers - outdated VMS computers by a PC-based emulation and to enable the use of Lynx together with the HKED evaluation software A prototype system to transfer Pu powder with a master slave manipulator into a waste container has already been developed. This needs some modifications to improve its functioning. Liquid samples arriving by pneumatic transfer systems arrive in specific sample jugs. The jugs need to be opened for disposal of its liquid content. A prototype sample jug opener has already been made. This needs some modifications to improve the functioning. The microwave apparatus which is installed in the OSL for dissolution of solid samples needs to be replaced with a smaller, user friendly system. The purpose of the task is to develop a foil heating device for 1) dissolution of powder/pellet samples and 2) LSD spiking. Additionally, a LED light is to be attached to the heater to verify the completeness of dissolution process. Both devices will belong together and are built into a similar Perspex unit.	30/12/2018 30/12/2018 31/12/2018 31/12/2018 30/12/2018	Technical systems Technical systems Technical systems Technical systems Technical systems

JRC 2017- 2018 WORK PROGRAMME																	
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category	
		Conditions of industrial nuclear facilities															
279 - NTAS JRC.G.II.6	3666 - OSL-LSS_2 On-Site Laboratories OSL and LSS &	The Euratom On-Site Laboratories at nuclear	JRC.G.II.6 Karin CASTELEYN	3.3.4.a	ENER	ENER	Paul Meylemans (ENER E.1)		- BRITISH NUCLEAR GROUP SELLAFIELD LT AREVA NP - AREVA NP Main Company IAEA - International Atomic Energy Agency (IAEA)	01/07/2016 30/06/2017	CON-AA			An increased number of input samples are delivered to the OSL in flight tubes, which are difficult to be opened manually without even minor spillage onto the gloves. A new device is under development in ITU, with increased safety features in comparison to a similar device already used for opening product sample flight tubes. The purpose of the task is to reduce dose-rates to the hands of the analysts and to increase safety while using the device.	30/12/2018	Technical systems	
279 - NTAS JRC.G.II.6	3669 - LIS upgrade LIS upgrade	The purpose of the "LIS upgrade Project" is the modification of the laboratory infrastructure to allow for enhanced nuclear material analysis by chemical and mass spectrometric methods. JRC-ITU will design, manufacture, purchase, install, and	JRC.G.II.6 Evelyn ZULEGER	3.3.4.a	ENER	ENER	S. Lechner (ENER E); Paul Meylemans (ENER E.1)		SELLAFIELD LT AREVA NP - AREVA NP Main Company IAEA - International Atomic Energy Agency (IAEA)	01/10/2016 31/12/2018	CON-AA	3669	Upgrade of 3 Mass spectrometers in the LIS and ITU	The Thermal Ionisation mass spectrometers Thermofischer Finnigan MAT of the OSL, LSS and ITU will be upgraded to state of the art electronics and software to guarantee further accurate U and Pu isotopic composition measurement for Safeguards.	31/12/2018	Technical systems	
												3669201701	Status report	Status report including acceptance test results for the different TIMS instrument upgrades at the different sites (Karlsruhe, OSL, LSS)	22/12/2017	JRC technical reports	
279 - NTAS JRC.G.II.6	3700 - HPTA & DA Analysis_2 HPTA & DA Analysis of Safeguards samples	Continuation of the established nuclear analytical support to Euratom Safeguards activities (see previous project 823 and 2641). Unique analytical capabilities of JRC-ITU requested	JRC.G.II.6 Evelyn ZULEGER	3.3.4.a	ENER	ENER	S. Lechner (Director DG ENER.E)		Seibersdorf laboratories - IAEA IAEA - International Atomic Energy Agency (IAEA) NBL - New Brunswick Laboratory (NBL), US	01/07/2016 31/12/2017	CON-AA	370001	Analysis of safeguards samples 2016 - 2017	U and Pu concentration and isotopic composition as well as various impurity contents are requested to determine. In order to provide these analysis results, 15 different techniques are applied, such as Thermal Ionisation mass spectrometry, LG-Secondary mass spectrometry, ICP-MS, gamma spectrometry and Compucea. The results are delivered in separated reports as requested by ISO 17025	31/12/2017	JRC technical reports	
325 - METRO JRC.G.2	4180 - INS-CRM Innovative nuclear certified reference materials (CRM) for EURATOM safeguards and industry	The JRC is obliged to implement requirements in line with the EURATOM Treaty (2012/C 327/01), the Commission Regulation (EURATOM) 302/2008 on the application of EURATOM safeguards, and the Treaty on the Non-Proliferation of Nuclear Weapons (NPT, INFCIRC/140). Particularly, EURATOM Safeguards entrusts the JRC, according to J.O. C 126 (1994), SEC (92) 515 and JRC BXL MOU 32924 -2012 with the development of analytical and quality control methods. This work	JRC.G.2 Yetunde AREGBE	3.3.4.a	ENER	JRC	ENER-E.1 (Euratom Safeguards)	GROW	- BRITISH NUCLEAR GROUP SELLAFIELD LT - Seibersdorf laboratories - IAEA - AREVA NP GMBH* CETAMA - Commission d'Analyse du CEA (CETAMA) France JAEA - Japan Atomic Energy Agency JNFL - Japan Nuclear Fuels Limited (JNFL) - Japan	01/01/2016 31/12/2017	INS-ER	2	Mid-term status report on INS-CRM	Report on the status and first results on the development of new types of reference materials in the frame of INS-CRM. This report will be distributed to ENER.E.1, the IAEA and the stakeholder from industry and presented to the Scientific Committee	01/02/2017	JRC technical reports	
												3	New method for nuclear CRMs	Validated method for the development of innovative nuclear certified reference materials (CRMs) for measurements of different types of nuclear safeguards/industrial/waste samples	15/12/2017	Validated methods, Reference methods and measurements	
												4	Conference presentation	The status and achievements of the development of innovative nuclear CRMs will be presented at a relevant conference to a broad audience	31/05/2017	Oral presentation	
279 - NTAS JRC.G.II.6	5026 - NMAMD Nuclear Materials Analysis and Method Development	NMAMD develops innovative cutting-edge technology, techniques and scientific instruments required for the safeguardability of fuel cycles in close co-operation with authorities (DG ENER, IAEA). The focus is on radiometric, chemical, and mass spectrometric methods with direct application in the Euratom on-site laboratories, for safeguards analytical measurements in general and for support in detection-oriented Eusecra training courses. The experience from present fuel cycles serves to develop safeguards concepts and material analysis strategies for alternative fuel cycles. NMAMD provides analytical technologies to other JRC-ITU projects in the fuel cycle domain. Nuclear safeguards R&D develops cutting-edge S/T instruments and techniques required for the safeguardability of fuel cycles in close co-operation with authorities (DG ENER, IAEA).	JRC.G.II.6 Evelyn ZULEGER	3.3.4.a	ENER	JRC	S. Lechner (ENER E); Paul Meylemans (ENER E.1); Peter Schwalbach (ENER E.1)	DEVCO HOME	- Seibersdorf laboratories - IAEA - University of California, Los Alamos National Laboratory CETAMA - Commission d'Analyse du CEA (CETAMA) France EEAS - European External Action Service IAEA - International Atomic Energy Agency (IAEA) JAEA - Japan Atomic Energy Agency NBL - New Brunswick Laboratory (NBL), US NMCC - Nuclear Material Control Center (NMCC) - Japan ORNL - Oak Ridge National Laboratory US DoE - US Department of Energy (DOE)	02/01/2017 28/12/2018	INS-RS	502601	Compucea for UF6	A combined L-edge densitometer & U235 enrichment meter (COMPUCEA) has been developed at ITU. The mobile instrument is deployed for in-field physical inventory verifications at U fuel fabrication plants in EU to determine the U content and the U235 enrichment. Joint inspection teams are composed of DG ENER, IAEA and ITU staff. ITU and IAEA are developing the method further so that it could be used also for UF6 samples. EC task EC-A-02003 and DG ENER TASK UF6.	31/12/2018	JRC technical reports	
													502602	MOX analysis	Previous studies before 2003 have investigated calorimetry and neutron coincidence counting for safeguards verification (accountancy) of plutonium in MOX samples. The present project focuses on optimized use of available NCC detectors, extending the scope to a different set of samples. This will ensure the continuity of knowledge on these sophisticated analytical procedures. The outcome will improve the in-field applications for MOX analysis.	31/12/2017	JRC technical reports
													502603	High-resolution gamma spectra for U and Pu	ITU is testing software codes for determining the isotopic composition of U and Pu from high resolution gamma spectra. The aim is to give recommendations on how to record the spectra so that codes will provide the most accurate results. This study will establish optimal software FRAM settings for IAEA safeguards inspectors. Safeguards inspectors and mobile expert teams will benefit from this study by being able to make justified decisions in the field. JNT-A-01684/DG ENER task R&D radiometric.	31/12/2017	JRC technical reports
													502604	Evaluation of medium-resolution gamma spectra	ITU has recorded high-quality medium resolution gamma spectra (MRGS) of U and Pu certified reference materials. These have been distributed by the IAEA to the participants of the international U/Pu isotopic codes inter-comparison exercise to use the spectra to develop software for evaluating the U and Pu isotopic composition from MRGS. The ITU benchmarking is the subject of this deliverable. Part of EC_IAEA JNT-A-01684.	31/12/2018	JRC technical reports
													502605	EC-P IAEA: Highly-active waste at Rokkasho RP	The aim is to develop a radiometric method - based on HKED densitometry - for determining the plutonium content of High-Active Liquid Waste samples at the IAEA On-Site Laboratory at Rokkasho reprocessing plant in Japan. These samples contain sedimented solid particles. Presently, only Pu in solution can be measured. The new method will enable measuring Pu in the particles as well (within IAEA support project JNT-A-01946 "Analysis of HALW Samples containing Particles".)	31/12/2017	JRC technical reports
													502607	HKED VMS software upgrade to use LYNX electronics	X-ray densitometry coupled with XRF (HKED) is a key technique for U/Pu measurements in nuclear safeguards. It is a basis for accountancy measurements in the Euratom OSLs as well as in ITU. The hardware platform (VMS) for data has been already replaced with emulation of the VMS system on a PC platform, which allows to use the existing powerful analysis software. The focus is on the replacement of NIM electronics by modern Lynx systems with corresponding software modifications.	31/12/2017	Technical systems
													502608	MCNP modelling of actinide X-ray fluorescence	HKED is a powerful safeguards tool for quantitative U/Pu assay in aqueous reprocessing solutions. In order to reduce the HKED calibration effort, a Monte-Carlo approach to model the XRF response is being developed which includes experimental validation. The approach will be used to improve sample analysis by reducing the calibration efforts, and can be used where reference material is difficult to obtain (f. e. for pyro-processing, where the matrix is based on salt matrices with high-Z elements)	31/12/2018	JRC technical reports
													502609	EC-SP IAEA: Verification of mixed U-Pu spikes	Nuclear material accountancy requires lowest, state-of-the-art uncertainties. Isotope dilution mass spectrometry is used with a Large Size Dried (LSD) spikes prepared from Pu and U reference materials. IAEA, JAEA and IRMM are producing LSD spikes for, e.g., the Rokkasho reprocessing plant. To independently verify the U and Pu concentrations in LSDs, ITU performs annually verification campaigns for IAEA, JAEA and IRMM. EC SP task EC-A-01806.	31/12/2018	JRC technical reports
													502610	Analytical Service for JRC-ITU 2017-2018	The Analytical Service operates as part of E.7, performing nuclear material analyses for all ITU scientific/technical units, such as waste water characterisation prior to release, gaseous radioactive emissions, trace elements in nuclear fuel, provision of material content info for transport declarations. The technologies used are either developed for purpose or have been designed for safeguards needs. About 160 sample request with up to 400 different analyses are performed annually.	31/12/2018	JRC technical reports
													502611	Actinide mass spectrometry	E.7 operates thermal ionisation mass spectrometers for U/Pu safeguards analyses in ITU and in the On-site laboratories of La Hague and Sellafield. The methodology for U/Pu assay and isotopic ratios has constantly to be improved, in particular for better accuracies. Therefore reference material with good characterisation and uncertainty evaluation are needed. Available material in ITU is characterized in order to save precious certified reference material.	31/12/2018	JRC technical reports
													502612	ISO 17025 accreditation	The Analytical Services are ISO 17025 accredited since 2005. Accreditation is mandatory to carry out safeguards analyses in particular for IAEA. The management system must continuously be improved and controlled. This requires an internal audit and review system in place, including annual management reviews and proficiency tests. Follow-up corrective and preventive actions must be assured.	31/12/2018	Validated methods, Reference methods and measurements

JRC 2017- 2018 WORK PROGRAMME																	
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category	
												502613	LIMS - Laboratory Information Management System	A LIMS system was developed by E.7 to provide a platform for the information management of ISO 17025 accredited analysis methods. The system is web-based and allows also other Commission users, such as DG ENER, to launch analysis requests. Next steps are the development of modules for HRGS, calorimetry and HKED densitometry. Validation reports will be issued.	31/12/2018	Validated methods, Reference methods and measurements	
												502614	Upgrade of Pu assay by titration	Titration as a primary method is used to calibrate the radiometric methods deployed in the Analytical Service. However, the current setup is producing a significant amount of nuclear waste. Therefore investigations and testing of more suitable approaches are initiated aiming at a replacement of the current method.	31/12/2018	JRC technical reports	
												502615	Renewal of an HR-ICP-MS	SAS operates since 15 years a high-resolution ICP-MS used for nuclear material analyses for international safeguards and for nuclear safety units at ITU. Its intensive use and machine ageing require renewal of the present instrument. Installation is foreseen in 2016. Purchasing and commissioning will take longer than expected.	30/07/2017	Technical systems	
												502616	ELANA R&D	Elemental analysis of C, N and O gains importance for safeguards approaches. In order to improve the measurement capabilities contacts are made between the safeguards authorities and laboratories with some experience. Collaboration with CETAMA to prepare and improve the reference material availability will be intensified and as a deliverable a laboratory intercomparison should provide an appropriate reference material to the safeguards community	31/12/2018	JRC technical reports	
												502617	Scientific Publications	Scientific publications in peer-reviewed journals and conference contributions on topics related to NMAMD	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)	
												502618	Feasibility study on halogen measurements	In cooperation with the IAEA a feasibility study is undertaken in order to identify the pertinent analytical criteria and associated equipment to answer the increasing demands from safeguards point of view regarding the analysis of halogens in uranium components	31/12/2018	Technical systems	
279 - NTAS	5028 - HPTA & DA Analysis_3	Continuation of the established nuclear analytical	JRC.G.II.6	3.3.4.a	ENER	ENER	S. Lechner DG ENER E		- Seibersdorf laboratories - IAEA	01/07/2017	CON-AA						
279 - NTAS JRC.G.II.6	5031 - OSL-LSS_3 On-Site Laboratories OSL and LSS & COMPUCEA 2017 / 2018	The Euratom On-Site Laboratories at nuclear reprocessing facilities in La Hague (F) and Sellafield (UK) are operated on behalf of DG ENER. Nuclear material entering and leaving the	JRC.G.II.6 Karin CASTELEYN	3.3.4.a	ENER	ENER	Paul MEYLEMANS		Company - INTERNATIONAL ATOMIC ENERGY AGENCY*	01/07/2017 30/06/2018	CON-AA						
421 - INZSAF JRC.G.II.7	5122 - AS3ML ITC Innovative Training Concept based on advanced modeling	Development of an innovative concept for training of nuclear inspectors based on signal simulation but with the original measurement equipment, hence practical training of nuclear measurements can be made outside a nuclear laboratory. The concept includes the confrontation of trainees with a variety of practical technical measurement problems in nuclear installations. The development work is basing on wide experience with training (PM) and the engineering competence in AS3ML (LD). The work comprises the provision of well suited measurement results for this application, but also gamma modeling for special situations in nuclear installations with no access or limited access.	JRC.G.II.7 Patricia MORTREAU	3.3.4.a	ENER	JRC	EURATOM training group	DEVCO	IAEA - International Atomic Energy Agency (IAEA) JAEA - Japan Atomic Energy Agency	02/01/2017 30/12/2018	INS-RS	1	Provision of series of gamma spectra	One or more series of well suited gamma spectrometric measurement results have to be provided for the use in the new training concept. These series must comprise good, realistic gamma spectra. The development case could be either the application Planar Ge / MGAU and MGA, or UF6.	30/06/2017	JRC technical reports	
												2	Spectrum based signal generator / signal receiver	Electronic device (hardware and software) which uses individual counting events of pattern spectra (see deliverable 1) and creates an electric signal of the type of a typical gamma detector preamplifier output. The choice of the spectrum is made on basis of settings the trainee has made and the individual events of this spectrum are selected with a random generator, the count rate is defined by the distance "source" - "detector". Simulated will be compared with Real measurements.	31/12/2017	Technical systems	
												4	Inspector training	The gamma radiation measurement courses have to be performed according to the needs of ENER (U gamma, Pu gamma, MGAU module at Lux). This comprises usually 4 courses. The need will be defined later in the annual planning with ENER.	31/12/2018	Training	
												5	Follow-up training course to IRTC SSAC	The Japanese Atomic Energy Agency provides training to Asian IAEA member states with small nuclear sectors, actually in form of the Inter Regional Training Course on State Systems for Accountancy and Control of nuclear material. This course is supplemented by a laboratory course on nuclear security and safeguards measurements for some chosen countries	30/06/2017	Training	
5120 - NDA4SSD JRC.G.II.7	5920 - RIGA RIGA - Radionuclide Identifier for Gamma Analysis	This work package aims to develop, produce, test and optimise an industry prototype of Radionuclide Identification Device (RID) based on high-purity germanium (HPGe) detector, importantly using a non-conventional cooling system which will free operators from any need of liquid nitrogen (commonly used) and represents a number of advantages over direct electromechanical cooling	JRC.G.II.7 ARTURS ROZITE	3.3.4.a	JRC	JRC	n/a	ENER HOME		06/02/2017 31/12/2017	INS-PC	DesignSpecs	Develop Designs and Technical Specifications	Development of cryostat design and technical specifications for the multichannel analyser (MCA) and peripheral components.	31/08/2017	JRC technical reports	
													IntegrateTest Optimis	Integration testing and optimisation of the complete instrument	31/05/2018	JRC technical reports	
													Orders	Process orders for Cryostat, MCA, peripherals as well as send existing HPGe detector for repair.	30/10/2017	Technical systems	
3.3.4.b development of containment and surveillance techniques in the nuclear fuel cycle process, from enrichment facilities to geological final disposal.																	
421 - INZSAF JRC.G.II.7	688 - SealSys Sealing Systems for Safeguards	Development of sealing systems requested by DG ENER and IAEA for safeguarding nuclear material. The activity consists in a continuous upgrade of existing ultrasonic sealing systems developed by the Seal & Identification Laboratory (SILab). These equipment are already in use throughout the world especially the JRC Candu Sealing System (JCSS) in Cernavoda (Romania), Darlington (Canada) & Karachi (Pakistan), the sealing system in La Hague (France) and the new Ultrasonic Optical Seal Bolt recently deployed in Ignalina (Lithuania). Soon our ultrasonic seals will be deployed in Argentina on underwater storage of Atucha reactors. In parallel, we develop new sealing & identification equipment for underwater or dry storage applications in particular the Active Optical Loop Seal, a new low cost electronic seals. New prototypes will be manufactured, tested and delivered to our Customers. The Swedish Radiation Safety Authority (SSM) formally requested a feasibility study to assess ultrasonic techniques for identification of the copper canisters for final repositories. A patent has been filed on the identification/authentication of the copper canisters, which would be a huge breakthrough for the Safeguards of future long term repository throughout the world, and in particular firstly in Sweden and Finland. SILab filed also two patents on a seal to be deployed by the operator without the presence of	JRC.G.II.7 Francois LITTMANN	3.3.4.b	ENER	JRC	Paul MEYLEMANS	DEVCO	IAEA - International Atomic Energy Agency (IAEA)	01/01/2014 31/12/2018	INS-RS	201702	Training of inspectors and operators	Training inspectors to the use of our sealing systems deployed throughout the world is of up most importance. Two training sessions per year are organized within our training rig in Ispra for IAEA and Euratom inspectors. On request, we organized specific ad-hoc	31/12/2017	Training	
													201703	Reading System for UOSB	The Ultrasonic Optical Sealing Bolt (UOSB) is already deployed in Ignalina (Lithuania) by DG ENER and IAEA for joint inspections. Following several tentative designs of the reading systems and feedbacks from inspectors, the final version will be manufactured, tested in house and deployed infield. The system is light, compact and battery operated, if deployment successful could replace existing 200V reading systems.	30/06/2017	Technical systems
													201705	Prototype of Copper Canister Identification Reader	In 2016 we made a feasibility study for the Swedish Radiation Authority (SSM) in 2016 and filed a patent on an innovative way to identify and authenticate copper canisters which can't be labelled or engraved externally for corrosion reasons. First reading on copper samples were positive, so SILab will design a scale one functional prototype of the reading system to be tested in house of a full scale lid and slice of canister to be shipped by SSM.	31/12/2017	Technical systems
													201706	Active Optical Loop Seal	Following the development of the Active Optical Loop Seal (AOLS), prototypes were manufactured and provided to DG ENER and IAEA. First industrial versions of the seal will be manufactured and tested in house and deployed for field testing by DG ENER and IAEA.	31/12/2017	Technical systems
													201803	Training of inspectors	Training inspectors to the use of our sealing systems deployed throughout the world is of up most importance. Two training sessions per year are organized within our training rig in Ispra for IAEA and Euratom inspectors. On request, we organized specific ad-hoc sessions tailored on user demands, both in Ispra or during missions in field. Training for operators will continue. New developments as electronic seal, copper canister reader and seal installed by operator will be shown as well.	31/12/2018	Training
													201804	AOLS adhoc versions	The Active Optical Loop Seal can be tailored to specific applications, as for example for the seal installed by the operator or monitoring of specific parameters. Different versions will be developed on request.	31/12/2018	Technical systems
													201805	Non ENER sealing developments	Outside of Europe, where the DG ENER is not involved, innovative developments on sealing and identification systems could be requested by IAEA through the EC Support Programme 1 or ABACC through the ABACC - Euratom Agreement. Within this task, preliminary designs, prototypes and tests could be done, when deployment is later done if the preliminary stages were successful, equipment will be purchase through a Third Party Work contract.	31/12/2018	Technical systems

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
		inspectors in order to decrease the mission/days and doses of inspectors, especially seen the huge amount of dry storage casks which will be needed in Germany or transport casks in Sweden for example.										201806	IEEE Transactions on UFFC	Paper to be submitted to the IEEE Transactions on UFFC (Ultrasonics, Ferroelectrics, and Frequency Control Society), title would be : Innovative Authentication method of copper canisters based on the Ultrasonic analysis of the internal gap partially filled after stir friction welding. It is written in cooperation with the University of Florence, related to the work performed on the identification & authentication of copper canisters (JRC patent P-2970).	30/06/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
421 - INZSAF JRC.G.II.7	691 - NUVER Nuclear Verification Technologies and Approaches	Research and development on image and laser based identification and verification systems for containment and surveillance. Application areas covers the design information verification of nuclear facilities, identification of nuclear containers by unique surface maps, verification of containment and closure welds, 3D surveillance, as well as safeguards video reviews. Activities include the support and training to ENER and IAEA on JRC-developed systems	JRC.G.II.7 Vitor SEQUEIRA	3.3.4.b	ENER	JRC	Head of Unit ENER.E.1-P. Meylemans	IAEA - International Atomic Energy Agency (IAEA)	01/01/2014 31/12/2018	INS-RS	23	Market survey for surveillance techniques/sensors	The current Nuclear Surveillance camera is built on dedicated hardware and software with a resulting elevated cost for purchases and maintenance. This deliverable will be dedicated to conduct a market survey to identify off-the-shelf surveillance techniques and sensors with the potential to substitute existing surveillance technology. The study should consider both industrial imaging sensors and new emerging smart sensor technologies which can be applied to the Nuclear Surveillance field.	31/12/2017	JRC technical reports	
											50	Multimodal 3D data fusion and reconstruction	Development of new algorithms to reconstruct the content of closed containers by fusing data acquired from heterogeneous sensors (such as X-ray, colour cameras and 3D data). In particular the aim is calibrating precisely the employed sensors by exploiting the 3D information of the outer environment. Task-Sheet on 3D Technologies for Security Emergency Response part of the JRC-CEA Security Research agreement.	30/12/2017	Article contribution to periodicals or to conference proceedings listed in SCOPUS	
											51	R&D on 3D laser based verification systems	Scientific publications on novel algorithms for 3D data processing.	29/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)	
											62	R&D on Real-time Tracking using 2D and 3D Sensors	Carry out research on novel self-localization and tracking techniques for supporting inspection activities in indoor environments. The techniques will be based on 2D and 3D laser data and will integrate other sensor data as appropriate.	29/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)	
											73	VideoZoom: Summary browsing modalities	Research and development on video summary browsing modalities other than zooming and panning (e.g. summary retrieval by similarity, support to faceted search).	31/12/2018	Article contribution to periodicals or to conference proceedings listed in SCOPUS	
421 - INZSAF	2980 - E-Seals 2015-2018	The objective is to provide ultrasonic sealing	JRC.G.II.7	3.3.4.b	ENER	ENER	P. Schwalbach	IAEA - International Atomic Energy Agency (IAEA)	17/03/2015	CON-AA						
421 - INZSAF JRC.G.II.7	5134 - ENERC&S Development, delivery and installation of C&S systems for DG ENER	The purpose of this Administrative Arrangement is to provide DG ENER with JRC sealing reading systems for ultrasonic, Cobra & glass seals and ultrasonic seals, as well as 2D/3D laser equipment for Containment & Surveillance (C&S) in la Hague (France), Cernavoda (Romania) & Ignalina (Lithuania), associated with training and infield assistance.	JRC.G.II.7 Francois LITTMANN	3.3.4.b	ENER	ENER	Paul MEYLEMANS	DEVCO	IAEA - International Atomic Energy Agency (IAEA)	01/01/2017 31/12/2019	CON-AA	1701	Ultrasonic Reading Systems	- One full reading system will be done for Ignalina, including the computer (or tablet), the software, the ultrasonic acquisition box and the reading head. - One backup reading head for La Hague.	31/12/2017	Technical systems
												1702	80 Ultrasonic Optical Seal Bolts for Ignalina	From a total of 240 UOSB seals, 80 delivered in 2017, two types of UOSBs, 40 for EOSS with connectors and 40 for Cobra without connectors. In addition 80 inserts for Constor casks.	31/12/2017	Technical systems
												1801	UOSB seals for Ignalina	From a total of 240 UOSB seals, second batch of 80 to be delivered in 2018, two types of UOSBs, 40 for EOSS with connectors and 40 for Cobra without connectors. In addition 80 inserts for Constor casks.	31/12/2018	Technical systems
												1802	US Seals for La Hague	Batch of 100 ultrasonic seals for La Hague	31/12/2018	Technical systems
3.3.5 Promote excellence in the nuclear science base for standardisation																
3.3.5.a understanding the fundamental properties and behaviour of innovative nuclear and structural materials for safety assessment and model validation;																
65 - DANTE JRC.G.10	368 - SUPRACLEAR Standard nuclear data and UnderPinning ReseArch on nUCLEAR materials	The main objective of the SUPRACLEAR work package (WP-368) is to combine experimental and theoretical studies of actinides and nuclear-fuel related materials relevant for the safety assessment of the nuclear fuel cycle. Using state-of-the-art instrumentation, we are linking fundamental atomic properties of the ground state with the macroscopic behaviour of the system. The former are investigated by quantum probes, such as photons and neutrons available at external large scale facilities, the latter by bulk techniques available in-house and allowing one to measure physical properties such as magnetisation, specific heat, and electrical transport quantities, as a function of several thermodynamical parameters (temperature, pressure, magnetic field) covering a wide range of values. Structural studies are performed both on highly ordered crystalline materials and in disordered systems, with techniques giving information both at long and short distances (x-ray and neutron diffraction, x-ray absorption spectroscopies such EXAFS and XANES, and solid-state nuclear magnetic resonance). Dynamical properties are investigated by spectroscopic techniques (Mössbauer, inelastic neutron and x-ray scattering) covering a wide range of the energy-momentum space. Experimental data are used to validate the prediction of theoretical models based on parametric and first principles electronic structure calculations. A part of the programme is performed in the framework of an open access initiative – USERLAB – offering the use of specialised and unique ITU's laboratories to scientists from European academic and research organizations. The users are chosen through a selection process implying regular calls for proposals (twice a year) and a selection based on scientific and educational merit following the recommendations of an external panel formed by prominent scientific experts in the field. Finally, in the purpose of ensuring long-term knowledge access on nuclear reference data, the project takes care of a continuous update the	JRC.G.I.5 Jean-Christophe GRIVEAU	3.3.5.a	RTD	JRC	Maurizio Boella	EAC	- University of California, Los Alamos National Laboratory - UNIVERSITY OF SHEFFIELD - Technical University of Lisboa - INSTITUTO TECNOLOGICO E NUCLEAR - W. TRZEBIATOWSKI INSTITUTE OF LOW TEMPERATURE AND STRUCTURE RESEARCH (POLISH ACADEMY OF SCIENCES) - CENTRE NATIONAL DE RECHERCHES METEOROLOGIQUES METEO FRANCE - UNIVERSITY OF CAMBRIDGE - University of Edinburgh - University of Manchester - Institute of Public Health - Ben-Gurion University of the Negev - University College London - UNIVERSITY OF BRISTOL - Gdansk University of Technology - UNIVERSITA DEGLI STUDI DI PARMA - Delft University of Technology CU - Charles University Prague CEA - Commissariat à l'Energie Atomique et aux Energies Alternatives CNRS - Centre National de la Recherche Scientifique EERA - European Energy Research Alliance ESNII - European Sustainable Nuclear Industrial Initiative ESRF - European Synchrotron Radiation Facility IAEC - Israel Atomic Energy Commission ILL - Institut Laue-Langevin INL - Idaho National Laboratory (INL) JAEA - Japan Atomic Energy Agency KIT - Karlsruhe Institute of Technology	01/01/2016 31/12/2018	INS-RS	3680002017001	Other deliverables - Scientific publications 2017	Publications and conference contributions: Reference Data for the fundamental properties of Nuclear Fuels Related Materials (conventional or advanced such as UN - INL collaboration), including structural, magnetic, electronic and thermodynamic features at extreme conditions (very low temperature, high magnetic field and pressure) and of	31/12/2017	Article contribution to periodicals or to conference proceedings listed in
												3680002017002	Organisation of Actinides 2017 and SCES 2017	Actinides 2017 is a conference dedicated to provide a platform for discussion and information exchange for current research in the physics and chemistry of the actinides and the trans-actinides elements including fundamental materials science, chemistry, physics, environmental science, and application technologies. SCES 2017 a conference with main topic research in condensed matter physics and presenting a specific session on actinides will be held in Prague. A proceeding will be published.	01/11/2017	Conferences and workshops organized by the JRC
												3680002017004	Report on controlled and updated KNC 2017	A scientific report containing the list of updated nuclides data for the maintenance and the expansion of the Karlsruhe Nuclide Chart database will be issued	31/12/2017	Datasets
												3680002017005	USERLAB report for activities 2017	A technical report will be issued reporting the activities in the framework of the USERLAB program giving access to external users at the laboratories of ITU (PAMEC) for basic research	29/12/2017	Science-for-policy reports
												3680002018001	Other deliverables - Scientific publications 2018	Publications and conference contributions: Reference Data for the fundamental properties of Nuclear Fuels Related Materials (conventional or advanced such as UN - INL collaboration), including structural, magnetic, electronic and thermodynamic features at extreme conditions (very low temperature, high magnetic field and pressure) and of Emergent Phenomena (magnetism and superconductivity) related to the physics of the actinides elements and compounds for the basic understanding of 5f electrons	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												3680002018002	organisation of JdA 2018	This conference is a traditional forum for informal discussion encompassing numerous different aspects related to the chemistry, physics and applications of the actinides. It regularly brings together experts from all the fields involved, emphasizing exchanges and lively discussions on current issues in actinide science and stimulating new collaborative projects. Moreover, a strong emphasis is given on presentations of on-going research projects by young scientists and PhD students.	31/12/2018	Training
												3680002018003	Report on controlled and updated nuclides KNC 2018	A scientific report containing the list of updated nuclides data for the maintenance and the expansion of the Karlsruhe Nuclide Chart database will be issued	31/12/2018	Datasets
												3680002018004	Userlab activities report 2018	A technical report will be issued reporting the activities in the framework of the USERLAB program giving access to external users at the laboratories of ITU (PAMEC) for basic research	28/12/2018	Science-for-policy reports
												3680002018005	Probing the atomic scale of actinide materials	In the context of the safety assessment of the nuclear fuel cycle, one must better understand the atomic scale of a broad range of materials (e.g.: fuel, reaction fuel/coolant) for a constant understanding of their properties and an improvement of the existing models. MAS-NMR in radioactive materials is a unique appropriate technique specific to JRC-ITU. This deliverable will be the development of a scientific database through a set of peer-reviewed publications and presentations in conferences.	31/12/2018	JRC technical reports

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
269 - ND-Applications JRC.G.2	385 - ND-Fission Advanced studies of neutron-induced fission for innovative systems and standardized safety estimates	This project determines high quality neutron data requested with high priority by the OECD Nuclear Energy Agency, the IAEA and Member States laboratories. An improved characterization of neutron-induced fission is required for the main isotopes of a power reactor: U-235 and Pu-239. Two concerns are addressed 1) the reliability of the energy dependence of neutron multiplicities for criticality safety estimates and 2) the heating of test-devices by gamma-rays. In consultation with the requester new measurement results will be obtained and confronted with the predictions of the prevalent nuclear data files. Recommendations for improvements of the nuclear data library will be issued and the impact on the problems from which the requests originated will be assessed. The project involves improvement of experimental equipment and techniques and both European and International Collaboration through OECD-NEA and IAEA. Participating partners are CEA, CNRS, the universities of Uppsala and Bucharest. As agreed in the JRC ELI-NP/IFIN-HH collaboration agreement 34207, the expertise in fission measurements of this WPk will be used to develop a fission chamber for accurate gamma-beam monitoring at the new ESFRI facility ELI-NP (Extreme Light Infrastructure - Nuclear Physics, Magurele, Romania). The fission chamber will be produced and characterised in this work package with support of WPk 613 NS-Targets constituting deliverables D1.2 and D1.3 of Action 1 of the collaboration agreement together with the Romanian counter part.	JRC.G.2 Stephan OBERSTEDT	3.3.5.a	ENER	JRC	DG ENER D2 Nuclear Energy technology, Nuclear waste and Decommissioning		- University of Bucharest - University of Uppsala CEA - Commissariat à l'Energie Atomique et aux Energies Alternatives CNRS - Centre National de la Recherche Scientifique ELI-NP - Extreme Light Infrastructure - Nuclear Physics (ELI-NP) GANIL - Grand Accélérateur National d'Ions Lourds (GANIL) IAEA - International Atomic Energy Agency (IAEA) IFIN-HH - Horia Hulubei National Institute of Physics and Nuclear Engineering IRSN - Institut de Radioprotection et Sûreté Nucléaire NEA-OECD - Nuclear Energy Agency (OECD) US DoE - US Department of Energy (DOE)	01/01/2014 31/12/2018	INS-UR	10	Neutrons by fission fragment with Verdi	Prompt fission neutron characteristics as a function of fragment properties from a 2v-2E measurement with the VERDI spectrometer	30/06/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												4	U-235 energy dependent neutron multiplicity	Better fission neutron multiplicity data are needed for criticality estimates in which reliable uncertainty propagation is a major concern. This was demonstrated in detailed validation and uncertainty propagation exercises by IAEA and OECD/NEA projects. In a report we will describe the result of new measurements of the U-235 prompt fission neutron multiplicity. After the successful completion of this task measurements will be performed for Pu-239.	10/11/2017	JRC technical reports
												5	Fission chamber for the ESFRI facility ELI-NP	A fission chamber will be prepared and characterised for gamma-beam monitoring at the new ESFRI facility ELI-NP (Extreme Light Infrastructure - Nuclear Physics) in Magurele, Romania. The appropriate U-238 fission deposits will be prepared by WPk ... This constitutes a combination of the deliverables D1.2 and D1.3 for Action 1 of the collaboration agreement 34207 between JRC and ELI-NP/IFIN-HH.	27/10/2017	Technical systems
												6	Pu-239 energy dependence of neutron multiplicity.	Fission neutron multiplicity data for criticality estimates with reliable uncertainties are a major concern. The sensitivity of such data was demonstrated in validation and uncertainty propagation exercises by IAEA and OECD/NEA projects. For the most challenging case of Pu-239 a feasibility study with an increased sensitivity SCINTIA array will be performed. Development and characterisation of the latter will be a key component of the work.	29/11/2018	JRC technical reports
												7	Improving the ESFRI facility ELI-NP gamma monitor	For accurate gamma-beam monitoring at the new ESFRI facility ELI-NP (Extreme Light Infrastructure - Nuclear Physics, Magurele, Romania) by fission chamber it is well known that the uncertainty of the (g,f) cross sections does not allow a smaller than 10% uncertainty. A report will be provided of measurement campaigns geared towards improvement of the required (g,f) cross sections using the new tandem of the MONNET laboratory. The aim is for an uncertainty of a few percent (<5%).	30/11/2018	JRC technical reports
												8	Prompt neutron multiplicity of U-235	Point-by-point model calculation of the prompt neutron multiplicity distribution $\nu(A)$ for $^{235}\text{U}(n,f)$ at incident neutron energies ranging from thermal to 50 MeV, A. Tudora, F.-J. Habsch et al.	31/10/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												9	Fission gamma-spectra for Pu-239	Prompt fission gamma-ray spectral data for the reaction $\text{Pu-239}(n,\text{th})$	30/06/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
3.3.5.b support for the standardisation and harmonisation of radiological measurement methods in the EU and collaboration with key partner countries and international organisations (IAEA, OECD-NEA) in the field.																
269 - ND-Applications JRC.G.2	406 - ND-Standards Enhancing nuclear data quality assurance through a new IAEA Standards Evaluation	Quality assurance for safety assessments and relies on quality assured standards for nuclear data (COM/2011/311, C/2009/71, C/96/29). The IAEA Standards Evaluation provides a comprehensive set of reference nuclear data standards providing the basis for accurate nuclear measurements throughout the field of energy applications. This project contributes new experimental data using the JRC accelerator-based neutron sources and recommendations for new and extended neutron reaction standards: B-10(n, α), Li-6(n,t), Au-197(n,g), Li-7,Ti-48(n,n'g). The project also includes a recommendation for the U-238(n,g) reaction based on experimental data provided by the JRC. Given recent questions about an important calibration reference for neutron detector calibrations (the neutron spectrum for spontaneous fission of Cf-252) we will investigate improved measurements for this 30 year old	JRC.G.2 Franz-Josef HAMBSCHE	3.3.5.b	ENER	JRC	DG ENER D2 Nuclear Energy technology, Nuclear waste and Decommissioning		- University of Uppsala CNRS - Centre National de la Recherche Scientifique HZDR - Helmholtz-Zentrum Dresden-Rossendorf e.V. IAEA - International Atomic Energy Agency (IAEA) IFIN-HH - Horia Hulubei National Institute of Physics and Nuclear Engineering INRNE - INSTITUTE FOR NUCLEAR RESEARCH AND NUCLEAR ENERGY - BULGARIAN ACADEMY OF SCIENCES JSI - Jozef Stefan Institute KAERI - Korea Atomic Energy Research Institute	01/01/2014 31/12/2018	INS-RS	5	JRC & EU Perspectives for neutron standards	A report will be prepared determining the strategy of new JRC neutron standards measurements. It will address the requirements in the fields of nuclear safety, security and radiological protection in the light of EU strategies and Member States interests. It	30/09/2017	JRC technical reports
												7	Least squares evaluations with covariances	Standards evaluations rely on Bayesian 'least squares' analyses to make the best of the available data. Credible correlations between data sets and covariances are key to a successful analysis and a proper weighing of the data in the final evaluation. To fully clarify the impact of new measurements on such evaluations we will 1) adopt an existing evaluation system and database, 2) evaluate the correlation and covariance, 3) test the impact of new GELINA data on the best evaluation and covariance	01/12/2018	JRC technical reports
												8	Total cross section for n+U-238	An evaluation of the total cross section for neutron interactions with U-238 in the resonance region will be published. The evaluation uses the methods of the standards evaluation (GMA fit) and constrains the standards cross section related to n+U-238.	30/11/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
269 - ND-Applications JRC.G.2	460 - ND-Criticality Safety Nuclear reference data for safety, security, waste and innovation	The project improves criticality safety assessments involving innovative materials that are studied on request of and in collaboration with the US DOE (ORNL) Nuclear Criticality Safety Program and the IRSN program in nuclear safety. This project determines reference nuclear data for copper, calcium, cerium, iron and vanadium, yttrium and zirconium in the interest of nuclear safety, security and innovation (Council Directives C/2009/71,	JRC.G.2 Stefan KOPECKY	3.3.5.b	ENER	JRC	DG ENER D2 Nuclear Energy technology, Nuclear waste and Decommissioning		INFN - ISTITUTO NAZIONALE DI FISICA NUCLEARE ELI-NP - Extreme Light Infrastructure - Nuclear Physics (ELI-NP) IAEA - International Atomic Energy Agency (IAEA) IRSN - Institut de Radioprotection et Sûreté Nucléaire MS EU - Member states EU	01/01/2014 30/12/2018	INS-RS	4	Vanadium cross-section measurements at GELINA	Reference nuclear data for vanadium in the interest of nuclear criticality safety on request and in collaboration with US-DOE will be provided to US-DOE, OECD-NEA and IRSN (FR). This concerns total and radiative capture cross sections using the GELINA facility.	01/11/2017	Datasets
												5	Scattering data for Fe-54 and Fe-nat	Iron is an important reactor material used for construction, pressure vessel, reflector and shield. The CIELO project (WPk 499, www.oecd-nea.org/science/wpk499-cielo) concluded that an accurate determination of Fe-56 data required better data for the minor isotopes and benchmark data for iron scattering. These points are taken up in the JRC-IRSN collaboration agreement and we will report the result of new measurements for a new IRSN evaluation and validation follow-up activity.	26/10/2018	Datasets
269 - ND-Applications JRC.G.2	499 - ND-CIELO CIELO: Pilot studies for a world-wide standardised nuclear data file for nuclear safety	A Collaborative International Evaluated Library Organisation (CIELO) aims at world-wide standardisation of evaluated nuclear data for harmonized safety assessments in nuclear energy by the international experts (C/2009/71, C/2011/70, 2012/C 327/01). CIELO starts with a pilot launched by the OECD-NEA addressing a small number of high priority nuclides: H-1, O-16, Fe-56, U-235, U-238, Pu-239. JRC will be in charge of two nuclides contributing with accurate measurements and expert advice.	JRC.G.2 Arjan PLOMPEN	3.3.5.b	ENER	JRC	DG ENER D2 Nuclear Energy technology, Nuclear waste and Decommissioning		CIAE - China Institute of Atomic Energy (CIAE) IAEA - International Atomic Energy Agency (IAEA) JAEA - Japan Atomic Energy Agency JSI - Jozef Stefan Institute KAERI - Korea Atomic Energy Research Institute MS EU - Member states EU NEA-OECD - Nuclear Energy Agency (OECD) US DoE - US Department of Energy (DOE)	01/01/2014 31/12/2018	INS-RS	4	The JRC 238U+n evaluation in the resonance range	The JRC n+238U evaluation in the resonance range will be documented in support of the evaluation delivered to the international CIELO project (OECD-NEA based pilot project). The report is essential for quality control of the U-238 nuclear data file and aims at establishing best practices and avoiding misinterpretations of the experimental database by future re-evaluations. It aims to set an example of quality control in future nuclear data evaluations minimizing the need for duplication of work.	01/12/2017	JRC technical reports
												5	Final scientific publications of CIELO OECD-NEA SG	Publication of the JRC contributions as part of scientific papers in the high-impact special issue of Nuclear Data Sheets. Lead author of the publication on the oxygen related activities. Lead author on the resonance range evaluation of U-238. Contributions to the CIELO summary publication led by Mark Chadwick.	31/03/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												6	Exploitation and extension of CIELO results	The results of the international CIELO collaboration at OECD-NEA level have left a number of open issues. For U-238 capture data deficiencies in capture (1.5-10 keV) and inelastic need to be tackled. Second the evaluation of Fe-56 in the resonance range and its minor isotopes Fe-54 and Fe-57 could not be completed. JRC will work with partners (CNRS, IFIN-HH, IRSN, JSI, BNL, ORNL) on evaluations and new measurements to resolve these issues. The results to be contributed to OECD-NEA JEFF-4 project	30/11/2018	JRC technical reports

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Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
												7	n+U-238 in the unresolved resonance region	This paper will summarise the contribution to the CIELO project from the JRC concerning evaluated data for neutrons interacting with U-238 in the unresolved resonance region. The paper will be published in a special issue of Nuclear Data Sheets on the CIELO project.	31/01/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
283 - RADMED JRC.G.2	584 - RN-RefRad-Food-Feed Evaluation of food and standardisation of feed measurement methods	This work package concerns inventarisation and assessment of the radioactivity measurement methods for food and feed that are applied throughout Europe. This study addresses methods that are used in the Member States' monitoring laboratories implementing Council Regulations 2016/52/Euratom, 733/2008/EC and 1048/2009/EC, and those developed under the Feed Mandate III, M/523, addressing Regulation 882/2004/EC. This analysis will serve for the harmonisation and standardisation of the European radioactivity measurement system applied in routine monitoring conditions. It will also provide pro-active advice for emergency preparedness situations. It also includes work for fulfilling the contract for the CEN Mandate 523 on developing a standard for the determination of Cs-134, Cs-137 and I-131 in feed.	JRC.G.2 Timotheos ALTZITZOGLU	3.3.5.b	ENER	JRC	Ivo Alehno, ENER D.3; Frans Verstraete, SANTE E.7; Michel Herzeele, ENER D.3	ENV GROW	Env Rad EU - EU Member State authorities competent for environmental radioactivity Env Rad Mon EU - Radioactivity Environmental Monitoring National Laboratories and Institutes NRLs - NRLs - national reference laboratories Nat Reg - National Regulatory Bodies OCL - Official Control Laboratories for Food and Feed Reg EU - EU Nuclear Safety Regulatory Authorities	01/01/2014 31/12/2018	INS-RS	2	Report on food measurement methods	An inventory and performance evaluation of quick and reliable measurement methods for screening of radioactivity in food as used in the Member States' monitoring and control laboratories. This output depends on the response to the questionnaire mentioned in	15/10/2017	JRC technical reports
												3	Study of spiking emergency reference materials	Scientific article published in the refereed international journal on a topic linked to the work carried out in this work package as the efficient spiking of food reference materials to be used in emergency situations.	01/02/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												4	Report of validation study	Deliverable transferred from WPK 2260 after merger of these 2 WPKs. This report will describe the results of the validation study by external laboratories of the method developed (described in the former deliverable 1 of WPK 2260) and specifying the performance characteristics of the method.	31/08/2017	JRC technical reports
												5	Analysis of validation exercise	This report will describe the analysis of the validation exercise (deliverable 4) and give a draft of a gamma-ray measurement standard for the measurement of I-131, Cs-137 and Cs-134 in feed.	31/08/2018	JRC technical reports
436 - CBRNEsec JRC.A.7	585 - RN-CBRN-Standards Standards for performance assessment of RN detection and measurement equipment	The work package will: •Propose improvements to - and contribute to the development of - international standards (ISO/IEC) for performance tests of equipment used against CBRN threats. In particular detection and measurement equipment used against radiological and nuclear (RN) threats and in the first response to such events. •Standardise data formats. •Invite equipment manufacturers under the EUFRAT programme to participate in pre-normative research and tests of equipment and draft standards, such as developed within WP 3883 DiSNU •Develop technical systems that facilitate the execution of performance tests of such equipment. •Stimulate the adoption of the international standards into European standards (EN), enabling policy makers to refer to those standards in EU harmonised legislation and opening the world-wide market for European manufacturers of such equipment. •Promote the use of international, and mainly, European standards of such equipment. See "Note" for legal basis	JRC.G.2 Jan PAEPEN	3.3.5.b	HOME	JRC	Wiktor WOTJAS	ENER GROW TAXUD	CEN - European Committee for Standardization CENELEC - European Committee for Electrotechnical Standardization (CENELEC) Cust Aut MS - MS Customs Authorities EU MS R/N emergencies - EU MS Authorities competent for R/N emergencies IAEA - International Atomic Energy Agency (IAEA) IEC - International Electrotechnical Commission Nat Reg - National Regulatory Bodies US DoE - US Department of Energy (DOE)	01/01/2014 31/12/2018	INS-RS	20	Propose improvements to ISO/IEC standards	Based on experience and test results from ITRAP+10, WP 3883 DiSNU and this WP, contribute to the development and revision of ISO/IEC standards for radiation detection and measurement equipment and methods used in nuclear safety, security and safeguards	31/12/2017	JRC contributions to standards
												40	test and development of a data format standard	Report on the organisation of the project to develop the international standard IEC 63047. The report will discuss: The pre-normative research performed by ERNCIP-RN. The involvement of equipment manufacturers, who comment on the draft standard. The legal framework to ensure equal opportunities of SMEs participating. The access of equipment manufacturers to the JRC research infrastructure. Results from a survey that will be organised to assess the intention of the SMEs to implement the standard.	01/03/2018	JRC technical reports
												50	tests of digital data acquisition instruments	Scientific article on results obtained from tests of digital data acquisition instruments providing data in the draft format IEC 63047, in collaboration with equipment manufacturers who participate in the tests organised at the EUFRAT research infrastructure, referred to in Deliverable 40.	01/10/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												60	software for the draft standard IEC 63047	Software providing the coding and decoding routines for the draft standard IEC 63047, to be used by equipment manufacturers who participate in pre-normative research and tests of equipment and draft standard within WP 3883 DiSNU. The software facilitates rapid implementation of the drafts of the standard, allowing the equipment manufacturers to comment on the drafts	31/12/2017	Scientific information systems and databases
283 - RADMED JRC.G.2	586 - RN-Standards Harmonisation and standardisation of the radioactivity measurement system	This work package aims to establish international equivalence in radioactivity measurements in line with Article 8 of the Euratom treaty, which is realised in collaboration with the Consultative Committee for Ionizing Radiation (CCRI) of the International Committee for Weights and Measures (CIPM). The main work deals with performing reference measurements for radionuclides that are essential to society and key policy areas like nuclear safety, security, safeguards, medicine, decommissioning, radioprotection etc. Therefore this work package is the cornerstone on which several other work packages rest on and includes the maintenance and improvement of special unique radioactivity measurement instruments and infrastructure. The work involves furthermore, reference measurements of nuclear decay data; developing detection methods, analytical tools and uncertainty evaluations for enhancing reliability of methods and consistency of reference values; and training of professionals in related contexts.	JRC.G.2 Mikael HULT	3.3.5.b	ENER	JRC	Ivo Alehno, D3	- NPL Management Ltd PTB - Physikalisch-Technische Bundesanstalt BIPM - International Committee on Weights and Measures ESARDA - European Safeguards R&D Association EURAMET - European Organisation of Metrology (EURAMET) IAEA - International Atomic Energy Agency (IAEA) ICRM - International Committee for Radionuclide Metrology (ICRM) NMIs - National Metrology Institutes	01/01/2014 31/12/2018	INS-RS	11	Establishing international equivalence for a RN	Reference measurements of a radionuclide (RN) different than the one in deliverable 3. The selection of the radionuclide in question is depending on scheduling of CCRI key comparisons (of a radionuclide relevant in either nuclear medicine, radioactive waste management, decommissioning, or nuclear safety and security).	31/12/2018	Validated methods, Reference methods and measurements	
											12	Decay data for important radionuclide	Many important radionuclides have surprisingly poorly known decay data (half-life, emission probabilities, branching ratio, emission energy, decay energy). Developments in fields like nuclear medicine, radioactive waste management, dating of nuclear events (separation, purification or explosion) etc. all require better decay data than is available today. Depending on strategic decisions improved decay data for an important radionuclide (e.g. U-238 or Am-243) will be produced during 2018.	31/12/2018	Validated methods, Reference methods and measurements	
											13	Decay data for an important radionuclide	Many important radionuclides have surprisingly poorly known decay data (half-life, emission probabilities, branching ratio, emission energy, decay energy). Developments in fields like nuclear medicine, radioactive waste management, dating of nuclear events (separation, purification or explosion) etc. all require better decay data than is available today. Depending on strategic decisions improved decay data for an important radionuclide (e.g. U-238 or Am-243) will be produced during 2017.	31/12/2017	Validated methods, Reference methods and measurements	
											14	Standardisation of radionuclide for REM-ICS	WPK 845 RN-ILC is JRC's response to EG ENER's work in implementing Harmonisation and quality control of Member States' capacity of measuring radioactivity in the environment (air, water, soil and mixed diet). The radionuclides used for the reference materials employed in that WPK will have to be standardised. This deliverable is the standardisation of the radionuclides needed for the next REM-ICS (Radioactivity Environmental Monitoring-International Comparison Scheme)	30/04/2018	JRC technical reports	
											15	Confidence in decay constants for beta-minus decay	No world-wide study with high quality data was ever conducted to test whether the law of exponential decay is valid. JRC will lead work with NMIs from around the globe to test if the earth-to-sun distance will affect decay rates as has been suggested in several recent publications. The study should furthermore shed highly valuable light on the question of stability of instruments and influence of environmental factors on reference measurements. Part-I: Beta-minus decays	31/01/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)	
											16	Confidence in decay constants for beta plus decays	No world-wide study with high quality data was ever conducted to test whether the law of exponential decay is valid. JRC will lead work with NMIs from around the globe to test if the earth-to-sun distance will affect decay rates as has been suggested in several recent publications. The study should furthermore shed highly valuable light on the question of stability of instruments and influence of environmental factors on reference measurements. Part-II: Beta-plus and EC decays.	28/02/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)	
											17	Confidence in decay constants for alpha decays	No world-wide study with high quality data was ever conducted to test whether the law of exponential decay is valid. JRC will lead work with NMIs from around the globe to test if the earth-to-sun distance will affect decay rates as has been suggested in several recent publications. The study should furthermore shed highly valuable light on the question of stability of instruments and influence of environmental factors on reference measurements. Part-III: Alpha decays	15/03/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)	

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Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
												3	Establishing international equivalence for a RN	Reference measurements of a radionuclide (RN). The selection of the radionuclide in question is depending on scheduling of CCR key comparisons (of a radionuclide relevant in either nuclear medicine, radioactive waste management, decommissioning, or nuclear safety and security).	20/11/2017	Validated methods, Reference methods and measurements
												5	Half-life of Po-209	Po-209 is the most important reference for tracer studies of polonium-210 in the environment. Our initial study shows a 25% error in database value. We expect to provide a new value which will have the greatest impact ever on the evaluated half-life.	31/01/2017	Validated methods, Reference methods and measurements
												6	Half-life of Na-22	Na-22 is the most important radionuclide for calibrating beta-emitters. It is also a major radionuclide for calibrating gamma-ray detectors. It is particularly significant as it is the major calibration radionuclide with positron emission. There are inconsistencies in its half life value, because of new technological developments we plan to produce a reference measurement that will have the biggest impact on the evaluated reference value for its "new" half-life.	20/02/2017	Validated methods, Reference methods and measurements
323 - Fukushima-NMS JRC.G.2	587 - RN-post Fukushima Post-Fukushima measurement support	Provide measurement results to studies of Ocean inventory of radionuclides released during the Fukushima reactor accident (for Oceanographic Society, Fukushima University and Woods Hole Oceanographic Institute) aiming at (i) tracing of ocean currents and the assessment of the long term effect on the dose to humans (ii) determining the amount of radioactivity from Fukushima reaching US shores (iii) provide basic data for studies of uptake in the food chain with radioecology experts. Provide measurement support to the certification of radioactivity in reference materials. The competences and techniques developed in this WP also contribute to project 283 (RADIOlogical Measurements supporting EU Directives). The timely execution in 2016 and 2017 is essential as the most important radionuclide, Cs-134, has a half-life of only 2 years. i.e. this work has to be performed now or else it is too late.	JRC.G.2 Mikael HULT	3.3.5.b	ENER	JRC	Michel Herzele, ENER D.3 Ivo Alehno, ENER D.3	MARE SANTE	- Korean Research Institute of Standards and Science - National Metrology Institute of Japan - Intergovernmental Oceanographic Commission of UNESCO IAEA - International Atomic Energy Agency (IAEA) IAEA-MEL - Marine Environment Laboratory of IAEA Nat Reg - National Regulatory Bodies SCK-CEN - Belgian Nuclear Research Centre (SCK-CEN) UNESCO IOC - United Nations Educational Scientific and Cultural Organization - Intergovernmental Oceanographic Commission US DoE - US Department of Energy (DOE)	01/01/2014 31/12/2017	INS-RS	4	Monitoring of radionuclides in Northern Pacific	Summary report of the monitoring of anthropogenic radionuclides in the Northern Pacific	30/11/2017	JRC technical reports
												5	Uptake of radicaesium in rice	Measurements in HADES of different parts of rice-plants with the aim to study establish the pathways for uptake.	27/01/2017	JRC technical reports
												6	Radioactivity in Baltic Sea Sediment CRM	The IAEA-MEL have asked JRC-Geel to contribute with reference measurements of radioactivity to the certification of a new Baltic Sea Sediment reference material.	15/02/2017	JRC technical reports
												7	Radioactivity in rice plants	Scientific article on pathways for uptake of radiocaesium in rice-plants.	01/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												8	Robust data-analysis system for underground data	Gamma-spectrometry data from underground laboratories are not trivial to analyse due to poor counting statistics and special peaks that do not appear above ground. At present data is analysed in Geel with too many manual manipulations. A robust system requiring minimum of manual manipulations will be developed. It shall also incorporate the new version of ISO11928 for determining detection limits and decision thresholds.	28/02/2017	Scientific information systems and databases
325 - METRO JRC.G.2	613 - NS-Targets Characterised targets for nuclear physics studies on reactor safety, waste transmutation, safeguards	This work package relates to the provision and development of well characterised high-quality targets for the measurements of constants critical for nuclear safety reactor systems and for dealing with long-lived nuclear waste supporting Council directive 2009/71/EURATOM and the Council Conclusions EUCO 10/11 of 24/25 MARCH 2011. The Japanese Atomic Energy Agency (JAEA) selected Neutron Resonance Densitometry (NRD) developed at JRC-IRMM, as one of the most suitable methods to characterise molten fuel during decommissioning of the Fukushima Daiichi nuclear power plants (C/2010/212). This work package is also providing targets for studies on Neutron Resonance Densitometry analysis carried out under the JRC - JAEA CA for future safeguards verification measurements of the Fukushima debris (melted fuel). Furthermore targets produced in this work package are provided within the respective agreements to international accelerator sites (CERN) and to large European projects (EUFROT, CHANDA).	JRC.G.2 Yetunde AREGBE	3.3.5.b	ENER	JRC	ENER.E.1 (Euratom Safeguards), ENER D2 Nuclear Energy technology, Nuclear waste and Decommissioning	GROW RTD	CERN - European Organization for Nuclear Research CEA - Commissariat à l'Energie Atomique et aux Energies Alternatives CERCA/AREVA - CERCA/AREVA - France CNRS - Centre National de la Recherche Scientifique IAEA - International Atomic Energy Agency (IAEA) JAEA - Japan Atomic Energy Agency	01/01/2017 31/12/2018	INS-RS	1	Well-characterised targets	Material information sheets of a number of well-characterised targets on demand for neutron data measurements in support to nuclear safety and nuclear safeguards and under CAs JRC-CERN, JRC-JAEA, JRC-CEA, JRC-CNRS	11/12/2017	Reference Material
												2	Publication on target preparation	Peer reviewed article on preparation and/or characterisation of actinide thin targets for key minor and major actinides for high accuracy nuclear data studies; including new preparation processes and equipment	18/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												3	Well-characterised targets	Material information sheets of a number of well-characterised targets on demand for neutron data measurements in support to nuclear safety and nuclear safeguards and under collaboration agreements JRC-CERN, JRC-JAEA, JRC-CEA, JRC-CNRS	10/12/2018	Reference Material
												4	Publication on actinide target preparation	Peer reviewed article on preparation and/or characterisation of actinide thin targets for key minor and major actinides for high accuracy nuclear data studies; including new preparation processes and equipment	21/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
334 - REM&EPR JRC.G.10	845 - RN-ILC Comparisons on radionuclide measurements for monitoring labs	To provide comparisons (proficiency tests) of radionuclide measurements in environmental matrices and foodstuff for Member States' laboratories which monitor radionuclides in the environment and food. The aim is to improve the comparability and reliability of measurement results reported to the Commission by the Member States as laid down in Commission Recommendation COM/2000/473 and Articles 35 and 36 of the Euratom Treaty.	JRC.G.2 Timotheos ALTITZOGLOU	3.3.5.b	ENER	JRC	Ivo Alehno, ENER D.3; Vesa Tanner, ENER.D.3	ENV SANTE	Env Rad EU - EU Member State authorities competent for environmental radioactivity Env Rad Mon EU - Radioactivity Environmental Monitoring National laboratories and institutes NRLs - NRLs - national reference laboratories Nat Reg - National Regulatory Bodies OCL - Official Control Laboratories for Food and Feed Reg EU - EU Nuclear Safety Regulatory Authorities	01/01/2014 31/12/2018	INS-RS	10	Organising REM-ICS	Organisation of a proficiency test for the measurement of I-131, Cs-137 and Cs-134 in feed (maize powder). REM-ICS = Radioactivity Environmental Monitoring - International Comparison Scheme	30/06/2018	Science-for-policy reports
												11	ILC Report	Report describing the results a proficiency test on measurements of gross-alpha and gross-beta activities in drinking water. The report will form the basis on which DG ENER (D.3) will decide on taking actions on member states that underperform. In this case the report will have the extra dimension of triggering a discussion on the suit performance of the participating monitoring-laboratories distributed to the laboratories, member state representatives (nominating authorities), and DG ENER D.3.i	31/01/2017	Science-for-policy reports
												12	Workshop on radioactivity in feed measurements	Organisation of a workshop for stakeholders combined with a training on measurement of I-131, Cs-137 and Cs-134 in feed (maize powder).	31/12/2018	Training
												13	Reference Material for an upcoming ILC	Study report on the possibility of producing a radon in water reference material for an ILC. This ILC has been specifically requested by both DG ENER and the National experts of Article 35 during the most recent meeting (April 2016). This is in support of the new Euratom Drinking Water Directive.	30/09/2018	JRC technical reports
												6	Reference Material for next ILC	Characterisation of the material for the next ILC for its radioactivity contents (the radionuclides relevant to the ILC exercise).	31/10/2017	Reference Material
279 - NTAS JRC.G.II.6	3568 - DOE Co-operation in U/Pu measurements	Under the Agreement between Euratom and US-DOE on "Nuclear Material Safeguards and Security R&D" the project NTAS co-operates with several of the DOE national laboratories in the fields of U/Pu accountability measurements, method standardisation and enhancement of neutron measurement capability.	JRC.G.II.6 Evelyn ZULEGER	3.3.5.b	ENER	JRC	Peter Schwalbach (ENER E.1)		- University of California, Los Alamos National Laboratory IAEA - International Atomic Energy Agency (IAEA) NBL - New Brunswick Laboratory (NBL), US ORNL - Oak Ridge National Laboratory US DoE - US Department of Energy (DOE)	01/01/2016 31/12/2018	INS-RS	356801	Safeguards Measurement QA - Action Sheet 44	NBL (New Brunswick Laboratory) and ITU cooperate on measurement quality assurance to spike production, U and Pu analyses. ITU will participate in the NBL inter-comparison quality assurance programme. Task within the Euratom - US DOE Agreement Action sheet 44: Collaboration on Safeguards Measurement Quality Assurance and Reference Material Production and Use for Accountability Measurements	30/12/2018	JRC technical reports
												356802	Hyper kedge - Action sheet 49	Participation in the Preparation of a ASTM standard for Uranium and Plutonium concentration using Hybrid Kedge.	31/07/2017	JRC contributions to standards
												356803	Neutron Reference Measurements - Action Sheet 51	JRC-ITU, DG ENER and US-DOE-NNSA will undertake a cooperative effort aimed at improving neutron reference measurements. The objective of this Action Sheet is to study the potential for neutron reference materials alternative to Cf252, develop improved dead time correction techniques, and performance test existing software used for neutron data acquisition and analysis to identify and document improvements.	31/12/2017	JRC technical reports
												356804	UF6 - Action sheet 54	ITU and IRMM are participating in the validation of a method to allow UF6 samples to be transported from plant to laboratories under the safety regulations and still provide accurate results for safeguards. IRMM is providing reference material to validate the method to ABBAC and the participants.	31/12/2018	JRC contributions to standards
												356805	new action sheets	During the JSC-DOE meeting in June 2016 the action sheets are reviewed and it is foreseen to extend the collaboration. However details are not yet available	31/12/2018	JRC technical reports
		This is an EMPIR project with the following objectives: 1. The development of an accepted committee							CENELEC - European Committee for Electrotechnical Standardization (CENELEC)			2	Contributions to a draft IEC standard- data format	Submission of a revised Committee Draft to IEC/TC 45.	15/12/2017	JRC contributions to standards

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Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
JRC.A.7	Digital standards for nuclear security	draft IEC standard for a digital list-mode data format to be used in nuclear instrumentation, in which JRC takes the leading role. 2. The development of software tools for users of	Jan PAEPEN	3.3.5.b	HOME	RTD	Wiktor Wojtas (HOME.D.1)		IEC - International Electrotechnical Commission	31/05/2018	CON-IA	3	Acceptance of Committee draft	Report demonstrating the acceptance of the Committee Draft standard IEC 63047 and the inclusion of the outputs of EMRP JRP ENG08 MetroFission and the pre-normative research by ERNCP RN TG into the standard. (Deliverable D2 in the EMPIR project).	15/05/2018	JRC technical reports
3.3.6 Knowledge management, training and education																
3.3.6.a monitoring EU trends in human resources in the nuclear energy field and facilitating the mobility of human resources in the sector throughout the EU. Developing tools for knowledge management and for transparency and dissemination of information;																
268 - NUCLEOS JRC.G.10	3340 - EHRO-N European Human Resources Observatory for the Nuclear Energy Sector	EHRO-N was established in the framework of the EURATOM treaty, in support to DG ENER, to determine the situation of nuclear-educated Human Resources in Europe, assess the trends and suggest policy options for improvement. The IET is the Operating Agent. It is a central point for data collection and trend analyses to identify patterns for intra-sectorial mobility, measure distance between competences and skills required among different sectors, evaluate the possible scarcity of resources and bottlenecks in knowledge sharing and knowledge management related to nuclear Human Resources and Nuclear Safety expertise in the EU. The implementation of the ECVET system in the nuclear energy sector plays an important role to achieve results.	JRC.G.10 Marcello BARBONI	3.3.6.a	ENER	JRC	nina palomaki	EAC EMPL NEAR RTD	ENEN - European Nuclear Engineering Network IAEA - International Atomic Energy Agency (IAEA) MS EU - Member states EU NEA-OECD - Nuclear Energy Agency (OECD) Nuc Ind - Nuclear Industry	01/01/2016 30/12/2019	INS-RS	1701 1702 1703 1704 1705 1710 1801 1802 5	Training Syllabus on GEN IV reactor technology Report on the status of the JRC/ENEN collaboration Taxonomy of Jobs in NPP: Final Report ECVET for nuclear energy sector: connecting E&T Report: analysis of the nuclear energy sector Scientific publications and outreach activities Quantitative follow-up survey on the European NES Scientific publications and outreach activities Contribution to LCEO and FET	A training syllabus will be compiled on GEN IV reactor technology and safety features, based on a one-week training given from different expert lecturers, facilitated and Report on the status of the JRC/ENEN collaboration on the following topics: 1. Participation of the JRC in support to the Secretariat of ENEN 2. Creation of a certification system between ENEN and JRC 3. Nuclear Knowledge Management and Knowledge sharing. 4. Trans-Sectorial training of expert for the energy sector. 5. Support the expansion of EHRO-N activities to the broader energy sector. Final version of the classification of job profiles in nuclear power plants, defined in terms of roles, functions and competence requirements. Description of the methodology, definition of relevant concepts and conclusions related to the preparation of the job taxonomy. The report describes the achievements of JRC on the ECVET implementation during a period of 6 years. Synergy between nuclear research, innovation and education, with emphasis on lifelong learning and cross-border mobility. Monographic report on nuclear energy sector with analysis of society and industry needs, convergence towards a common vision, and development of common instruments. This deliverable will include the following output: - Annual report on the activities of the observatory for 2017, summarizing results, findings and lessons learned. - Peer reviewed papers - Conference proceedings - Dissemination activities Quantitative follow-up survey on the European Nuclear Energy sector. Quantitative survey to industries and E&T stakeholder to assess the current situation and future needs of the European nuclear energy sector. This deliverable will include any of the following outputs: peer-reviewed scientific publications, conference proceedings, dissemination activities. Contribution to LCEO Tasks A. and E.	01/06/2017 31/12/2017 30/06/2017 30/06/2017 31/07/2017 31/12/2017 19/12/2018 19/12/2018 31/12/2017	Books and monographs with JRC JRC technical reports JRC contributions to standards JRC technical reports Science-for-policy reports Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI) JRC technical reports Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI) JRC technical reports
268 - NUCLEOS JRC.G.10	3582 - PRONEO Activities promoting the establishment of a Nuclear Energy Observatory	Dialog between the JRC and European Technical Support Organizations (TSOs) indicates an interest at MS level for the JRC to valorize European Commission competencies, knowledge, and	JRC.G.14 TIMOTHY AUSTIN	3.3.6.a	RTD	JRC	Rita.LECZYCHOVA@ec.europa.eu, RTD.G.4 (Fission Energy)	ENER	EERA - European Energy Research Alliance ETSON - European Technical Safety Organisation Network	01/01/2016 31/12/2017	INS-RS	3	NEO platform design and prototyping	Development of a platform design / prototype, building on the NEO positioning and concept papers, drawing lessons from the LCEO and ageing knowledge base.	30/11/2017	Scientific information systems and databases
401 - RSMW JRC.G.III.8	5125 - TraCK Transferring and Consolidating the Pan-European Radioactive Waste Management Knowledge Base	The objectives are to document the state-of-knowledge in three different topical areas within the overall context of disposal of radioactive waste. The topical areas aimed for are (i) scientific base from earlier indirect action framework programmes, (ii) planning R&D programmes on a national level towards geological disposal of	JRC.G.III.8 GUNNAR BUCKAU	3.3.6.a	ENER	RTD	Christophe Davies (RTD)		IAEA - International Atomic Energy Agency (IAEA) MS EU - Member states EU NEA-OECD - Nuclear Energy Agency (OECD)	01/06/2017 31/12/2018	CON-IA	TraCK01	Status of IKMS at the end of the Pilot Phase	The State-of-Knowledge for topics selected during the project negotiation is established through external expert group meetings. At the JRC "Integrated Knowledge Management System (IKMS)" for radioactive waste management, the State-of-Knowledge is documented with open access and the possibility for anyone to provide comments for later revisions. The present report summarizes the work done by JRC and experience feedback for full implementation during Joint Programming.	31/12/2018	Scientific information systems and databases
3.3.6.b preserving, aggregating and disseminating specific scientific and technical knowledge related to nuclear safety, safeguards and security by providing operational support and training and by increasing access to the JRC nuclear laboratories for researchers from Member States and international organisations.																
65 - DANTE JRC.G.10	504 - EUFRAT Serving EU and international partner needs through transnational access to JRC facilities	Operation of a transnational access scheme to the JRC measurement facilities and target preparation providing on a yearly basis experimental time for external users from the member states and abroad (2012/C 327/01) and providing nuclear targets to external users: 1000 h at the GELINA accelerator, 400 h at the Van de Graaff, 400 h at the underground laboratory HADES, and the equivalent of at most 3 pm for target preparation. The project will establish a Programme Advisory Committee for evaluation and advice on the allocation of resources. For each proposal an SNS3 contact person will be responsible. This WP draws its mandate from article 4 b) and c) of the EURATOM treaty (2012/C 372/01) and contributes to Horizon 2020 and ERA objectives, as mentioned in SWD(2014) on Nuclear Education and Training. This work package has close links with project 542 Open Access to JRC Research Infrastructures and aims at consistency with that project.	JRC.G.2 Franz-Josef HAMBSCH	3.3.6.b	ENER	JRC	DG ENER D2 Nuclear Energy technology, Nuclear waste and Decommissioning		JAEA - Japan Atomic Energy Agency MS EU - Member states EU US DoE - US Department of Energy (DOE)	01/01/2014 30/12/2020	INS-RS	4 5 6 7	EUFRAT Open Access progress report PLC Long counter for neutron fluence monitoring A new gamma-source for dosimetry EUFRAT Open Access progress report	The EUFRAT Open Access progress report will include the minutes of the two PAC meetings in 2017, the summary of proposals, their evaluation and resource allocation and summaries of the support provided to approved proposals. Progress on implementation of new support instrumentation will be reported. Contributions to and synergies with the JRC As part of the JRC-IRSN collaboration agreement JRC and IRSN will have a common instrument for neutron fluence measurements, the so-called PLC long counter. The primary aim is interoperability of measurement services to JRC and IRSN stakeholders and sharing experience on their use. The JRC will produce two PLCs for its own use and one for use by IRSN. IRSN will provide the detailed design specifications to the JRC and characterize these detectors at its AMANDE laboratory. In the context of the JRC - SCK'CCEN collaboration agreement a tandem based ISO gamma source of 6.1 MeV will be developed for routine use in dosimeter calibrations. The aim is to widen the range of services that may be offered to the MONNET tandem laboratory. Different methods of realising this gamma field will be investigated. Its characterisation in terms of flux will be pushed to state-of-the-art accuracy (5%). SCK'CCEN staff is involved in the design and analysis of the experiments. The EUFRAT Open Access progress report will include the minutes of the two PAC meetings in 2018, the summary of proposals, their evaluation and resource allocation and summaries of the support provided to approved proposals. Progress on implementation of new support instrumentation will be reported. Contributions to and synergies with the JRC Open Access project 542 will be summarized.	28/11/2017 30/11/2017 30/11/2017 15/12/2018	JRC technical reports Technical systems JRC technical reports JRC technical reports
												4 5	2017 SN3S training and education report 2018 SN3S training and education report	Summary report describing the contributions, course material and proceedings of the SN3S unit for 1) Training for inspectors (DG ENER) 2) ESARDA course on destructive analysis 3) Gamma spectrometry course 4) Proceedings ND2016. 5) Course on radiochemistry (Ljubljana) Summary report describing the contributions, course material and proceedings of the SN3S unit, details tbd in 2017. Presently foreseen: 1) PhD thesis UHasselt in the domain of NORM. 2) Course on liquid scintillation counting.	01/12/2017 15/12/2018	Training Training
65 - DANTE JRC.G.10	2246 - ANNETTE Advanced Network for Nuclear Education and Training and Transfer	The project aims at enhancing the Europe-wide efforts initiated in the past decades by different stakeholders to maintain and develop Education	JRC.G.10 CONCETTA FAZIO	3.3.6.b	RTD	RTD	R. LECZYCHOVA, RTD D.G.G.4	EAC ENER	- Département de Physique (Université catholique de Louvain) - Tecnatom	01/01/2016 31/12/2019	CON-IA	201701 201702	Report on available nuclear facilities in support Pilot Database/Webportal of JRC Knowledge	The report will summarise the outcome of a survey conducted on the available nuclear facilities in Europe in support to life-long learning initiatives The aim is to develop a system (database) to be integrated on a web portal gathering all information on JRC nuclear activities and containing the links to existing ad hoc websites. It will include also passive knowledge such as conferences and meetings participation.	31/12/2017 01/12/2017	JRC technical reports Scientific information systems and databases

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65 - DANTE JRC.G.10	5263 - NOWMAD Nuclear knOWledge MAnagement and Dissemination	The internal production of knowledge in support to policy making has been the core task of the JRC for the last twenty years. In this Work Package, this production of knowledge will be streamlined and more focussed in order to further strengthen the policy relevance of nuclear activities. It includes also outreach and communication activities cross-cutting the various project lead by Directorate G as way of dissemination of knowledge. The major objectives are: - To manage and disseminate knowledge generated by the scientific units of this Directorate by mapping, collating, analysing, quality checking and communicating in a systematic and digestible way all the relevant scientific data, methods, tools and to monitor knowledge available worldwide. - Attention to be given to anticipating knowledge needs, mapping knowledge gaps and suggesting research topics to be carried out in the JRC. - Ensure visibility and disseminate knowledge, both internally the Commission, to the various stakeholders and to public at large. It complements the activities performed in the other WPKs of the overarching project focusing on facilitating open access to JRC nuclear facilities including training and education.	JRC.G.10 KAISA SIMOLA	3.3.6.b	JRC	JRC	n/a	DEVCO EAC RTD SG	IAEA - International Atomic Energy Agency (IAEA) NEA-OECD - Nuclear Energy Agency (OECD)	01/01/2017 01/01/2021	INS-RS	201703	Gap Analysis-Nuclear Reactor Safety	Produce a gap analysis on JRC activities in Nuclear Reactor safety. This will include knowledge mapping, benchmarking and analysis of MSs relevant work programmes and worldwide activities. The exercise will serve as a basis to develop further gap analysis in other thematic in coming years.	01/10/2017	JRC technical reports
												201704	Analysis of JRC-MSs work programmes 2019+	Collect relevant information concerning Horizon 2020 and Member States' programmes and their outputs and impacts in the field of the KP Directorate and transfer this knowledge to the KP Units. In June/July 2017 a 2-days Workshop will be organised with all MS partners, where each part can present its R&D Programme. The JRC will present a draft of its programme, at least for 2019-20 (extension), this will help a lot to clearly define the complementarities and alignments of JRC Programme with MSs.	15/09/2017	JRC technical reports
												201705	Development of a web based KM platform	This pilot project will consist in developing a concept and implementing a Scientific Editorial platform for policy support, including making knowledge more accessible to non technical public and supporting interactive exchanges between communities of interest. It will be complemented for internal use by a platform to share relevant knowledge.	22/09/2017	Scientific information systems and databases
												201706	Briefing /review report on nuclear emerging issues	Draft briefing note (or review report) on the status of knowledge and gaps related to emerging issues of strong policy concerns. Top themes foreseen could cover Status of knowledge related to Shared Solution for Nuclear Waste Depository, Long-term operation (life extension) or small modular reactors. It could also be complemented in relation with issues identified in the anticipatory report. Top priority theme will be selected later in the WP process in consultation within and outside JRC.	31/08/2017	Science-for-policy reports
												201708	Training Activities and Open Access at JRC	Develop a Knowledge Portal and an Integrated Data Base for Education and Training, open access and Annual Report 2017.	15/12/2017	JRC technical reports
												201801	Horizon scanning 2018	Report on emerging issues in nuclear that might have policy and societal implications for Europe	20/12/2018	Science-for-policy reports
												201803	Gap Analysis 2018	Produce a gap analysis on JRC activities in 'thematic to be defined'.	01/10/2018	JRC technical reports
3.3.7 Nuclear science applications and use of radioisotopes																
3.3.7.a development of techniques for medical radiotherapy and radio-diagnosis; contribution to a resilient and sustainable supply of medical radioisotopes in the EU; development of industrial and space applications.																
561 - NAPP JRC.G.1.5	433 - TAT Targeted Alpha Therapy	In its communication (COM(2010)423) the European Commission has identified the securing of supply of radioisotopes for nuclear medicine and the improvement of radiation protection of patients and staff as key challenges. In its 3053rd meeting the European Council has stressed the need for continued efforts to actively investigate economically feasible alternatives to the current radioisotope production methods and the isotopes currently used. This WP will accrue and evaluate data on novel technologies for production and use of radiolabeled compounds in nuclear medicine and support the transfer of successful developments into standardized clinical protocols and routine use for the benefit of cancer patients in Europe and worldwide. In close collaboration with regulatory bodies it will contribute to the development of recommendations and guidelines for the safe use of radiolabeled compounds in nuclear medicine to increase safety of patients and hospital staff. In response to the increasing use of alpha emitting radionuclides in cancer therapy a registry database summarizing the clinical experience with alpha emitters will be further developed and disseminated. Training will be provided for hospital staff on the safe handling of radionuclides in clinical settings to increase safety and reduce radiation dose to	JRC.G.1.5 Alfred MORGENSTERN	3.3.7.a	JRC	JRC	S. Mundigl ENER D.3.002	GROW SANTE	- UNIVERSITA DEGLI STUDI DI ROMA LA SAPIENZA - Delft University of Technology - INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE MEDICALE - Institut de recherches subatomiques - Czech Technical University in Prague - University of Gothenburg - Albert Einstein College of Medicine - ERASMUS MEDICAL CENTER ROTTERDAM - Technische Universität München - JOHANNES GUTENBERG UNIVERSITÄT MAINZ - KING'S COLLEGE LONDON - INSTITUTE OF NUCLEAR CHEMISTRY AND TECHNOLOGY - Medical University of Warsaw IRCM - Institut de Recherche en Cancérologie de Montpellier JHU-SOM - Johns Hopkins School of Medicine ORNL - Oak Ridge National Laboratory RU - Rutgers University RUNMC - Radboud University Nijmegen Medical Centre	01/01/2014 30/12/2018	INS-RS	1	Standardization of clinical protocols	The aim of this deliverable is to transfer successful developments in targeted alpha therapy into standardized clinical protocols and routine use in close collaboration with regulatory bodies. Furthermore it will contribute to the development of recommendations and guidelines for safe clinical use of radionuclides on European level. In this context data on therapeutic efficacy and tolerability of radiolabeled compounds will be accrued, evaluated and disseminated in peer-reviewed journals.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												2	Registry of clinical use of TAT	For several years JRC has contributed to the clinical testing and application of alpha emitters for treatment of various types of cancer. In recent years the number of patients treated with alpha emitters has increased very significantly world wide. Recently a database has been set up to collect and disseminate the increasing body of clinical experience with alpha emitters. The database will be maintained and further developed.	31/12/2017	JRC technical reports
												3	Training and knowledge transfer on Alpha Therapy	In response to the increasing clinical use of alpha emitters, training on the safe handling on alpha emitting radionuclides in clinical settings will be provided to staff in hospitals and cancer research centers to improve radiation safety and reduce radiation dose. Knowledge on the benefits and potential of TAT for cancer treatment will be disseminated through co-organization of the 10th International Symposium on Targeted Alpha Therapy, continuing a symposium series initiated by JRC in 1997.	31/12/2017	Training
												4	Outsourcing of nuclide production technology	Transfer of JRC's know-how related to the production of medical isotopes, in particular Actinium-225 and Bismuth-213 to external partners. Cooperation with commercial partners through provision of expertise, training and know-how licenses to support setting up of production facilities to secure supply in Europe and world-wide. Support to IAEA, to the National Atomic Energy Commission in Argentina and to CERN to support the establishment of Actinium-225 production facilities.	31/12/2017	Training
561 - NAPP JRC.G.1.5	5150 - SMeR Sustainable and Resilient Supply of Medical Radioisotopes in the EU	The supply of radioisotopes for worldwide medical applications is one of the most important aspects of nuclear science. Every year, over 50 million imaging exams are conducted using radiopharmaceuticals; in addition, a growing number of treatments involve radioactive elements combined with specific affinity molecules for targeted therapy. Emerging approaches and technologies, such as personalised medicine, will create an extra burden in the already fragile supply. The production of radioisotopes for medical applications involves an unique, just in time, chain of supply, in which the half-lives of the radionuclides are extremely limited, and which is strongly relying on the availability of nuclear reactors, until now mainly government-subsidized research facilities. Among other factors, the aging of the reactors and the strategic changes in nuclear policy in the EU MS and worldwide contribute to the critical fragilities in the security of supply of medical radioisotopes, highlighted in the severe shortages experienced in 2008-2010. In reply, the EU Council has adopted several	JRC.A.7 MARGARIDA GOULART DE MEDEIROS	3.3.7.a	ENER	JRC	Georgi SIMEONOV	SANTE		01/01/2017 31/12/2018	INS-RS	01	The EU market of medical radioisotopes	Survey commissioned to a service contractor to compile information on the market of medical radioisotopes in all EU member states, including current national health service approach, patient access to medical radioisotope procedures, pricing and reimbursement systems, and other information found relevant and included in the technical specifications of the tender.	31/12/2017	External study reports
												02	Contribution to EU OSMR and OECD-NEA HLGMR reports	Written contributions and presentations to be delivered in the plenary sessions of the EU observatory on the Supply of Medical Radioisotopes and of the High-level Group on the Security of Supply of Medical Radioisotopes (HLG-MR).	31/12/2018	JRC contributions to policy documents
												03	Contribution to SAMIRA	The JRC will provide written contributions to the development of the Strategic Agenda for Medical, Industrial and Research Applications of nuclear and radiation technology (SAMIRA) to DG ENER, based on the activities of the SMeR WPK.	31/12/2017	JRC contributions to policy documents
												04	Sustainable and resilient supply of MR in the EU	Report on the EU market of medical radioisotopes, including analysis of the survey data, current and emerging medical use of radioisotopes in the EU, and recommendations to improve the sustainability and resilience of supply of medical radioisotopes.	30/09/2018	Science-for-policy reports
												05	Sustainable EU Market of Medical Radioisotopes	Scientific publication with data extracted from the commissioned survey and the JRC report on the EU market of medical radioisotopes	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
561 - NAPP JRC.G.1.5	5900 - ActiniumPSMA Actinium-PSMA-617 for therapy of	The aim of this project is to develop a standardized protocol for formulation of the novel	JRC.G.1.5 Alfred MORGENSTERN	3.3.7.a	ENER	JRC	S. Mundigl ENER D.3.002	GROW SANTE	- Technische Universität München - Medical University of Warsaw	03/02/2017 31/12/2017	INS-PC	1	Report on proof of concept project	Report on the development, testing and validation of a formulation for the radiopharmaceutical Actinium-225-PSMA-617.	31/12/2017	JRC technical reports
4 A deeper and fairer internal market with a strengthened industrial base																
4.1 Internal market, industry, entrepreneurship and SMEs																
4.1.a strengthening industry in the single market - industrial policy development, notably to support standardisation, reference measurements and (nano)materials; support for industrial sectors to enhance their environmental efficiency, energy performance, resilience to climate change, and achieve reductions in the intensity of GHG emissions, including vehicle emission test procedures and assessment of innovative technologies;																
433 - SciNANO JRC.F.2	178 - NANOMILE Engineered nanomaterial mechanisms of interactions with living systems	The NanoMILE project is aiming at establishing a fundamental understanding of the mechanisms of nanomaterial interactions with living systems and the environment, and uniquely to do so across the entire life cycle of nanomaterials and in a wide	JRC.F.2 Douglas GILLILAND	4.1.a	GROW	RTD	GROW - Otto LINHER (GROW.D.2) ; RTD - Georgios KATALAGARIANAKIS (RTD.D.3)	ENV SANTE	ECHA - European Chemicals Agency (ECHA) EFSA - European Food Safety Authority	01/03/2013 28/02/2017	CON-IA	4	NanoMile Project final report	Report summarising the results of the NANOMILE project	30/04/2017	Project management related documents/reports identified as outputs of the JRC Work
326 - EE-E3P JRC.C.2	189 - SILC Crosscutting Valorisation of SILC	The aim of this WPK (Administrative Arrangement) is to provide support to DG GROW for the valorisation and dissemination of the results of	JRC.C.7 JOSE ANTONIO MOYA RIVERA	4.1.a	GROW	GROW	Mr. Aurelien GENTY	CLIMA ENER ENV		01/09/2012 31/10/2017	CON-AA					
433 - SciNANO JRC.F.2	212 - NANOREG A common European Approach to the Regulatory Testing of Nanomaterials	Based on questions and requirements supplied by regulators and legislators, this large scale flagship FP7 project will deliver answers on nanoEHS needed by regulatory authorities and legislators. It	JRC.F.2 Hugues CRUTZEN	4.1.a	GROW	RTD	GROW - Otto LINHER (GROW.D.2) ; RTD - Georgios KATALAGARIANAKIS	ENV SANTE	CEFIC - European Chemical Industry Council (CEFIC) Chem Cos Pharm Food Agri - Chemicals, Cosmetics,	01/03/2013 28/02/2017	CON-IA	7	JRC NANOREG annual report	The project has been prolonged for additional six months by DG RTD. JRC contribution to the final report	31/03/2017	Project management related documents/reports identified as outputs of
		HOT-NANO supports the establishment of a sound science-based and balanced regulatory framework for nanomaterials (NM) (e.g. under REACH, Cosmetics Products, Food & Feed Contact										10	Nanomedicines Interaction with biological systems	Establishment of an inventory of the most frequent biological responses triggered by the nanospecific properties of nanodrugs. The information will include currently used in vitro methods that are able to detect interactions with biological systems but it will also cover a review of existing standards applicable to nanomedicines in order to identify gaps where	30/11/2017	Article contribution to periodicals or to conference proceedings listed in

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Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
433 - SciNANO JRC.F.2	373 - HOT-NANO Harmonisation Of Tools for sound regulatory assessment of nanomaterials	<p>Materials, Biocides, Pharmaceuticals) to support innovation, growth, EU/global trade, and consumer acceptance, while ensuring a high level of protection for human health (also in occupational settings) and the environment, and clear and accurate information to all stakeholders. HOT-NANO supports EU regulatory processes via the harmonisation of assessment tools such as test methods, guidelines, guidance (physico-chemical, human health, environment) and safety assessment methodologies (e.g. non-testing approaches such as grouping and read-across) for NMs and other chemicals.</p> <p>It also supports development of international test guidelines and standards, EU policy making and international consensus-reaching on risk assessment methodologies for chemical substances focusing on NMs, e.g. at OECD and ISO levels.</p> <p>The work involves active participation in international fora, such as OECD (playing a leading role in the Working Party on Manufactured Nanomaterials and representing the Commission in the Test Guidelines Programme, which govern global harmonisation of methods) and ISO/CEN, to represent EU interests/priorities. Results are fed via EU working groups into technical and policy documents of Commission Services, EU Agencies and other actors, supporting EU legislation such as the Test Method Regulation or the update of chemicals legislation to specifically address NMs. Nanomedicines are addressed via work with the IPRF.</p> <p>Moreover, HOT-NANO manages the JRC Nanomaterials Repository to provide benchmark materials for the scientific development and regulatory implementation of methods for which reference materials are not (yet) available, and the NANOHUB database. The objectives and work of HOT-NANO are underpinned by research activities and complementary collaborative research projects, particularly on physical/chemical/biological characterisation of NMs.</p> <p>It is important that EU regulations on NMs, as requested by the EU Parliament and other EU bodies and stakeholders, are adapted in a scientifically sound way to support safety, consumer confidence, access to information, a level playing field, and the single market without stifling innovation or growth. EU regulators, industry and the public, all benefit from this. The WPK addresses SciNano objectives related to industrial NMs and chemicals.</p>	JRC.F.2 Juan RIEGO SINTES	4.1.a	GROW	JRC	GROW D.1 (M.Puolamaa, P. Baricic); ENV A.3 (A.Kobe, K.Kilian); SANTE (R.L. Perez Berbejal) RTD (G.Katalagarianakis) EMPL(J. Costa-David)	CNECT EMPL ENV RTD SANTE	CEFIC - European Chemical Industry Council (CEFIC) CEN - European Committee for Standardization Chem Cos Pharm Food Agri - Chemicals, Cosmetics, Pharmaceuticals, Food, and Agrochemicals Industry Chem Cos Pharm Food Agri EU - Competent Authorities of EU Member States ECHA - European Chemicals Agency (ECHA) EFSA - European Food Safety Authority ICCR - International Collaboration of Cosmetics (ICCR) ISO - International Organization for Standardization (ISO) OECD - Organisation for Economic Co-operation and Development (OECD)	01/01/2016 31/12/2020	INS-RS	12	Harmonisation 2017	Report of contribution and output of activities supporting EU & International harmonisation on EHS for NM in EU NCM-43, OECD WNT-29, OECD WPMN-18, ISO and CEN meetings, the EU Competent Authority Sub-group on Nanomaterials (CASG Nano), the Nanomaterials Working Group and other fora related to the implementation of REACH and other regulations related to nanomaterials. Report on contributions and output to the Interservice Group on Nanotechnology, the ICCR and other Commission Working Groups	30/11/2017	JRC contributions to policy documents
												13	Adaptation to Technical Progress - 9	This deliverable will ensure coherence of EU test methods with international guidelines by providing the test methods for the 9th ATP for the Test Method Regulation (number and dates tbc).The number of methods depends on a regular priority setting and developments in the scientific area. The exact date of approval by the EU National Coordinators is not predictable and, in addition, the exact date of the official voting and adoption in the committee process is even less predictable	30/11/2017	JRC contributions to policy documents
												14	Repository annual report	Report on the activities of the JRC Repository of Nanomaterials in 2017. Development and implementation of internationally harmonised Test Guidelines for nanomaterials assessment relies on the availability of benchmark (or representative) materials both for the method developers and for the users. JRC hosts the first set of thoroughly tested nanomaterials for use as benchmarks for research and regulatory tests development and implementation	28/02/2018	Reference Material
												17	Publications related to nanomaterials regulation	In support to the core policy-related work of HOT-NANO, there are ongoing laboratory activities related to the development of the JRC's nanomaterials repository, characterisation of these materials, methods for determination of the interaction of nanomaterials with biological systems or the environment, and grouping/read-across methods. Scientific output related to these is often produced with collaboration partners. At least two publications and technical reports are foreseen by mid-2018.	30/06/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												18	Guidance on NM grouping and read-across	Under REACH, every single nanoform of a nanomaterial must be assessed. This imposes a heavy resource load to industry. A guidance document on the application of grouping and read-across to nanomaterials to avoid the need of massive testing is urgently needed and must be available in the ECHA site well in advance of the REACH deadline for Registration (mid-2018). JRC will continue contributing to drafting such guidance, also exploiting JRC results of 2016/2017	15/12/2017	JRC contributions to policy documents
												19	Harmonisation 2018	Report of contribution and output of activities supporting EU & International harmonisation on EHS for NM in EU NCM-44, OECD WNT-30, OECD WPMN, ISO and CEN meetings, the EU Competent Authority Sub-group on Nanomaterials (CASG Nano), the Nanomaterials Working Group and other fora related to the implementation of REACH and other regulations related to nanomaterials. Report on contributions and output to the Inter-Service Group on Nanotechnology, the ICCR and other Commission Working Groups	30/11/2018	JRC contributions to policy documents
												20	Adaptation to Technical Progress - 10	This deliverable will ensure coherence of EU test methods with international guidelines by providing the test methods for the 10th ATP for the Test Method Regulation (number and dates tbc).The number of methods depends on a regular priority setting and developments in the scientific area. The exact date of approval by the EU National Coordinators is not predictable and, in addition, the exact date of the official voting and adoption in the committee process is even less predictable	30/11/2018	JRC contributions to policy documents
												9	Critical quality attributes for nanomedicines	Suitable test methods for evaluation of quality and safety of nanomedicines will be optimised and qualified in house according to EMA's procedures. Through this work JRC will contribute to the assessment and harmonisation of test methods and protocols for nanomedicines. The critical quality and safety attributes will be based on collaborative work with the International Pharmaceutical Regulators Forum (IPRF).	01/12/2017	JRC technical reports
63 - SANSIF JRC.G.1.3	450 - PreMaQ Pre-normative Materials Qualification Research	<p>Building on advanced non-destructive evaluation methods developed in the unit, like ultrasonic, neutron diffraction, small punch creep and fracture tests, and nano-indentation, the following objectives are pursued:</p> <p>I. Pre-normative R&D for materials characterization with regard to manufacturing quality, service-induced degradation, and inspectability of nuclear structural materials and components.</p> <p>II. Harmonisation of test methods and development of international standards for the characterisation of advanced materials and welded components, in particular the ISO/TC 135 WG on residual stress measurements and the revision of the CEN WA 15627 in ECISS TC 101 on Small Punch testing as well as the creep related standards ISO 204 and EN 13445.</p> <p>The experimental work is performed on candidate materials for Gen IV applications.</p>	JRC.G.1.4 MATTHIAS BRUCHHAUSEN	4.1.a	GROW	JRC	Hein Bollens (Deputy HOU GROW.J.4)	RTD	CEN - European Committee for Standardization EERA - European Energy Research Alliance ESNII - European Sustainable Nuclear Industrial Initiative GIF - Generation-IV International Forum HZDR - Helmholtz-Zentrum Dresden-Rossendorf e.V. ISO - International Organization for Standardization (ISO) NUGENIA - Nuclear Generation II & III Association PSI - Paul Scherrer Institute SNETP - Sustainable Nuclear Energy Technology Platform (SNETP)	01/01/2014 31/12/2018	INS-RS	20154	Updated instrument control system HFR/HB4 to replace obsolete equipment (more than 15 years old). Work has been delayed severely	Installation of updated software and hardware at residual stress diffractometer HFR/HB4 to replace obsolete equipment (more than 15 years old). Work has been delayed severely	29/09/2017	Technical systems
												20171	Transfer of CEN CWA 15627 into an EN standard	The current, outdated Code of Practice for Small Punch testing will be revised and transferred into an EN standard. The deliverable is the draft standard that will be submitted to public enquiry (prEN).	31/10/2017	JRC contributions to standards
												20172	Round-Robin on Room Temperature Nanoindentation	Conclusions from a Round-Robin exercise carried out by the collaborators of the EERA-JPNM pilot project NINA – Nanoindentation for nuclear Applications. The final goal of the inter-laboratory measurement campaign is to develop guidelines of good practices for room temperature measurements of the mechanical properties of materials at the micro-nanoscale.	30/06/2017	JRC technical reports
												20173	Revision of ISO 204	The revised ISO 204 Creep test standard draft circulated 2016, final editing 2017	16/06/2017	JRC contributions to standards
												20174	Revision of EN13445	The EN13445 is being updated for negligible creep, JRC modifications in Clause 19 and Annex V.	15/12/2017	JRC contributions to standards
												2017O	Outreach activities	Publications e.g. on NeT Task Group 4 activities, and Small Punch Testing	15/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												201803	Best Practices High Temperature Nanoindentation	Report based on the experience from High Temperature Nanoindentation (e.g. Round Robin within NINA)	14/12/2018	JRC technical reports
												20181	Mechanical Tests in Hot Cells	Based on the outcome on the del. 20164 " Joint IET/ITU feasibility study on mechanical testing in hot cells" a test setup will be built. The outcome of the EERA JPNM pilot project TASTE will be taken into account and liaising with the Joint Technical Team on testing of fuel claddings that is expected to be formed as a follow up of TASTE will be sought.	14/12/2018	Technical systems
												20182	ISO Standard Neutron Diffraction Stress Meas.	JRC-IET is convener of the Working Group "Non-destructive testing/Radiation methods" under ISO/TC 135/SC 5. The WG is in charge of the development of an International Standard on the Method to Measure Residual Stresses by Neutron Diffraction. The draft undergoes formal review in 2016 by SC5 and is expected to be finalized in 2018.	14/12/2018	JRC contributions to standards
												2018O	Outreach activities	Scientific Publications e.g. on nanoindentation and miniature test methods for fuel claddings	14/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
		The objective of this work package is, through use and extension of existing experimental battery testing infrastructure, to perform robust pre-normative experimental performance and safety														
												10	SET plan Action 7	Support to the follow-up of Phase 1 of the implementation of the SET plan Action 7 as defined by F.6	29/12/2018	JRC contributions to policy documents
												11	Follow up Actions on standardisation	Follow up of Actions identified in Executive Summary Report of the Putting Science into Standards experts workshop on batteries for e-vehicles	29/12/2018	JRC contributions to standards

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
563 - BATEST JRC.C.1	472 - BESTEST Battery Energy Storage Testing for Safe Electrification of Transport	<p>evaluation of electric vehicle energy storage devices.</p> <p>This science-based work package contributes to the objectives of the BATEST project to achieve European Union policy goals pertaining to low-carbon, safe and sustainable transport and energy storage by following 3 lines of activities: (1) robust support towards safe and sustainable e-mobility and battery-related policy and international regulations; (2) harmonisation of standards for battery energy storage test methods to facilitate innovation; (3) underpinning innovation and EU industry's competitiveness through technology validation and stimulating commercialisation by enhancing safety and consumer acceptance.</p> <p>Activities in this work package comprise experimental testing and numerical modelling. These competences are supplemented with knowledge management activities to identify opportunities for integration of Europe's research and innovation contributions which will increase the competitiveness of European industry in the global battery market. To achieve its objectives this work package exploits JRC's independence as a warranty to ensure impartial and robust scientific support to battery-related standards, regulations and innovation. The knowledge, competences and experimental facilities of this work package are strategically positioned to support additional policy areas including battery thermal propagation testing for UNECE regulation of electric vehicle safety. Deliverables for any additional policy support areas will be added pending formal requests from the relevant policy DGs and assignment of required</p>	JRC.C.1 Lois BRETT	4.1.a	GROW	JRC	Aleksander Lazarevic	ENER MOVE RTD	<p>CEN - European Committee for Standardization</p> <p>CENELEC - European Committee for Electrotechnical Standardization (CENELEC)</p> <p>EUROBAT - Association of European Automotive and Industrial Battery Manufacturers</p> <p>UN ECE - UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE</p> <p>US DoE - US Department of Energy (DOE)</p>	01/01/2017 30/12/2018	INS-RS	12	Scientific publications 2017	This deliverable will include the following outputs: publications and conference proceedings focusing on the areas of electric vehicle component testing activities and results	29/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												13	Scientific publications 2018	This deliverable will include the following outputs: publications and conference proceedings focusing on the areas of electric vehicle component testing activities and results	29/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												3	UNECE GTR on EVS – Electrolyte/Venting Task Force	Support to DG GROW (co-chair) in the activities of the co-sponsors group and Informal Working Group on electric vehicle safety (EVS) set up by WP.29 with a view to develop UN Global Technical Regulation (GTR) vehicle safety. Support towards drafting of formal GTR proposal for submission to GRSP/WP29.	29/12/2017	Science-for-policy reports
												4	Informal Working Group of UNECE GTR on EVS	Support to DG GROW (co-chair) in the activities of the co-sponsors group and Informal Working Group on electric vehicle safety (EVS) set up by WP.29 with a view to develop UN Global Technical Regulation (GTR) vehicle safety. Support towards drafting of formal GTR proposal for submission to GRSP/WP29.	29/12/2017	JRC contributions to policy documents
												5	SET plan Action 7	SET plan Action 7 "Become competitive in the global battery sector to drive e-mobility forward." To support to the follow-up of Phase 1 of the implementation of the SET plan Action 7 as defined by F.6	28/12/2017	JRC contributions to policy documents
												6	Follow-up PSIS experts workshop	Executive summary report of the Putting Science into Standards experts workshop on batteries for e-vehicles, including recommended follow-up actions	28/12/2017	JRC contributions to standards
												9	Informal Working Group of UNECE GTR on EVS	Support to DG GROW (co-chair) in the activities of the co-sponsors group and Informal Working Group on electric vehicle safety (EVS) set up by WP.29 with a view to develop UN Global Technical Regulation (GTR) vehicle safety in the second phase.	29/12/2018	JRC contributions to policy documents
219 - Photovoltaic Energy JRC.C.2	579 - PVREF Photovoltaics Standards, Performance and EU Research Infrastructure	<p>This work package targets a series of themes of high relevance to the implementation of EU policies on renewables, on innovation and on competitiveness:</p> <p>a) Develop European and international standards to promote a transparent market of manufacturers and investors, and to promote innovative PV technologies.</p> <p>b) Pre-normative R&D to improved accuracy of the technical measures of the performance and reliability of PV products, which underpin investments, EU electricity markets, trade regulations and other legal measures.</p> <p>c) Provide a hub for European PV research efforts, providing training, promoting best practices in performance assessment using round robins and intercomparison, hosting of trainees and visiting scientists</p> <p>d) Provide independent reference measurements for EU research projects, national laboratories and industry.</p> <p>e) Technical coordination of the annual European Photovoltaic Solar Energy conference (EU PVSEC). The European Solar Test Installation (ESTI) provides the platform for the experimental research and focal point for JRC's support to developing our largest and most competitive source of sustainable electricity.</p>	JRC.C.2 Ewan DUNLOP	4.1.a	GROW	JRC	GROW.B.3 "Standards for Growth" (Hein BOLLENS, DHoU)	ENER RTD	<p>CENELEC - European Committee for Electrotechnical Standardization (CENELEC)</p> <p>EERA - European Energy Research Alliance</p> <p>IEC - International Electrotechnical Commission</p> <p>PV Ind EU - Photovoltaic industry EU</p> <p>R&D Inst Int - Governmental and independent R&D institutions</p> <p>SET-Plan Com - SET-Plan Community</p>	01/01/2014 31/12/2018	INS-RS	1701	PV Standards Status 2017	Annual report on technical standards for PV products and systems, based on contributions to: - International Electrotechnical Commission Technical Committee 82 activities - European Committee for Electrotechnical Standardization (CENELEC) TC-82 activities - IECRE (IEC System for Certification to Standards Relating to Equipment for Use in Renewable Energy Applications) - International PV Quality Assurance Forum	31/12/2017	JRC contributions to standards
												1702	Potential Implications of Ecodesign for PV	DG-GROW is considering whether to include PV modules under the Ecodesign directive. The report will review the possible implications and the eventual requirements for performance and life cycle data to underpin the process.	30/06/2017	Science-for-policy reports
												1703	Status of PV-storage-grid standards	Assessment of the status of current standards for small systems relevant to residential and small commercial application, including results from relevant JRC experimental activities (in collaboration with C3).	31/12/2017	JRC technical reports
												1704	PV Product Performance	Results of calibrations performed for EU industry and research organisations	31/12/2017	Reference Material
												1705	Validation of improved performance measurements	Reports verifying ESTI's unique independent traceability chain for irradiation measurements and on benchmarking activities with peer external organisations	31/10/2017	Validated methods, Reference methods and measurements
												1706	PV Deployment Potential in the EU	Update the analysis of the distribution of the levelised cost of electricity generated by small PV systems over the EU (in collaboration with work packages PV-GIS and RE-PORT). The report will address other factors affecting deployment, including land availability and suitability, storage options and also administrative barriers. Finally it will provide a summary assessment for each Member State.	30/06/2017	Science-for-policy reports
												1707	Potential of Hybrid-Organic PV Products	Polymer and hybrid-organic photovoltaic devices are exciting developments, with efficiencies of up to 20% have been reported. However there are open questions regarding the power measurement, long-term stability and environmental impact. This paper will describe ESTI's work to establish adequate performance measures, involving Dir F (Health, Consumer and Reference Materials) and external experts if needed.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												1708	PV deployment for electric vehicle charging	Study of the role of dedicated PV charge stations and their impact potential for satisfying large scale EV deployment (collaboration with F8)	31/12/2017	JRC technical reports
												1709	R&D for improving PV performance measures	Scientific papers on improved methods for measurement of power and energy yield for new and emerging PV technologies, in particular multi-junction devices, bifacial modules smart modules (i.e. with in-built power electronics for DC-DC or DC-AC control) and on organic and hybrid-organic devices. The research will also address advanced methods for solar radiation and spectral measurements, including inter-comparisons. Results will also be communicated to relevant standards committees.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												1801	PV Standards Status 2018	Annual report on technical standards for PV products and systems, based on contributions to: - International Electrotechnical Commission Technical Committee 82 activities - European Committee for Electrotechnical Standardization (CENELEC) TC-82 activities - IECRE (IEC System for Certification to Standards Relating to Equipment for Use in Renewable Energy Applications) - International PV Quality Assurance Forum	31/12/2018	Science-for-policy reports
												1802	PV Products for Near Zero Energy Buildings	All new buildings in the EU will be required to be Near Zero Energy from 2021 on (already from 2019 for public buildings). PV is one of the few options for on-site or near-site energy production. However the availability of appropriate products, information on their performance and integration standards are a source of concern. The report will assess these aspects and provide recommendations for short-to-medium actions. It will use results of lab investigations as well as market surveillance.	30/06/2018	Science-for-policy reports
												1803	Performance Assessment of Innovative PV Products	This is an annual report that a) provides an update on the adequacy of measurement methods used to assess the electrical performance of PV products and prototypes. b) verifies the status of ESTI's unique independent traceability chain for irradiation measurements c) summarises results of calibrations performed for EU industry and research organisations, as well as benchmarking activities with peer external organisations	31/12/2018	Science-for-policy reports
												1804	Technical report on the outcome at EUPVSEC 2018	The European Photovoltaic Solar Energy Conference is the world's largest PV research conference and a showcase for European innovation. The JRC coordinates the technical programme. The report will focus on the technical outcome of the EUPVSEC conference 2018 and seeking for future strategy in the area of European photovoltaic solar energy.	31/10/2018	JRC technical reports

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Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
												1805	Pre-normative R&D on PV Performance Measurement	Scientific papers on improved methods for measurement of power and energy yield for new and emerging PV technologies, including smart modules (i.e. with in-built power electronics for DC-DC or DC-AC control) and on building integrated products. Research will also address advanced methods for solar radiation measurements, including inter-comparisons. Results will also be communicated to relevant standards committees.	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												1806	Operational Life of PV Modules	Assessment of the combined effect experiments performed in the International PV Quality Assurance Forum, to which ESTI is invited to participate as one of group of elite laboratories. Establishing such a method has significant consequences for long-term economics of PV systems, and in consequence on investment and deployment	31/12/2017	JRC technical reports
												1807	PV Deployment Potential in the EU	Update the analysis of the distribution of the levelised cost of electricity generated by small PV systems over the EU (in collaboration with work packages PV-GIS and RE-PORT). The report will address other factors affecting deployment, including land availability and suitability, storage options and also administrative barriers. Finally it will provide a summary assessment for each Member State.	31/12/2018	Science-for-policy reports
437 - SAFE&CLEAN-CONSTRUCT JRC.E.4	610 - ELSALab ELSA Laboratories: Reaction Wall and HOPLAB facilities	To design, set up and carry out large-scale experimental test campaigns for scientific and policy support projects ensuring high standards of management, safety and quality. Perform tests for work packages SLA4F4E and BUILD-CIP. Give Transnational and Open Access to Research Projects within work packages SEERIA 4 EU and ELSA OPEN, respectively. To maintain, operate efficiently and keep up to date the Reaction Wall and HOPLAB facilities. This includes regular and improved maintenance, strategic planning for new investments, implementation of safety standards, ISO certification, calibration and management of sensor equipment, maintenance of the ELSA database, implementation of protocols for qualification and procurement. The WP provides also for optimal transnational cooperation and effective operation of RIs within the European Research Area by supporting a sustained platform for collaboration of RIs in	JRC.E.4 Pierre PEGON	4.1.a	GROW	JRC	Marzena Rogalska, Head of Unit, Fulvia Raffaelli, Acting Head of Unit, DG GROW, C.1	ENER ENV HOME RTD	CEN - European Committee for Standardization ESFRI - European Strategy Forum on Research Infrastructures Fusion for Energy - European Joint Undertaking for ITER and the Development of Fusion Energy NEA-OECD - Nuclear Energy Agency (OECD)	01/01/2014 31/12/2019	INS-RS	7	ELSLab report 2017	Experiments planning, execution and control, strategic planning for new investments & procurement, implementation of safety standards, successful re-certification, protocols for qualification, maintenance, data curation, performance of the Laboratory. Operational use of ISO Building, equipment and instrument management, implementation of Control Room for multi media communication. Collaboration with international partners (USA, Korea, Japan and China) and data sharing.	15/12/2017	JRC technical reports
												8	Prospective for photogrammetry and DIC	Assess the techniques used up to now at ELSA, in photogrammetry and digital image correlation, for sensing displacement and deformation of large structures, based on results obtained from past projects. Review the available equipment and software in order to establish guidance for their use in ELSA. Carry out a prospective analysis of the future needs, and of the development of such techniques, considering the new opportunities in technology and software developed in-house and elsewhere.	15/12/2017	JRC technical reports
												9	ELSLab report 2018	Experiments planning, execution and control, strategic planning for new investments & procurement, implementation of safety standards, successful re-certification, protocols for qualification, maintenance, data curation, performance of the Laboratory. Performance of ISO Building and Control Room. Report on i) activities and future plans within collaboration agreements with international partners and ii) the opportunities and scope for European Research Infrastructures to join ESFRI.	15/12/2018	JRC technical reports
437 - SAFE&CLEAN-CONSTRUCT JRC.E.4	615 - INNOBUILD Pre-Normative Research in Support of Innovation in Buildings and Construction	Following the Digital Single Market priority and considering the current ICT adoption level of the European construction sector, this WP targets to support and link up initiatives for the digitisation and automation in construction. Building industry must accelerate take up of digital technologies regardless of a company's size and develop its full potential to remain globally competitive as well as give a new boost for jobs, growth and investment. The speed up of development and adoption of common standards in key areas, such as BIM (Building Information Modelling) is ensured also by the support and contribution to the CEN Technical Committee 442 on BIM standardization work	JRC.E.4 Martin POLJANSEK	4.1.a	GROW	JRC	Marzena Rogalska, Head of Unit, Fulvia Raffaelli, Acting Head of Unit, DG GROW, C.1	CLIMA ENER ENV RTD	CEN - European Committee for Standardization ESFRI - European Strategy Forum on Research Infrastructures	01/01/2017 31/12/2020	INS-RS	07	Innovative Materials for Retrofitting of Building	Report on the seismic and energy retrofitting of deficient building envelopes with innovative and low environmental impact materials covering • Assessment of the vulnerability of existing European building envelopes both in terms of safety and energy efficiency. • State-of-the-art review. • Recommendations on novel, environmental friendly and cost effective solutions for structural and energy retrofitting. • Evaluation of socio-economic impact of the proposed retrofitting solutions.	20/12/2017	Science-for-policy reports
												08	BIM standards and initiatives	A report on Building Information Modelling (BIM) standardisation work with CEN Technical Committee 442 on linking of geospatial and BIM data.	22/12/2017	JRC technical reports
												09	Prenormative assessment - structural design	A report on advances in structural design govern by the development of materials, computational methods and variation of loads due to the climate change.	20/12/2018	Science-for-policy reports
341 - Reference Materials JRC.F.6	625 - Health RM Health diagnostics Reference Materials	Development of certified reference materials for crucial biomarkers used for the monitoring of the health status of patients. These CRMs are required by the EU IVD Directive 98/79/EC demanding higher order reference materials for establishing clinical traceability of diagnostics further specified in ISO 17511 and ISO 15194. This workpackage supports the International Federation for Clinical Chemistry and Laboratory Medicine and ISO in standardisation activities for biomarkers measured by hospitals as health indicators, the global market for IVDs and the development of new disease diagnostics e.g. for Alzheimer' and autoimmune disease.	JRC.F.6 Stefanie TRAPMANN	4.1.a	GROW	JRC	Eliša MINCHEVA (GROW D4)		IFCC - International Federation of Clinical Chemistry and Laboratory Medicine EDQM - European Directorate for the Quality of Medicines and HealthCare (EDQM, Council of Europe) JCTLM - Joint Committee for Traceability in Laboratory Medicine (JCTLM)	01/01/2014 31/12/2018	INS-RS	09	Release of a CRM for Alzheimer's	Release of the first certified reference material for diagnostics of Alzheimer's.	31/12/2017	Reference Material
												1	CRM certified for additional protein	Certified reference materials for the monitoring of the health status of patients via proteins blood certified for additional protein content.	31/12/2014	Reference materials
												10	Scientific publication	Scientific publication on the development of reference materials for in-vitro diagnostics.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												11	Release of a anti-PR3IgG autoimmune CRM	Release of an anti-PR3IgG autoimmune certified reference material.	31/12/2017	Reference Material
												12	Release of a T3 CRM	Development of a triiodothyronine (T3) certified reference material used for in-vitro diagnostics and measurements of free triiodothyronine in serum, which is of interest for patients with thyroid dysfunction.	31/12/2018	Reference Material
												4	Release of an anti-βGB autoimmune reference mat.	Release of a certified reference material used to establish clinical traceability of diagnostics measurement as demanded by EU IVD Directive 98/79/EC.	31/12/2017	Reference Material
341 - Reference Materials JRC.F.6	650 - NanoRMs Reference Materials for nanotechnologies	A competitive and fair internal market with a strengthened industrial base (Juncker's priority Number 4) requires high standards of European products. Mutual recognition of compliance with standards in the global as well as the internal market for goods needs to be effective, as it avoids duplication of compliance checks and enhances trust between trade partners. Standardisation of measurements plays an important role in supporting the industry and the regulator in this respect. In the EU, legally binding nanomaterial definitions were adopted as part of sector-specific legislation (e.g. food and cosmetics), requiring to inform consumers about the presence of nanomaterials in products on the market. This work package is focusing on the development of new reference materials for measurements of size and other physico-chemical parameters at the nanoscale in support of enterprise and industry policy. The WPK collaborates with the US NIST in this respect. This work is strongly requested by a number of partner DGs (ENV, SANTE, GROW, CNECT, RTD, EMPL, see ARES(2016)1802763). There will be an emphasis on the development of reference materials for the implementation of the Commission	JRC.F.6 Andrea HELD	4.1.a	GROW	JRC	Otto Linher (GROW D.2), Andrej Kobe (ENV A.3)	ENV SANTE		01/01/2014 31/12/2018	INS-RS	100	Certified Reference Material for particle sizing	Release of a new Certified Reference Material for particle sizing in size ranges close to, but just outside, the nano-range. This new CRM will support laboratories to correctly classify materials as nano- or non-nanomaterials. The CRM will be accompanied by supporting documentation (certification report). COM(2011)696	30/09/2017	Reference Material
												11	Report on need for nano RMs	A report will be provided detailing the need for (Certified) Reference Materials in the field of nanomaterial characterisation. The report will be prepared using input of partner policy DGs as well as external experts in the field.	30/06/2017	JRC technical reports
												110	Certified Reference Material for particle sizing	Release of a new Certified Reference Material for particle sizing in size ranges close to, but just outside, the nano-range. This new CRM will support laboratories to correctly classify materials as nano- or non-nanomaterials. The CRM will be accompanied by supporting documentation (certification report). COM(2011)696	30/09/2017	Reference Material
												12	Release of a nano CRM	A Certified Reference Material of nanoparticles certified for selected shape parameters will be released.	31/12/2018	Reference Material
												13	Peer reviewed publications	Results of the workpackage will be published in peer reviewed journals.	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
		Industrial and advanced materials are a key product, creating employment and economic										10	Release of a biofuel/diesel blend CRM	Release of a new Certified Reference Material consisting of a biofuel/diesel blend, certified for fuel quality parameters as listed in EN 14214.	31/12/2017	Reference Material

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
341 - Reference Materials JRC.F.6	652 - Industrial RM Industrial Reference Materials	growth. The availability of (C)RMs as measurement standards and quality benchmarks for functional properties of advanced materials, industrial products and fuels is important for supporting the competitiveness of European industry and for the required compliance controls with EU legislation. This WPK develops measurement standards and quality benchmarks for functional properties of advanced materials, industrial products and fuels which: a) support the competitiveness of European industry; b) require compliance controls with EU legislation and c) are not addressed by existing reference materials. This includes the sustainable provision of CRMs for testing of impact resistance (in support of Regulation (EU) 305/2011 and Directives 1997/23/EC and 2009/105/EC), and fuel/biofuel reference materials enabling the implementation of Directive 2009/30/EC on fuel specifications and supporting Directive 2009/28/EC on the promotion of renewable energy. The work package will	JRC.F.6 Andrea HELD	4.1.a	GROW	JRC	Dhooge Hans (GROW.C3)		ISO - International Organization for Standardization (ISO) VAMAS - Versailles Project on Advanced Materials and Standards (VAMAS)	01/01/2014 31/12/2018	INS-RS	100	Certified Reference Material for titanium metal	Release of a new Certified Reference Material for minor and trace elements in titanium metal. The element content of Ti significantly influences their physical properties which are relevant for their use in advanced applications ranging from parts for aircrafts and cars to chemical industry. The CRM will be accompanied by supporting documentation for the user (certification report).	31/12/2017	Reference Material
												11	Release of Charpy CRMs	Release of new Charpy Certified Reference Materials, certified for impact toughness.	31/12/2017	Reference Material
												110	Certified Reference Material for Ti alloys	Release of a new Certified Reference Material for minor and trace elements in Ti and TiAl6V4 alloy. The element content of Ti and Ti alloys significantly influences their physical properties which are relevant for their use in advanced applications ranging from medical implants to parts for aircrafts. The CRM will be accompanied by supporting documentation for the user (certification report).	31/12/2017	Reference Material
												12	Publications	Scientific results of this workpackage will be published in peer reviewed journals.	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
190 - NEMESIS JRC.C.4	659 - Vehicle Emissions Support to European vehicle/engine emissions legislation	This work package includes assistance to DG-GROW on specific open issues concerning future emission legislation. Technical and scientific support is requested by DG-GROW for the development of the European emission legislation for heavy and light duty vehicles, including non-road mobile machinery. This institutional work package complements the activity carried out under the Administrative Arrangement between the JRC and DG-GROW (WPK 4440 -EMILE) which financially covers only part of the staff and the specific credits needed to carry out the required work. Moreover, compared to the activities directly covered by the AA, this WP includes also more looking forward activities with a broader scope, not just addressing specific immediate policy needs. Additional currently unregulated pollutants, specific engine/after-treatment technologies, innovative instruments and methods are also explored. Its major objectives are to: - produce analyses and studies on emission data generated in ad-hoc experimental campaigns to support the discussion with stakeholders on future emission legislation; - technical contribution (test procedures, measurement techniques, ...) to the proposals for emission legislation; - coordination of expert groups for the development/review of test procedures. The experimental activities are designed to address specific issues of new/advanced vehicle technologies that require adaptation/modification of the existing emission legislation/test procedures as well as to assess/validate new emission/energy	JRC.C.4 Giorgio MARTINI	4.1.a	GROW	JRC	Panagiota DILARA	CLIMA ENV	UN ECE - UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE	01/01/2014 31/12/2018	INS-RS	3	Review of RDE test procedure	Report presenting the results on-road emissions testing and listing areas for further investigation and providing suggestions for the revision of the RDE (Real Driving	31/12/2017	JRC technical reports
												4	Report on sub 23nm particles from vehicles	Report on sub23nm particle emissions of vehicles of the latest generation and recommendations for an alternative procedure to measure sub23nm particles.	31/12/2017	Science-for-policy reports
												5	Report on HD PEMS measurement at cold temperatures	Final report on the assessment of the heavy duty vehicles (HDV) PEMS emissions at cold temperatures, which will include the analysis of the measurement campaigns and conclusions as regards to the significance of the issue and possible ways forward	31/12/2017	Science-for-policy reports
												6	Report on market surveillance	The JRC is expected to test, both in the laboratory and the road, a certain number of vehicles representative of the latest technologies using protocols suitable to investigate the possible use of defeat devices. Quarterly reports with the results of the market surveillance activities will be provided to DG-GROW.	31/12/2017	JRC technical reports
												7	Report on market surveillance	The JRC is expected to test, both in the laboratory and the road, a certain number of vehicles representative of the latest technologies using protocols suitable to investigate the possible use of defeat devices. Quarterly reports with the results of the market surveillance activities will be provided to DG-GROW.	31/12/2018	JRC technical reports
												8	Scientific publications and outreach activity 2018	Scientific publications on the topics of emissions from light and heavy duty vehicles (possible topic: sub-23 nm particles from latest generation of vehicles)	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												9	Scientific publications and outreach activity 2017	Scientific publications on the topics of emissions from light and heavy duty vehicles	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												1	Critical materials for energy technologies	Deliverable 1 is a report on materials that might become critical for the deployment of selected low carbon energy technologies (LCT) on longer term. The work can contribute to the long-term EU strategy for successful deployment of the projected LCT by 2030. The role of the substitution within this timeframe will be underpinned. The report builds on 2016 report extending the scope by introducing new technologies. Collaboration with C3 unit.	15/09/2017	Science-for-policy reports
												2	Structural materials in energy	Deliverable 2 is a report on the specific role of structural materials required in large quantities in present and future energy technology installations. The report will give an estimation of present and 2030 demand for such structural materials in current and future technologies under present economic, environmental, political and technological trends. Potential issues related to internal production or imports of structural materials will be identified.	30/06/2018	Science-for-policy reports
4	Materials for LCT – datasets	Data collection, data analysis and creation of datasets on materials relevant to low carbon energy and transport technologies; the information will be used within the existing Materials Information System.	30/11/2017	Datasets												
5	Scientific publications	Scientific publications related to EU competitiveness in terms of materials used smart grids and energy storage technologies. Supply chain issues will be investigated.	31/10/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)												
7	Materials needs for refurbishment of buildings	Deliverable 7 is a report which will estimate the materials needs for refurbishment of the existing buildings in line with the Buildings thematic area of the European Energy Efficiency Platform. Materials such as plastics, smart glass, steel, non-ferrous metals, ceramics etc. are needed for the purpose. The EU reliance on both raw materials and manufacturing capacities will be evaluated.	31/08/2018	Science-for-policy reports												
8	Materials implications for efficient air transport	Deliverable 8 is a study which will identify materials implications for more efficient air transport sector; besides fuel efficiency, utilising less and lighter materials having sufficient strength is utmost for the air transport. Screening the latest tendencies in the air transport and associated materials implications will provide ground to identify gaps and opportunities for EU.	30/11/2018	Science-for-policy reports												
9	Scientific publications	Scientific publications on special materials needs for buildings refurbishment and more efficient air transport sector, pointing out the weakest link in the supply chain of these materials for the EU.	30/11/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)												
190 - NEMESIS JRC.C.4	661 - UNECE -GRPE Global Harmonisation and Standardisation at UNECE for Vehicles & Engines	The compliance with emissions standards is a central issue of vehicle certification worldwide. Most manufacturers produce vehicles for a global market. Even if vehicles are not identical worldwide, the compliance with different emissions standards in each region creates high burdens Pre-normative research in line with the strategy outlined in the white paper "Roadmap to a Single	JRC.C.4 Maria ASTORGA-LLORENS	4.1.a	GROW	JRC	STEININGER Nikolaus (GROW); Alessandro Marotta (GROW); SZYMANSKI Maciej (GROW); Panagiota Dilara (GROW); Alessandro	CLIMA ENER MOVE RTD TRADE	UN ECE - UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE	02/01/2017 21/12/2018	INS-RS	8	JRC assessment of WLTP driving indexes	JRC technical report on: JRC assessment of WLTP driving indexes for LD vehicles and framed in the WLTP process	22/12/2017	JRC technical reports
												9	Report on Evaporative emissions and EU protocol	Report on Evaporative emissions and new protocols for EU	21/12/2018	JRC technical reports
												1	Electric and hybrid vehicle testing	Report outlining the results of testing focusing on: electric vehicle performance (range, efficiency, durability, emissions in case of hybrids...) in realistic use scenarios (e.g.	31/12/2017	Science-for-policy reports

JRC 2017- 2018 WORK PROGRAMME																	
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category	
208 - ELITE JRC.C.4	664 - EVIAC Electric Vehicle Interoperability Assessment and Standardisation	European Transport Area – Towards a competitive and resource efficient transport system* and the Energy Union Package on electric vehicles and their interoperability with charging infrastructure and smart power grids, in collaboration with Argonne National Laboratory-Department of Energy (ANL-APRF/DoE) through information exchange, common analyses, and round-robin testing; input to the common EU/US work programme evolution and road map on Interoperability. EVIAC will conduct pre-normative research on electric vehicle performance (range, efficiency, durability, emissions in case of hybrids,...) in realistic use scenarios (e.g. different climatic and driving conditions), and recharging interoperability tests between electric vehicles and the multitude of recharging equipment. The work will contribute to the development of robust type approval procedures ensuring good levels of real word energy efficiency and reliable information to consumers. On the basis of targeted pre-normative research results, support will be given to European Standardisation Organisations. Industry	JRC.C.4 Elena PAFFUMI	4.1.a	GROW	JRC	Panagiota DILARA	CLIMA CNECT ENER MOVE RTD TRADE	ANL - Argonne National Laboratory TABC - Trans-Atlantic Business Council	01/01/2014 31/12/2018	INS-RS	2	Analysis of real driving data	Report outlining the results of desktop research mainly based on the analysis of big data concerning vehicle activity patterns in agglomeration areas in support to transport policy assessment and pilot case studies.	30/12/2017	Science-for-policy reports	
												3	Assessment of in-vehicle durability of batteries	Report outlining the results of durability tests or simulation of EVs/HEVs	31/12/2018	JRC technical reports	
												4	Scientific publications and outreach activity 2017	This generic aggregate deliverable includes interim reports, peer-reviewed scientific publications, presentations, conference proceedings, participation to workshops etc.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)	
												5	Scientific publications and outreach activity 2018	This generic aggregate deliverable includes interim reports, peer-reviewed scientific publications, presentations, conference proceedings, participation to workshops etc. They will be related to: - Comparison of lab and on road tests on e-vehicles - Joint publication with ANL - Peer reviewed papers - Big data analysis -Testing on interoperability	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)	
433 - SciNANO JRC.F.2	812 - NanoComput Computational approaches in the safety assessment of nanomaterials	Investigation of the availability of Quantitative structure-activity relationship (QSAR) models and grouping approaches for nanoparticles, and assessment of their applicability under REACH. Work in the framework of the AA no 33269.	JRC.F.3 Andrew WORTH	4.1.a	GROW	GROW	GROW.D.1, BARICIC Peter; ENV.A.3, KOBE Andrej	ENV RTD SANTE		01/01/2014 31/03/2017	CON-AA	4	Final report	Final report on the work achievements of the entire project, including the annual report of 3rd project year, the annual progress reports for years 1 and 2, finalized findings and conclusions, final recommendations on the use of computational methods, final recommendations on the further research, structured and searchable inventory/database of models.	31/03/2017	JRC Technical reports	
437 - SAFE&CLEAN-CONSTRUCT JRC.E.4	813 - SAFESUST Impact of sustainability and energy efficiency requirements on building design and retrofit	The work will consist in the development of a knowledge tool for assessing the global performance of buildings in terms of safety, energy efficiency and environmental impact. The tool will provide a unique performance indicator, expressed in economic/monetary terms, for qualifying the global performance of buildings, group of buildings or building typologies, to be used as an input for strategic decisions at urban and regional scales.	JRC.E.4 Paolo NEGRO	4.1.a	GROW	JRC	Marzena Rogalska, Head of Unit, Fulvia Raffaelli, Acting Head of Unit, DG GROW, C.1	ENER ENV REGIO	CEN - European Committee for Standardization	01/01/2017 30/12/2019	INS-RS	1	Methodology for the global evaluation of buildings	A method to assess the global (Safety, Energy and Sustainability) performance of typological buildings will be developed. The method, expressed in terms of costs (construction costs, expected operation costs, savings and losses) is intended to be used by stakeholders for evaluating the different options in the maintenance and/or development of building stocks.	18/12/2017	JRC technical reports	
												2	Expert group on buildings renovation	A group of experts and technical stakeholders in the field of economic aspects of building's renovation and development will be set-up. The group is intended to bridge the gap between technical and economic issues for safety, energy and sustainability.	17/12/2018	JRC technical reports	
433 - SciNANO JRC.F.2	1470 - NANODEFINE Development of methods and standards supporting the Commissions nano-definition	FP7 project NMP.2013.1.4-3 Development of an integrated approach based on validated and standardized methods to support the implementation of the EC recommendation for a	JRC.F.6 Andrea HELD	4.1.a	GROW	RTD	Otto Linher (GROW D.2), Nicholas SEGEBARTH (RTD D.3)	ENV SANTE		01/11/2013 31/10/2017	CON-IA	7	Interlaboratory validation studies	Up to four interlaboratory validation studies will be organised and evaluated for methods that were previously selected, based on in-house validation results. Apart from the usual contribution to project reports, validation reports on these studies will be prepared.	31/10/2017	JRC technical reports	
158 - SPC Economics JRC.B.5	2049 - ManuBase2 Economic analysis of European	Development of a framework and its application to the analysis of the competitiveness of the EU	JRC.B.5 Peter EDER	4.1.a	GROW	GROW	Francisco Caballero (DG ENTRA.4)	RTD		01/10/2015 31/05/2017	CON-AA	2	Analysis of EU competitiveness	Analysis of EU industries and Member States and their international competitiveness	31/05/2017	Science-for-policy reports	
433 - SciNANO JRC.F.2	2184 - PROSAFE Promoting the Implementation of Safe by Design	The project (CSA) coordinates and supports EU and international activities for nanomaterials safety assessment, management and governance by streamlining data acquisition, collection and	JRC.F.2 Hugues CRUTZEN	4.1.a	GROW	RTD	GROW – Otto LINHER (GROW.D.2); RTD - Georgios KATALAGARIANAKIS	ENV RTD SANTE	CEFIC - European Chemical Industry Council (CEFIC) Chem Cos Pharm Food Agri - Chemicals, Cosmetics,	01/02/2015 30/04/2017	CON-IA	2	JRC PROSAFE Final Report	Report on JRC led policy oriented deliverables	31/05/2017	Project management related documents/reports identified as outputs of	
433 - SciNANO JRC.F.2	2191 - NANoREG II Development and implementation of Grouping and Safe-by-Design approaches within regulatory framework	This work package contributes to the design and implementation of a regulatory system which can deal with a rapidly diversifying system of manufactured nanomaterials (MNM) over time. This system has to be flexible enough to be able to deal with new targets and requirements in the future on the basis of the development and introduction of Safe by Design (SbD) principles.	JRC.F.2 Juan RIEGO SINTES	4.1.a	GROW	RTD	GROW – Otto LINHER (GROW.D.2); RTD - Georgios KATALAGARIANAKIS (RTD.D.3)	ENV RTD	CEFIC - European Chemical Industry Council (CEFIC) CHEM Industry - Chemicals Industry Chem Cos Pharm Food Agri EU - Competent Authorities of EU Member States Chemicals, Cosmetics, Pharmaceuticals, Food, and Agrochemicals industry	01/09/2015 31/08/2018	CON-IA	3	JRC NANoREG-2 annual report 2	Report on JRC led policy oriented deliverables	31/12/2017	Project management related	
												4	JRC NANoREG-2 annual report 2	Report on JRC led policy oriented deliverables	31/08/2018	Project management related documents/reports identified as outputs of the JRC Work Programme	
190 - NEMESIS JRC.C.4	2248 - LowBraSys A Low environmental Impact Brake System	The LOWBRASYS H2020 project aims at demonstrating a novel and low environmental impact brake system that will reduce micro and nanoparticles emissions by at least 50% both in number (PN) and in mass, whilst improving the measurement and understanding of their effects on health and the environment and providing recommendations to policy makers. In the LOWBRASYS project JRC will be responsible for the task regarding the definition of real drive brake patterns and consequently the definition of a laboratory tests procedure to assess real drive brake emissions (RDBE). JRC will also lead the task having the objective of proposing recommendations for policy makers in order to define a standard limit and procedure for particulate emissions deriving from brakes. These activities suit well with the expertise of JRC to provide scientific support to EU policies.	JRC.C.4 Giorgio MARTINI	4.1.a	GROW	RTD	Nikolaus STEININGER	ENV			01/09/2015 31/08/2018	CON-IA	1	New real-drive brake cycle for chassis dynamometer	As responsible for Task 2.5 on Standards & Technology Requirement, JRC will steer the definition of real drive brake patterns and of a laboratory tests procedure to assess real drive brake emissions	30/06/2018	Science-for-policy reports
													2	Recommendations on brake particles emission legisl	JRC will collect the inputs on strengths and weaknesses raised during the project with the aim of defining recommendations for future European Legislation, including emissions of brake particles and measurement procedure	30/06/2018	Science-for-policy reports
													3	Scientific publications and outreach activity 2018	This generic aggregate deliverable includes the following outputs: interim reports, peer-reviewed scientific publications, presentations, conference proceedings, participation to workshops etc.) on the topic of emissions concerning L-category vehicles, light duty vehicles (M and N category) and heavy duty vehicles.	30/06/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
													4	Scientific publications and outreach activity 2017	This generic aggregate deliverable includes the following outputs: interim reports, peer-reviewed scientific publications, presentations, conference proceedings, participation to workshops etc.) on the topic of emissions concerning L-category vehicles, light duty vehicles (M and N category) and heavy duty vehicles.	31/12/2017	Science-for-policy reports
158 - SPC Economics JRC.B.5	2746 - GreenImpact-E2KLEMS Toward Green Competitiveness: Explaining and Predicting Productivity Impacts of Environmental Policy	This project builds a multi-industry framework for modelling & analysis of international competitiveness and environmental efficiency of EU industries. It integrates in a seamless manner the analysis of the industry' production technology and its environmental effects in the form of the environmental output production function. It will include environmental effects into Total Factor Productivity for the same sectors as the EU KLEMS database	JRC.B.5 TEODORA CORSATEA	4.1.a	GROW	JRC	Francisco Caballero (DG GROW)	ECFIN ENER ENV ESTAT RTD	ENV gov - Government organisations for environment, forestry, river and catchments, land use and environmental impact MIN Eco Energy EU - Ministries of Economy and Energy, Energy Authorities EU		01/01/2015 29/12/2018	INS-ER	3	Apply E2KLEMS to environment & industrial policies	Application of E2KLEMS modelling framework to assessment of environmental and industrial policies. In this report we will present the results of pilot policy assessment exercises using the new E2KLEMS analytical framework. The policy assessment case reports will contain: the description of the policy programme; detailed quantitative analysis of the policy effects on economic and environmental productivity; qualitative discussion and policy implication. DDG01 will contribute a section and on us	31/12/2017	JRC technical reports
													4	E2KLEMS growth accounting framework	Policy assessment with environmentally extended E2KLEMS growth accounting framework This deliverable contains one or more less technical documents for wider audience of researchers, policy makers and practitioners presenting the results of pilot policy analysis cases	31/12/2017	Science-for-policy reports
													5	Analyse Sustainable Productivity & Competitiveness	Environmentally Extended KLEMS Model for Analysis of Sustainable Productivity and Competitiveness One or more presentations at the economic and environmental policy research related conferences, where the description and the results of the project (in particular the results of policy cases) are presented to a wider audience of researchers, policy makers and practitioners.	31/12/2017	Oral presentation
													6	Academic publication of the E2KLEMS research	Environmentally Extended KLEMS Model for Analysis of Sustainable Productivity and Competitiveness. Publication in an economic or environmental policy research journal, where the results of the project are presented.	28/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
158 - SPC Economics JRC.B.5	3240 - FIGARO Full International and Global Accounts for Research in Input-Output Analysis	The project aims to prepare with Eurostat the annual production of EU Multi-country Input-Output Tables and a five-yearly production of EU Multi-	JRC.B.5 Peter EDER	4.1.a	ESTAT	ESTAT	Isabelle REMOND-TIEDREZ	ECFIN GROW TRADE		01/10/2015 31/12/2017	CON-AA	2	EU Multi-country Input-Output Tables	Final report on establishing an annual production of EU Multi-country Input-Output Tables and a five-yearly production of EU Multi-country Supply, Use and Input-Output Tables.	31/12/2017	JRC technical reports	
158 - SPC Economics JRC.B.5	3241 - ELIOD Environmental and labour accounts linked to a global input-output	Production of labour and environmental accounts in extension of the EU and global multi-country input output tables in order to contribute to the follow-up	JRC.B.5 Peter EDER	4.1.a	GROW	GROW	Aurelien GENTY	CLIMA ECFIN EMPL ESTAT ENV		16/12/2015 30/11/2018	CON-AA	2	Second Interim Report	Data projection	31/12/2017	Scientific information systems and	
												3	Final Report	Final Report	30/09/2018	JRC technical reports	
158 - SPC Economics	3320 - CompTrade	This work package supports policy making and	JRC.B.5	4.1.a	GROW	JRC	Francisco De Asis	ENV		01/01/2016	INS-ER	2	Methodological or analytical papers	Analysis and modeling of the socio-economic and environmental impacts of trade and other policies	31/12/2017	Science-for-policy reports	

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
JRC.B.5	Economic analysis of industrial competitiveness and trade	better regulation by methodologies, data and analyses for assessing	Peter EDER	4.1.a	GROW	SG	CABALLERO SANZ	SG TRADE		29/12/2020	INS-RS	3	Industrial competitiveness report	Analysis of the industrial competitiveness of Member States in support of the contributions of policy DGs to the European Semester	31/12/2018	Science-for-policy reports
159 - Waste Management JRC.B.5	3321 - FertilisersCriteria1 Quality criteria for recovered materials used in fertilising products	This WP develops European-wide quality criteria for recovered materials used in fertilising products. Based on the results DG GROW will develop the Fertiliser Regulation into a more favourable legal framework for the production of fertilisers from biological and waste materials with the aim to give them access to the entire EU market. This initiative will support the circular economy and create the	JRC.B.5 Peter EDER	4.1.a	GROW	GROW	LIEGEOIS Eric (GROW), DELVAUX Vincent (GROW), JAMERS An (GROW)	ENV		01/12/2015 30/11/2018	CON-AA	2	Interim report on quality criteria	Interim report on quality criteria for recovered materials used in fertilising products	30/06/2017	Project management related documents/reports identified as outputs of the JRC Work Programme
145 - IRI-TEC JRC.B.3	3484 - KeyTER Key Enabling and Emerging Technologies for Territorial development and Competitiveness	Analysis of the capability of the EU to develop new technologies which are critical to the transformation of strategic industries and to the emergence of new ones. The aim is to better	JRC.B.3 Alexander TUEBKE	4.1.a	GROW	JRC	HEIDI MOENS	CNECT REGIO RTD	OECD - Organisation for Economic Co-operation and Development (OECD)	01/01/2016 31/12/2017	INS-UR	2	2017 annual report	Report on "Assessing the capability of EU industry to develop advanced manufacturing technologies, in particular key enabling technologies, expected to produce major competitiveness and employment impact and to enhance the industrial modernisation of the EU".	31/12/2017	JRC technical reports
165 - Innovative Companies JRC.B.7	3488 - HGIE Policies to Support Financing of High Growth Innovative Enterprises	This is a continuation of the WPK "Policies to Support Financing of High Growth Innovative Enterprises (HGIE)" began in 2016. Its objectives are to assess the impact of Member States' and EU financing support instruments on the growth of young innovative companies, and to identify generalisable success factors for such support measures. It contributes to the project objectives by providing evidence regarding framework conditions for the development of HGIE and by deriving policy recommendations, based on the analyses' results, for the design of HGIE finance support instruments. The work in 2017 consists of two parts. (i)	JRC.B.7 Katarzyna SZKUTA	4.1.a	GROW	JRC	Astrid BARTELS	CNECT EAC ECFIN FISMA REGIO RTD		01/01/2016 31/10/2017	INS-RS	369006	Impact of HGIE support	This analysis will assess the effect on young innovative companies' growth of CIP (2007-2013) loan guarantee and equity facilities targeting SMEs with fast-growth potential. It will employ a counterfactual design comparing successful and unsuccessful applicant firms, by linking data on applicant firms and firm growth/financial development. This will be complemented by a preliminary assessment of comparable EFSI SME Window instruments. Led by B7, potential contributions from B3 and B4.	30/11/2017	Science-for-policy reports
273 - SafePro JRC.F.2	3503 - STANPAHs Developing methods to determine migration of PAHs from materials used in consumer products	The European Commission (DG GROW) has a binding obligation to revise the restriction of Polyaromatic Hydrocarbons (PAHs) in plastic and rubber used in consumer articles (as set out in (EU) No. 1272/2013, amending entry 50 of Annex XVII to the REACH regulation), taken into account	JRC.F.2 Josefa BARRERO	4.1.a	GROW	GROW	Mr Klaus Berend (HoU), Mr. Enrique Garcia John (policy officer) GROW.DDG1.D.1, REACH	EMPL ENV JUST SANTE	CEFIC - European Chemical Industry Council (CEFIC) CENELEC - European Committee for Electrotechnical Standardization (CENELEC) ECHA - European Chemicals Agency (ECHA)	10/05/2016 09/11/2017	CON-AA	1	Migration of PAHs from plastic and rubber	Midterm progress report on the review carried out for better understanding of migration behaviour of PAHs from plastic and rubber materials used in consumer products, and the steps to follow for the development of a methodology aiming at the determination of the release of the PAHs from plastic and rubber used in consumer articles.	10/02/2017	JRC technical reports
341 - Reference Materials JRC.F.6	3567 - MRM Management of Reference Materials	Reference materials (RMs), including certified reference materials (CRMs), are crucial measurement standards and quality benchmarks	JRC.F.6 Andrea HELD	4.1.a	GROW	JRC	Jean-Francois AGUINAGA (GROW B.1)		CEN - European Committee for Standardization ISO - International Organization for	01/01/2016 31/12/2018	INS-RS	4	Training on the use of	A training course on the selection and use of reference materials, including aspects of	31/12/2017	Training
437 - SAFE&CLEAN-CONSTRUCT JRC.E.4	3810 - ELSA OPEN Opening ELSA to scientists and industry for R&D	ELSA will make available to researchers and industry the Reaction Wall and HOPLAB facilities and will associate to the European Strategic Forum for Research Infrastructures. Access will be granted through open calls and proposals will be evaluated by a Selection Panel, considering the priority topics defined by a Steering Committee. Depending on the proposal, ELSA will provide technical assistance, testing of specimens, data acquisition, support in the use of analytical tools, a web-based data repository and tele-presence. The work package supports the Commission's objective	JRC.E.4 Georgios TSIONIS	4.1.a	GROW	JRC	Marzena Rogalska, Head of Unit, Fulvia Raffaelli, Acting Head of Unit, DG GROW, C.1		CEN - European Committee for Standardization ESFRI - European Strategy Forum on Research Infrastructures	01/01/2016 31/12/2019	INS-UR	3	Progress Report on ELSA Open - 2017	The deliverable will include the results of the evaluation by a User Selection Committee, according to the evaluation criteria and priority topics. It will present the final detailed design of the specimens, experimental set-up, testing sequence, instrumentation and data acquisition system for the selected projects. It will report on the progress of execution and technical results of the selected projects, depending on the time schedule and the type of project.	22/12/2017	JRC technical reports
437 - SAFE&CLEAN-CONSTRUCT JRC.E.4	3827 - AA-Eurocodes Support to policies and standards for sustainable construction	The work planned under the Administrative Arrangement expands the JRC area of support to DG GROW (previously - standards for structural design (Eurocodes)) to a wider field of policies and standards for sustainable construction. The planned tasks are focused on: 1. Further harmonization and evolution of policies and technical tools in the field of sustainable construction. *IT support for the implementation and monitoring of the Eurocodes and other policies/tools *Facilitating the practical implementation and harmonized use of the Eurocodes and other policies/tools *New fields of application (adaptation of structural design to climate change, design of underground structures) *Resource efficient construction and renovation 2. Promotion of the construction sector outside the EU: *Fostering and coordinating promotion of the Eurocodes, European energy efficiency and resource efficiency policies and tools outside the EU The work will be performed in synergy with IPTS/J5 and IES/H7.	JRC.E.4 Silvia DIMOVA	4.1.a	GROW	GROW	Marzena Rogalska, Head of Unit, Fulvia Raffaelli, Acting Head of Unit, Manfred Fuchs, DG GROW, C.1	CLIMA DEVCO ENER ENV NEAR	CEN - European Committee for Standardization MS EU - Member states EU	01/01/2016 30/06/2017	CON-AA	21	Maintenance of the Eurocodes IT tools - Y2	The deliverable reports the administrative and IT tasks executed in 2016 on the design of European portal on resource efficiency, and on the maintenance and development of NDPs Database, Eurocodes website, Centralized Eurocodes Helpdesk, on the usage of the website and the Helpdesk, and on the state of registration of users and state of the upload of NDPs.	31/07/2017	JRC technical reports
437 - SAFE&CLEAN-CONSTRUCT JRC.E.4	3827 - AA-Eurocodes Support to policies and standards for sustainable construction	The work planned under the Administrative Arrangement expands the JRC area of support to DG GROW (previously - standards for structural design (Eurocodes)) to a wider field of policies and standards for sustainable construction. The planned tasks are focused on: 1. Further harmonization and evolution of policies and technical tools in the field of sustainable construction. *IT support for the implementation and monitoring of the Eurocodes and other policies/tools *Facilitating the practical implementation and harmonized use of the Eurocodes and other policies/tools *New fields of application (adaptation of structural design to climate change, design of underground structures) *Resource efficient construction and renovation 2. Promotion of the construction sector outside the EU: *Fostering and coordinating promotion of the Eurocodes, European energy efficiency and resource efficiency policies and tools outside the EU The work will be performed in synergy with IPTS/J5 and IES/H7.	JRC.E.4 Silvia DIMOVA	4.1.a	GROW	GROW	Marzena Rogalska, Head of Unit, Fulvia Raffaelli, Acting Head of Unit, Manfred Fuchs, DG GROW, C.1	CLIMA DEVCO ENER ENV NEAR	CEN - European Committee for Standardization MS EU - Member states EU	01/01/2016 30/06/2017	CON-AA	22	Harmonized use of Eurocodes in Europe - Y2	The deliverable presents the JRC work during 2016 on the further harmonization of Eurocodes: analysis of the NDPs accepted by the Member States; assessment of reliability levels of design achieved in the Member States by choice of the NDPs; extractions of data from the NDPs Database to facilitate the work of CEN/TC250 on the further harmonization of the second generation of the Eurocodes; European Workshop on further harmonization.	31/07/2017	JRC technical reports
437 - SAFE&CLEAN-CONSTRUCT JRC.E.4	3827 - AA-Eurocodes Support to policies and standards for sustainable construction	The work planned under the Administrative Arrangement expands the JRC area of support to DG GROW (previously - standards for structural design (Eurocodes)) to a wider field of policies and standards for sustainable construction. The planned tasks are focused on: 1. Further harmonization and evolution of policies and technical tools in the field of sustainable construction. *IT support for the implementation and monitoring of the Eurocodes and other policies/tools *Facilitating the practical implementation and harmonized use of the Eurocodes and other policies/tools *New fields of application (adaptation of structural design to climate change, design of underground structures) *Resource efficient construction and renovation 2. Promotion of the construction sector outside the EU: *Fostering and coordinating promotion of the Eurocodes, European energy efficiency and resource efficiency policies and tools outside the EU The work will be performed in synergy with IPTS/J5 and IES/H7.	JRC.E.4 Silvia DIMOVA	4.1.a	GROW	GROW	Marzena Rogalska, Head of Unit, Fulvia Raffaelli, Acting Head of Unit, Manfred Fuchs, DG GROW, C.1	CLIMA DEVCO ENER ENV NEAR	CEN - European Committee for Standardization MS EU - Member states EU	01/01/2016 30/06/2017	CON-AA	23	New fields of application of structural design-Y2	The deliverable reports the results of the JRC activities in 2016 on assessment of research and standardisation needs for: i) adaptation of structural design to climate change; ii) design guidelines and standards of underground structures. The work aims a vision on development of the Eurocodes after 2020 (Generation 3). The analysis is carried out by two working groups chaired by JRC. The results will be further elaborated by JRC and published as JRC Science for Policy Reports later.	31/07/2017	JRC technical reports
437 - SAFE&CLEAN-CONSTRUCT JRC.E.4	3827 - AA-Eurocodes Support to policies and standards for sustainable construction	The work planned under the Administrative Arrangement expands the JRC area of support to DG GROW (previously - standards for structural design (Eurocodes)) to a wider field of policies and standards for sustainable construction. The planned tasks are focused on: 1. Further harmonization and evolution of policies and technical tools in the field of sustainable construction. *IT support for the implementation and monitoring of the Eurocodes and other policies/tools *Facilitating the practical implementation and harmonized use of the Eurocodes and other policies/tools *New fields of application (adaptation of structural design to climate change, design of underground structures) *Resource efficient construction and renovation 2. Promotion of the construction sector outside the EU: *Fostering and coordinating promotion of the Eurocodes, European energy efficiency and resource efficiency policies and tools outside the EU The work will be performed in synergy with IPTS/J5 and IES/H7.	JRC.E.4 Silvia DIMOVA	4.1.a	GROW	GROW	Marzena Rogalska, Head of Unit, Fulvia Raffaelli, Acting Head of Unit, Manfred Fuchs, DG GROW, C.1	CLIMA DEVCO ENER ENV NEAR	CEN - European Committee for Standardization MS EU - Member states EU	01/01/2016 30/06/2017	CON-AA	24	Resource efficient construction and renovation Y2	The deliverable reports the results of JRC work in 2016. They encompass: analysis of collected case studies on resource efficient construction to establish the state of progress; coordination of working group on technical needs for holistic and standardized approach to resource efficient construction and renovation; design of European web-portal to disseminate best practices and available technologies for resource efficient construction.	31/07/2017	JRC technical reports
437 - SAFE&CLEAN-CONSTRUCT JRC.E.4	3827 - AA-Eurocodes Support to policies and standards for sustainable construction	The work planned under the Administrative Arrangement expands the JRC area of support to DG GROW (previously - standards for structural design (Eurocodes)) to a wider field of policies and standards for sustainable construction. The planned tasks are focused on: 1. Further harmonization and evolution of policies and technical tools in the field of sustainable construction. *IT support for the implementation and monitoring of the Eurocodes and other policies/tools *Facilitating the practical implementation and harmonized use of the Eurocodes and other policies/tools *New fields of application (adaptation of structural design to climate change, design of underground structures) *Resource efficient construction and renovation 2. Promotion of the construction sector outside the EU: *Fostering and coordinating promotion of the Eurocodes, European energy efficiency and resource efficiency policies and tools outside the EU The work will be performed in synergy with IPTS/J5 and IES/H7.	JRC.E.4 Silvia DIMOVA	4.1.a	GROW	GROW	Marzena Rogalska, Head of Unit, Fulvia Raffaelli, Acting Head of Unit, Manfred Fuchs, DG GROW, C.1	CLIMA DEVCO ENER ENV NEAR	CEN - European Committee for Standardization MS EU - Member states EU	01/01/2016 30/06/2017	CON-AA	25	Promotion of the construction sector outside EU-Y2	The deliverable reports the work of JRC during 2016 on promotion in third countries of European policies and standards for construction. JRC coordinates a working group on promotion encompassing other DGs, CEN, National Standardization Bodies, European Industrial Associations. JRC collects and evaluates material related to promotion needs and results, and facilitates promotion activities.	31/07/2017	JRC technical reports
603 - CC-ME JRC.I.1	3946 - CC-ME.GROW Competence Centre on Microeconomic Evaluation - GROW	The purpose of this WP is to provide scientific expertise, methodological support in the context of the assessment of the progress in the implementation of structural reforms or CSRs. This WP is developed in collaboration with DG GROW Unit A.2. Its expected outcome is to provide a review of existing measures to assess the degree of implementation of the CSRs and to provide an analysis on the determinants of CSRs implementation that can be used in the annual reports on integration and competitiveness or in DG GROW's contributions to the Annual Growth Survey and the European Semester, in line with "A New Boost for Jobs, Growth and Investment" of	JRC.I.1 LEANDRO ELIA	4.1.a	GROW	JRC	Frank SIEBERN-THOMAS			01/01/2016 31/12/2017	INS-RS	1	Analysis on determinants of CSRs implementation	The deliverable will provide a review of existing measures/methods to assess the degree of implementation of the CSR, and a sensitivity analysis thereof. Moreover, it will provide an analysis on the determinants or drivers of CSRs implementation based on the qualitative information provided by policy DGs involved in the European Semester, such as the DG ECFIN CeSaR database. Although these are qualitative assessments, the study will use quantitative methods to assess yearly progress.	31/12/2017	JRC technical reports
603 - CC-ME JRC.I.1	3946 - CC-ME.GROW Competence Centre on Microeconomic Evaluation - GROW	The purpose of this WP is to provide scientific expertise, methodological support in the context of the assessment of the progress in the implementation of structural reforms or CSRs. This WP is developed in collaboration with DG GROW Unit A.2. Its expected outcome is to provide a review of existing measures to assess the degree of implementation of the CSRs and to provide an analysis on the determinants of CSRs implementation that can be used in the annual reports on integration and competitiveness or in DG GROW's contributions to the Annual Growth Survey and the European Semester, in line with "A New Boost for Jobs, Growth and Investment" of	JRC.I.1 LEANDRO ELIA	4.1.a	GROW	JRC	Frank SIEBERN-THOMAS			01/01/2016 31/12/2017	INS-RS	2	Review: actual use of counterfactual policy impact	Subject to agreement with DG GROW and other interested Commission DGs (in particular the "core group" of SG, ECFIN, EMPL) as appropriate, provide a review on the state and actual use of (counterfactual) policy impact evaluations of microeconomic structural reforms involved in the European Semester, based on the relevant economic literature and European Semester documents (AGS, Country Reports, National Reform Programmes, Country-Specific Recommendations).	31/12/2017	Conferences and workshops organized by the JRC
603 - CC-ME JRC.I.1	3946 - CC-ME.GROW Competence Centre on Microeconomic Evaluation - GROW	The purpose of this WP is to provide scientific expertise, methodological support in the context of the assessment of the progress in the implementation of structural reforms or CSRs. This WP is developed in collaboration with DG GROW Unit A.2. Its expected outcome is to provide a review of existing measures to assess the degree of implementation of the CSRs and to provide an analysis on the determinants of CSRs implementation that can be used in the annual reports on integration and competitiveness or in DG GROW's contributions to the Annual Growth Survey and the European Semester, in line with "A New Boost for Jobs, Growth and Investment" of	JRC.I.1 LEANDRO ELIA	4.1.a	GROW	JRC	Frank SIEBERN-THOMAS			01/01/2016 31/12/2017	INS-RS	3	Financial Cycles and Sustainable Growth	The paper investigates firms' willingness to match the currency composition of their assets and liabilities and their incentives to deviate from perfect matching. Using detailed information at the loan contract level for the Hungarian non-financial corporate sector, the paper provides strong evidence to support the role of matching motivation of exporters' currency-of-denomination decisions.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
		the Commission. Input from JRC colleagues already working on related topics will be sought.										4	Currency Matching & Carry Trade: Non-Financial Co	This paper aims at estimating the "sustainable growth" for a number of countries, i.e. the output growth adjusted for both cyclical demand and financial imbalances. In the spirit of Borio et al. (2014), we test the implications of incorporating financial cycle indicators into four standard signal extraction models (extended HP filter, parsimonious model, Semi-structural model and SVAR).	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
661 - COIN JRC.I.1	3961 - COIN_GROW Monitoring the national implementation of the Small Business Act	The Small Business Act for Europe (SBA) reflects the European Commission political will to recognize the central role of SMEs in the EU economy and puts into place a comprehensive SME policy framework for the EU and its Member States. The objectives of this workpackage are: (a) to design one (or more) composite indicator(s) to monitor the national implementation of the Small Business Act (SBA) for Europe, (b) to define and analyse clusters of Member States according to SBA performance, (c) to compare the SBA framework	JRC.I.1 Michaela SAISANA	4.1.a	GROW	GROW	Ludger ODENTHAL	RTD		01/02/2016 31/01/2018	CON-AA	2017001	Report on the SBA Thematic Indicator 2017	The report will include a description of the refinements made to the SBA thematic indicator (developed in 2016) and an update of the cluster analysis. The documentation will include the indicators finally used in the construction of the SBA dimensions, and also those indicators that were considered but finally discarded (together with a justification of	20/11/2017	JRC technical reports
												2017002	Clustering EU MS on SMEs performance	The report will define clusters of MS according to SBA performance. The basis for this analysis will be the indicators included in the SBA fact-sheets as well as other structural indicators. The clusters will aim at identifying groups of countries where the SME sectors exhibit similar patterns in performance. The findings of the clustering analysis should be explained and interpreted and whenever possible illustrated by systematic evidence at country level.	20/12/2017	JRC technical reports
433 - SciNANO JRC.F.2	4200 - OPEN-NANO-LAB Opening JRC Nanobiosciences laboratories to scientists and industry for R&D	Key Enabling Technologies (KETs) underpin innovation, growth and job creation in many industrial sectors. The JRC has in the recent years built up state-of-the-art laboratories that are ideal for the characterisation of nanotechnology based advanced materials, including nanomedicines and nanosystems for health application. These laboratories will be made available to researchers and industry (especially SMEs) and will be associated to the European Strategic Forum for Research Infrastructures. Access will be granted through open calls, and proposals will be evaluated by a Selection Panel, with priority topics being defined by a Steering Committee. JRC staff will provide expert assistance to visiting users. The WPK supports the Commission priorities for jobs, growth and a stronger industrial base, by promoting innovation, in particular in advanced technology industries, such as health, energy and security. It will have a positive impact on normative developments, in particular in the health sector.	JRC.F.2 Pascal COLPO	4.1.a	GROW	JRC	Marzena Rogalska, DG GROW Unit C1	CNECT ENV RTD SANTE	CEFC - European Chemical Industry Council (CEFC) Chem Cos Pharm Food Agri EU - Competent Authorities of EU Member States Chemicals, Cosmetics, Pharmaceuticals, Food, and Agrochemicals Industry EFPIA - European Federation of the Pharmaceutical Industries and Associations (EFPIA) EMA - European Medicines Agency (EMA)	01/01/2016 31/12/2019	INS-UR	10	Evaluation of the proposal	The report will present the evaluation of the proposals submitted to the open call. Following the eligibility check, the evaluation will be performed by a User Selection Committee (USC), according to the previously defined evaluation criteria, priority topics and the terms of reference of the USC	15/04/2018	Project management related documents/reports identified as outputs of the JRC Work Programme
												11	Final design of selected projects	Final detailed design of experiments and analysis to perform for the synthesis, characterisation and/or testing of specimens for the selected projects. The design will be proposed by the user groups of the selected projects, assessed by JRC scientists, and jointly optimised and planned	30/06/2018	JRC technical reports
												12	Progress report on Open-Nano-Lab	the deliverable will report on the execution of the selected projects. It will take the form of a JRC technical report, and will for each project include details on motive for the experiments, planning and experimental design, results and conclusions. Where appropriate the results will be submitted for joint scientific publications	01/12/2018	JRC technical reports
												5	Call for proposals for access to Nano-laboratories	The call for proposals for access of external researchers to the Nanobiotechnology laboratories will be published on the JRC Science Hub and the Project web portal. The call for proposals will be accompanied by the terms of reference for the User Selection Committee, a guide for proposals, model contract agreement and the evaluation criteria	31/01/2017	Project management related documents/reports identified as outputs of the JRC Work Programme
												6	Evaluation of proposals	The report will present the evaluation of the proposals submitted to the open call. Following the eligibility check, the evaluation will be performed by a User Selection Committee (USC), according to the previously defined evaluation criteria, priority topics and the terms of reference of the USC	30/04/2017	Project management related documents/reports identified as outputs of the JRC Work Programme
												7	Final design of selected projects	Final detailed design of experiments and analysis to perform for the synthesis, characterisation and/or testing of specimens for the selected projects. The design will be proposed by the user groups of the selected projects, assessed by JRC scientists, and jointly optimised and planned	30/06/2017	JRC technical reports
												8	Progress report on Open-Nano-Lab	The deliverable will report on the execution of the selected projects. It will take the form of a JRC technical report, and will for each project include details on motive for the experiments, planning and experimental design, results and conclusions. Where appropriate the results will be submitted for joint scientific publications	15/12/2017	JRC technical reports
												9	Call for proposals for access to Nano-Laboratories	The call for proposals for access of external researchers to the NBS laboratories will be published on the JRC Science Hub and the Project web portal. The call for proposals will be accompanied by the terms of reference for the User Selection Committee, a guide for proposals, model contract agreement and the evaluation criteria	31/01/2018	Project management related documents/reports identified as outputs of the JRC Work Programme
208 - ELITE JRC.C.4	4209 - DO_NOT_DISTURB Radiointerference & Magnetic Field Strength Control Methods for Electric Vehicle Recharging Stations	DO_NOT_DISTURB evaluates measuring methods that can effectively check for critical electric & magnetic fields from high power recharging columns during their interplay with electric vehicles. It addresses potential RF-interferences and critical field strengths for the technical environment and human beings - especially during "charging" and "fast charging" processes in public spaces, when the electric car is in stand-still, but the power electronics of the recharging device and the vehicle will work at high power through-put. The work consists of a thorough experimental verification of testing methods proposed by the UN-ECE and the IEC Technical Committee 69 (standardization project IEC 61851-21-2, currently in draft status). Experimental conditions will be varied to reflect real world scenarios, to perform a critical review of	JRC.C.4 Harald SCHOLZ	4.1.a	GROW	JRC	STEININGER Nikolaus	CNECT MOVE	ANL - Argonne National Laboratory	01/01/2016 31/12/2017	INS-ER	1	Experimental Verification of Testing Methods	JRC technical report about the detailed approaches and results. Experimental Verification of Testing Methods proposed in the standardization project "IEC 61851-21-2" by the UN-ECE and the IEC Technical Committee 69	30/11/2017	JRC contributions to standards
												2	Workshop will recommend on IEC 61851-21-2 draft	The workshop proceedings of DO_NOT_DISTURB will discuss all results so far achieved the discussion with charging column producers and EMC specialists about these results, and will distill clear recommendations for the IEC 61851-21-2 draft of standardisation. The proceedings will take the form of another JRC Technical Report.	30/06/2017	JRC contributions to standards
												3	Peer-reviewed publication on DO_NOT_DISTURB result	At least one peer-reviewed publication will have been submitted, that summarises all DO_NOT_DISTURB results, incl. the standardisation recommendations, and the methodological insight gained for fast and economically testing fast charging columns with regard to potentially unwanted electromagnetic emanations.	30/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
341 - Reference Materials JRC.F.6	4281 - CONSTRUCT Validation of standards for construction materials	Some Member States are introducing national requirements for emissions from construction materials which creates new barriers to trade. Further, there is no coherence in test methods used which makes comparison of performance levels and/or test results very difficult. DG GROW has requested the JRC to support a CEN mandate on test methods for construction material by	JRC.F.6 Andrea HELD	4.1.a	GROW	GROW	Manfred FUCHS (GROW C1)		CEN - European Committee for Standardization	11/03/2016 10/03/2018	CON-AA	10	Progress report to DG GROW	Intermediate progress report to DG GROW summarising the work undertaken in the first year of the administrative arrangement	10/03/2017	JRC technical reports
												20	First report to, CEN/TC351	First report with evaluated data of stage I of the validation delivered to CEN/TC351	10/09/2017	JRC contributions to standards
												30	Second report to CEN/TC351	Second report with evaluated data of stage II of the validation delivered to CEN/TC351	10/03/2018	JRC contributions to standards
												40	Final report to DG GROW	Final report to DG GROW summarising the work undertaken in the administrative arrangement	10/03/2018	JRC technical reports
190 - NEMESIS JRC.C.4	4341 - NRMM-Type Approval Type Approval of Non-Road Mobile	The purpose of this Administrative Arrangement is to provide support to DG GROW with activities	JRC.C.4 Adolfo PERUJO MATEOS DEL	4.1.a	GROW	GROW	Philipp Troppmann (GROW C.4)			15/03/2016 31/12/2017	CON-AA	1	Final Report	Final report summarizing all the activities carried out in the context of the AA.	31/12/2017	JRC contributions to policy documents
190 - NEMESIS JRC.C.4	4440 - EMILE S&T Support to the Preparation and Implementation of the LDV and HDV legislation	The Work package focuses on providing technical and scientific support to DG-GROW for the development of the European emissions legislation concerning L-category vehicles, light duty vehicles (M and N category) and heavy duty vehicles. This in particular includes the development/fine tuning of the new Real Driving Emission (RDE) legislation, the review of the Euro VI provisions for heavy duty vehicles with specific focus on cold temperatures and on-road particle emissions, the contribution to the environmental effect study of the Euro 5 step for L-Cat vehicles. The AA also foresees a series of tests on vehicles available on the market to	JRC.C.4 Giorgio MARTINI	4.1.a	GROW	GROW	Panagiota Dilara (DG GROW C4)			01/06/2016 31/12/2018	CON-AA	1	Final Report	Final report describing all the work carried out in the context of the Administrative Arrangement.	18/12/2018	JRC technical reports
												2	Scientific publications and outreach activities	This generic aggregate deliverable includes the following outputs: interim reports, peer-reviewed scientific publications, presentations, conference proceedings, participation to workshops etc.) on the topic of emissions concerning L-category vehicles, light duty vehicles (M and N category) and heavy duty vehicles.	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
219 - Photovoltaic Energy JRC.C.2	4540 - ESTI-TPW European Solar Test Installation Third Party Work Contracts	European reference laboratory for the verification of the power and energy generation of PV devices. The job has a two CA's linked with the	JRC.C.2 Tony SAMPLE	4.1.a	GROW	n/a	n/a		MANUFACTURERS ASSOCIATION OF EUROPE (MANUE)	08/04/2016 31/12/2017	CON-TW					
190 - NEMESIS	4621 - TPW VELA Third Party Work Contracts	The JRC-IET manages a laboratory for the measurements of emissions and energy efficiency	JRC.C.4	4.1.a	JRC	n/a	Medici-Cristina		MANUFACTURERS ASSOCIATION OF EUROPE (MANUE)	01/01/2016	CON-TW	1	Emission data	The results of the tests performed for third parties are delivered directly to the third party	31/12/2017	JRC technical reports

JRC 2017- 2018 WORK PROGRAMME																	
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category	
JRC.C.4	4845 - REDEEM Real driving emissions of new diesel	of vehicles and engines (Vehicle Emissions Laboratory, VELA). Several requests for third parties work under emission Laboratory (VELA). Several requests for third parties work under emission Laboratory (VELA). Several requests for third parties work under emission Laboratory (VELA).	Barouch GIECHASKIEL	4.1.a	JRC	ENV	Martin Giorgio		OECD - Organisation for Economic Co-operation and Development (OECD)	31/12/2018	CON-AA	2	Emission data	The results of the tests performed for third parties are delivered directly to the third party.	31/12/2018	JRC technical reports	
437 - SAFE&CLEAN-CONSTRUCT JRC.E.4	4640 - EFIREsources Resource Efficient Construction towards Sustainable Design	The main goal of this project is the development of a performance-based approach and model for sustainable design, which enable to assess the efficient use of resources in buildings throughout the complete life cycle of the building, and to comply with the design rules and reliability provisions of the Eurocodes. The JRC provides scientific & technical support to DG GROW in the area of policies and standards for sustainable construction, including the Eurocodes. In this context JRC accumulated expertise and vision for further steps to be performed at European Level, needed to successfully supervise the study. The JRC develops a database with case studies on resource efficient construction to be used in the work on the project. At the same time, the planned research will enrich the JRC contribution to the analysis of technical & standardisation needs to	JRC.E.4 Silvia DIMOVA	4.1.a	GROW	RTD	Fulvia RAFFAELLI	GROW	REA - Research Executive Agency of the European Commission	01/09/2016 31/08/2018	CON-IA	1	Model for Life cycle assessment (LCA) of buildings	Development of a comprehensive model for Life Cycle Assessment (LCA) of buildings focussing on resource efficiency. The work on the deliverable comprises elaboration of appropriate indicators effectively representing resource efficient in construction, development of the LCA model, collecting and analysing case studies on resource efficient construction and renovation of buildings.	15/12/2017	JRC technical reports	
												2	Benchmarks for resource efficiency	LCA of the collected case studies will be carried out to obtain results for the selected indicators and to identify the best practices and strategies towards resource efficiency. These results will be stored in a database and will be later disseminated through a website. Furthermore, the results of the LCA will enable to identify different levels of performance for buildings and to establish benchmarks.	15/12/2017	JRC technical reports	
												3	Approach to sustainable design	An approach to sustainable design of buildings will be developed, consistent with the Eurocodes. The environmental performance of a building, focussing on the indicators for resource efficiency previously selected (Deliverable 2), will be compared with a target performance based on the benchmarked values. The distance to the target value will be considered as an estimate of the resource efficiency achieved.	30/05/2018	JRC technical reports	
												4	Recommendations and guidelines	A set of recommendations and guidelines to foster research, standardization and design practice will be defined.	31/08/2018	Science-for-policy reports	
190 - NEMESIS JRC.C.4	4847 - DownToTen Measuring automotive exhaust particles from 10 nm	The overall objective of this Administrative Arrangement is to gain targeted independent DownToTen will seek to develop a reliable and robust methodology to enhance the regulatory approach in the assessment of particle number emissions in the sub 23nm region (down to at least 10nm), focusing on state-of-the-art automotive powertrains with direct injection gasoline engines, but also diesel ones, under real-world operation conditions. To this end, DownToTen will first investigate and quantitatively describe the nature and the characteristics of nanoparticles <23 nm (formation, origin, physical and chemical character), and will set up a synthetic aerosol bench for fundamental studies at instrument level for the facilitation of metrology and evaluation purposes. Existing, proposed and under development instruments will be evaluated against	JRC.C.4 MARTIN WEISS	4.1.a	GROW	ENV	ZLATKO KREGAR			01/01/2017 31/12/2018	CON-AA	2	Emission factors	Report including: the emission factors determined, relevant post-processing after vehicle testing, and a comparison procedure to ensure consistency for all vehicles.	31/12/2018	JRC technical reports	
190 - NEMESIS JRC.C.4	4851 - PaRECEn Particle Reduced, Efficient Gasoline Engines	PaRECEn addresses the short term scope of the GV-02 call via research into and the innovation of gasoline engines for light duty vehicles. Specifically, engines used in mid to premium passenger cars will be addressed. Through using state of the art techniques, like optical engines, modelling & simulation tools (for new control strategies or understanding particle formation) and applying new engine componentry, the optimal trade-off between efficiency & emissions will be found. Of attention will be the	JRC.C.4 Giorgio MARTINI	4.1.a	GROW	RTD	Panagiota DILARA			01/10/2016 30/09/2019	CON-IA	2	Definition of most promising sampling setups	Contribution to the definition of most promising sampling setups and measurement principles for Chassis Dyno and on-road testing. Selected research sampling and analysis techniques, which were identified and optimized in previous steps will be applied and tested along with standard instrumentation. In combination with off-line chemical analysis these measurements are suitable to test robustness and reliability of the techniques identified for routine use and recommended for emission control	30/03/2017	JRC technical reports	
190 - NEMESIS JRC.C.4	4923 - FertilisersCriteria2 Impacts of quality criteria for recovered materials used in fertilising products	This WP assists DG GROW in assessing ex-ante the impacts of European-wide quality criteria for certain recovered materials used in fertilising products under the Fertiliser Regulation. The materials covered by the assessment are struvite, biochar and ash-based products. The dimensions of the impact assessment are environment and human health, economy, market and legislation.	JRC.C.4 Giorgio MARTINI	4.1.a	GROW	RTD	Panagiota DILARA			01/10/2016 30/09/2019	CON-IA	2	Scientific publications and outreach activity 2018	This generic aggregate deliverable includes the following outputs: interim reports, peer-reviewed scientific publications, presentations, conference proceedings, participation to workshops etc.) on the topics covered by the project.	30/09/2018	JRC technical reports	
159 - Waste Management JRC.B.5	4938 - FIGARO 2 Full International and Global Accounts for Research in Input-Output Analysis	The WP aims to support Eurostat in the annual production of EU Multi-country Input-Output Tables and a five-yearly production of EU Multi-country	JRC.B.5 Peter EDER	4.1.a	GROW	GROW	Eric LIEGEOIS	AGRI ENV		01/01/2017 30/11/2018	CON-AA	1	Interim report on impacts of quality criteria	Interim report on impacts of quality criteria for recovered materials used in fertilising products	31/12/2017	Project management related documents/reports identified as outputs of the JRC Work Programme	
158 - SPC Economics JRC.B.5	5032 - Eurocodes YEAR 3 Support to policies and standards for sustainable construction	The work planned under the Administrative Arrangement expands the JRC area of support to DG GROW (previously - standards for structural design (Eurocodes)) to a wider field of policies and standards for sustainable construction. The planned tasks are focused on: 1. Further harmonization and evolution of policies and technical tools in the field of sustainable construction: *IT support for the implementation and monitoring of the Eurocodes and other policies/tools *Facilitating the practical implementation and harmonized use of the Eurocodes and other policies/tools *New fields of application (adaptation of structural design to climate change, design of underground structures) *Resource efficient construction and renovation 2. Promotion of the construction sector outside the EU: *Fostering and coordinating promotion of the Eurocodes, European energy efficiency and resource efficiency policies and tools outside the EU The work will be performed in synergy with IPTS/J5 and IES/H7	JRC.B.5 Peter EDER	4.1.a	ESTAT	ESTAT	Isabelle REMOND-TIEDREZ	ECFIN ENV GROW	OECD - Organisation for Economic Co-operation and Development (OECD)	01/10/2017 31/12/2019	CON-AA	2	Interim report EU multi-country SUT	Interim report EU multi-country supply and use tables Support provided to the construction of EU multi-country supply and use tables	31/12/2018	Scientific information systems and databases	
437 - SAFE&CLEAN-CONSTRUCT JRC.E.4	5032 - Eurocodes YEAR 3 Support to policies and standards for sustainable construction	The work planned under the Administrative Arrangement expands the JRC area of support to DG GROW (previously - standards for structural design (Eurocodes)) to a wider field of policies and standards for sustainable construction. The planned tasks are focused on: 1. Further harmonization and evolution of policies and technical tools in the field of sustainable construction: *IT support for the implementation and monitoring of the Eurocodes and other policies/tools *Facilitating the practical implementation and harmonized use of the Eurocodes and other policies/tools *New fields of application (adaptation of structural design to climate change, design of underground structures) *Resource efficient construction and renovation 2. Promotion of the construction sector outside the EU: *Fostering and coordinating promotion of the Eurocodes, European energy efficiency and resource efficiency policies and tools outside the EU The work will be performed in synergy with IPTS/J5 and IES/H7	JRC.E.4 Silvia DIMOVA	4.1.a	GROW	GROW	MARZENA ROGALSKA	CLIMA DEVCO ENER ENV NEAR	CEN - European Committee for Standardization MS EU - Member states EU		01/07/2017 30/06/2018	CON-AA	310	Maintenance of the Eurocodes IT tools - Y3	The deliverable describes the progress of the work of JRC in 2017 in the development of the European portal on resource efficiency, and on the maintenance and development of NDPs Database, Eurocodes website, Centralized Eurocodes Helpdesk, on the usage of the website and the Helpdesk, and on the state of registration of users and state of the upload of NDPs.	31/07/2018	JRC technical reports
													320	Harmonized use of the Eurocodes in Europe - Y3	The deliverable presents the JRC work during 2017 on the further harmonization of Eurocodes: analysis of the NDPs accepted by the Member States; assessment of reliability levels of design achieved in the Member States by choice of the NDPs; extractions of data from the NDPs Database to facilitate the work of CEN/TC250 on the further harmonization of the second generation of the Eurocodes	31/07/2018	JRC technical reports
													321	Reliability levels of design in EU MS	The paper presents the methodology and the results of the study of the reliability levels of design in the EU Member States achieved with the chosen NDPs under permanent and variable actions. The study encompasses steel and reinforced concrete bridges and buildings constructed with all materials covered by the Eurocodes. The achieved reliability levels are analysed and conclusion are drawn regarding the need to request some Member States to reconsider their NDPs.	31/07/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
													323	State of harmonized use of the Eurocodes	The report implements the Commission Recommendation 2003/887/EC, which requires comparison of the NDPs accepted by the different Member States and assessment of the technical differences due to choice of NDPs. It summarises the results of the JRC work on the analysis of the NDPs chosen by the EU Member States and on the reliability levels of design achieved. The results will be basis for a decision by DG GROW on the need of a new Commission Recommendation.	31/07/2018	Science-for-policy reports
													330	New fields of application of structural design-Y3	The deliverable reports the results of the JRC activities in 2017 on assessment of research and standardisation needs for: i) adaptation of structural design to climate change; ii) design guidelines and standards of underground structures. The work aims a vision on development of the Eurocodes after 2020 (Generation 3). The analysis is carried out by two working groups chaired by JRC. In 2017 the results will be summarized by JRC and will be published as JRC Science for Policy Reports later	31/07/2018	JRC technical reports
402 - EUPolicyLab JRC.I.2	5138 - BLOCKCHAIN4EU Blockchain4EU: Blockchain for Industrial Transformations	The project is a forward looking exploration of existing, emerging and potential applications based on Blockchain and other Distributed Ledger Technologies (DLTs). Its main focus will be on the industrial / non-financial sector with the goals of	JRC.I.2 SUSANA FIGUEIREDO DO NASCIMENTO	4.1.a	GROW	JRC	Xavier LE MOUNIER			15/02/2017 14/02/2018	CON-AA	1	Challenges and opportunities of BC and DLTs	The final report will provide an overview of present and future Blockchain and other DLTs applications for industrial / non-financial purposes across specific areas, an exploration of future scenarios of production, distribution and use of Blockchain and DLTs applications, and the identification of prospective options at regulatory and broader policy and funding levels.	14/02/2018	Science-for-policy reports	
433 - SciNANO JRC.F.2	5660 - REFINE Advancement of regulatory science in the field of biomaterials and nanomedicines. The	Refine aims to establish an international consortium for the advancement of regulatory science in the field of biomaterials and nanomedicines. The	JRC.F.2 Susanne BREMER	4.1.a	GROW	RTD	Heico FRIMA	ENV SANTE	Food and Drug Administration -FDA Chem Cos Pharm Food Agri EU - Competent Authorities of EU Member	01/09/2017 31/08/2020	CON-IA	10	Final Report	Final report	31/08/2020	JRC technical reports	

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol.	Funding DG	DGs' Contact	Add. Pol.	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
433 - SciNANO JRC.F.2	5661 - GRACIOUS Grouping, Read-Across, Characterisation and Classification	GRACIOUS intends to develop a multi-perspective framework for grouping and read-across of Monomers (M) in the high industries and regulations	JRC.F.2 Juan RIEGO SINTES	4.1.a	GROW	RTD	Otto LINHER	ENV RTD SANTE	CHEM industry - Chemicals industry Chem Cos Pharm Food Agri EU - Competent Authorities of EU Member States	01/09/2017 31/08/2021	CON-IA	10	Final report	Final report	31/08/2021	JRC technical reports
158 - SPC Economics JRC.B.5	5700 - Manubase-3 Economic analysis of European	Development of a framework and its application to the analysis of the competitiveness of the EU	JRC.B.5 Peter EDER	4.1.a	GROW	GROW	Francisco De Asis CABALLERO SANZ			01/06/2017 31/12/2018	CON-AA	1	Analysis report on EU internal market integration	Analysis and characterization of EU industries and Member States with respect to internal market integration	31/12/2018	Science-for-policy reports
563 - BATEST JRC.C.1	5820 - BaTProp Battery Thermal Propagation and Safety Related Aspects	In order to ensure the overall safety of vehicles equipped with a rechargeable electrochemical energy storage system (battery) containing flammable electrolyte, the vehicle occupants should not be exposed to the hazardous environment resulting from thermal propagation of this system. In the context of the further development (Phase 2) of the Global Technical Regulation on Electric Vehicle Safety (GTR EVS), the UNECE Informal Group experts involved in this exercise have acknowledged the safety risks to vehicle occupants associated with thermal propagation	JRC.C.1 Andreas PFRANG	4.1.a	GROW	GROW	Aleksander LAZAREVIC	MOVE RTD	- European Space Research and Technology Centre CEN - European Committee for Standardization CENELEC - European Committee for Electrotechnical Standardization (CENELEC) EUROBAT - Association of European Automotive and Industrial Battery Manufacturers UN ECE - UNITED NATIONS	01/02/2017 31/01/2020	CON-AA	1	Informal Working Group of UNECE GTR on EVS – Therm	Scientific support and advice to DG GROW (co-chair) of the UNECE informal group on electric vehicle safety (EVS) set up by WP.29 to develop a UN Global Technical Regulation (GTR). A report/reports describing scientific research underpinning the development of a regulatory test method to demonstrate that potential risks to vehicle occupants associated with thermal propagation are appropriately minimised and/or provision of S&T analysis on proposals made by other stakeholders.	26/12/2017	Science-for-policy reports
												2	Informal Working Group of UNECE GTR on EVS – Therm	Scientific support and advice to DG GROW (co-chair) of the UNECE informal group on electric vehicle safety (EVS) set up by WP.29 to develop a UN Global Technical Regulation (GTR). A report/reports describing scientific research underpinning the development of a regulatory test method to demonstrate that potential risks to vehicle occupants associated with thermal propagation are appropriately minimised and/or provision of S&T analysis on proposals made by other stakeholders.	26/12/2018	Science-for-policy reports
4.1.b space strategy - support for Galileo and the EGNOS, including signal, receivers and technical support for policy development and the management of R&D assets and resulting IPR; technical support for applications, implementation and further development of services, including Galileo PRS and security, spatial information analysis and data dissemination tools for Copernicus and EU contributions to civil and international space																
541 - SEED JRC.E.1	404 - MIE4CopEMS Management, Innovation and Evolution for Copernicus EMS	The objective of the work package is the management of Copernicus EMS-Mapping, evolution and innovation in emergency mapping an evaluation of potential applicability and added value of Remotely Piloted Aircraft Systems for crisis mapping and disaster risk management. Following activities will be done: 1. Technical and administrative management of Copernicus EMS – Mapping with its three components (Rapid Mapping, Risk and Recovery Mapping and Validation) as described in sub-cross delegation agreement and administrative arrangement with DG GROW (JRC No. 33539-2014 NFP). All three components include: contract and budget management, technical and quality reviews, products dissemination including web-portal administration and development, and participation at Copernicus Committee and User Forums. Additionally for Rapid Mapping (RM) the	JRC.E.1 Jan KUCERA	4.1.b	GROW	JRC	Mauro Facchini (DG GROW), Andreas Vetspak (DG GROW), Francoise Villette DG (GROW)	DEVCO ECHO	Civ Protection EU - Civil Protection Services in Member States EEAS - European External Action Service ENV EU - Environmental authorities of the Member States and Candidate Countries FPI - Foreign Policy Instruments Service WFP - World Food Program of the United Nations	01/01/2017 30/12/2020	INS-RS	201701GEM MA	Quarterly reports on the EMS services	The EMS services will be monitored and reported as agreed with DG GROW. The reports are transmitted to Member States in the frame of the Copernicus User Forum.	30/11/2017	Science-for-policy reports
												201702GEM MA	Technical user workshop on EMS services.	The workshop is used to evaluate the EMS services and more specific technical aspects on the 3 different components rapid , risk and recovery mapping and validation. The aerial component shall be included as well depending on the past deployment- frequency and Copernicus Users request The workshop serves for EMS users to express their feedback on the service	31/07/2017	Conferences and workshops organized by the JRC
												201703GEM MA	Remotely Piloted Aircraft Systems: Pilot Study	Deployment of very light fixed wing remotely Piloted Aircraft Systems (RPAS) using different sensors for 'rapid' mapping purposes in the scope of emergency mapping components rapid, risk and recovery mapping and validation. The RPAS at the JRC will be deployed and further tested in 'real' post disaster needs assessment field operations, as well in exercises and emergencies planned with EU civil protection authorities.	30/11/2017	JRC technical reports
												201704GEM MA	International Cooperation in Emergency Mapping	Annual report on Innovation, evolution and international Cooperation in Emergency Mapping (including IWG-SEM).	30/11/2017	JRC technical reports
												201705GEM MA	Geospatial data management and sharing platforms	The deliverable focuses on building an application to manage and share spatial data in a quick and efficient way. The outcomes will be: innovative web systems for data sharing, supporting tools for data management of the Copernicus EMS project and web maps to leverage pre and post disaster data access in general.	30/11/2017	Scientific information systems and databases
564 - CESAR JRC.D.6	750 - EOSS Earth Observation Support to Copernicus Climate and Marine Services	EOSS supports the EU long-term objective to guarantee accuracy and reliability of information of marine environment and security. It consequently contributes to benefiting from the huge Copernicus investment in Earth Observation (EO) technology and space missions. Specifically, within the context of the Copernicus Marine Environment Monitoring Service and of the marine component of the Climate Change Service, EOSS ensures policy support and science deliverables through: I. Collection and application of highly accurate in situ reference data for the permanent calibration and validation (cal/val) of marine EO data products by relying on consolidated know-how, laboratories and distributed infrastructures allowing to perform autonomous measurements at a number of fixed sites in European seas and manned measurement through oceanographic campaigns; II. Standardization of field and laboratory measurement methods for the generation of highly accurate in situ data by focusing on the reduction of uncertainties through the comprehensive characterization and calibration of instruments; III. Generation of EO state-of-art ocean colour reference data sets of Essential Climate Variables (ECV) by composing multi-mission EO data products accounting for carefully quantified uncertainties; IV. Evaluation of the fitness-for-purpose of EO marine data candidate to the creation of Climate Data Records (CDR) through direct comparisons of EO and in situ data, and with the aid of radiative transfer simulations; V. Development and application of advanced statistical methods to evaluate ocean biosphere variability and trends through the application of EO data products. EOSS activities at large will benefit of the JRC representation in international organizations and additionally of collaborations supported by agreements with international institutions and agencies. It is restated that the EOSS activities are fundamental to ensure confidence in Copernicus EO data products and to support the international effort to create CDRs from multi-mission EO data, both essential for policy makers. It is finally mentioned that presently no EU institution has the same level of know-how and infrastructure for an equivalent comprehensive execution of the work-package. Additionally, no institution applies similar approaches and strategies over the whole European macro-region, and consequently ensure equivalent comparability of results and diagnostics across all European	JRC.D.2 Giuseppe ZIBORDI	4.1.b	GROW	JRC	Mauro FACCHINI	CLIMA ECHO ENV	- EUROPEAN SPACE AGENCY NIST - National Institute of Standards and Technology CEOS - Committee on Earth Observation Satellites (CEOS) EUMETSAT - European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT) GCOS - Global Climate Observing System (GCOS) NASA - NASA - National Aeronautics and Space Administration NOAA - National Oceanic and Atmospheric Administration	01/01/2016 31/12/2018	INS-RS	201701	Reference measurements to assess EO data products	Highly-accurate in situ reference bio-optical measurements for the calibration and validation of EO data. On a yearly basis, the activity will increment the JRC reference dataset through: i. autonomous systems operated in coastal regions and included in the Ocean Color component of the Aerosol Robotic Network (AERONET-OC), and ii. targeted oceanographic campaigns performed in collaboration with European partners. The activity will benefit of an agreement with NASA (under re-definition).	31/12/2017	Datasets
												201702	Standardized measurement methods for EO validation	Standardized field optical radiometry methods for the generation of ocean colour in situ reference data. During 2017 the activity will address metrology requirements for the reduction of overlooked uncertainties like polarization sensitivity or in-water responsivity change, affecting in situ reference measurements. The activity will rely on JRC state-of-the-art know-how and laboratories, and specific agreements with NIST and partnership with ESA.	31/12/2017	JRC technical reports
												201703	Fitness-for-purpose of Copernicus EO climate data	Assessment of Copernicus EO ocean colour data products applicable for the construction of Climate Data Records. On a yearly basis the activity will specifically re-evaluate the fitness-for-purpose of EO Copernicus Sentinel-3 ocean colour data to support climate research by investigating their accuracy through direct comparison with reference measurements, independent EO mission data products and outputs from radiative transfer simulations and climatology.	31/12/2017	JRC technical reports
												201704	Data sets of EO Essential Climate Variables (ECVs)	Global and regional EO ocean-colour reference data sets of ECV from multiple missions, complemented by metadata and uncertainty estimates. On a yearly basis the activity will continue to update and expand the JRC's benchmark EO database (in a BigData context created to support marine and climate studies, and to interdependently address the fitness-for-purpose of EU Sentinel-3 ocean colour products for marine and climate services.	31/12/2017	Datasets
												201705	Analysis of ocean biosphere variability and trends	Analysis of the marine algal biomass and water quality of EU priority regions (European and African seas, Atlantic and Arctic Oceans). During 2017 the activity will test state-of-art statistical methods to assess the variability and trends affecting selected marine ecosystems. It will support EU climate actions and enhance EU marine knowledge to promote sustainable development of the oceans (United Nations SD goal 14).	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												201801	Reference measurements to assess EO data products	Highly-accurate in situ reference bio-optical measurements for the calibration and validation of EO data. On a yearly basis, the activity will increment the JRC reference dataset through: i. autonomous systems operated in coastal regions and included in the Ocean Color component of the Aerosol Robotic Network (AERONET-OC), and ii. targeted oceanographic campaigns performed in collaboration with European partners. The activity will benefit of an agreement with NASA (under re-definition).	31/12/2018	Datasets
												201802	Standardized measurement methods for EO validation	Standardized field optical radiometry methods for the generation of ocean colour in situ reference data. During 2018 the activity will face the need to re-assess and improve above-water radiometry methods applied with new advanced AERONET-OC autonomous systems deployed at remote sites in coastal regions in support of EO data products validation. The activity will rely on JRC state-of-the-art know-how, facilities and laboratories, and a specific agreement with NASA (under re-definition).	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												201803	Fitness-for-purpose of Copernicus EO climate data	Assessment of Copernicus EO ocean color data products applicable for the construction of CDR. On a yearly basis the activity will specifically re-evaluate the fitness-for-purpose of EO Copernicus ocean color Sentinel-3 data to support climate research by investigating their accuracy through direct comparison with FRM, independent EO missions and outputs from radiative transfer simulations and climatology.	31/12/2018	JRC technical reports
												201804	Data sets of EO Essential Climate Variables (ECVs)	Global and regional EO ocean-colour reference data sets of ECV from multiple missions, complemented by metadata and uncertainty estimates. On a yearly basis the activity will continue to update and expand the JRC's benchmark EO database (in a BigData context created to support marine and climate studies, and to interdependently address the fitness-for-purpose of EU Sentinel-3 ocean colour products for marine and climate services.	31/12/2018	Datasets

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
		seas and ocean basins.										201805	Analysis of ocean biosphere variability and trends	Analysis of the marine algal biomass, water quality and carbon fluxes of EU priority regions (European and African seas, Atlantic and Arctic Oceans). During 2018 the activity will address the variability and changes affecting EU marine ecosystems by using time series analysis and classification techniques. It will enhance marine knowledge and support EU climate actions, the common implementation strategy of the Marine Strategy Framework Directive and the sustainable development of the oceans.	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
346 - GALILEO JRC.E.2	848 - GALINNOVA Innovative Solutions to Support the EU Navigation Programmes	In application of the Reg. (EU) No 1285/2013, DG GROW, Dir J, is responsible for the management of the EU GNSS programmes, Galileo and EGNOS. JRC will continue to develop its know-how and expertise to support these two Programmes carrying out technical studies and measurement campaigns to support the development of services and of technologies relevant to Galileo and EGNOS. This WPK will be developed in close collaboration with the partners of DG GROW, Dir J, and will include specific support to activities such as the study of robust approaches for improving GNSS resilience, and at a later stage, to the development of an European GNSS timing and advanced receiver autonomous integrity monitoring (ARAIM) services. An additional objective of the WP is the anticipation of future policy needs in the EU GNSS programmes. In this respect, approaches complementary to GNSS will be investigated and the integration between GNSS and technologies such as chip-scale inertial devices will be analysed. Both statistical and combinatorial approaches will be considered. Potential issues and needs for	JRC.E.2 Carlo FERIGATO	4.1.b	GROW	JRC	Matthias PETSCHKE	CNECT ENER HOME	- EUROPEAN SPACE AGENCY EUROCONTROL - European Organisation for the Safety of Air Navigation (EUROCONTROL) GSA - European GNSS Agency	01/01/2017 31/12/2019	INS-RS	D2	ESA/JRC International GNSS summer school -2017	The JRC will continue co-organizing the ESA/JRC summer school on GNSS. The deliverable will consist of the organization of this annual event and of the preparation of lectures and labs.	30/09/2017	Training
												D3	ESA/JRC International GNSS summer school -2018	The JRC will continue co-organizing the ESA/JRC summer school on GNSS. The deliverable will consist of the organization of this annual event and of the preparation of lectures and labs.	30/09/2018	Training
												D7	New robust techniques for GNSS positioning	Statistically robust techniques such as the M-estimators and the Forward Search will be investigated in the context of GNSS positioning. The approaches considered will be compared with standard receiver autonomous integrity monitoring techniques.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												D8	Integration of GNSS and inertial measurements	A survey on new commercial devices exploiting modern physics concepts and their reliability with respect to GNSS navigation will be conducted. Data integration strategies will also be investigated with techniques from robust statistics.	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
346 - GALILEO JRC.E.2	861 - GALSPACE Underpinning the adoption of the Galileo and its ionospheric correction model	JRC will continue to develop its know-how and expertise to support the EU Global Navigation Satellite Systems (GNSS) Programmes assessing the impact of ionospheric disturbances, underpinning the adoption of the Galileo ionospheric model NeQuick-G, assessing the present backup radionavigation aids available across the EU, and facilitating the access to the JRC's GNSS testing facilities to Commission's R&D Actions, Member States and other interested third parties. This WP will address three main priorities: 1) Noting that the ionosphere is the major source of positioning errors that are greatly corrected using correction models, JRC will maintain and upgrade an in-house reference software (SW) implementation of the NeQuick-G model developed under a JRC's Proof of Concept project, making it publicly available to the community of receiver manufacturers. JRC will continue to monitor and evaluate EC R&D Actions implementing ionospheric forecasting services to be transferred to the Galileo Service Centre. JRC will continue to investigate novel uses of SW radio platforms to monitor and record GNSS observations during severe ionospheric disturbances. JRC will maintain and operate a network of monitoring stations located in the Equatorial and Polar Regions. JRC will continue to upgrade and maintain an online reference library of ionospheric scintillation datasets. JRC will continue its collaboration with NOAA investigating the impact of space weather related ionospheric disturbances. 2) In the framework of the definition of Commission's Space Strategy, JRC will assess the present backup radionavigation aids available across the EU and the implications on the definition	JRC.E.2 Joaquim FORTUNY GUASCH	4.1.b	GROW	JRC	Matthias PETSCHKE	CNECT HOME MOVE	- EUROPEAN SPACE AGENCY EUROCONTROL - European Organisation for the Safety of Air Navigation (EUROCONTROL) GSA - European GNSS Agency NOAA - National Oceanic and Atmospheric Administration	01/01/2017 30/12/2019	INS-RS	D1	Global network of scintillation monitoring station	The JRC is currently operating a network of ionospheric scintillation stations in sites located in the Equatorial Region and in Antarctica. Efforts will continue aimed at adding a station in Alaska in a joint effort with NOAA and possibly another one in Taiwan. A progressive optimization and upgrade of the data collection hardware will continue to make it more efficient and capable of detecting and classifying events automatically.	15/12/2017	Technical systems
												D10	Network of monitor stations and cooperation NOAA	The JRC will continue to maintain and operate a network of ionospheric scintillation stations in sites located in the Equatorial Region and in Antarctica. Efforts will continue aimed at continuing the cooperation with NOAA under the current Implementation Agreement. A progressive optimization and upgrade of the data collection hardware will continue to make it more efficient and capable of detecting and classifying events automatically.	14/12/2018	Technical systems
												D4	Global network of scintillation monitoring station	Technical report summarising the analysis of the observation data collected in the network of ionospheric monitoring stations currently deployed and any new one that can be added in 2017. This technical report will be the basis for the preparation of a conference paper and possibly a submission to a peer-reviewed scientific journal.	31/12/2017	JRC technical reports
												D5	Ionospheric scintillation from LEO satellites	A technical report on the observations of ionospheric scintillation from LEO satellites collocated with Jicamarca Radio Observatory. This study will be based on the scintillation data collected at the Jicamarca station and the data from the FORMOSAT-3/COSMIC constellation. A climatological analysis of collocated data from Jicamarca and satellite data will be carried out looking for patterns and seasonal behavior. These results will also be the subject of a conference paper.	15/12/2017	JRC technical reports
												D6	Ionospheric Prediction Service: Progress overview	GROW tasked G05 to monitor the progress and review the deliverables of H2020 project IPS. In this context, a technical report will be produced summarising the key aspects that will make this particular project fulfill the prevision to become a potential service of ionospheric products to be distributed by means of the Galileo Service Centre.	30/09/2017	JRC technical reports
												D7	Galileo NeQuick-G Optimisation	After the successful implementation of the Galileo NeQuick model at JRC, efforts will focus on the optimisation of such reference implementation. This is an extremely important aspect given the high computational cost of the present implementation documented in an Official EC Document. The implementation of NeQuick is not possible in some receivers (e.g., avionics) and this limitation needs to be tackled. This study will be the subject of a conference paper.	15/11/2017	Science-for-policy reports
												D9	Deployment of ionospheric prediction service	GROW tasked G05 to monitor the progress and review the deliverables of H2020 project IPS. In this context, a technical report will be produced on the follow-up of the expected deployment of an ionospheric prediction service in the Galileo Service Centre.	14/12/2018	JRC technical reports
564 - CESAR JRC.D.6	900 - SPACE-CIS Space Policy and support to the Implementation of the Copernicus Climate and Global Land Services	The Copernicus Programme (Regulation (EU) No 377/2014), defined as "Europe's eyes on Earth", aims to monitor the global environment for civil protection and security, and to maximise socio-economic benefits and growth (Art. 4). Fully supporting the role of the Commission in the governance of Copernicus (Art. 9), this WPK ensures the implementation and further evolution of the Global Land Component of the Copernicus Global Land Service, especially addressing needs for the Sustainable Development Goals (SDGs), food security and international initiatives such as Reducing Emissions from Deforestation and Forest Degradation+ (REDD+) as well as applications and analysis tools. Technical support to the mid-term evaluation of the Copernicus Programme is foreseen, as required in the Regulation by the end of 2017. The WPK maintains and reinforces relationships with third countries and international organisations (as required by the Regulation), and contributes to the development of the new "European Strategy for International Relations in Space".	JRC.D.6 Michael CHERLET	4.1.b	GROW	JRC	Mauro Facchini mauro.facchini@ec.europa.eu DDG3 I2	AGRI CLIMA DEVCO ECHO ENV	FAO - THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO) GCOS - Global Climate Observing System (GCOS) GEO - The Group on Earth Observations UNCCD - United Nations Convention to Combat Desertification (UNCCD) UNEP - United Nations Environment Programme (UNEP) WMO - World Meteorological Organization (WMO)	02/01/2017 21/12/2018	INS-RS	201701	EU Capacity 4 Space observations	Reference report providing an update on the 2010 report, documenting current and planned EU Capability for Climate Observations and Reanalysis in support of Climate Services development. Including case studies based on an end-to-end value chain of the JRC report on documenting best practices in the assessment of Copernicus products and the evaluation of the fitness for purpose of the services. This is coordinated with the other in-house Copernicus activities under the AA and takes advantage of sectoral policy competences concerning land resources and official development assistance programming. [policy document (EU)377/2014]	15/07/2017	JRC technical reports
												201702	Best practices 2 assess Copernicus fitness4purpose	JRC report on documenting best practices in the assessment of Copernicus products and the evaluation of the fitness for purpose of the services. This is coordinated with the other in-house Copernicus activities under the AA and takes advantage of sectoral policy competences concerning land resources and official development assistance programming. [policy document (EU)377/2014]	13/10/2017	Reference Material
												201801	Implementation of Copernicus Global Land Service	Implementation of the Land Component of the Copernicus Global Land Service as per the sub-delegation agreement between DG GROW and the JRC, in support of Art.9 of Reg.(EU)No377/2014, and including contract management activities and technical and operational activities as specified in Ares(2015)1881967-04/05/2015, section B.c.. This deliverable is linked to WPs CLEO, GMES&Africa.	21/12/2018	Science-for-policy reports
												201802	Evolution of the Copernicus GL: EO4SDG	Supporting the Commission in contributing to the appropriate development of Copernicus Services, Reg.(EU)No377/2014-Art.9.4, potential near-mature products are ramped up to pre-operational stages, building value-chain approaches. Including HR land surface water occurrences, phenological variables, land system productivity and degradation and land cover dynamics. Products support SDGs and international partners such as UNCCD. This deliverable is linked to WPs CLEO, GMES&Africa and EUROCLIMA2	21/12/2018	JRC technical reports
												201803	Relationships with third countries & intern.org.	Supporting the Commission's role on the governance of Copernicus, Reg.(EU)No377/2014-Art.9.2: reporting & advice to the EU's space dialogues provided through partnerships with space agencies and EO users outside the EU. Input to CEOS, GEO, WMO, GCOS, promoting and providing feedback to the Copernicus Programme on appropriate international engagement. Contributes to the GMES & Africa process by establishing roadmaps to implement thematic action plans & workshops. Links to MESA, CLEO, GMES&AF.	21/12/2018	JRC contributions to policy documents
564 - CESAR JRC.D.6	1707 - QA4ECV Quality Assurance for Essential Climate Variables	The project will develop a robust generic system for the QA of satellite and in-situ algorithms and data records that can be applied to all ECVs in a prototype for future sustainable services in the frame of the GMES/Copernicus Climate Change Service: multi-use tools and SI/community	JRC.D.6 Nadine GOBRON	4.1.b	GROW	n/a	Mauro Facchini, GROW.I.2	AGRI CLIMA ENV	CEOS - Committee on Earth Observation Satellites (CEOS) GCOS - Global Climate Observing System (GCOS) GEO - The Group on Earth Observations	01/01/2014 31/12/2017	CON-IA	201701	Performance of field protocols (D3.7)	QA of retrieval in-situ protocols for Land ECVs	31/12/2017	JRC technical reports
												201702	QA satellite retrieval algorithms Land ECVs (D5.3)	Evaluate ECV retrieval algorithms using simulated satellite data over virtual validation sites	01/06/2017	JRC technical reports
												201703	QA of land ECVs (D5.4)	Report with quality assessment of Land ECV data products (D5.4)	31/12/2017	JRC technical reports
4855 - GHG-MoVe JRC.C.5	2148 - GHG-CCI P2 GHG-CCI Phase 2: Essential Climate Variable (ECV): Greenhouse Gases (GHG) CO2 and CH4	The project aims at extending and improving the global CO2 and CH4 satellite-derived concentration data to obtain long-term atmospheric GHG time series, needed for various carbon and climate	JRC.C.5 Peter BERGAMASCHI	4.1.b	GROW	GROW	B Pinty, M. Fachetti	CLIMA ENER	ESA - European Space Agency - Italia IPCC - Intergovernmental Panel on Climate Change	01/03/2014 01/03/2017	CON-TW	3	Global CH4 inversion using CRDP XCH4 products	Inverse modelling of methane surface fluxes using all "Baseline" CRDP XCH4 products (from CP3) for a one year time period (likely 2010).	28/02/2017	JRC technical reports

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Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category	
564 - CESAR JRC.D.6	2167 - Copernicus 1 Administrative Arrangement on Technical support to Copernicus	Multi-annual Administrative Arrangement with DG ENTR on the JRC technical support to the Copernicus Programme. Including: management o	JRC.D.6 Mark DOWELL	4.1.b	GROW	GROW	Mauro FACCHINI	AGRI CLIMA CNECT		01/10/2014 30/09/2017	CON-AA	201701	Annual Report	Copernicus 1 AA 2017 report	21/10/2017	JRC technical reports	
225 - EO&SS Big Data JRC.I.3	2276 - P4BIDEO Platform for Earth Observation and Social Sensing Big Data Processing	Benchmark, extend, and optimise the prototype platform for analysing the massive Earth Observation (EO) data streams delivered by the Copernicus programme and other free and open data, including in situ and social sensing data. The platform will be tuned to continuously offer both the data collections and processing/analysis capabilities required by selected projects in the Knowledge Production units. The platform shall provide a unique environment for discovery, processing, analysis, and visualisation of the available data and produced information. It will foster knowledge sharing and thus facilitate the collaboration between Knowledge Production and Management units. In a subsequent scaling-up phase, the system will be extended to provide large-scale storage and processing capabilities while populating the input storage space by ingesting data from all relevant data streams of interest to the Knowledge Production units.	JRC.I.3 Pierre SOILLE	4.1.b	GROW	JRC	Andreas Veispak	AGRI CNECT DEVCO ECHO ENER ENV ESTAT MARE REGIO	CERN - European Organization for Nuclear Research ESA - European Space Agency - Italia EUMETSAT - European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT) EUSC - European Union Satellite Centre	01/01/2017 31/12/2019	INS-UR	01	Prototype platform benchmarking	This deliverable covers all activities related to the management, benchmarking, and optimisation of the Petabyte storage and processing technical system. It covers the seamless integration and administration of the additional data and processing servers, including those procured by the GHSL project to expand the prototype JEODPP infrastructure.	31/12/2017	Technical systems	
												02	Data ingestion and management	Population of the new storage solution with new data produced by the Sentinel missions and other missions to fulfil the needs of the Knowledge Management units with emphasis on the initial project use-cases. It covers management of relevant EO&SS data originating from JRC Knowledge Management units including the operations of the CID portal for archiving and data dissemination/discovery services. Reference and base data layers are made available through a range of access methods.	31/12/2017	JRC technical reports	
												03	Computing environment for processing and analysis	Enhance and expand the functionalities of the joint data processing library. This covers integration and sharing of methods developed within Knowledge Production units and open-source libraries. It includes the development of innovative data analytics techniques and the consolidation of the interactive computing environment.	31/12/2017	Technical systems	
												04	Big Data from Space conference cycle	Co-organisation of the Big Data from Space conference cycle with the European Space Agency and the EU Satellite Centre (to be hosted by CNES in Toulouse).	31/12/2017	Conferences and workshops organized by the JRC	
												05	Scaling-up user basis and JEODPP functionalities	Following the successful integration of the initial use-cases, the user basis of the platform is scaled-up. This widens the data portfolio and fosters collaborations among Knowledge Production units while increasing the processing and analysis functionalities of the platform. The new users will originate from Knowledge Production projects not involved in the initial prototyping phase and selected users from entities collaborating with JRC.	31/12/2018	Technical systems	
												06	Large scale IT environment	Design and implementation of the extension/scaling of the initial prototype to handle the processing, analysis, and storage of multi petabytes of earth observation and social sensing data. Collaborations with other private clouds as well as public clouds will also be assessed and implemented if appropriate.	31/12/2018	Technical systems	
346 - GALILEO JRC.E.2	3578 - GALGSA Technical and Policy Support to European GNSS Agency (GSA) on EU Satellite Navigation Programmes	DG GROW has established a number of delegation agreements with the European GNSS Agency (GSA) for the conduct of several tasks (see section II.4 of the GSA Work Programme in attachment). At the same time GROW has requested JRC to provide technical support to GSA under some strategic delegated tasks. Upon this specific request of DG GROW and following on the 2012 JRC-GSA Memorandum of Understanding (in attachment), JRC will provide technical support to the GSA in many different areas. Some relevant examples are: Galileo user segment operational readiness (Galileo receivers testing and validation in JRC labs), H2020 and Galileo Fundamental Elements (definition, evaluation and follow-up of the most relevant research calls related to GNSS technology), Galileo Security and PRS (User Segment development, Pilot Projects definition and implementation), Galileo and EGNOS Exploitation (Service provision, system evolution, cooperation with other GNSS).	JRC.E.2 MATTEO PAONNI	4.1.b	GROW	GROW	Matthias PETSCHKE	GSA - European GNSS Agency	01/06/2016 31/05/2019	CON-AA	GSA01	E-Call and RX Testing Campaign after Galileo IS	With this technical report JRC will support GSA in the testing of E-Call modules and Galileo Receivers Testing after the declaration of Galileo Initial Services (IS). Main purpose will be to verify the readiness of the E-Call modules and of the receivers under testing to the Galileo characteristics, the effective fulfillment of the performance expectation as described in the Galileo SDD and the compliance with eventual specifications to be verified (especially with respect to the E-Call modules).	31/12/2017	JRC technical reports		
											GSA02	Support to JTA and PRS Pilot Projects	By request of the GSA Security Department, JRC will support Joint Test Activities (JTA) and National Pilot Projects on the Galileo Public Regulated Service (PRS). This support will require important lab activities within the EMSL laboratory. The work is particularly relevant at policy level because will help the development of Galileo PRS user segment and an effective exploitation of the PRS service, which is one of the main features of the Galileo system.	31/12/2017	JRC technical reports		
											GSA03	Galileo System Documentation Definition and Review	JRC will support the GSA Exploitation department in the definition and review of Galileo system documentation, including Galileo Signal In Space Interface Control Document (SIS ICD), Galileo Service Definition Document (SDD), Galileo Signal In Space Operational Status Definition (SIS OSD) and the Galileo Ionospheric Model Document. These are the key documents for the communication of Galileo characteristics to users worldwide, helping an effective development of Galileo user segment.	31/12/2017	JRC technical reports		
											GSA04	Support to GSA - First Semester 2017	As agreed in the technical annex to the SLA, JRC has to produce half-yearly progress reports. With this deliverable JRC will document the activity performed in the first semester of 2017, providing an overview of the tasks and of all the produced outputs. Project management aspects will be also covered.	15/07/2017	Project management related documents/reports identified as outputs of the JRC Work Programme		
											GSA05	Support to GSA - Second Semester 2017	As agreed in the technical annex to the SLA, JRC has to produce half-yearly progress reports. With this deliverable JRC will document the activity performed in the first semester of 2017, providing an overview of the tasks and of all the produced outputs. Project management aspects will be also covered.	15/01/2018	Project management related documents/reports identified as outputs of the JRC Work Programme		
											GSA06	Support to PRS Receiver Standardization	The JRC team will provide technical support on the topic of standardization of PRS receivers. In particular, JRC will support the interaction with other PRS User segment stakeholders, provide technical advice and support the drafting of PRS receiver/PRS equipment standards in view of achieving acceptance of PRS receivers, provide support to the definition and implementation a standardization strategy for PRS receivers, support to the integration of PRS positioning services into PMR	31/12/2018	JRC contributions to standards		
											GSA07	Support to Galileo Service Validation	JRC will support the GSA Exploitation Department in the context of Service Validation activities, addressing Signal-In-Space performance (e.g. after a system delivery or service declaration, support a service validation campaign through measurement campaigns at JRC and/or reviewing the results provided by other actors, such as ESA or WP1). Main outcomes of this long-term activity will be documented in one or more JRC Technical Reports.	31/12/2018	JRC technical reports		
											GSA08	PRS applications and its adoption for CIP	Preliminary interactions with several Critical infrastructure stakeholders conducted by the GSA suggest that there could be a demand driven by user needs to use PRS for specific EU critical infrastructures which make (or may in the future) use GNSS for timing and/or synchronization. One of the goal would be to study an approach to mitigate risks related to such applications, with due reference to the European policies regarding the protection of Critical Infrastructures.	31/12/2018	Science-for-policy reports		
											GSA09	Support to GSA - First Semester 2018	As agreed in the technical annex to the SLA, JRC has to produce half-yearly progress reports. With this deliverable JRC will document the activity performed in the first semester of 2018, providing an overview of the tasks and of all the produced outputs. Project management aspects will be also covered.	15/07/2018	Project management related documents/reports identified as outputs of the JRC Work Programme		
		The main aim of the work package FLOODS is to contribute to the evolution and management of the flood early warning component of the Copernicus Emergency Management Service through its European and Global Flood Awareness Systems (EFAS & GloFAS). In addition, the work package										201701	New developments for the Copernicus flood EWS	Development of new products for the Copernicus flood early warning systems (EFAS & GloFAS) with regard to linking to other Copernicus services (e.g. data assimilation of satellite river and lake levels from Copernicus global land), testing seasonal forecast products, improved flash flood indicators and enhancing the web interface integrating feedback from the various end-users such as the ERCC as well as national authorities.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in SCOPUS	
													201702	EU & Global flood expert needs and meetings	Outreach (including training) to other international networks and enlargement of the EFAS network to ENP/SNP countries to foster uptake of science into decision and policy making on DRR in EU and globally. This includes the co-organisation of the Global Flood Partnership, the EU-Brazil dialogue, the JRC-NCAR collaboration, JRC- Angola-EU Joint Action Plan, collaboration with Red Cross as well as the EFAS Annual meeting, reporting in DG ENV WG-F meetings and contributions to the DRMKC.	30/12/2017	Training
														201703	Ad-hoc support reports for ERCC and EUSF	During exceptional floods, daily in-depth situation reports based on the analysis of collected data and detailed national information on the hydrological conditions in the affected areas as well as the Copernicus EWS are prepared for DG ECHO's ERCC. In addition, independent technical impact assessments for severe flood events are prepared upon request for DG REGIO's Solidarity Fund.	30/12/2017

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541 - SEED JRC.E.1	3805 - FLOODS Supporting resilience to floods at local, national, European and global level	enhances the EU's capacity for managing and adapting to flood risks through the analytical support to DG ECHO's Emergency Response Coordination Centre, assessments for DG REGIO's Solidarity Fund or the support to the implementation of the Floods Directive. The work spans the entire risk management cycle (prevention, preparedness, crisis management and recovery) and throughout different stages of the policy cycle (anticipation, implementation and ad hoc support). New research such as large scale data assimilation of satellite observations into flood early warning systems, the pre-activation of satellite mapping based on early warning information, or the incorporation of seasonal forecasts will be done considering the feedback of a large variety of stakeholders through expert meetings, workshops and collaborations. These stakeholders range from policy and decision makers (e.g. DG ECHO, ENV, national civil protection), to national and local authorities (e.g. hydro-meteorological authorities), international organizations (e.g. ECMWF, Red Cross/Red Crescent Climate Center, ICPDR) and research institutions (e.g. CEMADEN, Dartmouth Flood Observatory, University of Reading, NCAR).	JRC.E.1 Peter SALAMON	4.1.b	GROW	JRC	Mauro Facchini (HoU), Francoise Vilette	CLIMA ECHO ENV REGIO	- Ministerio de Medio Ambiente - Slovak Hydrometeorological Institute - Swedish Meteorological and Hydrological Institute FAO - THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO) ICPDR - International Commission for the Protection for the Danube River DFO - Dartmouth Flood Observatory Deltares - Stichting Deltares FRONTEX - European Agency for the Management of Operational Cooperation GEO - The Group on Earth Observations Hydro Met Serv - National and regional hydrological and meteorological services IFRC - International Federation of Red Cross and Red Crescent Societies (IFRC) UN ISDR - United Nations International Strategy for Disaster Reduction (UN-ISDR) WMO - World Meteorological Organization (WMO)	01/01/2016 30/12/2020	INS-RS	201704	Linking Copernicus flood warning and rapid mapping	Establishing standard operational procedures to be included into the operational Copernicus flood early warning systems (EFAS & GloFAS) and the Copernicus EMS rapid mapping activations based on the request of ERCC and the Copernicus user community. This includes the further refinement of impact information as well as the updating of flood hazard and risk maps as an essential component of resilience planning emergency response, and risk mitigation.	30/12/2017	Article contribution to periodicals or to conference proceedings listed in SCOPUS
												201705	Resilience to floods in ENP/SNP & enlarg. countries	Based upon a request from DG ECHO the capacities to build up flood early warning systems and/or flood monitoring systems in the Eastern and Southern neighbourhood countries as well as in the potential EU enlargement countries will be assessed. The main objective of this work is to improve future funding programmes of DG ECHO in the field of flood risk management for the ENP/SNP and EU enlargement countries.	30/06/2017	Science-for-policy reports
												201801	New developments for the Copernicus flood EWS	Development of new products for the Copernicus flood early warning systems based on various end-users such as the ERCC, national authorities and the Copernicus user forum	30/12/2018	Article contribution to periodicals or to conference proceedings listed in SCOPUS
												201802	Ad-hoc support reports for ERCC and EUSF	During exceptional floods, daily in-depth situation reports based on the analysis of collected data and detailed national information on the hydrological conditions in the affected areas as well as the Copernicus EWS are prepared for DG ECHO's ERCC. In addition, independent technical impact assessments for severe flood events are prepared upon request for DG REGIO's Solidarity Fund.	30/12/2018	JRC contributions to policy documents
												201803	EU & Global flood expert needs and meetings	Outreach (including training) to other international networks to foster uptake of science into decision and policy making on DRR in EU and globally. This includes the co-organisation of the Global Flood Partnership, the EU-Brazil dialogue, the JRC-NCAR collaboration, JRC-Angola-EU Joint Action Plan, as well as the EFAS Annual meeting, reporting in DG ENV WG-F meetings, participation in the ICPDR flood expert group meetings and contributions to the DRMKC.	30/12/2018	Training
												201804	Establishing a hydrological reference model	The hydrological model LISFLOOD is used in many applications from flood forecasting to water resource management at a European and global scale. To enable users from EU MS authorities, research institutions and other interested parties to make use of this tool and its associated datasets also at national/regional level, LISFLOOD will be prepared as open source model. This includes user documentation and regular source code releases incl. model updates.	30/12/2018	Scientific information systems and databases
												201805	Benefits of forecast-based financing	Exploring the concept of forecast based financing as initiated by the German Red Cross and the UN World Food Program to improve the efficiency of humanitarian aid and development funding. This will be done in collaboration with the Red Cross and based on several case studies using GloFAS.	29/12/2018	Science-for-policy reports
561 - NAPP JRC.G.1.5	4186 - EPSO-SPACE European Power Source for Deep SPACE Missions	Most of the nuclear power sources for space missions are based Pu-238, a nuclide with high decay heat, but expensive to produce and not readily available in Europe. Here Am-241 will be chosen as power nuclide. Candidate Am compounds will be investigated for chemical stability at high temperature and self-irradiation damage. New thermo-electric materials containing actinides will be assessed and a robust iridium encapsulation designed. The design will be modular for required output. Safety analyses will be performed including launch explosion and re-entry accidents. The research will conclude in a conceptual design of a prototype power source. Miniaturisation and efficiency of today's electronics compensate for the reduced power. Mass can be reduced by increasing efficiency using advanced materials and high temperatures. EPSO-SPACE will provide new insights into properties of candidate materials at high temperatures, utilizing the unique facilities and competences at JRC-ITU and JRC-IET	JRC.G.1.3 DANIEL FREIS	4.1.b	GROW	JRC	n/a	- EUROPEAN SPACE AGENCY UKNLL - National Nuclear Laboratories of the UK	01/01/2016 31/12/2017	INS-ER	41860171	Studies on new Am forms and their characterization	Promising Am compounds will be synthesized in the Minor Actinide Laboratory of JRC-ITU using the well-established sol-gel method. Structural and thermo-physical properties at high temperature will be assessed using existing equipment and competences at JRC-ITU such as XRD, Laser Flash, Drop Calorimeter and Laser Melting. Due to intense alpha-activity self-damage occurs rapidly. Defects will be characterized by XRD, RAMAN spectrometry, NMR, SEM and TEM.	31/12/2017	JRC technical reports	
											41860172	Studies on thermo-electric materials at high temperature	Samples will be synthesized by different methods and thermo-electric properties in the temperature range of interest will be measured. Equipment is available at JRC-ITU, and a high temperature setup will be developed.	31/12/2017	JRC technical reports	
											41860173	Prototyping of safety encapsulation	The safety encapsulation will be designed using the existing competences and tools at JRC-IET (CAD, FEM). Lessons learned from established (e.g. US GPHS) will be utilized and the safety capsule will be fit to the requirements of EPSO.	31/12/2017	JRC technical reports	
											41860174	Safety analysis	A deterministic safety analysis will be performed building on existing competences at JRC IET (e.g. Design and Safety Reports for numerous irradiation experiments). FEM and thermal hydraulic codes will be used to assess the impact of defined accident scenarios on the encapsulation. If necessary the results will be fed back to Task 3 in an iterative process.	31/12/2017	JRC technical reports	
											41860175	Conceptual design	The results of EPSO-SPACE will be merged into a final Conceptual Design Report (JRC Report)	31/12/2017	JRC technical reports	
											41860176	Other deliverables - scientific publications 2017	This deliverable represents a series of publications, reports and conference proceedings used to disseminate knowledge generated by the JRC in this work package. The achievements will be presented in one or more scientific presentation.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)	
486 - OK-DDE JRC.B.6	4841 - SDE Space Data Economy	This WPK will support DG GROW in developing and implementing a strategy and platform to maximise the dissemination and use of Copernicus data. The WPK will include making contributions to the technical specifications of the platform(s), and analysing the value added to the European economy and society of the use of Copernicus and other open data. It will also include an in-house review of the legal landscape applicable to IT platforms and its foreseeable evolution in line with ongoing considerations on eCommerce platforms within the Digital Single Market. More specifically, this WPK will: 1. carry out a review of the Copernicus data dissemination option document prepared by DG GROW; 2. contribute to the preparation of technical specifications for the selected data dissemination platforms; 3. carry out a review of deliverables from contractors implementing the data dissemination platforms; 4. ensure compliance with Digital Single Market	JRC.B.6 Massimo CRAGLIA	4.1.b	GROW	GROW	Andreas VEISPAK	CNECT DIGIT RTD	- EUROPEAN SPACE AGENCY	01/01/2017 31/12/2019	CON-AA	201701	Review of technical specs for data dissemination	Technical report reviewing the technical specifications developed by the European Space Agency (ESA) and EUMETSAT for the Copernicus data and information access services and enhanced distribution services.	01/02/2017	JRC technical reports
												201702	First Assessment of Services (I)	The technical report will assess the work of the contractors implementing the Copernicus data dissemination platforms. In particular, it will analyse the contractors' enhanced distribution services and Copernicus data and information access services.	01/12/2017	JRC technical reports
												201801	Second Assessment of Services (II)	The technical report will assess the work of the contractors implementing the Copernicus data dissemination platforms. In particular, it will assess the contractors' enhanced distribution services and Copernicus data and information access services.	01/06/2018	JRC technical reports
												201802	Review of legal landscape	Review of the legal landscape applicable to data dissemination platforms and stakeholder perspectives (study contract).	01/06/2018	Article contribution to periodicals or to conference proceedings listed in SCOPUS
												201803	Socio-eco and technical analysis of IGS (phase 1)	Technical report reviewing the outcomes of the Integrated Ground Segment (IGS) Phase 1 and making recommendations for the design of Phase 2.	01/12/2018	JRC technical reports
		In application of the Regulation (EU) No 1285/2013 of the European Parliament and of the Council of 11 December 2013 on the implementation and exploitation of European Global Satellite Navigation Systems (GNSS) (OJ L 347, 20.23.2013, p. 1), DG GROW, Directorate J, is responsible for the European GNSS programmes. Through this project JRC will support the EU Satellite Navigation Programmes at DG GROW, ensuring continuity										GROW01	Ionosphere modelling and characterisation	Support will be provided in the context of the modelling and the characterisation of the ionosphere and of its effects on the Galileo signals propagation. Likewise, JRC will develop a web-based platform running a reference implementation of the Nequick-G, which shall be made freely available to receivers manufacturers integrating Galileo's ionospheric model. JRC will closely monitor the current development of a prototype ionospheric forecasting service under an H2020 project.	31/12/2017	JRC technical reports
												GROW02	Contribution to the EU Radionavigation Plan	In the context of the current definition of the Commission's Space Policy, backing of the consultations with the stakeholders (i.e., Member States, Industry, ESA...) on priorities for the H2020 R&D actions in the timeframe 2018-2020. Support the Commission's initiatives towards the establishment of the 1st EU Radionavigation Plan, a key element that should influence the evolution of the EU GNSS Programmes.	31/12/2017	JRC contributions to policy documents

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
346 - GALILEO JRC.E.2	4869 - GALGROW 2017-2019 Technical and policy support to DG GROW on EU Satellite Navigation Programmes	This work package aims to ensure the quality assurance of space- and ground-based land products and their retrieved methodologies. Fitness for purpose of the Copernicus data records will be ensured. The tasks include a state-of-the-art model-based approach for achieving reference data used for product validation. Web-based quality assurance tools are envisaged.	JRC.E.2 MATTEO PAONNI	4.1.b	GROW	GROW	Matthias PETSCHKE		GSA - European GNSS Agency	01/01/2017 31/12/2019	CON-AA	GROW03	Support to EU GNSS Programmes - 01/2017	As agreed in the technical annex to the GALGROW AA, JRC has to produce half-yearly progress reports. With this deliverable JRC will document the activity performed in the first semester of 2017, providing an overview of the tasks and of all the produced outputs. Project management aspects will be also covered.	15/07/2017	Project management related documents/reports identified as outputs of the JRC Work Programme
												GROW04	Support to EU GNSS Programmes - 02/17	As agreed in the technical annex to the GALGROW AA, JRC has to produce half-yearly progress reports. With this deliverable JRC will document the activity performed in the second semester of 2017, providing an overview of the tasks and of all the produced outputs. Project management aspects will be also covered.	15/01/2018	Project management related documents/reports identified as outputs of the JRC Work Programme
												GROW05	Galileo and GNSS Monitoring	Under the support to EU GNSS Programmes JRC is engaged in a permanent activity aiming to monitor the performance of Galileo and of other GNSS. In this context JRC will conduct a number of ad-hoc analysis (e.g. in case of anomalies). The results of such analyses will be documented in one or more JRC technical reports.	31/12/2018	JRC technical reports
												GROW06	Galileo Compatibility, Signals and Interoperability	JRC is providing specific support to GROW in the context of the Galileo Compatibility, Signals and Interoperability Working Group (CSI WG). In this context JRC will assist GROW on CSI WG meetings preparation, also through the execution of dedicated technical analysis. Also, JRC will support GROW in the framework of negotiations with GNSS and non-GNSS providers through the execution of specific technical analysis on the compatibility between Galileo and other systems.	31/12/2018	JRC technical reports
												GROW07	Support to EU GNSS Programmes - 01/2018	As agreed in the technical annex to the GALGROW AA, JRC has to produce half-yearly progress reports. With this deliverable JRC will document the activity performed in the first semester of 2018, providing an overview of the tasks and of all the produced outputs. Project management aspects will be also covered.	15/07/2018	JRC technical reports
564 - CESAR JRC.D.6	4871 - CLEO Copernicus Land Observation quality assurance	This work package aims to ensure the quality assurance of space- and ground-based land products and their retrieved methodologies. Fitness for purpose of the Copernicus data records will be ensured. The tasks include a state-of-the-art model-based approach for achieving reference data used for product validation. Web-based quality assurance tools are envisaged.	JRC.D.6 Nadine GOBRON	4.1.b	GROW	JRC	Mauro FACCHINI	ENV	CEOS - Committee on Earth Observation Satellites (CEOS) GCOS - Global Climate Observing System (GCOS) WMO - World Meteorological Organization (WMO)	01/01/2017 31/12/2018	INS-RS	201701	Model-based reference database	Construction of a large number of realistic small-scale terrestrial sites in a computer model towards intensive real-time (RT) simulations. These simulations will be reference data of field measurements both inside virtual sites and space data, such as Sentinel-3 and Sentinel-2 data. A reference validation database will be developed to store them.	31/12/2017	Validated methods, Reference methods and measurements
												201702	Space land ECVs	Global land reference datasets of Essential Climate Variables (ECVs) complemented by metadata and uncertainty estimates. On a yearly basis the activity will continue to update and expand the JRC's benchmark Earth Observation (EO) database created to support land and climate studies, and to interdependently address the fitness-for-purpose of EU Sentinel-3 land products.	31/12/2017	Validated methods, Reference methods and measurements
												201801	Quality assurance of validation protocol	Model-based quality assurance framework to overcome limitations in the quality control for validating ECV protocols.	31/05/2018	PhD thesis
												201802	Benchmark platform	An automatic platform that provides the results of benchmarking between international and Copernicus terrestrial satellite products. This will allow for the checking of fitness for purpose against accuracy requirements.	31/01/2018	Technical systems
486 - OK-DDE JRC.B.6	4884 - EOvalue Socio-economic value of EO Research and Innovation	This WPK will evaluate the economic, social and innovation potential of Earth Observation (EO) research, and support DG RTD in implementing the Group on Earth Observations (GEO) Strategy 2016-25, including coordinating the evolution of the GEO System of Systems (GEOSS) Common Infrastructure with the needs of GEO initiatives or flagships in which the JRC participates. More specifically, this WPK will: 1.Support to GEO Governance (including participation to the Board and GD7). 2.Support to development of GEOSS (inc. GCI, including interaction between the EU Hub (H2020 project) and GD7 as well as ESA supporting action 3.Characterization of the commercial sector in Europe for the exploitation of EO data and services.	JRC.B.6 Massimo CRAGLIA	4.1.b	RTD	RTD	Michel SCHOUPE	CNECT DIGIT GROW		01/07/2017 01/07/2020	CON-AA	20171	Review of the GEO Work Programme	Technical report reviewing the annual Work Programme implementing the GEO strategy 2016-25, assessing the contribution of GEO initiatives and flagships. It includes findings and recommendations for the GEO Programme Board and the GEO Plenary.	22/12/2017	JRC technical reports
												20181	Review of the GEO Work Programme	Technical report reviewing the annual Work Programme implementing the GEO strategy 2016-25, assessing the contribution of GEO initiatives and flagships. It includes findings and recommendations for the GEO Programme Board and the GEO Plenary.	01/09/2018	JRC technical reports
												20182	Private sector exploitation of Open GEO data	This technical report analysis the opportunities and perceived limitations in the exploitation of open Earth Observation (EO) and GEOSS open data CORE by the European private sector, and SMEs in particular. This activity is based on the results of a survey focus group and workshop held to elicit the views of the private sector and make recommendations to DG RTD and the GEO Programme Board.	01/10/2018	JRC technical reports
												20183	Characterisation of EO commercial sector	Scientific deliverable aiming to characterise the commercial sector that are able to exploit and use EO data and products. Paper(s) expected as output.	01/11/2018	Article contribution to periodicals or to conference proceedings listed in SCOPUS
564 - CESAR JRC.D.6	5045 - Copernicus 2 Administrative Arrangement on Technical support to Copernicus Programme - PLANNED	The overall objective of this project is to build on the successes of the previous MetEOC projects (http://www.emceoc.org/) and contribute to the establishment of the necessary metrology infrastructure, tailored to climate needs in readiness for its use in climate observing systems. Within the framework of a European metrology 'centre of excellence' network, the research in this project will help to facilitate uncertainties at levels openEO is an H2020 project funded by the EO Big Data Shift call (H2020-EO-2017) and coordinated by the Technical University of Wien, Austria. openEO aims at designing and implementing a common, open source interface between high-level descriptions of data mining chains to be applied to	JRC.D.6 Mark DOWELL	4.1.b	GROW	GROW	Mauro FACCHINI	AGRI CLIMA CNECT DEVCO	01/10/2017 30/09/2020	CON-AA	2018	Yearly report	Copernicus 2 AA 2018 report	30/10/2018	JRC technical reports	
564 - CESAR JRC.D.6	5600 - METEOC 3 Metrology for Earth Observation and Climate 3	The overall objective of this project is to build on the successes of the previous MetEOC projects (http://www.emceoc.org/) and contribute to the establishment of the necessary metrology infrastructure, tailored to climate needs in readiness for its use in climate observing systems. Within the framework of a European metrology 'centre of excellence' network, the research in this project will help to facilitate uncertainties at levels openEO is an H2020 project funded by the EO Big Data Shift call (H2020-EO-2017) and coordinated by the Technical University of Wien, Austria. openEO aims at designing and implementing a common, open source interface between high-level descriptions of data mining chains to be applied to	JRC.D.2 Frederic MELIN	4.1.b	GROW	RTD	Mauro Facchini, GROW.1.2	CLIMA ENV	01/09/2017 31/08/2019	CON-IA	201801	Performance assessment of radiometric calibrations	By focusing on hyperspectral sensors applied for satellite ocean validation, the activity will investigate differences in absolute calibration performance of single- versus multi-point optical radiometric calibrations. Final objective is to quantify uncertainties due to non-linear response of radiance and irradiance sensors built on hyperspectral spectrometers.	31/12/2018	JRC technical reports	
225 - EO&SS Big Data JRC.I.3	5980 - openEO Common open source interface between Earth Observation data infrastructures & front-end applications	openEO is an H2020 project funded by the EO Big Data Shift call (H2020-EO-2017) and coordinated by the Technical University of Wien, Austria. openEO aims at designing and implementing a common, open source interface between high-level descriptions of data mining chains to be applied to	JRC.I.3 Pierre SOILLE	4.1.b	GROW	JRC	Pierre Soille		01/01/2018 31/12/2020	CON-IA	1	openEO API	Contribution to the specification, testing, and optimisation of the common and open application programming interface between various front-end users and back-end platforms for the analysis of Earth Observation data at scale and for a variety of use-cases. Contribution to cross-testing to ensure that reproducible results are obtained when performing the same data analysis on two or more platforms equipped for this analysis.	31/12/2020	Technical systems	
4.1.c medical devices and cosmetics - support to the implementation and management of the revised medical devices and in vitro diagnostic medical devices regulatory framework through scientific, technical and related logistic means; support to the cosmetics regulatory framework including through promotion of alternative methodologies to animal testing.																
275 - MedicalTechnology JRC.F.2	2001 - AIRN-MD II Post Market Safety - Medical Devices (MDs) and In Vitro Diagnostic Medical Devices (IVDs)	DG JRC is formally committed to providing technical, scientific and related logistic support for the implementation of a revised regulatory framework for medical devices for which two Commission's proposals have been adopted on 26.09.2012 and are now under discussion in the European Parliament and Council. The new regulatory framework foresees a stronger role for MD-EVIDENCE will cover the next administrative arrangement (AA) on medical devices - which still needs to be defined. Once the present AA will be finished in April 2017 (WPK 2001), MD-EVIDENCE will ensure a seamless continuation of the project's policy-support dimension. Depending on the agreements on joint implementation (GROW/JRC) and the resources available, MD-EVIDENCE may tackle considerably more scientific work areas (see Reference 1) than outlined here. In its current design MD-EVIDENCE largely continues the work initiated under the current AA (FTE) addressing fundamental scientific shortcomings (see Commission impact	JRC.F.2 Claudius GRIESINGER	4.1.c	GROW	GROW	Erik HANSSON; Erik.Hansson@ec.europa.eu	SANTE	WHO - World Health Organization	26/08/2015 25/04/2017	CON-AA	20	Vigilance Report	Progress report on the activities carried out and contribution provided in accordance with all the tasks falling within the vigilance area.	31/01/2017	JRC technical reports
												30	Exploratory Study on EURLs for MDs and IVDs	Summary report on the exploratory work for the establishment and running of medical devices (MDs) and in vitro diagnostics (IVDs) EU Reference Laboratories, including results and identified needs.	30/04/2017	JRC technical reports
												6	Final Report on Medical Devices	Scientific report describing all the activities carried out in the framework of this Work Package, including the specific deliverables produced under each of the assigned tasks.	30/04/2017	Science-for-policy reports
275 - MedicalTechnology	4881 - MD-EVIDENCE Implementing an evidence-based	MD-EVIDENCE will cover the next administrative arrangement (AA) on medical devices - which still needs to be defined. Once the present AA will be finished in April 2017 (WPK 2001), MD-EVIDENCE will ensure a seamless continuation of the project's policy-support dimension. Depending on the agreements on joint implementation (GROW/JRC) and the resources available, MD-EVIDENCE may tackle considerably more scientific work areas (see Reference 1) than outlined here. In its current design MD-EVIDENCE largely continues the work initiated under the current AA (FTE) addressing fundamental scientific shortcomings (see Commission impact	JRC.F.2	4.1.c	GROW	GROW	Hans Erik HANSSON; Paul PISCOI; Jean-Francois	COMP	COCIR - European Coordination Committee of the Radiological, Electromedical and Healthcare IT Industry (COCIR) EDMA - European Diagnostic Manufacturers Association (EDMA) EPF - European Patients Forum (EPF)	01/05/2017	CON-AA	MDE1	Guidance for manufacturers and notified bodies	Summary report on the guidance documents developed for manufacturers and notified bodies on clinical evidence for specific high-risk devices and on new working procedures introduced for guidance development (e.g. transparent use of external expertise). Actual output will consist of official guidance documents published on the Commission's MEDDEV pages.	31/03/2020	JRC technical reports
												MDE2	Clinical trial applications - EU consistency	Summary report on the activities on improved procedures and criteria for joint assessment by EU MS of clinical trial applications by manufacturers in view of enhancing consistency of decisions by competent authorities and shortening assessment periods. Actual output will include updated or novel guidance documents on MEDDEV.	30/04/2020	JRC technical reports
												MDE3	International nomenclature	Summary report on the development of international nomenclature for Adverse Event Reporting in the context of the 'International Medical Device Regulators Forum, IMDRF'. Actual output will be guidance / technical annexes concerning nomenclatures published on the IMDRF webpage.	31/10/2019	JRC technical reports

JRC 2017- 2018 WORK PROGRAMME																
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JRC.F.2	management of medical devices under the novel EU regulatory framework	assessment) in both pre-market (e.g. clinical) and post-market space (e.g. vigilance, risk detection). MD-EVICENCE will (1) Produce new guidance for manufacturers and notified bodies on clinical evidence for specific high risk devices and introduce new working procedures for guidance development, including transparent use of external expertise. (2) Develop working procedures for common assessment of clinical trial applications by manufacturers in view of enhancing consistency of decisions by competent authorities and shortening assessment periods. (3) Develop, in collaboration with MS &	Claudius GRIESINGER				ROCHE; Salvatore D'ACUNTO	SANTE	EUCOMED - Eucomed represents the Medical Technology industry in Europe IMDRF - International Medical Device Regulators Forum (IMDRF) Medtech Europe - Medtech Europe	01/05/2020		MDE4	Integrated approaches for signal detection	Summary report on work towards integrated approaches for signal detection, combining qualitative evaluation criteria with quantitative approaches of clustered data (MDR EUDAMED) for efficient signal detection. Actual output may include scientific publications guidance documents on MEDDEV as well as IMDRF guidance.	30/11/2019	JRC technical reports
												MDE5	Evaluation of clinical applications	Summary report on (1) novel working procedures for MS competent authorities regarding the use of new sources for signal detection and (2) development of an IT tool to collect, collate and exploit new data sources, supporting MS collaboration. Actual output may be MEDDEV guidance documents, Science-for-Policy report and a website presenting categorised information on alerts and recalls collected from global sources.	31/10/2019	JRC technical reports
												MDE6	Functionalities novel EU database	Summary report on the input provided to DG GROW in view of optimising specifications and functionalities of the electronic modules on vigilance and clinical evaluation of the new EU database on medical devices (MDR EUDAMED).	29/02/2020	JRC technical reports
4.1.d raw materials - support the implementation of actions and EU policies and monitor the progress of the implementation plan for the European Innovation Partnership on Raw Materials. Monitor the primary and secondary raw materials global and European markets and support the management of the EU Knowledge Base on Raw Materials, by developing the Raw Materials Information System in collaboration with European																
443 - Raw Materials JRC.D.3	3441 - MICA Mineral Intelligence Capacity Analysis	The objective of MICA is to develop a methodology, workflows and associated tools to make the best use of available data on mineral resources in Europe to support scientific and policy questions. MICA is a follow up (Minerals4EU) that created European minerals knowledge base (information system) + the permanent EU mineral information network. MICA is planned to	JRC.B.6 Robert TOMAS	4.1.d	GROW	RTD	Slavko SOLAR (GROW. C.2)			01/12/2015 31/01/2018	CON-IA	201701	Technical specifications	The report will describe a resulting "intelligent" layer located on top of the central database and its visualization system that represent essential pieces of the system which is to provide all the stakeholders with the highest quality of expertise. The "Search Interface" for the EU-RMCP will be developed as a Dynamic Decision Graph (DDG) based on a multidimensional ontology.	30/08/2017	JRC technical reports
												201702	Raw Materials Intelligence Capacity Platform	Delivery (implementation and operation) of the Raw Materials Intelligence Capacity platform (EU-RMCP system), fully integrated to the EU Raw Materials Knowledge Base	30/11/2017	Scientific information systems and databases
												201701	Security of supply of raw materials: resilience	EC lists every 3 years RM considered critical due to their high economic importance and risk of supply disruptions. This deliverable will focus on resilience, complementing the current risk and consequences analysis. It will provide a framework for resilience assessment in the context of raw materials, building on international cross-sectorial activities. It will provide insights from a literature survey of member state, European, and international activities related to resilience.	30/11/2017	JRC technical reports
												201702	Exploring potential for re-use in Circular Economy	Although mentioned already in the Raw Material Initiative, re-use as an option to mitigate raw materials supply risk has been less analysed and documented than recycling. This deliverable will describe a method to assess the environmental impacts and benefits of reusing products / components that aims to extend the use of raw materials. The method will be applied to a typical Information Technology product that contain CRMs (e.g. servers). Links with durability will also be discussed.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												201703	EU trade flows in Raw Materials	EU trade policy recognizes the strong role of new global value chains in influencing trade decisions and international agreements. Detailed data and indicators on trade flows dynamics are needed, also best practices info for various value chains stages. The needs for data, info and impact assessments are increasing in the case of raw materials, with priority on: a) trade flows of commodities b) international trade measures and agreements. Deliverable integrates specific datasets and indicators.	15/12/2017	JRC technical reports
443 - Raw Materials JRC.D.3	3767 - RAW-MAT-CEA Raw Materials: Criticality and Efficiency Assessments	Objectives: - This WPK will contribute to the EU's secure and sustainable access to raw materials, particularly in the context of criticality, resource efficiency and recycling. How the WPK contributes to the achievement of project's objectives? - The WPK contributes to the project as it supports effective identification of Critical Raw Materials and the 3rd pillar of the Raw Material Initiative "Resource efficiency and supply of secondary raw materials through recycling". Moreover, the methods developed in this WPK are necessary to prepare meaningful information and data on resource efficiency and recycling to be inserted into the Raw Materials Information System, including for use in the Raw Materials Scoreboard. What will be done in the WPK? - A first block of the WPK is to explore important parameters used in relation to criticality assessment, particularly in relation to security of supply and resilience. A second block concerns the analysis of stocks of raw materials (categories of products) and of secondary raw materials, (including critical ones). A last block aims at exploring the potential of options for mitigation of supply risks, through re-use, durability and standards. Short description of main methodologies (experiments, modelling, workshops,...) to be used? - Most of the work will be done through analysis of the current situation (analysis of statistics, of practices), modelling of current and future material flows and stocks, and proposal and test of new indicators. Why is this work needed? Why is it important? - This work is at the heart of the Raw Materials Initiative, it supports the EU Knowledge Base on Raw Materials and the Raw Materials Scoreboard, among other outputs, and is supported by DG GROW (and also DG ENV).	JRC.D.3 FABRICE MATHIEUX	4.1.d	GROW	JRC	GROW, C2 (Mattia Pellegrini & Magnus Gisleiv); GROW, C1 (Fulvia Raffaeli & Cesar Santos); ENV (Hugo Sschally & Ferenc Pekar); ENER (Paul Hodson; Paolo Tosoratti)	CNECT ENER ENV SANTE SG	- European Consumers' Organisation - TECHNISCHE UNIVERSITAET BERLIN - EUROPEAN COPPER INSTITUTE EGS - Eurogeosurveys CEN - European Committee for Standardization CENELEC - European Committee for Electrotechnical Standardization (CENELEC) EAA - European Aluminium Association EUROFER - European Confederation of Iron and Steel Industries (EUROFER) KUL - Katholieke Universiteit Leuven MS EU - Member states EU ORGALIME - European Engineering Industries Association PlasticsEurope - Association of Plastics Manufacturers (PlasticsEurope)	02/01/2017 31/12/2018	INS-RS	201801	Tool for environmental assessment of durability	Various EU policies encourage higher durability of products as a way to extend the use of raw materials and hence mitigate supply risks. JRC has been developing a method to assess if and how it is convenient to prolong the lifetime of products. The deliverable aims at revising this method and at implementing it into a software tool, potentially interoperable with the EC Ecoreport tool for the assessment of ErPs. This tool will allow users to easily run the JRC method for durability assessments.	30/11/2018	Scientific information systems and databases
												201803	Prioritizing waste streams for quality raw-mat	The Raw Material Initiative identified end-of-life products/components (e.g. EEE, batteries, vehicles) as valuable sources of secondary raw materials. This del. will provide an analysis to (1) identify which waste streams have the greatest potentials for production of (high-quality) secondary raw materials and (2) provide quantitative estimates of such potential. It focuses specifically on some waste streams (e.g. those containing CRMs) and to linking this work with RMIS and the RM Scoreboard.	30/06/2018	JRC technical reports
												201804	Reference values for recyclability calculations	This deliverable will address methodological and practical aspects to develop EU reference values to calculate recyclability / recoverability rates of products (in particular electronic equipment). The methodology will be tested on case studies. It will build on a feasibility study completed in 2016. The approach provides new opportunities to link industrial products and recycling, as well as to enhance the dialogue between stakeholders, incl. material producers, product manufacturers, recyclers	30/09/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												201805	Standards for material-efficient products	Report analysing the need for, and the necessary components of, new standards for defining clear and shared methods to measure the material efficiency of products (including recyclability, durability, use and recyclability of CRMs), as source of secondary raw materials (task for ISG on raw mat). It will be based on the 2 years (2016-18) JRC' contributions to the preparation/execution of the CEN/CENELEC mandate on standardise methods for material efficiency, by request from DG GROW and ENV.	28/09/2018	Science-for-policy reports
443 - Raw Materials JRC.D.3	3818 - Raw-KBM Raw Materials Knowledge Base and Monitoring	The Raw Materials Initiative, the European Innovation Partnership, and the Circular Economy Action Plan foresee the necessity of a Knowledge Base and Monitoring at EU level to support policy needs for the secure and sustainable supply of raw materials. This work package, RAW-KBM, facilitates the development of the Raw Materials Information System (RMIS) and the development of monitoring indicators. The RMIS is foreseen to become a central contribution to the EU's Knowledge Base on Raw Materials, providing direction on knowledge needs as well as facilitating coherent inputs including from the Geological Surveys of Europe (EGS), the European Institute of Innovation and Technology – Raw Materials, as well as selected Horizon 2020 projects and COST Actions, and other institutions. International interactions are foreseen with the UNEP International Resource Panel. While supporting key raw materials policy commitments, the RMIS will also be developed to facilitate monitoring needs related security and sustainability	JRC.D.3 David PENNINGTON	4.1.d	GROW	JRC	Mattia PELLEGRINI	EAC ENV RTD TRADE	- POLITECNICO DI TORINO - Ghent University EGS - Eurogeosurveys	01/01/2016 31/12/2018	INS-RS	201701	RMIS version 2.0	Building on RMIS v1.0 and further expanding its scope and ambitions, RMIS 2.0 will become a "one-stop" platform in support to priority EC policy support needs for the secure and sustainable supply of raw materials. It will cover non-energy, non-food raw materials, from both primary and secondary biotic and abiotic sources, covering the entire value chain. The current structure will be substantially upgraded and new thematic blocks will focus on needs identified in the 2016 RMIS Interim Roadmap.	01/12/2017	Scientific information systems and databases
												201702	Social impacts in the mining sector	The aim of this work is to analyse the scientific literature on social impacts of mining and detect what are the most important social issues of this sector. It also explores if, and to what extent, these issues are taken into account in the main currently available databases used in macro scale Social Life Cycle Assessment as well as relationships with e.g. Sustainable Development Goals.	29/12/2017	Science-for-policy reports
												201801	Material flow analysis: advancement&harmonisation	Europe relies on reliable and robust knowledge on raw material stocks and flows for better monitoring and to promote innovation along the entire value chain. This work focuses on (1) development of a JRC-internal MFA knowledge/database in the RMIS, (2) representation of MFA relevant information for some raw materials, and (3) summary of MFA modeling approaches, EU data sources, and suggestions for increased harmonisation of MFA modeling approaches in Europe.	29/06/2018	JRC technical reports
												201802	Environmental Assessment of RM Supply Chains	This work focuses on the sustainable supply of raw materials, primarily on the environmental dimension. Focus is on both micro and macro scale data and analyses to support the RMIS, Raw Materials Scoreboard, Circular Economy Monitoring, and other related needs. This includes a full value chain, or life cycle, approach using top-down methods such as environmental extensions to input-output economic accounts, as well as bottom up approaches such as using trade data combined with LCA information.	28/12/2018	Science-for-policy reports
												201803	Support to Report on Critical Raw Materials	Inputs to the "Report on critical raw materials and the circular economy" as foreseen in COM (2015) 614 Annex.	15/12/2017	JRC contributions to policy documents

JRC 2017- 2018 WORK PROGRAMME																
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		consideration of raw materials supply, from abiotic as well as abiotic and from primary as well as secondary (recycled waste) sources. This includes selected needs of the Raw Materials Scoreboard, the Resource Efficiency Scoreboard, and for Circular Economy Monitoring Indicators.										201804	Raw materials supply chain knowledge needs	Methods and data supporting the environmental and social assessment of supply chains are advancing, including in terms of data availability, coherence and quality assurance. Data on supply chains and activities for regions outside the EU remain a challenge, but one that is being addressed through international data networks, awareness raising, and tools such as crowd sourcing. This paper provides a critical review.	22/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
443 - Raw Materials JRC.D.3	3860 - Raw-Score Raw Materials Scoreboard	As outlined in Administrative Arrangement #SI/2.719208 with DG GROW, the purpose of the work to be carried out is to provide DG GROW	JRC.D.3 David PENNINGTON	4.1.d	GROW	GROW	GROW, C2 (Lie Heymans)			01/01/2016 30/06/2017	CON-AA	3	Data and analysis	Final results (data and graphs) for all indicators included in WP1 and a detailed.	31/03/2017	Science-for-policy reports
443 - Raw Materials JRC.D.3	4303 - RM- EIP Raw Materials – Support to European Innovation Partnership	This work implements the Administrative Arrangement between JRC and DG GROW in support of implementation of the Raw Materials European Innovation Partnership (RM-EIP). This Partnership was established to implement the Raw Materials Strategy in the context of Industrial Renaissance, in particular to increase competitiveness and hence growth and jobs. Focus is on non-energy and non-food raw materials; both biotic and abiotic. It accounts for raw material supply chains, including in particular knowledge and analyses associated with primary raw materials that are extracted, as well as secondary raw materials that are recovered from waste through e.g. urban mining, recycling, etc. This work package complements, and necessary interacts with, institutional work packages such as RAW-KB, Success, and others in the BRACE-RMP Project.	JRC.D.3 David PENNINGTON	4.1.d	GROW	GROW	Patrice Millet, Mattia Pelligrini	ENV ESTAT TRADE		01/07/2016 30/06/2018	CON-AA	D1	Annual Monitoring Report 2016	The Annual Monitoring Report is based on information provided by the Commitments through the Call for Commitments and via an annual mandatory monitoring survey. The annual monitoring survey is adapted each year to take into account new evolutions (e.g. new funding opportunities) and to get better insights from the Commitments (e.g. on obstacles to innovation).	26/05/2017	JRC contributions to policy documents
												D10	Support to the work on the CRM methodology	The first deliverable (D10) is a follow up on the JRC-GROW AA № SI2.702038 of which the objective was to assess the current CRM methodology, identify aspects that had to be adapted to better address the needs and expectations of the list of critical raw materials and ultimately propose an improved and integrated methodology.	30/06/2017	JRC contributions to policy documents
												D11	Adding the CRM fact sheets to RMIS	This deliverable consists of transferring the qualitative information of the CRM fact sheets that are being prepared within the framework of the study: "Review of the list of Critical Raw Materials for the EU (2017)" into the RMIS.	30/06/2017	Scientific information systems and databases
												D12	Analysing availability of trade data	This deliverable will contribute to the inclusion of trade data in RMIS. JRC will make an analysis of the data needs starting from the list below and create an overview of which data sources are the best suited to meet the agreed needs.	28/04/2017	JRC technical reports
												D13	Model country fiche with selected variables	Based on the dataset created in D12 a set of variables will be selected to form a template country fiche (developed in close co-operation with the relevant DG GROW policy officer to best reflect knowledge needs).	29/09/2017	Datasets
												D14	Trade fiches for at least three pilot countries	A set of three country fiches will be delivered based on D13 and D14. Countries will be selected by DG GROW in consultation with JRC.	24/11/2017	Datasets
												D15	Making trade fiches available online	Fiches should be made available online.	23/02/2018	Scientific information systems and databases
												D2	Annual Monitoring Report 2017	as per D1 but for 2017	30/03/2018	JRC contributions to policy documents
												D3	Pre-screening of the Commitment proposals	The EIP foresees the launch of a new Call for Commitments (CfC) by the end of 2017. Applicants will be able to submit their proposal through the EIP website, filling out a pre-defined form. When the call closes the JRC will be responsible for the pre-screening of the Commitment proposals, following the same procedure and templates developed for the previous call.	25/05/2018	JRC contributions to policy documents
												D4	draft fiches per priority area	The SIPID will consist of a concise key document with general conclusions that will be accompanied by an annex that includes 7 fiches (one per Priority Area). These fiches will provide an inventory, action by action, of research projects and initiatives undertaken by potential players during the mandate of the EIP, including the Raw Materials Commitments, EU funded projects (FP7, Horizon 2020), EC initiatives, MS funded projects and MS initiatives.	29/09/2017	JRC contributions to policy documents
												D6	Draft indicators	Based on the D5 analysis, GROW and JRC will elaborate an "indicator work plan". This will specify the approach for every indicator and set out the specifications for the development of the indicator fiches. JRC will then develop the draft indicators	26/05/2017	JRC contributions to policy documents
												D7	Revised indicators	Based on D6, taking into account consultations, JRC will finalise the indicators for the 2018 RM Scoreboard.	14/07/2017	JRC contributions to policy documents
												D9	MSA analysis for at least three bulk materials	The MSA analysis of at least three bulk materials (e.g., iron, copper, and aluminium, with consideration of nickel and zinc pending on feasibility) will start with (a) JRC's proposal for	23/02/2018	JRC technical reports
353 - ConTraffic JRC.E.5	746 - FP7-CORE Consistently Optimized Resilient	This WPK represents the participation of JRC in the FP7 CORE demonstration project. CORE will	JRC.E.5 Aris TSOIS	4.2.a	TAXUD	HOME	Agnieszka MARCINIAK (REA)	GROW MOVE	Cust Aut MS - MS Customs Authorities	01/05/2014 30/04/2018	CON-IA	9	JRC Contribution to WP22 in FP7 CORE	Contribution to the CORE (FP7) WP22 Data Collection activity	30/11/2017	JRC technical reports
341 - Reference Materials JRC.F.6	3180 - EUROMARKER Evaluation of fiscal markers for gas oil	Evaluation of the fiscal marker for gas oil and kerosene in accordance with Article 2 of	JRC.F.6 Andrea HELD	4.2.a	TAXUD	TAXUD	Vassil ZHIVKOV (TAXUD C.2)			01/06/2015 31/03/2017	CON-AA	10	Report on candidate markers	Report on the tests of the candidate markers	28/02/2017	JRC technical reports
5133 - TobCon JRC.F.4	3262 - TOBLAB Identification of illicit tobacco products	The subject of the AA is the operation of a facility for the chemical analysis of authentic and illicit cigarettes and tobacco products in order to identify whether they are genuine or contraband and counterfeit cigarettes. This work will support customs administrations in the Member States in	JRC.F.4 Maria Beatriz DE LA CALLE GUNTINAS	4.2.a	OLAF	OLAF	Zilvinas.Maigys@ec.europa.eu, OLAF.D.4	TAXUD	Cust Aut MS - MS Customs Authorities	01/06/2017 30/06/2017	CON-AA					
215 - SITAF-ST JRC.I.3	3365 - WP2 - AMT5 Phase II AUTOMATED MONITORING TOOL (AMT) STEP 5 - Phase II	This is the fifth in a sequence of support projects which began with the Enlargement of the EU in 2004. The general aim of the AMT series is to develop and apply novel statistical methods to anti-fraud relevant data and disseminate results via a purpose built web-based platform, THESEUS. This project will further advance applications and development work in the systematic statistical detection of patterns of antifraud relevance in large volumes of trade and other relevant data and will further disseminate the derived results in OLAF, the Member States and other interested services.	JRC.I.3 Domenico PERROTTA	4.2.a	OLAF	OLAF	Nicholas Shaw		Cust Aut MS - MS Customs Authorities	04/07/2016 03/07/2018	CON-AA	201701	Enhanced EU Fraud detection capability - II	The first deliverable of the AMT phase II focuses on the identification of cases of misclassification of Origin (Deflection of Trade) or Product", i.e. shipments being diverted through a third country or having the product code deliberately miss-declared to disguise their true origin or nature. Work includes the refinement of the detection of spikes and level shifts in time series of trade quantities/values with improved models for trend and seasonal changes.	30/06/2017	Project management related documents/reports identified as outputs of the JRC Work Programme
												201801	Enhanced EU Fraud detection capability - III	The second deliverable of the AMT phase II focuses on the detection of specific patterns in declaration level data. These are clusters and systematic under/over-valuation and price outliers for heteroscedastic populations. This work is meant to intensify the support to Member States, especially in view of the revision of the 515/97 Regulation.	30/06/2018	Project management related documents/reports identified as outputs of the JRC Work Programme
353 - ConTraffic JRC.E.5	3782 - CTR-RISK ConTraffic for Customs Risk	Collaboration with DG TAXUD and MS Customs authorities in implementing action 6.2 of	JRC.E.5 Aris TSOIS	4.2.a	TAXUD	TAXUD	HORAN Colin (TAXUD)	HOME OLAF	Cust Aut MS - MS Customs Authorities	16/04/2016 15/04/2018	CON-AA					
353 - ConTraffic JRC.E.5	3814 - CTR-REG-1 S & T support for the implementation of basic services as in the 2015 amendment to Reg (EC) 515/95	Provide S&T support to OLAF for the implementation of (EU) 2015/1525 amending Reg. (EC) 515/97, the part related to data specification, collection, integration, analysis and dissemination for Container Status Messages to be submitted by the logistics industry to OLAF.	JRC.E.5 Aris TSOIS	4.2.a	OLAF	OLAF	Georg ROEBLING (OLAF), Jose PERDIGAO (OLAF)	TAXUD	Cust Aut MS - MS Customs Authorities	01/01/2016 31/12/2017	CON-AA	2	Integration of CSMs in AFIS - rel. 2	Based on knowledge built in the ConTraffic project, JRC will provide scientific and technological support for the design, implementation and integration in AFIS of the data warehouse infrastructure needed to collect, store and extract harmonized common data elements from Container Status Messages sent by carrier companies. This includes support for the implementation of modules similar to the "Track & Trace" and "Surveillance" modules of ConTraffic. Final report for 2016-2017.	30/11/2017	JRC technical reports
353 - ConTraffic JRC.E.5	4220 - CTR-REG-2 S & T support for promoting the systematic use of CSMs based on (EU) 2015/1525	Scientific and technological support for the initial verification of logistics industry compliance to (EU) 2015/1525 regarding the submission of Container Status Messages through an independent verification/validation of the data submitted by the carriers. Support for the implementation of an EU-wide system in AFIS for the automatic and systematic origin verification of customs import declarations (SAD) based on Container Status Messages, similar to the ConTraffic-SAD pilot system developed by JRC. The support may include provision of software developed by JRC	JRC.E.5 Enrico CHECCHI	4.2.a	OLAF	OLAF	Jose Perdigao	TAXUD	Cust Aut MS - MS Customs Authorities	01/06/2016 31/12/2017	CON-AA	1	Industry compliance with (EU) 2015/1525	JRC will perform a study where data on Container Status messages provided will be compared to Track&Trace data publicly available over the Internet. The JRC activity will be done for carriers that are covered by ConTraffic's data gathering capacity at the time of the study. The study will try to determine if the carriers are compliant with the requirements of (EU) 2015/1525. Two interim reports, in December 2016 and June 2017, one final report in November 2017.	30/11/2017	JRC technical reports
												2	Integration of SAD-analysis module in AFIS	Scientific and technological support of the implementation of an automated validation of origin (similar to the ConTraffic-SAD analysis) for all SAD import declarations collected centrally by OLAF. Such a development will be based on the existing ConTraffic-SAD module. The work includes support for the development of the required container-trip computation module in AFIS, using code and techniques developed and tested in ConTraffic.	15/12/2017	JRC technical reports
353 - ConTraffic JRC.E.5	4240 - CTR-REG-3 S & T Support for developing in AFIS advanced interactive analytics on CSM data	Scientific and technological support for the development of advanced modules in OLAF's AFIS system for users to interactively analyse and visualize data from Container Status Messages(CSM) and related customs data, like Single Administrative Document (SAD) declarations or transit data. The main objective is transfer the JRC know-how and support OLAF to develop a visual analytics module that includes various	JRC.E.5 Aris TSOIS	4.2.a	OLAF	OLAF	Jose Perdigao	TAXUD	Cust Aut MS - MS Customs Authorities	01/01/2017 31/12/2018	CON-AA	1	Report on the results of the first year	In close collaboration with OLAF, support will be provided to design and develop the visual analytics module so that it can function in the AFIS environment. In the first year the aim will be to design and develop an initial prototype with reduced functionality. The report will document the support provided by JRC to OLAF.	15/12/2017	JRC technical reports
												2	Report on the second year results	In the second year the aim will be to develop and put in production the visual analytics module. The final functionality of the module will depend on many parameters including the availability of additional data (import declarations, transit data) and the development capacities in AFIS. The report will document the support provided by JRC to OLAF during the second year and the results achieved.	14/12/2018	JRC technical reports

JRC 2017- 2018 WORK PROGRAMME																	
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main DG	Funding DG	DG's Contact	Add. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category	
215 - SITAF-ST JRC.I.3	4307 - PoC Newcomb-Benford Web-based service using Newcomb-Benford's Law for customs fraud	SITAF collaborates with the Italian Customs and the Universities of Siena and Parma to establish a novel web service that will be used by custom	JRC.I.3 Emanuele SORDINI	4.2.a	OLAF	JRC	Nicholas SHAW	TAXUD	Cust Aut MS - MS Customs Authorities	01/01/2016 31/12/2017	INS-PC	43072	Deployment of the service in Web-ARIADNE	Implementation of the NB methodology in the Web-ARIADNE JRC server for testing by interested Member States	15/03/2017	Technical systems	
302 - EUDEPRO JRC.F.4	5720 - CLEN2SAND2 Identification of New Psychoactive Substances (NPS) and unknown chemicals part II	CLEN2SAND2 addresses the needs of DG TAXUD and of the Customs laboratories European Network (CLEN) for the identification of illicit substances in imported goods, such as new psychoactive substances (NPS), drug precursors or diverted medicines. In coordination with key EU and International organisations (Customs, European Network of Forensic Science Institutes, NIST, EMCDDA) the project contributes to establish guidelines for analytical methods and interpretation of data of new unknown substances found on the market and to set up an efficient ICT system at EU and international level for efficient sharing of data and knowledge on these chemical substances. The high level analytical facilities of the JRC are used for providing scientific and technical support for identification of unknown chemicals that Member States customs laboratories could not identify.	JRC.F.4 Claude GUILLOU	4.2.a	TAXUD	TAXUD	Herve SCHEPERS	GROW HOME OLAF	Cust Aut MS - MS Customs Authorities EMCDDA - European Monitoring Centre for Drugs and Drug Addiction	28/11/2016 27/11/2018	CON-AA	10	Study	Report on the Study of use of portable handled devices for verification of chemical nature of substances under investigation at the borders. The study investigates the possibility of establishing general reference spectral libraries that could be used by portable handled devices used in field by customs officers for verification of customs declarations and detection of suspicious substances in imported goods.	30/10/2017	JRC technical reports	
												20	Update of Spectral data collection	Update of Spectral and chemical data collection - Establishment of a collection of chemical and spectral data obtained by CLEN and the JRC. It includes the use of advanced methodologies (based on NMR, FT-IR and HR-MS) for the characterisation of new substances seized by Customs and/or purchased from specialised chemical companies.	30/06/2017	Scientific information systems and databases	
												30	Workshops and Trainings	Report on the various workshops, meetings of expert group, and training on use of chemoinformatic tools and processing of chemical analytical data, that the JRC will contribute to within the CLEN activities organised within the frame of the program CUSTOMS2020 (funded by DG TAXUD).	27/10/2017	Training	
												40	Annual report to DG TAXUD	Annual report to DG TAXUD summarising scientific developments aimed to improve knowledge of NPS and unknown chemicals covering items like new analytical and informatics based approaches for the identification of new drugs, scientific tools for their classification as analogues of already controlled drugs also in the view to support the legitimate trade. The report will present a summary of all the activities performed also as participations in Customs or other relevant workshops or meetings.	12/10/2017	Science-for-policy reports	
												50	Annual report 2018 to DG TAXUD	Annual report to DG TAXUD including the update of spectral libraries on NPS in 2018 and a summary of all the activities performed also as participations in Customs2020 workshops or other relevant meetings.	30/11/2018	Science-for-policy reports	
68 - Food Forensics JRC.F.4	5760 - DENATURED ALCOHOL 3 Harmonisation of practices to denature alcohol for exemption from excise duties ph3	To rationalise the EU system in relation to the denaturing of alcohol and in agreement with the European action plan to strengthen the fight against tax fraud and tax evasion, JRC will support the implementation of the JRC validated Standard Operating Procedure for measuring denaturants in	JRC.F.4 Alain MAQUET	4.2.a	TAXUD	TAXUD	HEATHER JONES	AGRI GROW SANTE SJ TRADE	Cust Aut MS - MS Customs Authorities MS EU - Member states EU	01/01/2017 31/12/2017	CON-AA	10	Euro-Denat 2017 report	The report will detail the results of the inter-laboratory comparison to validate a method for the determination of the chemicals constituting the formula for denaturing alcohol (isopropanol, methylethyl ketone, denatonium benzoate), the report of the training workshops and the training video, and the development of a rapid Raman spectroscopy method for checking denatured alcohol for legal compliance.	31/12/2017	JRC technical reports	
4.2.b training for custom authorities - establish pilot programmes to build capacity among, and provide training to, custom authorities on how to use applications or technologies, and how to share information and best practice.																	
65 - DANTE JRC.G.10	5116 - NDT-TAXUD-2 Nuclear Detection Training and Support for EU Customs	JRC will provide training on nuclear detection including conceptual aspects of nuclear security and nuclear detection, basics of radiation detection, practical training using portal monitors, alarm adjudication, use of hand-held equipment for alarm verification, measurement exercises using	JRC.G.II.6 Jean GALY	4.2.b	TAXUD	TAXUD	TAXUD B.2 Wil van Heeswijk	HOME TRADE	Cust Aut MS - MS Customs Authorities MS EU - Member states EU WCO - World Customs Organization	01/10/2016 01/10/2018	CON-AA	51161	Nuclear detection training	Organisation and execution of training courses related to nuclear detection method	31/12/2017	Training	
												51162	Nuclear detection training	Organisation and execution of training courses related to nuclear detection methods. Training the trainer activity shall be privileged.	30/09/2017	Training	
												51163	Support in developing e-learning tools	Expert support in developing e-learning tools for the EU Customs community	30/09/2018	JRC technical reports	
												51164	Support for field exercises	Provision of expert support and organisation of cross-border field exercises	30/09/2018	JRC technical reports	
5 A deeper and fairer Economic and Monetary Union																	
5.1 Economic and Monetary Union																	
5.1.a model and carry out socioeconomic analyses to improve macroeconomic, budgetary, structural, and financial developments and policies in the EU.																	
203 - MACFIS JRC.B.1	1014 - GAP Stability and Growth Pact	Support to DG ECFIN for the monitoring of fiscal imbalances in the EU in application of the Stability & Growth Pact and its recent updates Two Pack and Six Pack. The activity includes development and maintenance of Program GAP, regular participation to the Output Gap Working Group (OGWG), trainings to Member States, execution of the annual work-program agreed by the OGWG, as well as targeted studies following specific requests from DG ECFIN, the OGWG and its parent committees EPC and EFC.	JRC.B.1 Christophe PLANAS	5.1.a	ECFIN	JRC	Werner ROEGER	FISMA	MS EU - Member states EU	01/01/2016 31/12/2020	INS-RS	3	Continuous support to Stability and Growth Pact	Continuous maintenance of Program GAP and upgrade in line with the methodological developments approved by the Output Gap Working Group. Support to users from DG ECFIN and Member States. Upon request, training on Program GAP to ensure that the methodology is well understood by stakeholders/MS. Regular participation to Output Gap Working Group meetings with oral presentations. The OGWG meets 3-4 times per year.	15/12/2017	Technical systems	
												4	Methodological studies following DG ECFIN requests	Studies to investigate possible improvements to the method used calculate the output gap upon request from ECFIN as well as from the OGWG. The challenge is to incorporate further information in the output gap calculation in a structured way. Topics of current interest: incorporating information from price inflation in addition of wage inflation, enhancing the measurement of capital stock via estimating the depreciation rate and incorporating info about financial conditions. MACFIS Objective 4	15/12/2017	Science-for-policy reports	
203 - MACFIS JRC.B.1	2083 - MACFINROBODS Integrated Macro-Financial Modelling	To improve on existing methods for the estimation of DSGE (dynamic stochastic general equilibrium) This WPX aims at extending, jointly with DG ECFIN, the new Global Macroeconomic model (GM), i.e. the new multi-country macroeconomic model to be used as a complement of QUEST for international spillover analysis, forecasting and medium term projections. In particular, within the WPX, the following developments are foreseen: 1. implementing and testing the GM model specifications, also by designing relevant policy scenarios (partially binding constraints).	JRC.B.1 Marco RATTO	5.1.a	ECFIN	RTD	Dominik SOBCZAK			01/05/2014 30/04/2017	CON-IA	3	Economic paper/tutorial	One tutorial paper explaining how to use macro-financial models developed by the consortium for policy analysis, including how to adapt them to stylized models used in	31/03/2017	Scientific and policy reports	
203 - MACFIS JRC.B.1	3305 - AA-GM Global Multicountry model	Support to DG ECFIN in the context of the European Semester (Macroeconomic Imbalance Procedure, Economic Forecasts, In-depth Reviews) Computational and modelling tasks needed to developing and estimate the macroeconomic models GM and QUEST, jointly developed with ECFIN, and their policy applications. The scientific work on the GM model aims at providing policy support for understanding international macroeconomic spillovers and financial flows dynamics and for medium-long term forecasts. It consists in implementing and testing the GM model specifications, performing estimation exercises and diversified policy scenarios on selected geographical disaggregation (Euro Area aggregate, US, individual Euro-Area countries). Deliverables include the maintenance of the computational engine and related user interface and the training on methodology and software used to estimate and simulate the new global model. The GM model will be made available for country desks, and for the modelling and forecasting Units in DG ECFIN. The GM model is expected to be regularly and increasingly used for contributions to the periodic releases of the European Economic Forecasts. The development and extensions on QUEST mode is aimed at providing policy support in identifying main drivers of macroeconomic facts under study (growth determinants, unemployment, macroeconomic imbalances in the MS). Policy support deliverables include ad-hoc requests	JRC.B.1 BEATRICE PATARACCHIA	5.1.a	ECFIN	ECFIN	Werner ROEGER			01/07/2016 30/06/2017	CON-AA	1	Model simulation and estimation	1. implementing and testing the GM model specifications, also by designing relevant policy scenarios (partially binding constraints); 2. performing estimation exercises on selected country disaggregation; [Objectives 2-5 MACFIS Project]	30/06/2017	Science-for-policy reports	
												2	Development of codes	1. develop routines which allow for a frequent re-estimation of the model (before each forecasting exercise) 2. Improving the interface such as to allow regular use of the model by non-experiences model users. [Objective 5 MACFIS Project]	30/06/2017	Science-for-policy reports	
203 - MACFIS JRC.B.1	3566 - GM&QUEST Support to Macroeconomic Imbalance Procedure and EC economic projections	Support to DG ECFIN in the context of the European Semester (Macroeconomic Imbalance Procedure, Economic Forecasts, In-depth Reviews) Computational and modelling tasks needed to developing and estimate the macroeconomic models GM and QUEST, jointly developed with ECFIN, and their policy applications. The scientific work on the GM model aims at providing policy support for understanding international macroeconomic spillovers and financial flows dynamics and for medium-long term forecasts. It consists in implementing and testing the GM model specifications, performing estimation exercises and diversified policy scenarios on selected geographical disaggregation (Euro Area aggregate, US, individual Euro-Area countries). Deliverables include the maintenance of the computational engine and related user interface and the training on methodology and software used to estimate and simulate the new global model. The GM model will be made available for country desks, and for the modelling and forecasting Units in DG ECFIN. The GM model is expected to be regularly and increasingly used for contributions to the periodic releases of the European Economic Forecasts. The development and extensions on QUEST mode is aimed at providing policy support in identifying main drivers of macroeconomic facts under study (growth determinants, unemployment, macroeconomic imbalances in the MS). Policy support deliverables include ad-hoc requests	JRC.B.1 Marco RATTO	5.1.a	ECFIN	JRC	Werner ROEGER				01/01/2016 31/12/2020	INS-RS	Adhoc2017	Macro-models operation and ad-hoc support	In the context of the Macroeconomic Imbalance Procedure and the European Semester, on request of DG ECFIN, perform targeted studies, estimations, projections and forecasts for policy assessments (quarterly projections/ quarterly reports of the euro area/in-depth reviews for individual EA countries and euro-area). Maintenance and development of new algorithms and codes for models GM/QUEST.	15/12/2017	JRC contributions to policy documents
													GM2017France	Economic Forecasts Member States	In the context of strengthened EU economic governance (European Semester and Macroeconomic Imbalance procedure), in collaboration with DG ECFIN, perform model estimations and run model based projections and conditional forecasts for European Economic Forecast for FRANCE GERMANY ITALY SPAIN. [Objective 2 of MACFIS project]	15/12/2017	JRC contributions to policy documents
													PaperComparison	Model comparisons	Studies on systematic comparisons competing models and features: endogenous growth risk behavior in different investment sectors and financial fragility, indeterminacy in monetary policy, growth determinants, labor market and unemployment dynamics. Submission to peer reviewed journal. [Objective 4 of MACFIS project]	15/12/2018	Article contribution to a monograph or other periodicals
													PaperRobustness	Methods for robust policy advice	Development and application of methodologies (global sensitivity analysis, scenario analysis) to address robustness in policy advice. Submission to journal. [Objective 4 of MACFIS project]	15/12/2017	Article contribution to a monograph or other periodicals
													PaperVolatility	Dissecting output volatility in the EU	Empirical analysis of aggregate volatility, and its microeconomic sources. The study build on a volatility accounting framework and detailed growth and productivity accounts at the industry level. Results should be informative on the degree of endogeneity of output shocks in the EU, and its evolution over time, and thus feed the debate on ex ante and ex post policy responses (structural reforms, need for risk-sharing mechanisms). Submission to peer reviewed journal. [Objective 4 MACFIS project]	14/12/2018	Article contribution to a monograph or other periodicals
													Training2017	Training	Training on methodologies and softwares used to estimate and simulate the GM model. This is required by the multiplicity of partners involved in the use of the model estimates and forecasts/projections (DG ECFIN modelling and forecasting Units as well as Country Desks). DYNARE Course on methodologies developed at the JRC [Objective 6 of MACFIS project]	15/12/2017	Training

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
203 - MACFIS JRC.B.1	4865 - AA-SICOMA-2017 Modelling the macroeconomic impact of competition policies	Objective of this WPk is the assessment of the macroeconomic impact of competition policy enforcement in the EU by exploiting updated information on cartel and merger decisions by the European Commission. The work consists in simulating competition policy	JRC.B.1 BEATRICE PATARACCHIA	5.1.a	COMP	COMP	Fabienne ILZKOVITZ			02/01/2017 13/12/2019	CON-AA	2	SICOMA Toolbox	This deliverable includes the documentation and patenting of the SICOMA toolbox developed to automatize the macroeconomic simulations of Competition Authorities policies. It includes automatic extraction of information on economic sectors influenced by the decisions and their conversion into different economic classification (NACE2, ISIS3). [Objective 5 MACFIS Project]	15/12/2017	Scientific information systems and databases
203 - MACFIS JRC.B.1	4866 - AA-GM-2017 Global Multicountry model	This WPk aims at extending, jointly with DG ECFIN, the Global Multicountry model (GM). In particular, within the WPk, the following developments are foreseen: 1. implementing and testing the GM model specifications, also by designing relevant policy scenarios; 2. performing estimation exercises on selected country dis-aggregation; 3. maintain/develop routines which allow for a frequent re-estimation of the model (before each	JRC.B.1 BEATRICE PATARACCHIA	5.1.a	ECFIN	ECFIN	Werner ROEGER			01/07/2017 30/06/2018	CON-AA	1	Model development, simulations and estimations	Implement and test the GM model specifications, also by designing relevant policy scenarios. Perform estimation exercises, allowing flexibility in the choice of countries to be included (countries within Euro Area). [Objective 2-5 MACFIS Project]	30/06/2018	Science-for-policy reports
												2	End user provisions	Provide routines which allow for a frequent re-estimation of the model (before each forecasting exercise) in a user friendly interface such as to allow regular use of the model by non-experiences model users. [Objectives 2-5 MACFIS project]	30/06/2018	Science-for-policy reports
5.2 Financial stability, financial services and capital markets union																
5.2.a quantitative analyses for the development of the capital markets union and completion of the banking union:																
340 - FINSTAR JRC.B.1	3564 - NetFex Network of financial and economic experts	NetFex is a formal network of JRC academic and policy institutions working on financial issues. The mission is to foster cooperation between policy makers and scientists on issues related to financial stability and the functioning of financial markets. This will be achieved by: 1) feeding in a dynamic way the European policy debate with high quality research inputs, including specific knowledge and expertise developed outside the JRC. 2) providing academic partners with research questions relevant for policy makers, thus stimulating policy-driven research in financial	JRC.B.1 LUCIA ALESSI	5.2.a	FISMA	JRC	Martin SPOLC	COMP ECFIN GROW TAXUD	ECB - European Central Bank EIB - European Investment Bank OECD - Organisation for Economic Co-operation and Development (OECD)	01/01/2016 31/12/2018	INS-RS	NetFex1	NetFex event 2017	JRC-G01 will organize at least 1 joint seminar/event with key institutional/academic partners on topics strictly related to Commission priorities in the field of finance and/or economics. The event will bring together relevant players from the academia and the EU institutions and will serve the policy makers with updated research inputs in the areas of economics and finance.	15/12/2017	Conferences and workshops organized by the JRC
												NetFex2	Studies on financial topics with partners	Series of studies with institutional/academic partners on topics strictly related to Commission priorities and decided within NetFex.	15/12/2017	Science-for-policy reports
												NetFex3	NetFex Conference 2018	JRC-G01 will organize at least 1 joint seminar/event with key institutional/academic partners on topics strictly related to Commission priorities in the field of finance and/or economics. The event will bring together relevant players from the academia and the EU institutions and will serve the policy makers with updated research inputs in the areas of economics and finance.	15/12/2018	Conferences and workshops organized by the JRC
												NetFex4	Studies with NetFex partners	Series of studies with institutional/academic partners on topics strictly related to Commission priorities and decided within NetFex.	14/12/2018	Science-for-policy reports
4820 - CAPMAU JRC.B.1	4826 - CMU&FIRMS CMU and firms' financing	This WP aims at exploring how the financing of EU non-financial companies (NFCs) can be improved. The core objectives lie in exploring some crucial issues in firms' financing and how they can be addressed. First, our studies explore the determinants of SMEs' financial constraints, and how these constraints can be reduced. They also investigate the real effects in terms of growth and employment. Second, we are interested in broadening NFCs financing tools. Our studies thus investigate the determinants of medium and large firms' funding choices between bank loans, bonds and equity. They look at which companies have access to which financing instruments, how firms address barriers to capital market, and whether	JRC.B.1 ISSAM HALLAK	5.2.a	ECFIN	JRC	JAVIER VILLAR BURKE	EMPL GROW		01/01/2017 31/12/2018	INS-RS	1	SME Financial Constraints	At least 1 study investigating financial constraints of firms (especially SMEs), the determinants of these constraints and their effects on firms' growth and employment opportunities. The studies attempt to broaden the determinants of bank financing at firm level and the real effect in terms of growth and employment.	15/12/2017	Science-for-policy reports
												2	Financing options	At least 2 studies addressing (i) non-bank financing alternatives for firms (e.g. bond or equity issuance), (ii) the impact of non-financial firms in capital markets as financial investors, and (iii) the relationship between banking business models and firms performance. The studies will also explore whether non-bank financing is indeed able to palliate financial needs or whether other constraints could arise.	19/12/2017	Science-for-policy reports
												3	firms financing	Studies investigating firms financing (especially SMEs), bottlenecks ad way forward. The studies will continue 2017 activity and cover additional priorities emerging in 2017.	28/12/2018	Science-for-policy reports
												4	Scientific publications on CMU & firms' financing	At least 2 scientific publications related to CMU and firms' financing submitted to a peer review journal.	19/12/2017	Article contribution to a monograph or other periodicals
4820 - CAPMAU JRC.B.1	4827 - FIRS Financial Integration and Risk Sharing	The work package Financial Integration and Risk Sharing (FIRS) explores to what extent European financial markets are integrated, how financial integration can be measured and monitored and which is the relationship between financial stability and financial integration. To this purpose FIRS investigates whether and to what extent domestic financial markets are sensitive to international shocks by complementing the work carried out under FIMMINT2. It also analyses bilateral cross-border investments to highlight the magnitude, origin and final destination of cross-border flows of national savings according to the nature of the flows (e.g. portfolio or direct investments) and whether taxes significantly hamper cross-border portfolio investments. This is done using a dataset jointly managed by JRC and DG ECFIN on cross-border financial stocks and flows, for more than 100 countries worldwide. Another area of work in	JRC.B.1 Michela NARDO	5.2.a	FISMA	JRC	JAVIER VILLAR BURKE	ECFIN		01/01/2017 31/12/2018	INS-RS	1	Financial flows and risk sharing	At least one study on cross-border risk-sharing investigating links between risk sharing and economic shocks. This includes the analysis of cross-border financial flows to highlight (i) the main recent changes in magnitude, origin and final destination countries and the nature of the flows (e.g. portfolio or direct investments); (ii) the relationship between cross-border taxation and asset holdings; (iii) Update and analysis of the dataset on cross-border financial flows.	15/12/2017	Science-for-policy reports
												2	Integration of capital markets	At least one study exploring the integration of capital markets by developing ad-hoc econometric models able to measure and analyse the existence of (or the distance from) a European Capital Market. In the medium term contribute to the creation of a comprehensive monitoring system for financial integration in Europe in line with CMU Action Plan objectives and based on solid research results.	15/12/2017	Science-for-policy reports
												3	Dataset on bilateral cross-border financial flows	Update and extension of the dataset on bilateral cross-border financial flows.	15/12/2017	Datasets
												4	International dimension of financial markets	Studies investigating the international dimension of financial markets, bottlenecks ad way forward. The studies will continue 2017 activity and cover additional priorities emerging in 2017.	28/12/2018	Science-for-policy reports
												5	Scientific publications on financial integration	At least 2 scientific publications on financial integration or risk sharing submitted to a peer review journal.	19/12/2017	Article contribution to a monograph or other periodicals
5.2.b assess initiatives related to the regulation of the financial sector and to new dynamics and risks; maintain and further develop a data infrastructure for analyses of the EU financial sector;																
340 - FINSTAR JRC.B.1	901 - BANK REG Support to EC initiatives for regulation of the banking sector	GENERAL MISSION. BANK_REG supports Commission services in strengthening the European banking sector & enacting a Banking & Financial Union. (a) ex-ante impact assessment of policy options for banking sector, e.g. legislation aimed at improving financial stability, micro & macro prudential regulation, & risk-based fees to deposit insurance & resolution schemes; (b) ex-post evaluation of financial regulation, to assess gaps, inconsistencies & unintended effects; (c) gaining a better scientific understanding of risks to financial & economic stability, and developing frameworks & tools for the monitoring of systemic risk. MAIN ACTIVITIES include the development of: 1) quantitative analyses to support DG FISMA in monitoring the implementation of legislation & the response of the banking sector and financial markets to such legislation. Main target legislation could include: capital & liquidity requirements for banks, bank recovery & resolution (bail-in), deposit insurance (especially legislation on the European Deposit Insurance Scheme as well as a methodology for target level reductions under the DGSD), macroprudential policies. 2) Ad-hoc analyses for DG FISMA in support to (i) negotiations of initiatives with the EP and the Council, based on specific requests by the MS during the negotiations, (ii) assessment of the need of new legislation, in line with specific requests by the Cabinet. 3) financial sector systemic risk analyses pointing to risk creation and diffusion, monitoring &	JRC.B.1 LUCIA ALESSI	5.2.b	FISMA	JRC	Martin SPOLC	COMP ECFIN ENER TAXUD	WB - World Bank	01/01/2016 31/12/2020	INS-RS	BankPapers	Studies on banking risks	Series of studies on banking risks to be submitted to conferences and journals. Topics will cover the accumulation, shifting and transmission of risks in the regulated financial sector as well as contagion dynamics.	14/12/2018	Article contribution to a monograph or other periodicals
												ECFIN17	ECFIN support: public finances & systemic crises	Public finances resilience to banking crises. The report will update the estimation of the potential impact the costs of a systemic financial crisis on public finances, as the implementation of new EU banking legislation is completed and companies adapt to the new environment. Results will be obtained using the JRC SYMBOL model with 2016 data. Results could be published by ECFIN with its debt sustainability analysis. The report includes description of data preparation.	31/10/2017	Science-for-policy reports
												ECFIN18	ECFIN support: systemic crises & public finance 18	Public finances resilience to banking crises. The report will update the estimation of the potential impact the costs of a systemic financial crisis on public finances, as the implementation of new EU banking legislation is completed and companies adapt to the new environment. Results will be obtained using the JRC SYMBOL model with 2017 data. Results could be published by ECFIN with its debt sustainability analysis. The report includes a description of data preparation procedures.	15/12/2018	Science-for-policy reports
												FISMA17	FISMA support: EC banking legislative initiatives	Series of studies on impacts of EU legislation & on the practical implementation of resolution decisions in the Banking Union (Single Resolution Mechanism Regulation). Potential topics include supporting the transposition in EU law of internationally agreed standards (e.g. rules adopted in the Basel Committee and G-20) & assessing contagion from bail-in to the financial sector and real economy; 2) review of the macroprudential frwk; 3)ad-hoc requests for in negotiations with the Council & Parlia	15/12/2017	Science-for-policy reports
												FISMA18	Support to DGFISMA 18	1) Series of studies on impacts of EU legislation & on the practical implementation of resolution decisions in the Banking Union (Single Resolution Mechanism Regulation). Potential topics include supporting the transposition in EU law of internationally agreed standards (e.g. rules adopted in the Basel Committee and G-20) & assessing contagion from bail-in to the financial sector & real economy in actual resolution cases. 2) ad-hoc requests for in negotiations with the Council & Parliament.	31/12/2018	Science-for-policy reports
												PhDDefProb	Default Probabilities Mapping	A PhD dissertation developing and testing methods for the estimation of default probabilities of assets held by banks. The output is to be used for the estimation of the value of assets of banks requesting state guarantees or asset relief under EU state aid rules.	31/12/2017	PhD thesis

JRC 2017- 2018 WORK PROGRAMME																	
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category	
		4) analyses based on simulations to monitor the risks on public finances stemming from the banking sector & to produce impact assessments of legislation on financial safety nets & deposit insurance. 5) data and modeling infrastructure needed to											RobImp	Robust imputation of financial data	Paper on the application of robust statistics to banking data. The paper will be submitted to conferences and journals. Missing data is a primary problem for scientists working with bank data, given different legislative settings and waivers. Through statistically robust procedures we aim to develop a general framework to impute missing observations by regression estimates based on suitable proxies and data at different aggregation scales, taking into consideration the presence of outliers.	15/12/2017	Article contribution to periodicals or to conference proceedings listed in SCOPUS
340 - FINSTAR JRC.B.1	2821 - NeFiMaD New financial markets dynamics and risks	JRC will develop analyses aiming at assessing the resilience of the financial system with respect to several types of financial crises, e.g. market liquidity crises – which may drag solvent banks into bankruptcy - or crises originating from securitization activities – like the US subprime mortgage crisis. Based on the study of emerging phenomena and adaptive dynamics within financial markets, modelling tools will be provided to detect new risks and vulnerabilities as early as possible. The focus will be in particular on: (i) the risks arising from activity being pushed into the less-regulated shadow banking sector; (ii) the resilience	JRC.B.1 LUCIA ALESSI	5.2.b	FISMA	JRC	Harald STIEBER (FISMA B2) - M. Spolc (HoU, FISMA B2)	ECFIN		01/01/2015 31/12/2018	INS-RS	1	Financial market resilience	Series of studies assessing new threats in financial markets and the need of new legislation to assure financial stability. Exact topics are partly based on conjectural needs and will be narrowed down during the year. Currently we foresee at least one science-for-policy report to support the EC securitization initiative and a second one on how resilience of banks in liquidity crises. Other topics include shadow banking, financial networks structures, web mining, virtual currencies.	22/12/2017	Science-for-policy reports	
		The objective of this WPK is to provide additional resources to JRC's institutional work in support of DG FISMA's initiatives aimed at assessing the impact of financial regulation, either recently adopted or under elaboration, and the progress and barriers to capital markets integration. These activities complement the institutional work carried out under the FINSTAR-BANKREG and CAPMAU work-packages. The AA will be signed in the last quarter of 2016.	JRC.B.1 GIUSEPPINA CANNAS	5.2.b	FISMA	FISMA	Martin SPOLC			01/01/2017 31/12/2017	CON-AA	FMP1	Systemic importance of financial institutions	Series of studies providing quantitative analyses aimed at assessing the systemic importance of financial institutions, e.g. by measuring their systemic risk contribution, also considering relevant financial risks and vulnerabilities at the country-level.	15/12/2017	Science-for-policy reports	
340 - FINSTAR JRC.B.1	4905 - FIMMINT2 Financial Market Monitoring and INTegration 2											FMP2	Support to European Deposit Insurance Scheme	Studies with quantitative analyses for DG FISMA to support the negotiations and/or implementation of the legislation establishing the European Deposit Insurance Scheme (EDIS)	15/12/2017	Science-for-policy reports	
												FMP3	Support for the mid-term review of the CMU Action	Support for the mid-term review of the CMU Action Plan. Studies with quantitative analyses for monitoring integration of financial markets and assessing country specific risk sharing.	15/12/2017	Science-for-policy reports	
340 - FINSTAR JRC.B.1	5901 - APS An Absolute Performance Score for financial portfolios performance		JRC.B.1 LUDOVIC CALÈS	5.2.b	FISMA	JRC	n/a	COMP ECFIN		01/03/2017 31/08/2017	INS-PC	1	APS prototype	Development of routines to compute APS and deployment of a software prototype for a testing phase preliminary to start the patenting procedure under the Commission patent framework	31/08/2017	Technical systems	
340 - FINSTAR JRC.B.1	5941 - DIRAC Development of Independent Implementations of Risk Adjusted Contributions to Single Resolution Fund	GENERAL MISSION: DIRAC supports the Single Resolution Board. In particular, the cooperation is aimed at providing evidence to validate the Board's methodology for calculating banks' contributions to the Single Resolution Fund. MAIN ACTIVITIES The main activities of the project will be: (1) independently develop and implement an algorithm to calculate banks' risk adjusted contributions to the Single Resolution Fund, in line with current regulations and the decisions by the Board of SRB regarding their interpretation and application; (2) running such algorithm on a "test" data set provided by SRB; (3) liaising with SRB to compare results with those obtained with SRB's software solution for the calculation of contributions, using the same "test" data-set; (4) investigating the reasons for any	JRC.B.1 FRANCESCA DI GIROLAMO	5.2.b	JRC	JRC	n/a		SRB - Single Resolution Board	01/03/2017 28/02/2020	CON-TW	SRB171	JRC independent impl. of contributions to SRF	A set of results obtained with the application of the JRC independent implementation of the methodology to calculate ex-ante contributions to the SRF on an anonymized set of data to be provided by the SRB.	15/04/2017	Scientific information systems and databases	
												SRB172	JRC activities in support to the SRB	A technical report on the activities, including the description of any changes that might have been necessary to align the JRC implemented methodology with the applicable regulation of the SRB approach.	15/04/2017	JRC technical reports	
												SRB173	Documented example of algorithm for SRF	A documented example of the implemented algorithm with a subset of data provided by the SRB.	15/04/2017	Scientific information systems and databases	
												SRB181	JRC independent impl. of contributions to SRF	A set of results obtained with the application of the JRC independent implementation of the methodology to calculate ex-ante contributions to the SRF on an anonymized set of data to be provided by the SRB.	15/04/2018	Scientific information systems and databases	
												SRB182	JRC activities in support to the SRB	A technical report on the activities, including the description of any changes that might have been necessary to align the JRC implemented methodology with the applicable regulation of the SRB approach.	15/04/2018	JRC technical reports	
												SRB183	Documented example of algorithm for SRF	A documented example of the implemented algorithm with a subset of data provided by the SRB.	15/04/2018	Scientific information systems and databases	
5.2.c analyse the social dimension of EMU.																	
338 - EFFAIRES JRC.B.1	2055 - CrInGrIn Excessive Credit, Instability, Growth and Inequality	This WP, which continues from 2016, looks at income and wealth inequality, and their economic and social determinants and implications. It also builds upon and contributes to the JRC Fairness Project. Specifically, it focuses on the interconnections between the size and the characteristics of the financial sector (financial development), innovation inequality and growth. The WP analyses the aforementioned relations by performing literature reviews, econometric analysis, and economic and financial modelling. Specific topics include the	JRC.B.1 Stylianos KARAGIANNIS	5.2.c	EPSC	JRC	Lucio VINHAS DE SOUZA	COLLÈGE FISMA	EPO - European Patent Office (EPO) - OFFICE FOR HARMONISATION IN THE	02/01/2015 31/12/2018	INS-UR	2	Financial development, innovation and growth	An empirical study on the links between financial and economic stability, innovation and growth dynamics, looking at the level of individual firms.	15/12/2017	Scientific and policy reports	
												3	Innovation and income inequality	A report on the patterns, causes and effects of innovation and income inequality, including a comprehensive theoretical and empirical literature review. The report will also provide detailed descriptive statistics of the innovation-growth nexus at EU's regional and national level.	15/12/2017	Science-for-policy reports	
												4	Growth, inequality and spillovers	A report focusing on the effects of inequality on economic growth, with emphasis on possible social and economic spillovers and the effect of financial constraints on investment patterns.	15/12/2018	Science-for-policy reports	
												5	Innovation, income inequality and growth	A series of research papers on the links between innovation, income inequality and growth in Europe.	15/12/2018	Article contribution to a monograph or other periodicals	
338 - EFFAIRES JRC.B.1	2822 - H-Fin Household finances	This WP looks at the resilience and fairness implications of financial instruments (e.g. deposits or loans) and pension systems for households. Both financial instruments and pension systems are key insurance and adjustment mechanisms for households, making them more resilient to shocks. At the same time, these systems strongly shape the allocation of resources in the society (fairness). It sharpens the focus of the 2016 WP "Social Impact of Finances". It also builds upon and contributes to the JRC Fairness Project. Despite their policy relevance, there is very little empirical evidence on these topics due to the lack of appropriate data and a European perspective. By putting the already existing datasets of the EU Social Income and Living Conditions Survey, the Survey on Health Ageing and Retirement in Europe, the upcoming second wave of Households	JRC.B.1 PETER BENCZUR	5.2.c	EPSC	JRC	Lucio VINHAS DE SOUZA	COLLÈGE ECFIN EMPIL FISMA	OECD - Organisation for Economic Co-operation and Development (OECD)	02/01/2015 31/12/2018	INS-RS	2	Social impact of finances	A report on the use of finances and resilience of households during the economic crisis.	15/12/2017	Science-for-policy reports	
												3	Pension system designs and outcomes across the EU	-A descriptive report on the status-quo of pension system designs and outcomes across EU countries before, during and after the crisis. The aspects of comparisons are the (subjective) well-being of older citizens, adequacy and fairness of pension income, wealth inequality among retirees, the reliability and sustainability of pension systems, and the investment patterns of pension funds.	15/12/2017	Science-for-policy reports	
												4	Behavioural incentives for retirement planning	A report on behavioral incentives for retirement planning in Europe. The main aspect is how diverse pension systems in Europe can be reformed to remedy key contemporary and long-standing issues: first, the necessary increase in retirement ages, second, the possibility of persistently low interest rates (secular stagnation), and third, the widening need for complementary pension wealth in the light of reduced financing capacities of pay-as-you-go pensions.	15/12/2018	Science-for-policy reports	
												5	Heterogeneity in household finances	A summary report on how heterogeneity in household portfolios and use of finances contribute to income and consumption inequality.	15/12/2018	Science-for-policy reports	
												6	Research papers on household finances	A series of research papers addressing selected topics from (1) the effect of the use of finances on household outcomes, (2) income and inequality dynamics, and (3) retirement planning in Europe.	15/12/2018	Books and monographs with JRC editorship	
338 - EFFAIRES JRC.B.1	4887 - FRAME-RES Towards a framework for resilience	The recent European crisis strengthened the view that countries with more inclusive labour markets, a better skilled labour force and more elaborated social protection systems are more resilient: they can withstand shocks better, recover quicker and go through the necessary adjustments in a less painful way. Though this multifaceted concept of resilience applies to individuals as well as to institutions, markets, regions and countries, the ultimate object of interest is the individual (the social dimension). Continuing the work of the JRC-EPSC established Research Network on the Measurement of Resilience, this work package aims at establishing a general framework for assessing the resilience of EU policies, and analyzing the financial and economic aspects of resilience. The work proceeds along four main avenues. (1) Continue the consultation process within the	JRC.B.1 Anna Rita MANCA	5.2.c	EPSC	JRC	Lucio VINHAS DE SOUZA	SG		03/01/2017 31/12/2018	INS-UR	FRAMRES5	A holistic policy report on resilience.	A holistic policy report on resilience. This report aims at both (i) providing a holistic perspective of the concept and measurement of resilience at the EU/EC level and (ii) outlining future directions.	15/12/2018	JRC contributions to policy documents	
												FRAMRES1	Literature review	Literature review on the concept of resilience as addressed at the EC level. This would be the result of the resilience group activity among DGs, reaching a shared understanding of the use of resilience as an ingredient in policies.	15/12/2017	Science-for-policy reports	
												FRAMRES2	Policy Research Forum	Policy Research Forum on monitoring resilience in the EU. The Forum aims at stimulating the policy debate on resilience by confronting the lessons learned from the different perspectives of policy makers, researchers and practitioners and therefore identifying the way ahead.	15/12/2017	Conferences and workshops organized by the JRC	
												FRAMRES3	Dashboard of indicators for policy design	Dashboard of resilience indicators used for policy design and evaluation of EU policy priorities. This will serve to identify eventual overlaps or gaps among the existing indicators, and set up the base to understand the interconnections between interventions. It will lead to a proposal of a more comprehensive set of indicators, allowing more effective monitoring of the resilience implications of policies.	15/12/2017	JRC technical reports	
												FRAMRES4	Series of studies	Series of studies addressing topics among : (i) identification of resilient/vulnerable groups (ii) the role institutions vs individual resilience (iii) the relations between the magnitude and time profile of the shock or change and the required ability for a resilient behavior.	15/12/2018	Article contribution to a monograph or other periodicals	
5.3 Taxation																	
5.3.a corporate taxation - modelling to support the action plan for fair and efficient corporate taxation in the EU; carry out analyses of the effects of corporate taxes and in particular develop modelling tools for assessing the impact of anti-avoidance rules, the harmonisation of specific rules, changes in tax treaties and future EU policy initiatives;																	
340 - FINSTAR JRC.B.1	2820 - TAFE	Research on the effects of financial sector taxation on financial stability and the Internal Market.	JRC.B.1					ECFIN		15/12/2017		2	Financial sector tax impact	Report summarizing results of research on the impact of various taxes on the financial sector on systemic risk. JRC will develop model simulations with SYMBOL on different	16/12/2017	Science-for-policy reports	

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main DG	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
JRC.B.1	Taxation and Financial Stability	notably in the context of the priorities set out by President Juncker towards the adoption at EU level of a Common Consolidated Corporate Tax Base	SERENA FATICA	5.3.a	TAXUD	TAXUD	Gaetan NICODEME	ECFIN FISMA		14/12/2017	CON-AA	3	Corporate Tax Harmonisation and Financial Risk	Report summarizing results of research on the impact of corporate tax harmonisation in the banking sector on financial stability.	16/12/2017	Science-for-policy reports
340 - FINSTAR JRC.B.1	2823 - Bank TaxShift Taxation and banks in an international context	The work package aims to shed light on different aspects of international bank operations that might significantly affect both financial stability and public finances (notably tax revenue). This aim is achieved by pursuing two main lines of analysis. The first extends previous analyses of the tax bias towards debt finance, encouraged by the favorable tax treatment of interest payments, by investigating also international debt shifting within multinational banking groups, driven by corporate tax rate differentials across EU MS. The issue of how banking groups finance	JRC.B.1 SERENA FATICA	5.3.a	TAXUD	JRC	Gaetan Nicodeme (TAXUD.D.4)	ECFIN FISMA		01/01/2015 31/12/2018	INS-UR	2	Debt-shifting of multinational banks	Econometric study on the effect of the debt bias in corporate taxation on international debt shifting within multinational banking groups.	16/12/2017	Article contribution to a monograph or other
												3	Taxes and international bank operations	Report on international bank activities and profit shifting behaviour, including operations in tax havens. It involves reviewing the recent academic literature in the field and gathering data on bank deposits and operations in tax havens.	15/12/2017	Science-for-policy reports
												4	Tax transparency and international banking	Empirical study to assess banks behavioral reactions to policy initiatives aimed at curbing tax evasion and avoidance, also via increased transparency and facilitated information exchange among countries. Data to perform the econometric analysis will have been collected under deliverable 3. Depending on the quality of available data, the focus of the analysis could be tax planning behavior on the part of banking groups, and/or individuals through strategic location of deposits in tax havens.	14/12/2018	Article contribution to a monograph or other periodicals
144 - TAXMOD JRC.B.2	2825 - TAXMOD-Corporate Competitiveness & welfare effects of corporate tax reforms: CCTB, Base Erosion & Profit Shifting	Modelling support to Commission for the Action Plan on Corporate Taxation (including the CCTB and OECD BEPS discussions. To use, update and extend the CORTAX computable general	JRC.B.2 Salvador BARRIOS	5.3.a	TAXUD	TAXUD	Gaetan NICODEME	ECFIN	OECD - Organisation for Economic Co-operation and Development (OECD)	12/12/2014 11/12/2017	CON-AA	10	Modelling tax compliance cost	analysis and calibration of tax compliance costs in CORTAX	31/12/2017	JRC technical reports
												11	Final report extension of EUROMOD to wealth tax	Final report on the extension of EUROMOD to wealth taxation, dynamic analysis and use for tax policy analysis.	31/12/2017	JRC technical reports
5.3.b fiscal policies - modelling and economic analyses of tax policies using the EUROMOD microsimulation model.																
144 - TAXMOD JRC.B.2	2831 - TAXMOD- Policy Support to tax policy recommendations with the EUROMOD model: fiscal, employment and equity impact	The project will study the fiscal and equity impact of tax expenditures affecting labour taxes, the fiscal and equity impact of housing tax reforms, and including also an exploratory analysis for the calibration of the QUEST model and possible interaction between the EUROMOD and QUEST models for dynamic fiscal forecasting. The JRC-B2 unit provides contributes to the Country reports (COM Staff working document) in support to the Country-specific recommendations. Analyse the behavioural reactions to tax reforms, especially with regards to labour supply. Analyse the resilience and automatic stabilisation properties of	JRC.B.2 Salvador BARRIOS	5.3.b	ECFIN	ECFIN	Gilles MOURRE	EMPL SG TAXUD		28/11/2014 27/12/2017	CON-AA	3	Progress report on the cost of housing investment	Provide support to DG ECFIN for the macroeconomic impact analysis of specific tax treatment of housing investment.	31/05/2017	JRC contributions to policy documents
												4	Final report interaction QUEST-EUROMOD	Final report providing standardised modelling of tax reforms including overall macroeconomic impact	30/11/2017	JRC technical reports
												5	Support for the European Semester	Final report on all activities in support of the European Semester	30/11/2017	JRC contributions to policy documents
												6	Automatic stabilisation mechanisms in the EU	Final report on the modelling of automatic stabilisation mechanisms in the EU using the EUROMOD model. Automatic stabilisation concerns the ability of tax and social benefits systems to absorb negative shocks in income due to change in economic situation (e.g. going from employment to unemployment).	30/11/2017	JRC contributions to policy documents
												7	Impact of unemployment of fiscal forecasting	This activity will make use of the EUROMOD model extended to model the fiscal impact of large changes in unemployment evolutions, in particular through changes in social security contributions and unemployment benefits.	30/11/2017	Science-for-policy reports
144 - TAXMOD JRC.B.2	3473 - TAXMOD-INST Modelling tax reforms with the EUROMOD model	Tax modelling activities in the context of the Tax modelling Task Force (JRC/ECFIN/EMPL/TAXUD). Research of interest for DG ECFIN/TAXUD and EEMPL including: - Prepare the internalisation of the EUROMOD model.	JRC.B.2 Salvador BARRIOS	5.3.b	ECFIN	JRC	Gilles MOURRE	EMPL ESTAT SG TAXUD		01/01/2016 31/12/2017	INS-RS	1	Annual Report 2016-17 Tax modelling Task Force	Review of Tax modelling Task Force (with ECFIN/TAXUD/EMPL) activities on the fiscal and equity impact of tax reforms using the EUROMOD model. Includes training on the EUROMOD-JRC web interface. EUROMOD is the main tax modelling tool used in the context of the European Semester. Review of state of play of internalisation of the EUROMOD model including review of transition period (2017-2018) and future plans in the long-run (from 2019 onward).	31/12/2017	Training
7 An area of justice and fundamental rights based on mutual trust																
7.1 Justice, consumers and gender equality																
7.1.a consumer markets - analyse statistical indicators and methodologies to monitor consumer behaviour and market performance; data collection systems and their interoperability for product safety and market surveillance; application of behavioural insights.																
273 - SafePro JRC.F.2	3787 - CPS-IAData Injury and accident data collection in support of consumer product safety	Objective: to ensure EU consumers' safety by enabling interoperability of existing injury and accident data collection systems in the context of product safety and market surveillance work (Regulation (EC) No 765/2008, COM(2013) 76 final) (policy benefits). This will facilitate a fair well-functioning internal market with consistent product safety and market surveillance at national and EU level, enhance safety standards on products to avoid such injuries to happen and give rise to prevention campaigns (policy specific/societal benefits). In turn, a more efficient work on product safety and market surveillance will help reducing the injuries and accidents in the future, thus reducing the associated health treatment costs in hospitals, of insurance systems, societal benefits, etc. Analysis of the societal impact of this scientific work will be done in collaboration with JRC.DG1.01 (in future part of competence centre for modelling) via a network engagement hub.	JRC.F.2 Stylianos KEPHALOPOULOS	7.1.a	JUST	JUST	Tommaso CHIAMPARINO (DG JUST)	SANTE	Chem Cos Pharm Food Agri EU - Competent Authorities of EU Member States Chemicals, Cosmetics, Pharmaceuticals, Food, and Agrochemicals Industry OECD - Organisation for Economic Co-operation and Development (OECD)	22/03/2016 21/08/2017	CON-AA	2	Feasibility study on technical options	Report on "Methodology for data mining and analysis to support the identification of trends in product related injuries and accidents". The objective is to assess the methodological implications of possible convergence of data delivered by the relevant categories of databases or other data pooling mechanisms in a centralised and coordinated way, towards wide and cross border usability.	31/05/2017	JRC technical reports
												3	Data mining and analysis	Report on "Methodology for data mining and analysis to support the identification of trends in product related injuries and accidents". The objective is to develop a methodology to organise/filter/extract/analyse available data to support the identification and comparison of temporal trends and associations between products, risks and accidents/injuries data and the setting of priorities for actions in relevant existing national systems in EU (e.g. national poison centres).	31/05/2017	JRC technical reports
												4	Identification of future options & opportunities	Report on "Identification of future options and opportunities for data collection on injuries and accidents in support of product safety". The objective is to: explore possible options and opportunities for data collection on injuries and accidents in support of product safety, including partnerships with actors from private sectors and economic operators; assess the possible costs and methods to improve some of the existing categories of databases in the direction of more accurate and usable.	31/07/2017	Science-for-policy reports
7.2 Home affairs and security																
7.2.a support to strengthen critical infrastructure and community resilience against all threats; improve critical infrastructure protection, understand and model vulnerabilities and interdependencies, including through synthesis and sharing of knowledge, exchange of good practice, exercises and networks related to critical infrastructure operators, training and awareness programmes for national authorities and operators of critical																
4821 - RESIST JRC.E.2	186 - CIPRNET Critical Infrastructures Preparedness and Resilience Research Network	Co-funded by: EU FP7 Instrument: Network of Excellence (NoE) Start date: March 1, 2013 The activity aims at enhancing the security and resilience of built environment, including buildings transport and energy infrastructure, under catastrophic events such as explosions and impact caused by terrorist acts or accidents. Advanced modelling and innovative materials will be employed for the development of calibrated methodologies for upgrading structural robustness under such extreme loadings. Appropriate techniques for providing protection to soft targets will also be assessed. Data from selective laboratory testing will be used for the verification and validation of such models. Results will improve current standards, and will contribute to the drafting of new European Guidelines regarding the protection of physical infrastructure (C(2015) 3765, DG HOME, M/487 EN2014 - DG GRC/M). The effects of such	JRC.E.2 MARIANTHI THEOCHARIDOU	7.2.a	HOME	GROW	Torben FELL, HOME.D.1.002	ECHO	Förderung der Angewandten Forschung E.V.	01/03/2013 28/02/2017	CON-IA	3	Project textbook	The work package aims at guaranteeing an adequate visibility of CIPRNet and rapid dissemination of its results within the R&D communities involved in the different CIP topics. The "textbook" will be an assembly of the material produced.	28/02/2017	Scientific and policy reports
438 - PROTECT JRC.E.4	858 - BUILT-PROTECT Protection of buildings and soft targets to man-made hazards	Advanced modelling and innovative materials will be employed for the development of calibrated methodologies for upgrading structural robustness under such extreme loadings. Appropriate techniques for providing protection to soft targets will also be assessed. Data from selective laboratory testing will be used for the verification and validation of such models. Results will improve current standards, and will contribute to the drafting of new European Guidelines regarding the protection of physical infrastructure (C(2015) 3765, DG HOME, M/487 EN2014 - DG GRC/M). The effects of such	JRC.E.4 George SOLOMOS	7.2.a	HOME	JRC	Ms. Eva-Maria Engdahl	COMM ECHO GROW HR MOVE OIB	- Direction of Military Applications (CEA) NIST - National Institute of Standards and Technology CEA - Commissariat à l'Energie Atomique et aux Energies Alternatives CEN - European Committee for Standardization EEAS - European External Action Service NEA-OECD - Nuclear Energy Agency (OECD)	01/01/2014 31/12/2018	INS-RS	10	Models validation using Blast Simulator data	Test data will be generated, using the Blast Simulator apparatus, to be employed for the validation and verification of computational models developed in WP-871 SIMUL-PROTECT and used for assessing the explosion effects on structural components, full-size structures and their human occupants. The activity foresees testing of components made of both traditional (concrete, steel) and of more innovative materials (glass, foams etc). Disaster mitigation and protection capabilities will be considered.	15/12/2017	Validated methods, Reference methods and measurements
												11	Explosions effects assessment tool	The challenging task of a quick vulnerability assessment of existing buildings concerning blast loading will be undertaken. In order to facilitate such a first evaluation, a simulation tool will be developed, which will include the definition of a blast loading scenario, the resistance curves of classical structural components, like window glasses, and the potential effects to humans. The tool will be designed to be easy to use and it will mainly serve Commission security needs.	15/06/2018	Technical systems
												9	Resilience requirements in construction	Requirements of structural resilience in critical infrastructures will be reviewed. The feasibility of incorporating such requirements in building standards and Guides will be assessed. Consistent definitions and metrics relating to resilience will be identified and suitably adapted for use across sectors in a multi-hazard approach (both natural and man-made). The activity is expected to involve external experts, engage a broad range of stakeholders and consider NIST's extensive relevant work.	30/09/2017	JRC contributions to standards
4821 - RESIST	866 - ERNCIP	ERNICIP (European Reference Network for Critical Infrastructure Protection) is the flagship project of the European Programme for Critical Infrastructure Protection. In this framework, the ERNCIP project has developed a vast network of European experts and stakeholders (more than 700) to work in close collaboration with JRC to collect testing gaps and needs, identify promising areas for the development of standards, test protocols and certification procedures. It also involves the creation and population of an inventory of test facilities, and development of a software platform to enhance the use of this inventory. In the framework of supporting the EPCIP (European Programme for Critical Infrastructure Protection) and CBRNE (Chemical Biological Radiological	JRC.E.2	7.2.a	HOME	JRC	TORBEN FELL	CNECT ECHO	ETSU - European Telecommunications Standards Institute (ETSI) ETSO-E - European Network of	01/01/2014	INS-DC	17	Emerging security issues in critical sectors	A report with proposals for new areas of work (e.g. eHealth, Insider Threat) where standardisation and drafting of guidance documents for security is needed. This will be performed in close consultation with the relevant DGs.	30/06/2017	Science-for-policy reports
												18	EPCIP standardisation and guidance	ERNICIP will continue to support Thematic groups with a strong focus on the European Programme for Critical Infrastructure Protection (EPCIP) (Biometrics, Video Analytics, Indoor Airborne chemical and biological Threats, as well as new areas) in terms of facilitation, steering, monitoring and providing feedback to standardisation committees. In addition, ERNCIP will aim to provide recommendations for improving security of CIs as well as gaps for future research in the field.	31/12/2017	JRC contributions to standards
												19	CBRNE Standardisation and guidance	ERNICIP will continue to support CBRNE TGs (Water, Nuclear and Radiological Threats, Explosion effects to structures, Detection of Explosives and Weapons in Secure Locations - DEWSL) in terms of facilitation, steering, monitoring and providing feedback to standardisation committees. In addition, ERNCIP will continue also in the direction of developing recommendations for improving security of infrastructures and critical installations.	31/12/2017	JRC contributions to standards

JRC 2017- 2018 WORK PROGRAMME																	
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol.	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category	
JRC.E.2	Security testing, standardisation and facilities inventory	Nuclear and Explosives) policies, ERNCIP steers several thematic groups (TGs) in different areas of security of critical infrastructures. ERNCIP is conducting the main work to transform the output of thematic groups into technical requirements for feeding-in the work of Standardisation bodies and Committees. The standardisation work is paramount for the security industry in order to develop innovative and more competitive security solutions as well as interoperable solutions across MS. The main impact of this work is the development of more secure and resilient societies as well as a stronger and more competitive European security industry which translates to growth and jobs. In addition, ERNCIP is enhancing its knowledge in standardisation through a close	Gian-Luigi RUZZANTE	7.2.a	HOME	JRC	QUEVAUVILLER PHILIPPE	GROW MOVE	EU MS R/N emergencies - EU MS Authorities competent for R/N emergencies MS EU - Member states EU MSB - Swedish Civil Contingencies Agency (MSB)	31/12/2018	INS-RS	20	Workshop agreements in EPCIP and CBRNE	ERNCIP will provide proposals and the associated material in order to proceed to workshop agreements where applicable and in specific areas of EPCIP and CBRNE policies	31/12/2018	JRC contributions to standards	
												21	Update and expansion of ERNCIP inventory of labs	The ERNCIP inventory of labs is a reference point for the European security community. It is currently under expansion in order to incorporate security standards and create the link between testing capabilities of labs and their compliance to these standards and the respective certification capabilities. Several intermediate versions are expected, but a fully functional version of the inventory is expected for end of 2018. This will be integrated with the ERNCIP platform.	30/06/2018	Scientific information systems and databases	
												22	ERNCIP guidance on Resilience training	This report will provide guidance for CIP and Resilience training in Europe on the basis of the experience that ERNCIP has acquired developing this training activities	01/05/2017	Science-for-policy reports	
												8	IT Platform for inventory users	Prototype IT platform for inventory users. New services will be combined with the existing Inventory of the facilities integrating other software applications. Focus will be given on the inclusion of security standards and also improve the search capabilities of the inventory to facilitate the identification of laboratories that can perform tests implementing specific standards.	30/06/2017	Scientific information systems and databases	
438 - PROTECT JRC.E.4	871 - SIMUL-PROTECT Advanced computer simulations for protecting buildings and soft targets against terrorist acts	The activity addresses the need of producing European guidelines for the protection of the built infrastructure and of soft targets, like citizens, against terrorist acts. Such guidelines will be written together with European experts and the work will be effectively aided by advanced simulations which allow the reliable reproduction of the structural response to severe loads due to explosions and impact. The vulnerability of urban centres and other unprotected targets will be assessed under several bombing attack scenarios including new threats (drones), using innovative simulation approaches in the EUROPLEXUS software environment. A terrorism database will also be setup, useful for a comprehensive risk assessment.	JRC.E.4 Martin LARCHER	7.2.a	HOME	JRC	Ms. Eva-Maria Engdahl	CNECT COMM GROW HR MOVE OIB	- Direction of Military Applications (CEA) CEA - Commissariat à l'Energie Atomique et aux Energies Alternatives CEN - European Committee for Standardization EDF - Electricité de France EEAS - European External Action Service FGFAF - Fraunhofer Gesellschaft zur Förderung der Angewandten Forschung E.V. Fusion for Energy - European Joint Undertaking for ITER and the Development of Fusion Energy	01/01/2014 31/12/2018	INS-RS	08	Protection against new types of threats	Terrorist attacks in urban areas results often in the failure of a large amount of windows/glass. This could lead to many injuries especially due to flying splinters. Windows can also be affected by new threats like explosives carried by unmanned aerial vehicles. Their payload is increasing and the potential risk due to their use by terrorists to carry explosives will be investigated. Protection measures for fragile structures, like glass facades and windows, will be proposed.	15/12/2017	JRC technical reports	
												09	Guidelines for buildings against explosions	A draft of the guidelines concerning the protection of built infrastructure against impact and explosions will be produced by Deliverable 5 (250918). Such guidelines are requested in the European Agenda on Security in order to enhance protection and mitigate the risk due to terrorism. The guidelines should be extended to further applications. In addition, the possibility to enhance Eurocode 1.7 by using the results of these guidelines should be examined together with CEN/TC250.	31/12/2018	JRC technical reports	
												10	Protection of soft targets	In order to enhance the security of soft targets, the following steps should be performed: * Literature / database study: learning about cases * Selecting a number of simple examples in order to calibrate better the numerical models * Vulnerability studies of selected cases (e.g. stadia, shopping malls, open air demonstrations, Christmas markets); * Collecting mitigation measures from the literature and guidance from the experience of MS and other countries. * Sharing experience with MS	31/12/2018	JRC technical reports	
277 - FACIL JRC.G.II.6	938 - GIFT-CBRN Integrated Forensic Toolbox	The FP7-SEC project addresses current practice and challenges in forensic science with focus on CBRN contaminated evidence. Methods for fingerprints and DNA from contaminated evidence are developed for work package 4. In WP5, ITU is task leader for Task 5.3 on RN forensic analysis and provides a report on Nuclear Forensic of nuclear materials and signatures of radiological materials.	JRC.G.II.6 Erich HRNECEK	7.2.a	HOME	RTD	ENR.G.4	GROW	- National Institute for Public Health and the Environment - NETHERLANDS ORGANISATION FOR APPLIED SCIENTIFIC RESEARCH AWE - Atomic Weapons Establishment CEA - Commissariat à l'Energie Atomique et aux Energies Alternatives STUK - Radiation and Nuclear Safety	01/09/2014 31/08/2017	CON-IA	201601	Final project report GIFT	Finalise experiments contributing to WP3,4,5. Final project report on ITU contributions: WP3 technical report on the validation of a radiation sources measurement tool WP4 technical report describing the Recovery of DNA from contaminated items WP4 technical report describing methods for latent fingerprints under CBRN conditions WP5 technical report on Nuclear Forensic of nuclear materials and signatures of radiological materials	20/12/2017	JRC Technical reports	
												201701	forensic system for contaminated evidence	glove box system for analysis of fingerprints, DNA and electronic devices	31/12/2017	Technical systems	
429 - SEC-GAS JRC.C.3	1943 - EPCIP_IPP_2014 EPCIP Integrated Pilot Projects 2014-2020 in the Energy sector	The strategic objectives of this work package are to improve the level of prevention, preparedness and restoration for critical energy infrastructures of European dimension. This will be done by means of designing and applying a methodology for	JRC.C.3 Ricardo BOLADO LAVIN	7.2.a	HOME	HOME	Torben FELL (Unit A1.002)	CNECT ENER ENV GROW		01/05/2015 31/12/2017	CON-AA	5	Scientific publications and outreach activities	Four activities are developed in this deliverable: 1) selection of a number of relevant chains of events, 2) preparation of a number of training / information dissemination sessions based on the events chains selected, 3) realisation of training / information dissemination sessions, and 4) selection of lessons learnt.	28/04/2017	Training	
4821 - RESIST JRC.E.2	2523 - IMPROVER Improved risk evaluation & implementation of resilience concepts to Critical Infrastructures	The overall objective of the project is to improve European critical infrastructure resilience to crises and disasters through the implementation of resilience concepts to real life examples of pan-European significance, including cross-border examples.	JRC.E.2 Georgios GIANOPOULOS	7.2.a	HOME	HOME	ALBERTO PIETRO CONTARETTI	ECHO RTD			01/06/2015 31/05/2018	CON-IA	4	Resilience management	Preparation of a European Resilience Management Guideline on implementation of	27/04/2018	JRC technical reports
													5	2nd Operator's workshop report	A report to describe the output of the 2nd operator's workshop. The feedback of operators is important in order to steer the project and provide usable results at the end of the project	30/06/2017	JRC technical reports
													6	3rd Operator's workshop report	A report to describe the output of the 3rd operator's workshop which will take place towards the end of the project	30/06/2018	JRC technical reports
													7	Resilience Methodology report	A report that will describe the methodology for implementation of organisational, societal and technological resilience concepts to critical infrastructure	31/12/2017	JRC technical reports
4821 - RESIST JRC.E.2	3080 - CIPS 2015 CIPS 2015 - Actions to be carried out with the JRC	The description of work corresponds to actions to be carried out by the JRC in support to DG HOME in the implementation of the Internal Security Fund (ISF) AWP 2015 in the domain of police cooperation and crime prevention. In this framework, JRC will support the revised EPCIP through the development of tools and methodologies for interdependencies assessment and perform a scientific evaluation of the CIPS research projects that have been financed by the CIPS scheme during 2007-2013. A major part of the work described in CIPS 2015 is a continuation of CIPS 2013 and CIPS 2014. JRC will further develop GRRASP (Geospatial Risk and Resilience Assessment Platform) as the main vehicle for assessing interdependencies and CI impact at MS scale. The tool is available for use by the MS. JRC will offer training for the use of this tool (already performed in Malta, Greece follows). CIPS 2015 will support several activities proposed in the Staff Working Document on the revised	JRC.E.2 Georgios GIANOPOULOS	7.2.a	HOME	HOME	Torben FELL, HOME.D.1.002	CNECT ENER MOVE	ENISA - European Network and Information Security Agency	08/04/2016 07/04/2019	CON-AA	2	Scientific Analysis of CIPS funded projects	A report structuring and summarising the results of the CIPS projects which can be used to identify these tools that are mature enough to be used by the stakeholders as well as those guidelines, methodologies and best practices that can be delivered to MS for immediate use.	31/03/2017	Science-for-policy reports	
												3	Big data visualization and analysis capabilities	Development of a module to be plugged in to GRRASP for the analysis and visualization of big data (e.g. large infrastructures with high level of detail). The amount of data available for networks and infrastructures is continuously increasing and the use of search engines can provide a large amount of data. When it comes to very complex networks with a large number of nodes, relational databases reach their limits so new technologies are necessary such as Hadoop.	30/09/2017	JRC technical reports	
												4	GRRASP for response coordination	Development and integration of a module to handle data streams from emergency responders (e.g. description of a disaster in specific infrastructures) for facilitating the coordination of response teams. Data can range from simple text messages to photos, short videos etc. This will be enabled with the development of a simplified interface for mobile devices for uploading these data streams from authenticated users. Fostering the creation of civil protection/CIP interface.	31/03/2018	Technical systems	
												5	Federated simulations using GRRASP	Further development of current GRRASP architecture in order to federate various instances of GRRASP installed in various agencies or Member States in order to demonstrate the capability to perform joint analysis, especially for cross border infrastructures and incidents.	30/09/2018	Technical systems	
												194 - TDSS JRC.E.5	3300 - E-THREATS Explosives Threat Detection	Based on direct requests and problem formulations from policy DGs and Europol the JRC performs research on explosives and chemical substances, and technical appraisal of detection equipment and	JRC.E.5 Michael BERGLUND	7.2.a	HOME
4821 - RESIST JRC.E.2	3864 - TNCEIP-ITIS EUC Technical Support to the TNCEIP and ITIS-EUC	In 2010 ENER established the Thematic Network on Critical Energy Infrastructure Protection. The objective of TNCEIP is to improve the information sharing in energy sector both at technical level but also in terms of relation with external initiatives. JRC is moderating the meetings and produces the thematic papers, minutes, etc. As an outcome of the TNCEIP project, DG ENER invited the JRC to implement an information sharing platform to handle Incident and Threat Information in EU for Critical Energy Infrastructures, the ITIS-EUC (Incident and Threat Information Sharing - EU	JRC.E.2 Georgios GIANOPOULOS	7.2.a	ENER	ENER	Adam SZOLYAK DG ENER B.1	CNECT HOME	ENISA - European Network and Information Security Agency ETSO-E - European Network of Transmission System Operators EUROPOL - EUROPOL	24/02/2016 23/02/2018	CON-AA	1	Proceedings of Meetings	Production of proceedings of meetings (in principle 3 meetings per year) for dissemination to TNCEIP community	15/12/2017	JRC technical reports	
												3	Thematic papers 2017	JRC will compile a thematic paper on the topic of each meeting to serve as guidance and facilitate the discussion among actors	15/12/2017	JRC technical reports	
												6	Analysis on Cyber vulnerabilities/incidents 3	A report analysing the threats and incidents in the energy sector (gas, electricity, oil) with focus on cyber events and threats and providing lessons learned to the operators	30/06/2017	Public information documents	
												7	Analysis on Cyber vulnerabilities/incidents 4	A report analysing the threats and incidents in the energy sector (gas, electricity, oil) with focus on cyber events and threats and providing lessons learned to the operators	15/12/2017	External study reports	
438 - PROTECT JRC.E.4	4384 - SPSC Support to Physical Security of the Commission	DG HR.DS has to implement and enforce measures mitigating the risks arising from certain man-made hazards to Commission staff and	JRC.E.4 Martin LARCHER	7.2.a	HR	JRC	Nicholas KAYE	COMM HOME OIB	Fusion for Energy - European Joint Undertaking for ITER and the Development of Fusion Energy	01/01/2016 30/12/2018	INS-RS						
438 - PROTECT JRC.E.4	Simulation of explosion effects and testing of assemblages for the ITER	The work is commissioned by Fusion for Energy (F4E) and aims at assessing the safety of important ITER components against beyond design	JRC.E.4 Armelle ANTHOINE	7.2.a	ENER	n/a	Massimo GARRIBBA			14/04/2016 13/04/2018	CON-TW	446103	Results from the experimental programme	Detailed description of the experimental campaign including test results and analysis	15/12/2017	JRC technical reports	

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
4821 - RESIST JRC.E.2	4863 - INTERSEC Interdependencies and Security	The aim of this workpackage is to support the work of ERNCIP in existing areas of high priority as well as address emerging issues on request from the policy DGs. A limited amount of resources will be used to work on interdependencies of complex networks. New sectors (e.g. health) that have not been thoroughly addressed till now will be	JRC.E.2 Georgios GIANNPOULOS	7.2.a	HOME	HOME	TORBEN FELL	ECHO ENER	NIST - National Institute of Standards and Technology ENISA - European Network and Information Security Agency ETSO-E - European Network of Transmission System Operators MSB - Swedish Civil Contingencies	01/01/2017 31/12/2018	CON-AA	1	Standardisation proposals in CIP	This deliverable (mid term) will provide the areas in which standardisation activities are needed and that will be carried out by International Standardisation Bodies. In addition it will provide guidance to policy DGs to draft future research calls in the framework of H2020. The report will cover all activities by the various TGS.	31/12/2017	Science-for-policy reports
												2	Policy and Standardisation proposals	This report will provide consolidated input to policy DGs for standardisation work in the respective areas, additional research activities for H2020 calls as well future direction of thematic groups.	31/12/2018	Science-for-policy reports
4821 - RESIST JRC.E.2	5842 - NIS-TOPO Internet Topology Visualisation	The internet is a critical infrastructure upon which a plethora of others depend to function. More specifically, the Internet can be seen as a mesh of interconnected networks, collaborating to provide global connectivity between any two points. Through the institutional activity CIP-TOPO, JRC has conducted two years' worth of research towards a better understanding of the ways the	JRC.E.2 Thierry BENOIST	7.2.a	JRC	JRC	n/a			01/04/2017 31/03/2018	INS-PC	1	Visualisation Platform User requirements	This document aims at capturing the requirements of the public topology portal in a formal manner, which can be used as a baseline for implementation of the IT system.	02/10/2017	JRC technical reports
												2	Internet Topology Portal - Beta release	This is the beta release of the end-product, which will see the implementation of a first wave of requirements identified in deliverable 1.	15/12/2017	Technical systems
												3	Internet Topology Portal - Production release	This deliverable is the final version of the internet topology visualisation portal, implementing all requirements identified in Deliverable 1.	31/03/2018	Technical systems
7.2.b support the implementation of Action Plans on chemical, biological, radiological, nuclear (CBRN) and explosives (E) and of Regulation EU 98/2013 on explosives precursors, including through the provision of scientific support and research. Support the standardisation process for CBRN-E related detectors and other equipment. Exchange good practice among users and manufacturers of CBRN-E detectors and related equipment.																
436 - CBRNEsec JRC.A.7	4201 - SECUCIP Device for Detection of pathogen agents for security application	Threat from malicious use of chemical, biological, radiological, nuclear or explosive (CBRN-E) materials is a high priority area for the European Commission, identified in a number of EU political and legal instruments. For this purpose, DG HOME settles the EU CBRN Action Plan to minimise the likelihood of incidents and to limit their consequences. The plan contains 124 measures to be taken in three main areas: Prevention, detection, preparedness and response to CBRN threats. Among the biological actions of the plan, some regard the development of detection models with training and testing and the development of minimum detection standards. Current technologies ERNCIP (European Reference Network for Critical Infrastructure Protection) provides support to the security industry policy and action plan of DG HOME. The action is foreseen with dedicated budget in HORIZON 2020 work programme as	JRC.F.2 Pascal COLPO	7.2.b	HOME	JRC	ENGDahl Eva-Maria (HOME.D1), SOLER Ivette (HOME.D1)			01/09/2016 01/09/2018	INS-ER	2	publication on detection platform testing	publication on testing and optimisation of the platform by using the selected simulants for bacteria viruses and toxins. Testing AMPs individually and in microarrays format	30/06/2017	Article contribution to periodicals or to conference
												3	Performance comparison with commercial systems	Comparison of performance with commercial systems according to agreed testing norms specifying analytical parameters (sample volume, matrixes, testing time, continuous/discrete mode...) and the corresponding results	31/12/2017	JRC internal reports
												4	Report on testing with real samples	Analysis of the field of application based on current knowledge and existing tools. Testing with real samples will be performed through external collaboration within the CBRN action plan	30/06/2018	JRC internal reports
												5	Publication on detection of pathogens	final publication on detection of pathogens including results of del. 3 and 4.	30/08/2018	Article contribution to periodicals or to conference proceedings listed in SCOPUS
4821 - RESIST JRC.E.2	4966 - ERNCIP-CBRNE 17-18 ERNCIP Support to Mandate M487	Official title: European programme for the establishment of validated procedures for the	JRC.F.6 Reinhard ZELNY	7.2.b	HOME	RTD	QUEVAUVILLER Philippe (HOME, B.4)	ENV RTD	NIST - National Institute of Standards and Technology CEN - European Committee for Standardization IEC - International Electrotechnical	01/01/2017 31/12/2018	CON-AA	1	Standardisation and research recommendations	This deliverable will provide recommendations for standardisation activities in specific areas of the CBRNE policy as well as recommendations for further research in the area of H2020 where applicable	31/12/2017	JRC contributions to standards
												2	Recommendations for policy actions in CBRNE	This deliverable will provide recommendations for future research and standardisation activities in the area of CBRNE	31/12/2018	Science-for-policy reports
341 - Reference Materials JRC.F.6	5300 - EuroBioTox Establishment of validated procedures	Official title: European programme for the establishment of validated procedures for the	JRC.F.6 Reinhard ZELNY	7.2.b	HOME	RTD	QUEVAUVILLER Philippe (HOME, B.4)			01/02/2017 31/01/2022	CON-IA	01	Reference Materials	Reference materials for the identification and quantification of biological toxins developed	30/06/2022	Reference Material
7.2.c understand and develop methodologies to counter emerging threats, such as hybrid threats and insider threats; understand how new technologies such as social media, mobile apps and virtual reality can be used to improve citizens' security and the security perception;																
4821 - RESIST JRC.E.2	1001 - CIP-REAL Resilience Assessment Laboratory	To study the resilience of societies on a global approach by improving the absorptive, adaptive and recovery capacity of the critical infrastructures to cope with unexpected events, applying an all-hazards approach with particular focus to man made and hybrid threats. The main result of this workpackage will be the development of vulnerability and resilience indicators, study of interdependencies among complex networks and systems of systems (SoS), development of visual analytics tools for community resilience and finally pursue dissemination activities in the form of training for operators, policy makers and Member States authorities. In the framework of this project new scientific modules have been developed and are under development in order to be included into the Geospatial Risk and Resilience Assessment Platform (GRRASP) which is already in version 3.1 and it is available to MS and Academia for assessing the resilience of critical systems and societies. GRRASP has also been used in training activities in Malta and Greece and it has been demonstrated in the VITEX exercise organised by the Dutch authorities. With respect to dissemination activities a number of training sessions in Risk and Resilience have been performed in 2015 (Malta, Greece), a pan-European 3-days training for operators of critical infrastructures will take place in June 2016, while in 2017 a pilot platform for training will be available to MS in order to set-up online training courses. Furthermore collaboration with strong external actors is under preparation. A meeting with NIST is scheduled for June 6-10 2016 in order to investigate possibilities for further collaboration and joint actions in the framework of JRC-NIST collaboration agreement	JRC.E.2 Georgios GIANNPOULOS	7.2.c	HOME	JRC	Torben FELL, HOME.D.1.002	ECHO ENER MOVE	NIST - National Institute of Standards and Technology ENTSOE - European Network of Transmission System Operators for Electricity EUROCONTROL - European Organisation for the Safety of Air Navigation (EUROCONTROL) MS EU - Member states EU MSB - Swedish Civil Contingencies Agency (MSB)	01/01/2014 31/12/2018	INS-RS	11	Vulnerability indicators for Hybrid Threats	This deliverable will describe the main elements for vulnerability indicators to Hybrid Threats as described in the Joint Communication to the European Parliament and the Council on countering Hybrid Threats potentially affecting national and pan-European structures and networks.	30/06/2018	Science-for-policy reports
												12	Visual Analytics for resilience	Development of modules to visualise large scale complex networks with several points of interconnection, not restricted to critical infrastructures (e.g. social networks) and large datasets in order to support decision making for improving societal resilience.	31/12/2018	Scientific information systems and databases
												13	Contribution to the science for policy report	Contribution to the science for policy report by the DRKMC	30/05/2017	Science-for-policy reports
												14	Complex networks interdependencies modelling	Further development of the DMCI (Dynamic Modelling of Critical Infrastructures) module which is already included in GRRASP, analysis of specific use cases and dissemination of training to MS for the use of the tool through GRRASP in order to improve their capacities in assessing interdependent and complex networks.	30/09/2017	JRC technical reports
												15	GRRASP and the transport sector	Contribution to the work of Transport Economics and Modelling Project (141) through the use of GRRASP for the analysis of transport infrastructure. Collaboration with Unit J.1	31/12/2017	JRC technical reports
												16	Peer reviewed scientific publications	Peer reviewed scientific publications in Resilience and Interdependencies of critical systems. It is expected that 3 publications and 2 conference papers will be submitted for publication during 2017	31/12/2017	Article contribution to periodicals or to conference proceedings listed in SCOPUS
												17	Peer reviewed scientific publications	Peer reviewed scientific publications in Resilience and Interdependencies of critical systems. It is expected that 3 publications and 2 conference papers will be submitted for publication during 2018	31/12/2018	Article contribution to periodicals or to conference proceedings listed in SCOPUS
												8	Economic modelling of CI disruption	Development of a regional I/O model to be incorporated in GRRASP in order to assess the economic impact of critical infrastructure disruption. This model will contribute also to the work of the DisasterRisk project (d.222)	31/03/2017	Technical systems
												9	On line training platform for resilience	The aim of this deliverable is to develop an online training platform with material provided by the JRC as a result of the training activities to MS and operators conducted by the JRC in order to help towards improving the resilience of Critical Infrastructures and societies against all hazards. This workpackage will take stock of existing efforts in FP7, H2020 & CIPS projects, while collaboration with strong external partners such as NIST will be pursued.	31/12/2017	Technical systems
4821 - RESIST JRC.E.2	1054 - TCPNCI Tools for Crisis Preparedness in Networked Critical Infrastructures	To facilitate the preparation and execution of large pan-European crisis exercises in critical infrastructures, in particular when cross-sectorial competences are needed. The JRC will continue the development of IT tools to foster the preparation and the execution of crisis exercises.	JRC.E.2 Thierry BENOIST	7.2.c	HOME	JRC	TORBEN FELL	CNECT ENER MOVE	EUROCONTROL - European Organisation for the Safety of Air Navigation (EUROCONTROL)	01/01/2014 31/12/2018	INS-RS	1	Assessment of NARRATOR in pan-European exercises	To assess the added-value of the NARRATOR software suite and to draft potential improvements after the participation of the JRC as technical provider and/or observer to large pan-European crisis exercises, in particular an exercise with Eurocontrol.	30/06/2017	JRC technical reports
												2	Further development in NARRATOR	To further develop the NARRATOR software suite based on additional requirements raised after a pan-European exercise	15/12/2017	Scientific information systems and databases
7.2.d provide technical support, intelligence techniques and research to improve operational cross-border cooperation and assist Member State authorities in law enforcement in areas such as cybercrime (using European Media Monitor EMM and Open Source Intelligence OSINT) and digital forensics (including the online sexual abuse of children), open source intelligence and new psychoactive substances, including support for early																
329 - DFILE JRC.E.3	559 - ITFC Innovative Techniques for Fighting Cybercrime	ITFC work package is focused on developing innovative techniques to enable effective investigation and prosecution of cybercrime by European law enforcement bodies. It identifies emerging scientific and technological approaches, explores their potential for increasing the efficiency of cybercrime investigation and prosecution, and develops new techniques. This research activity deals with the prosecution of criminal activities that involve the usage of new technologies and lead to a direct financial impact for citizens and industries. A first line of research is focused on the emerging concept of mobile botnets and the related criminal	JRC.E.3 JOSE IGNACIO SANCHEZ MARTIN	7.2.d	HOME	JRC	Anabela GAGO (HoU HOME D.2 Organized Crime)	CNECT FISMA JUST	EUROPOL - EUROPOL MS EU - Member states EU	01/01/2014 31/12/2018	INS-RS	1	Fight against Mobile Botnets	This JRC Technical Report will describe the final architecture and implementation of the mobile botnet analysis platform developed in 2016. Supported by the tests conducted on this platform, the report will also describe several case studies of actual mobile botnet malware extracted from the samples collection built in 2016. On the bases of these case studies, a set of recommendations will be drawn proposing innovative strategies for the detection and take-down of mobile botnets.	15/12/2017	JRC technical reports
												2	Fight against digital payments fraud.	This JRC technical report will analyse the threats and vulnerabilities in the emerging digital payment systems based on virtual currencies, wireless credit cards and peer-to-peer payments. On the basis of this analysis and the set of experiments that will be conducted in laboratory conditions, innovative approaches will be identified to facilitate the forensic collection of digital evidence necessary for the successful prosecution of this type of criminal activities.	14/12/2018	JRC technical reports
329 - DFILE JRC.E.3	560 - AVICAO Authors and Victims Identification of CSA On-Line	The aim of the WP is to support the 2013 EU cybersecurity strategy in the fight against Child Sexual Abuse (CSA) on-line and the EU agenda on SAND provides scientific assistance to DG HOME and the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) within the EU Drugs Strategy and Action Plan and legislative proposals on new psychoactive substances (NPS) (Council Decision 2005/387/JHA . (COM/2013/619)). The	JRC.E.3 Laurent BESLAY	7.2.d	HOME	JRC	Anabela GAGO (HoU HOME D.2 Organized Crime)	CNECT	EUROPOL - EUROPOL MS EU - Member states EU	01/01/2014 28/12/2018	INS-RS	56007	TOR HS scanning tool development	Development of the application of scanning Hidden Services defined in 2016. The application will be tested and validated by EUROPOL/EC3 service during the November 2017 Virtual Identification Task Force of the TWINS focal point.	24/11/2017	Technical systems
									Cust Aut MS - MS Customs Authorities			2017A	Contribution to risk assessment	A summary of the risk assessment conducted on NPS in 2016 and 2017 by the scientific committee of EMCDDA will be edited. The risk assessment reports are the base for further decision for ban of certain substances by the EU institutions (Commission, Council). The JRC delegate is the scientist representative from the Commission participating in the EMCDDA meetings for risk assessment of new substances.	30/11/2017	JRC contributions to policy documents

JRC 2017- 2018 WORK PROGRAMME																	
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category	
302 - EUDEPRO JRC.F.4	606 - SAND Scientific Activity on New Drugs	Consultation ISC/2016/01413 of 12/05/2016 on a draft Commission proposal for a Regulation of the European Parliament and of the Council amending Regulation (EC) No 1920/2006 on the EMCDDA as regards information exchange, early warning system and risk assessment procedure on new psychoactive substances, recognises a clear need for EU action as Member States alone cannot reduce the problems caused by the spread of NPS. Moreover Union action should be based on scientific evidence. SAND supports EU action by establishing harmonised methods and approaches addressing the challenges of identification and collection of analytical data on NPS by forensic, customs and	JRC.F.4 Claude GUILLOU	7.2.d	HOME	n/a	DG HOME D4 Floriana SIPALA (HoU), Elsa Maia (policy Officer), Ute STIEGEL (policy Officer)	GROW OLAF SANTE TAXUD	EMA - European Medicines Agency (EMA) EMCDDA - European Monitoring Centre for Drugs and Drug Addiction EUROPOL - EUROPOL Law-enforcement Nat. Auth. - MS Law-enforcement National Authorities	01/01/2014 31/12/2018	INS-UR	2017B	Chemoinformatic tools for sharing of data on NPS	Report on dissemination and training to modern chemoinformatic tools for sharing of data and results through workshops and meetings co-organised with the EMCDDA for the REITOX and MS Early Warning System focal points, the European Network of Forensic Science Institutes (ENFSI) and Customs laboratories.	30/11/2017	Training	
												2017C	Binding affinities of new synthetic cannabinoids	Report on study of a new method based on surface plasmon resonance for measurement of the binding affinities of new synthetic cannabinoids with endocannabinoids receptors.	30/09/2017	JRC technical reports	
												2018A	Consistency of NPS chemical data	Report about the progress regarding consistency and quality of chemical and spectroscopic data collected on NPS through the Early Warning System. These data are further considered during the risk assessment process of NPS of high concern for public health.	15/07/2018	JRC technical reports	
												2018B	Monitoring and risk assessment of NPS	Report presenting an overview of the activities regarding monitoring and risk assessment of NPS in the frame of objectives and needs set in the EU Drugs strategy 2020 and corresponding legislative framework.	30/11/2018	Science-for-policy reports	
213 - TMA CC JRC.I.3	3479 - EuMM2017 Europol Media Monitor 2017	Europol's Corporate Communications Unit performs open source monitoring on behalf of operational Units in Europol. The Unit also	JRC.I.3 Charles MACMILLAN	7.2.d	HOME	EA	Funded by Europol			01/01/2017 31/12/2017	CON-AA	347901	Europol Media Monitoring	Delivery of Open Source monitoring and analysis tools to enhance Europol's capabilities preventing and combating organised crime, terrorism and other forms of serious crime.	29/06/2017	Technical systems	
329 - DFILE JRC.E.3	3524 - DOCIDT Disrupting Organised Crime with Innovative Digital Technologies	The aim of this WP is to support the EU Agenda on Security and more specifically its second priority for disrupting organized crime and tackling terrorism with the development of innovative technologies which will level the playing field of law enforcement authorities in full compliance with the EU charter for fundamental rights. The research efforts will be focused on the following topics: - The growing concerns about new encryption technologies will be addressed through the development of the concept of contextualized decryption. This new way of password recovery process aims at collecting all the information produced by a target in order to build his/her semantic space from which a customized wordlist will be extracted. Only personal data of the individual under investigation will be processed. Initiated in 2016, the backend system will be complemented with a front end part defined and tested in collaboration with EUROPOL/EC3 and the group of Member States law enforcement representatives. - Communication interception is a necessary and critical task supporting investigation. Innovative	JRC.E.3 Laurent BESLAY	7.2.d	HOME	JRC	Anabela Gago (D.2), Rob Rozenburg (B.3).		EUROPOL - EUROPOL OHIM - Office for Harmonization in the Internal Market	01/01/2016 28/09/2018	INS-RS	352405	Fingerprint Laser Recognition	Based on a new generation of very accurate 3D laser-based sensing technology, an innovative biometric reader will be explored in order to acquire in a contactless environment the full 3D fingerprint surface. Current performance of fingerprint-based recognition technology will be pushed from the millimeter frontier to the micron one resulting in a 1000 performance factor improvement expectation. Interoperability challenge with 2D fingerprint database will be assessed.	28/12/2017	JRC technical reports	
												352406	Fostering Accuracy of Biometric Systems	Following the scientific support provided on ten prints quality metric within the first phase of the implementation of the SIS/II AFIS functionality, G.06 will contribute to the technical definition of the second phase of the AFIS implementation with a scientific assessment and recommendations on the use of fingerprints. A scientific support will also be provided for the revision of the SIS framework and the possibility to use face recognition and tattoo image content based retrieval systems	28/12/2018	JRC technical reports	
												352407	Good Digital Identification against Counterfeiting	The team will conduct a survey of possible approaches and technologies for fighting against Intellectual Property infringing and counterfeiting. This survey will include an analysis of the techniques for the artificial insertion of physical fingerprints in addition to the fingerprints created spontaneously during the manufacturing process. It will develop demonstrators to support enforcers for the authentication of goods on the basis of signal processing techniques.	28/12/2017	JRC contributions to policy documents	
												352408	Smart home communication interception	Using the expertise and prototype application developed in the frame of DECT communication interception in 2015-16, the DFILE team will study the possibility to use the USRP card for developing a Smart home scanning application. The aim is for Law Enforcement Authorities to remotely evaluate the nature and the activity of the internet of things appliances and devices of a smart home before an intervention and to collect potential digital evidences on a forensic process.	02/07/2018	JRC technical reports	
213 - TMA CC JRC.I.3	4980 - STAR III EMM SECURE ZONE III	The AA is the continuation of JRC's support to DG HOME's strategic analysis and response capability (STAR). DG HOME uses STAR to develop risk assessment processes related to security threats. Furthermore, it is used as capability for crisis management. The operational nature of STAR requires continuing support and transfer of open source gathering and analysis techniques developed by JRC.	JRC.I.3 Charles MACMILLAN	7.2.d	HOME	HOME	Jorge BENTO SILVA				16/12/2016 15/12/2017	CON-AA	334401	OSINT for Law Enforcement	Improved tools and methods for Open Source Intelligence leading to further harmonisation of these tools across EU Law Enforcement Institutions.	21/10/2018	Science-for-policy reports
													CommunitySupport	Support Community of OSINT practitioners	a) Organise yearly hands-on workshop to exchange best practices b) Provide technical and organisational support to European Network of Law Enforcement Technologies and Services (ENLETS) group c) Maintain community web site with tutorial and event material	01/10/2017	Conferences and workshops organized by the JRC
													Dissemination	Disseminate JRC Tools	a) Provide training material and on-site tutorials b) Disseminate tools to MS authorities	01/10/2017	Training
													STAROPSUPPORT	Operational Support to STAR	Provide software updates and consulting to keep STAR operational	15/12/2017	Technical systems
													STARTRANSFER	Transfer of OSINT techniques	Provide DG HOME with latest open source gathering and analysis techniques. Transfer know-how to keep STAR operational.	15/12/2017	Training
213 - TMA CC JRC.I.3	5022 - STAR IV EMM SECURE ZONE IV	The AA is the continuation of JRC's support to DG HOME's strategic analysis and response capability	JRC.I.3 Charles MACMILLAN	7.2.d	HOME	HOME	Jorge BENTO SILVA			01/01/2018 31/12/2018	CON-AA	502201	Operational Support to STAR	Provide software updates and consulting to keep STAR operational	31/12/2018	Scientific information systems and	
213 - TMA CC JRC.I.3	5024 - EuMM2018 Europol Media Monitor 2018	Europol's Corporate Communications Unit performs open source monitoring on behalf of operational Units in Europol. The Unit also	JRC.I.3 Charles MACMILLAN	7.2.d	HOME	EA	Funded by Europol			01/01/2018 31/12/2018	CON-AA	502401	Europol Media Monitoring	Delivery of Open Source monitoring and analysis tools to enhance Europol's capabilities preventing and combating organised crime, terrorism and other forms of serious crime.	31/12/2018	Technical systems	
7.2.e provide technical support and research to strengthen EU large information systems (e.g. identity document security, data quality and biometrics, interoperability); close information gaps in the field of security; enhance security at the external border (e.g. support for the design and implementation of the EU entry-exit system).																	
244 - CSPI JRC.E.3	2848 - ISF14-PM Pilot for Masterlist Management for electronic passport authentication	Design, development and deployment of a small-scale pilot for assessing the feasibility of technical options concerning the management of Member-	JRC.E.3 Antonia RANA	7.2.e	HOME	HOME	Robertus ROZENBURG		Management of Operational Cooperation	17/07/2015 15/07/2017	CON-AA						
244 - CSPI JRC.E.3	3764 - DigitalID Digital Identity	This work-package aims at providing support to the forthcoming Commission Communication on an Action Plan on document security and identity management which is called for in the Commission Communication Stronger and Smarter Information Systems for Borders and Security which explicitly references the need to combat document and identity fraud. Linked to this activity on identity managed which is focused on "hard" id documents the work-package aims also at providing support to the "citizen mobility" challenge identified by COM(2014)144. Both initiatives are related to means to manage authentication related to the use	JRC.E.3 Antonia RANA	7.2.e	HOME	JRC	Yolanda GALLEGO-CASILDA GRAU	CNECT JUST		01/01/2016 30/12/2018	INS-RS	376401	Workshop on Interoperability testing of eMRTD	An interoperability event to test the interoperability of electronic documents conforming to the latest specifications with inspection systems will be organised. The test event will be accompanied by a workshop in which gaps and open issues will be discussed. A report summarising the test results and the outcome of the discussions will be prepared.	30/12/2017	JRC technical reports	
												376401a	Digital Identities, State of the Art	The deliverable will survey the state of the art in the digital identity domain, investigating soft and hard IDs and on the different paradigms used today in the DSM at european level	01/12/2017	JRC technical reports	
												376402	SoftID technology for trust building	This deliverable will investigate on technological means to build chains of trust leveraging on soft ID mechanisms. The output will be a scientific report on possible ICT based techniques to build-up a strong chain of trust in the issuing process of Citizen cards and residence documents, relying on chains of soft-IDs and soft-proofs	31/12/2018	JRC technical reports	
244 - CSPI JRC.E.3	4444 - MAIC Mobile Apps for Border/Immigration Control	This Administrative Agreement between DG JRC/IRSC and DG HOME is planned to support DG HOME in the evaluation of the use of mobile devices and "apps" for border and immigration	JRC.E.3 Igor NAI FOVINO	7.2.e	HOME	HOME	Marc Sulon (Sector Head - DG-HOME B.3 Information Systems for Borders and Security)			01/04/2016 31/05/2017	CON-AA	444402	Mobile apps: immigration control feasibility study	The deliverable presents the results of the feasibility study with identification of user, operational and architectural requirements, (in particular in terms of security, privacy and data-protection), presentation of possible architectures, prototyping results and comparison with current state of play in other countries.	28/02/2017	Science-for-policy reports	
244 - CSPI JRC.E.3	4860 - CTSFDD Conformity Testing of Security Features of Digital Documents	The purpose of this WP is to provide technical support to DG HOME B2 in the field of document security, namely to check the correct	JRC.E.3 Antonia RANA	7.2.e	HOME	HOME	Yolanda GALLEGO-CASILDA GRAU	HR		01/01/2017 31/12/2017	CON-AA	4860001	Conformity testing MS reports and final report	A test report will be provided for each Member State covering all the samples received from that Member State. A final report summarising the results and the work done will be delivered at the end of year.	30/12/2017	JRC technical reports	
8 Towards a new policy on migration																	
8.1 Migration																	
8.1.a enhance the capacity of the European Agency for the Management of Operational Cooperation at the External Borders of the Member States of the European Union (FRONTEX) to carry out border controls, risk analysis and joint operations at the external borders; enhance European Police Office (EUROPOL)'s capacity to fight illegal immigration and the trafficking of human beings; enhance the capacity of FRONTEX's,																	
												1	Dynamic Mapping Tools for Migration Flows/Routes	Development of dynamic maps of migration flows, to allow analysts and researchers to perform data analytics and deliver a better knowledge the current situation to be channelled to policy makers and practitioners.	29/06/2018	Scientific information systems and databases	
		This WP addresses activities agreed under the Action Plan of the KCMC Framework, 2017										10	Monitoring IDP camps	To address forced displacement, analyse the feasibility of mapping and monitoring IDP camps, in agreement with DG DEVCO and ECHO and depending on data sharing agreements with relevant international organisations and NGOs. The specific output will include the specification of a pilot-project and technical annex for a future service contract	15/12/2017	JRC technical reports	

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
355 - KCMD JRC.E.6	294 - MIGR-EW Migration Monitoring and Early Warning	Action Plan for the return of irregular migrants: risk analysis and prediction for enhanced situational awareness of migration flows and related events both in the maritime domain and on land. The workpackage shall also provide a specification for an overarching integrated monitoring system for migratory flows, considering the full set of migration flows and routes from countries of origin to the ones of transit to destinations into the EU. The work will require collaboration of scientists with practitioners from national operational authorities and EU agencies, including analytical staff in information hubs/crisis management centers of policy DGs HOME and ECHO dealing with the refugee and other migrant flows.	JRC.E.6 MICHELE VESPE	8.1.a	HOME	JRC	Rita DI PROSPERO (HOME), Oliver SEIFFARTH (HOME), Giulio DI BLASI (HOME)	ECHO NEAR	EMSA - European Maritime Safety Agency EUROPOL - EUROPOL FRONTEX - European Agency for the Management of Operational Cooperation MS Border Sec - MS Border and other Security Authorities	01/01/2016 31/12/2019	INS-UR	2	Vessel Profiling and Radiolocation	Vessel profiling and anomaly detection. Given a vessel ID, the risk profile is based on his historical behaviour (Origin-Destination, regularity and predictability, verification, visibility, RF fingerprinting etc.). This activity includes the refinement of radiolocation techniques at regional scale.	01/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												3	Early Warning and Predictive Tools	Development of automatic near real time early warning and predictive tools. This includes both land and maritime dimensions for routes and flows.	03/12/2018	Scientific information systems and databases
												4	Monitoring Migratory Flows and Routes- Feasibility	Analysis of the current situation (user needs, available technologies, current practices), gaps and improvements needed for a comprehensive monitoring system of migratory flows. This addresses the mixed migration movements towards the EU. To provide estimates of the stock of non-returned irregular migrants through analysis to match data held in the various national registers (on returns, decisions, immigration, asylum).	01/12/2017	JRC technical reports
												5	Monitoring Migratory Flows and Routes- Funct.specs	Functional specifications, operational scenarios and analysis (benefits, shortcomings, limitations, cost-effectiveness) of the proposed comprehensive monitoring system.	03/12/2018	JRC technical reports
												7	Monitoring Technologies Assessment for Migration	Report on capabilities of different monitoring techniques, systems and platforms, such as Space imagery, Remotely Piloted Aerial Systems (RPAS), aerostats, micro-satellites, to monitor different segments of the migratory routes (origin, transit, destination) and to anticipate changes in trends.	29/06/2018	JRC technical reports
355 - KCMD JRC.E.6	296 - NDMM New and alternative data sources for migration and mobility	This WP addresses activities agreed under the Action Plan of the KCMD. It aims at addressing current data gaps in strategic areas to improve the understanding of international migration processes and intra-EU mobility patterns. The WP will focus specifically on the identification of new datasets, new data sources, new sensors, new platforms and technologies able to collect new data. It will also study how heterogeneous data from a variety of sources, e.g. official statistics, indexes, remote sensing data, social media, mobile phones, smartphone tracking, etc., can be combined for a finer-granularity analysis of migration flows and routes.	JRC.E.6 Dario TARCHI	8.1.a	HOME	JRC	Oliver SEIFFARTH (HOME), Giulio DI BLASI (HOME), Rita DI PROSPERO (HOME), Corinne ANDRE (NEAR)	DEVCO ECHO EMPL NEAR	FRONTEX - European Agency for the Management of Operational Cooperation MS Border Sec - MS Border and other Security Authorities	01/01/2017 31/12/2019	INS-UR	1	Mobility data collection - feasibility	Feasibility study on methodologies to collect mobility data, based on mobile communication networks. Includes an analysis of the state-of-the-art, the present limitations, proposals for further development, privacy and security considerations. Use of new data sources to estimate mixed migration flows towards the EU. Explore the use of new data sources to complement or verify data held in centralised border management systems to produce estimates on the number of visa overstayers.	31/12/2017	JRC technical reports
												2	Mobility data collection - specs and prototype	Specifications and prototype of a technological system to support the monitoring of mobility flows based on mobile network communications. The specifications will include the operational scenarios, the user requirements as well as the design and testing conditions.	31/12/2018	JRC technical reports
												4	Tethered aerostat demonstration	Following up to the activities on the final specifications of TERMS (Del 4 of 2015 project IN-SENS), the developed Hardware (mini-radar) and Software (radar signal processing) components will be extensively tested on board a tethered aerostat. The combination with AIS sensors (Del 3 of the same) or traditional EO sensors will also be considered. Tests will be performed in collaboration with relevant Agencies and National Authorities in the field (e.g. MS Navies) in near-real-world scenarios	30/09/2017	Technical systems
355 - KCMD JRC.E.6	1880 - MARHOME 2 Support to EUROSUR	This policy support work comprises: i) Assessment of relevant FP7 project results with respect to EUROSUR requirements;	JRC.E.6 Guido FERRARO DI SILVIE CASTIGLIONE	8.1.a	HOME	HOME	Oliver Seiffarth	GROW	FRONTEX - European Agency for the Management of Operational Cooperation	01/07/2015 30/06/2017	CON-AA					
222 - DRMKC JRC.E.1	3358 - FOSS 2016 FOSS Application for FRONTEX	The Frontex One-Stop-Shop (FOSS) is the Agency's platform for sharing information with	JRC.E.1 Brian DOHERTY	8.1.a	HOME	n/a	Silvia Aimasso, FRONTEX, Silvia.Aimasso@frontex.eu		FRONTEX - European Agency for the Management of Operational Cooperation	01/10/2016 30/09/2017	CON-TW	1	Frontex One Stop Shop	Provide report to FRONTEX to support management of joint AA	30/09/2017	Scientific information systems and
213 - TMA CC JRC.I.3	3468 - FMM2017 Frontex Media Monitor 2017	The FRONTEX Media Monitor (FMM) is a media monitoring tool aimed at facilitating and automating	JRC.I.3 Charles MACMILLAN	8.1.a	HOME	EA	Funded by FRONTEX			18/12/2016 17/12/2017	CON-AA	346801	FRONTEX Media Monitoring	Enhanced Open Source monitoring capabilities at FRONTEX helping it to fulfil its responsibilities related to border management including migration.	17/12/2017	Technical systems
355 - KCMD JRC.E.6	4442 - EMN 2016 Operational support to EU's migrant return and relocation operations	Tackling migration is among the priorities of the Commission in 2016-2017. DG HOME has asked the support of the JRC to design and develop tools and methodologies that will promote the	JRC.E.6 Naouma KOURTI	8.1.a	HOME	HOME	Magnus OVIILIUS	DIGIT	FRONTEX - European Agency for the Management of Operational Cooperation	01/01/2016 31/05/2017	CON-AA	1	Design of IRMA's extension into re-admission appli	The Integrated return management application will be extended to accommodate re-admission applications. JRC will develop the design of the extension tools	30/06/2017	JRC technical reports
213 - TMA CC JRC.I.3	5025 - FMM2018 Frontex Media Monitor 2018	The FRONTEX Media Monitor (FMM) is a media monitoring tool aimed at facilitating and automating	JRC.I.3 Charles MACMILLAN	8.1.a	HOME	EA	Funded by FRONTEX			18/12/2017 17/12/2018	CON-AA	344301	FRONTEX Media Monitoring	Enhanced Open Source monitoring capabilities at FRONTEX helping it to fulfil its responsibilities related to border management including migration.	17/12/2018	Technical systems
8.1.b improve the EU's underlying bordercontrol IT systems for migration through work on biometrics, digital identity management and smart card security;																
244 - CSPI JRC.E.3	3533 - LP 2016-2017 Support to the operation of the Laissez Passer 2016-2017	Direct support to DG HR in the implementation and deployment of the Public Key Infrastructure (PKI) required to operate the EU Laissez-Passer security infrastructure. It includes: - operation of the CSCA/CVCA according to the defined security policies	JRC.E.3 Antonia RANA	8.1.b	HR	HR	Natalie CRESTE (HR.B.ADV01)	HOME		01/07/2016 30/06/2017	CON-AA					
355 - KCMD JRC.E.6	3547 - BORSEC Enhancing Operational Systems for Securing Borders, Migration and Asylum	This WP addresses activities agreed under the Action Plan of the KCMD. The EU maintains three large scale Identity Management Systems to secure external borders and handle migration flows namely SIS II, VIS and EURODAC. It also plans to establish a new system to register entry and exit of the Schengen area for third country nationals. All	JRC.E.6 Guenter SCHUMACHER	8.1.b	HOME	JRC	Marc SULON (HOME.B3 - Information Systems for Borders and Security)		FRONTEX - European Agency for the Management of Operational Cooperation	01/01/2017 31/12/2019	INS-RS	354703	Workshop on border security & immigration control	The workshop with national border control authorities will elaborate on requirements for strengthening EU border security. Particular emphasis will be placed on document security, biometric verification, automated border control systems, and access, handling and exchange of relevant data.	30/11/2017	JRC technical reports
												354704	ABC Security and Data Protection Assessment Trial	The report describes the setting up and conduct of a field trial on the application of the developed evaluation schemes at a selected number of border control points at air, land and sea borders.	29/06/2018	Science-for-policy reports
244 - CSPI	4859 - LP 2017	Direct support to DG HR in the further	JRC.E.3	8.1.b	HR	HR	Nathalie CRESTE	HOME		01/07/2017	CON-AA					
8.1.c support EU policy on addressing push and pull factors and reducing the incentives for people to migrate, including climate change as a root cause of forced displacement/migration;																
355 - KCMD JRC.E.6	4829 - MIGRIMPACTS Migration impacts	This WP addresses activities in line with the Action Plan of the KCMD. Demographic trends indicate that population growth in African countries will increase migratory pressure across the Mediterranean, while Europe will be affected by large deficiencies in its support ratios (workers per retiree). The effects of migration in contrasting the demographic contraction are not fully explored. A number of studies show that the amount of migrants required to contrast the demographic transition in the EU would be too large to be sustainable from a social and political perspective.	JRC.E.6 Fabrizio NATALE	8.1.c	HOME	JRC	Laura Corrado (HOME.B.1)	DEVCO ECHO EMPL NEAR REGIO		01/01/2017 31/12/2021	INS-RS	1	Migrations and demographic transition in the EU	Analysis of the impacts of migration on the EU labour force, fiscal, educational and welfare systems on the basis of medium-term demographic projections.	31/12/2018	Science-for-policy reports
												2	Mapping migrant communities	The deliverable will explore areas of high concentration of migrant communities (diasporas) at local geographical level and analyse socio cultural integration using micro data or alternative data sources.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
355 - KCMD JRC.E.6	4830 - MIGRPOLICIES Migration policies	This WP follows closely the implementation of the European Agenda for Migration, including the migration compacts and the new Partnership Framework, in line with the action plan of the KCMD. In agreement with the relevant policy DGs it will help anticipate the drafting of new legislation on migration where relevant, through ex ante impact evaluation and simulations of different policy scenarios. Migration flows are determined both by economics and migration policies and there are national differences in the implementation of migration policies across EU MS. In addition to geographical factors, these differences determine a non-uniform distribution of migration pressure in the EU. One deliverable under the WP will use existing information and indexes on migration governance and policies to analyse and monitor how the different national approaches for naturalisation, integration and border control in the EU may	JRC.E.6 GIULIANA URSO	8.1.c	HOME	JRC	Laura Corrado (HOME.B.1)	DEVCO ECHO EMPL NEAR		01/01/2017 31/12/2021	INS-RS	1	Monitoring national policies on migration (review)	A review of national migration policies and legislation and of international quantitative indexes on migration governance. The review will also consider regularisation as a pull-factor and the use of integration contracts to foster integration.	31/12/2017	JRC technical reports
												2	Impact of national policies on migration	The deliverable will consist in country profiles on migration policies. Information from the policy analysis activities will be used to evaluate the effects of the different national approaches for naturalisation, integration and border control in the EU on migratory flows and routes both in qualitative and quantitative terms.	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												4	Migration country profiles	In collaboration with DG DEVCO and EEAS, JRC will produce a "model" country profile for the needs of the migration compacts, including the specific and regional contexts. Sets of indicators will be selected to reflect the complexity of the migration phenomenon and the decision to migrate. The common template and methodology will be validated by DG partners and will be tested for the case of Mali. Infographics will be produced for the five priority countries for EU migration compacts in Africa.	30/09/2017	JRC technical reports
8.1.d analyse the impacts of migration on the EU labour force and fiscal, education and welfare systems on the basis of medium term demographic projections; enhance the spatial dimension of integration (e.g. to account for cities where most of the integration issues arise);																

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355 - KCMD JRC.E.6	4839 - MIGR-DataHub Dynamic Data Hub	This WP addresses activities agreed under the Action Plan of the KCMD. It develops a dynamic data hub of key data sets for migration and demography-related analysis. The Dynamic Data Hub will put together and make coherent and comparable large datasets of human migration.	JRC.E.6 MICHELE VESPE	8.1.d	HOME	JRC	Rita DI PROSPERO	DEVCO ECHO EMPL ESTAT NEAR	EUROPOL - EUROPOL FRONTEX - European Agency for the Management of Operational Cooperation	01/01/2017 31/12/2019	INS-UR	01	In-house data hub of key data sets for analysis	In-house (Commission) data hub of key data sets for analysis	30/12/2017	Scientific information systems and
												02	Migration ETL	Development of Extraction, Transformation and Loading (ETL) infrastructure to automatically gather migration related data at national but also more spatio-temporally disaggregated scales.	29/12/2017	Scientific information systems and databases
5046 - CAS-1 JRC.A.5	5071 - CAS1-Pop&Mig Population&Migration	This WP will contribute to state of the art research on demography and migration. It will first provide alternative socio-economic scenarios in the countries of Africa, the Middle East and Eastern Europe with a special focus on population growth, employment of the "youth bulge" and potentials for conflict. Alternative projections along the SSP scenarios (Shared Socio-economic Pathways by age, sex, education) will be combined with consistent assumptions on possible institutional, economic and environmental stresses which are	JRC.A.5 Jutta THIELEN DEL POZO	8.1.d	HOME	JRC	Dellah AL KHUDHAIRY	ECFIN ECHO EPSC ESTAT GROW NEAR	Int Disaster Resp - International disaster response, including, Humanitarian Community Reg Aut Mig - Candidate Countries / Members States regulatory authorities on Migration UN ISDR - United Nations International Strategy for Disaster Reduction (UN-ISDR) UN OCHA - United Nations, Office for the coordination of Humanitarian	01/07/2016 30/06/2019	INS-CAS	20171	WP1-Preliminary report on push factors	Pilot analysis on the push factors for migration for a limited number of countries	30/04/2017	JRC technical reports
												20172	Report on alternative scenarios on push factors	A report on alternative scenarios for all countries in Africa, the Middle East and Eastern Europe for assessing likely "push factors" will be presented.	31/07/2017	Science-for-policy reports
												20173	Preliminary report on pull factors	Illustrative first pilot analysis results on pull factors for a limited number of countries	22/12/2017	JRC technical reports
												20181	Final report on Pull factors	Complete draft report on Pull factors for all countries	30/04/2018	Science-for-policy reports
												20182	Preliminary report on migration streams and impact	Illustrative first pilot analysis results for a limited number of countries on migration streams and their potential impacts	30/09/2018	JRC technical reports
8.1.e support early warning, risk analysis and prediction for enhanced situational awareness of migration flows;																
355 - KCMD JRC.E.6	4828 - MIGRTRENDS Migration root causes, inclination indices and trends	This WP will analyse the determinants of migration with a view to predicting medium-term migratory flows in line with the action plan of the KCMD. The analysis of migration determinants will consider theories at the micro scale (human capital investment, capabilities and aspirations), meso scale (the role of migrant communities and networks) and macro scale (the role of the development of nations, migration transitions between stages of development). The WP will use existing data from international statistical sources such as EUROSTAT, UNDESA, UNHCR, OECD, World Bank to assess the propensity and intensity of migration from and towards the EU. The variables will include macroeconomic determinants such as poverty, wage differentials, inequalities, development indicators and conflicts. The work package will also explore the feasibility of using alternative sources of data to overcome limitations in the existing statistical data sources.	JRC.E.6 Fabrizio NATALE	8.1.e	HOME	JRC	Stefano SIGNORE (DEVCO), Laura Corrado (HOME.B.1), Giampaolo LANZIERI (ESTAT F.2)	DEVCO EMPL ESTAT NEAR	EEAS - European External Action Service	01/01/2017 31/12/2021	INS-RS	1	Review of literature on determinants and models	The deliverable will consist in the review of existing literature on theories, empirical analyses on migration determinants and of the models used to predict international migration. The review will produce a report on the state of the art in this field which will identify the key variables, the main sources of data including potential alternative sources and the main modelling approaches. The report will identify limitations and research challenges and indicate possible solutions for the predic	31/12/2017	JRC technical reports
												2	Assembling the data	The deliverable will consist in assembling the data which will be needed to produce a number of migration inclination indices and for modelling activities. The data will be made available to other researchers and analysts for exploratory data analysis through a dedicated online Business Intelligence platform.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												3	Migration inclination index	The deliverable will consist in the development of migration inclination indices which will characterise pull and push factors in sending and receiving countries. The indices will consider these factors separately for the different forms of migration (family reunifications, conflicts, poverty and disaster induced migration, labour migration, migration of high skilled professionals). The results will be made available to policy makers and the general public through interactive visualisations.	31/12/2018	Science-for-policy reports
8.1.f operate the Knowledge Centre for Migration and Demography, which will provide policy-oriented research and evidence-based analyses, observatories, partnerships, and capacitybuilding.																
603 - CC-ME JRC.I.1	4680 - CC-ME.HOME Competence Centre on Microeconomic Evaluation. HOME	CC-ME will provide different types of support to DG HOME in setting the evaluation plans for AMIF and ISF: i) a guidance document on counterfactual impact evaluation (CIE) methods for policy, for the use of the MS in the evaluation of AMIF and ISF in their country, ii) organization of training courses on CIE methods targeted to the MS, iii) organization of a workshop where MS shall present the preliminary results of the mid-term evaluation, receiving feedback from CC-ME experts, iv) support on the aggregate evaluation of AMIF and ISF at the EU level, to complement the evaluation performed at the MS level, v) support to the MS on data collection (e.g administrative data), to perform evaluation studies for specific objectives of AMIF and ISF, which cannot be implemented with country-year data.	JRC.I.1 ENKELEJDA HAVARI	8.1.f	HOME	HOME	Sonia PAGLIARO			01/06/2016 31/05/2018	CON-AA	1	Guidelines for Evaluation	CC-ME will prepare guidance documents which shall include the methodology to carry out the interim and ex post evaluation for ISF and AMIF, mainly targeted to the Member States. The guidance document will build on the indicators and evaluation questions included in the Delegated Regulation. It will provide definitions of indicators, modalities to	31/01/2017	Science-for-policy reports
												2	Pilot projects	JRC will provide support to DG HOME to identify 2 Member States interested and willing to take part in a pilot exercise, for the identification of the best practice in data collection and evaluation. The aim is to deliver a final report for each pilot study, which may be used as example for the other Member States in order to perform similar analysis in the future (ideally in view of the ex post evaluation).	31/05/2018	Science-for-policy reports
												3	Collaboration on midterm evaluation	The results of the interim evaluation carried out by the Commission will be shared with the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions (hereafter "European institutions"), the Member States, and stakeholders at European and national level, including NGOs, academia and general public.	31/05/2018	JRC technical reports
												4	Evaluation roadmaps	CC-ME will support DG HOME in the design of detailed roadmaps for the evaluation of ISF and AMIF: the aim of these documents is to specify the evaluation design (subject, purpose and scope; issues to be addressed and evidence to be gathered). On that basis, a draft evaluation roadmap will be prepared, following the structure defined by the Better Regulation guidelines and toolbox.	31/01/2017	JRC technical reports
												5	Training and workshops	CC-ME will support DG HOME and the Member States by delivering training courses on the evaluation of AMIF and ISF. They shall be organised in the form of workshops including the presentation of theoretical concepts and hands-on sessions in order to work with the participants	31/05/2018	JRC technical reports
355 - KCMD JRC.E.6	5105 - OP-KCMD Operation of the Knowledge Centre for Migration and Demography	The Action Plan of the Knowledge Centre for Migration and Demography (KCMD) identifies activities of the KCMD, a Commission-wide initiative, for its first two years of operation, from July 2016 to June 2018. The KCMD will provide better and timelier policy-relevant knowledge and evidence-based analysis. Its activities will be designed to address knowledge gaps and specific needs of EU policy makers. It will also gradually widen its scope to serve EU Member State authorities and address the relevance of future international migration and mobility issues. Although some its activities will focus on the immediate refugee crisis, a large part of its work will focus on medium to longer term issues, such as migration flows and population trends and their impact on the EU in the medium to longer term. The KCMD is designed around three building blocks: (1) data and information, building the evidence-base, doing analysis and foresight, (2) exploiting the knowledge base and facilitating uptake by stakeholders, and (3) partnerships and	JRC.E.6 MARION WESTRA VAN HOLTHE	8.1.f	HOME	JRC	GRAU Christine	CLIMA DEVCO EAC ECHO EMPL EPSC ESTAT NEAR RTD SG	IASA - International Institute for Applied Systems Analysis EEAS - European External Action Service FRONTEX - European Agency for the Management of Operational Cooperation OECD - Organisation for Economic Co-operation and Development (OECD)	01/01/2017 31/12/2018	INS-RS	1	Dedicated web site	In agreement with KCMD partners, operate a dedicated web site to showcase all available knowledge including data visualisation facilities and produce a periodic newsletter.	30/12/2017	Technical systems
												2	Flagship publications	Produce and disseminate a biennial flagship state-of-the-art publication and thematic science-for-policy briefs.	30/12/2018	Science-for-policy reports
												3	Workshops and seminars	Organize workshops and seminars with policy-makers and other stakeholders, in collaboration with KCMD internal and external partners.	31/12/2017	Science-for-policy reports
												4	Supporting the governance structure	Support of the KCMD Steering Group, providing for the KCMD Secretariat, coordinating different partner-DG contributions to the KCMD action plan, keeping the KCMD action plan constantly updated	31/12/2018	JRC technical reports
												5	Catalogues and inventories	Catalogue and assess the quality of relevant data sources and activities from the point of view of their policy relevance and potential for analysis and research. Produce annually-updated inventories of relevant Commission activities, stakeholder entities and networks, in collaboration with partner-DGs. Advise DG DEVCO on the development of an information platform to map the relevant projects for the migration compacts, by specifying a suitable classification and projects database.	30/12/2017	JRC technical reports
												6	Collaborations	Prepare collaboration agreements with new external partners, plan common events and collaborations on selected projects with external partners.	31/12/2018	JRC technical reports
												7	Technical advice	Prepare solutions to be able to offer some basic data, statistical and research services e.g. technical advice on sources, methods and tools, for policy makers and practitioners.	30/12/2017	JRC technical reports
402 - EUPolicyLab JRC.I.2	5131 - FOR-MIGRASYL Foresight for EU migration and asylum policy	The work proposed under this work package aims at supporting the EC Knowledge Centre for Migration and Demography in three ways by: 1) carrying out foresight activities to stimulate forward looking EU policy-making in the area of migration and asylum; 2) designing processes to facilitate exploitation and uptake of evidence-based and foresight knowledge; 3) building and maintaining	JRC.I.2 Alice SZCZEPANIKOVA	8.1.f	HOME	JRC	WOLFOVA Katerina; Katerina.WOLFOVA@ec.europa.eu; HOME.A.1	DEVCO EMPL		01/01/2017 31/12/2017	INS-RS	1	2030 migration scenarios & a new versions SES	Foresight Report on 2030 migration scenarios and the specific challenges for the EU & a new version of the JRC Scenario Exploration System (SES) developed based on the EU-specific 2030 migration scenarios developed as part of this work package.	15/12/2017	Science-for-policy reports
												2	Scenario Exploration Sessions- Migrations	Series of sessions to familiarise expert users in the Commission with the Migration 2030 scenarios and a demonstration of how to use the Scenario Exploration System to engage with diverse stakeholders around the topic of migration, asylum and integration.	01/09/2017	Training
9 Europe as a stronger global actor																
9.1 Global safety and security																
9.1.1 Fight against security and safety threats, crisis management and disaster resilience																
9.1.1.a disaster resilience, emergency and crisis management - provide scientific and analytical services, develop tools and build capacity to support the entire disaster risk management cycle (disaster prevention, preparedness, response and recovery), including via a dedicated Knowledge Centre for Disaster Risk Management, and provide assistance for risk vulnerability and crisis assessment to improve the knowledge base for																
		The overall concept of the Work Project is to span the whole alerting/information chain from the instrumentation and local sensors, to the monitoring and visualization systems, international coordination and national/coordination and field										201701	Mobile Crisis Room and ECML (1)	Comparison of actual arrangement for mobile truck based crisis room in the Italian Fire Brigades and the container based Mobile Crisis Room, verification of the requirements and design of a new Mobile Crisis Room for delivery in disaster areas.	15/12/2017	JRC technical reports

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222 - DRMKC JRC.E.1	287 - CMTT Crisis Management Technologies and Tools	<p>dispatching tools. This Work Package focuses on improving & further developing technological tools adopted for managing ongoing crises, facilitating the integration of different systems, supporting MS & partners in developing advanced sea level instrumentation and developing new mobile crisis rooms. The long term objective of the Work Package is to contribute to enhance Europe's capacity and that of its International partners in prevention, preparedness & response to disasters through research in analytical natural hazard models application, instrumentation, alerting devices & capacity building activities and will contribute to develop harmonized performance standards and will increase interoperability. Furthermore, the Work Package will provide evidence to promote and enhance technology transfer.</p> <p>One of the objectives of the UCPM (Commission Decision n. 1313/2013) indicates that the Commission will complement and facilitate coordination of MS's action in assessing their response capability at national or sub-national level and reports are due to the Commission every 3 years. One important role of the ECML activities is therefore to organize, in collaboration with MSS workshops dedicated to some specific monitoring/response tasks that can be useful to provide state-of-the-art overviews that can be useful to fulfil the main objectives. Example for these workshops could include but would not be limited to Situation Awareness tools, Communication and Alerting mechanisms, geographical information storage and processing.</p>	JRC.E.1 Alessandro ANNUNZIATO	9.1.1.a	ECHO	JRC	Juha AUVINEN	GROW HOME	<p>AU - African Union Civ Protection EU - Civil Protection Services in Member States ECDC - European Centre for Disease Control EEAS - European External Action Service FRONTEX - European Agency for the Management of Operational Cooperation WFP - World Food Program of the United Nations</p>	01/01/2017 30/12/2018	INS-RS	201702	Technology workshops	The ECML's activities include workshops aimed at exploring specific technology aspects of the crisis management process: to be held twice a year, the workshops provide a forum where research, market and end-users can meet and acquire a deeper vision of the proposed technology. In 2017 two workshops will be organized: oCommunication, infrastructures, technologies and services for crises rooms oEarly Warning Systems for Natural Disasters	31/12/2017	Science-for-policy reports
												201703	Operational Report for ERCC Backup	Report describing the procedures necessary to host ERCC in the ECML when for various reasons the ERCC is no longer or temporary not available. Identify needs and priorities to be respected and provide ECML user manual for ERCC users. Organization of regular training sessions at JRC for ERCC operators.	01/09/2017	JRC technical reports
												201801	Mobile Crisis Room and ECML (2)	Comparison of actual arrangement for mobile crisis room in the other EU Fire Brigades, other than the Italian one and the container based Mobile Crisis Room.	31/12/2017	Science-for-policy reports
												201802	Technological Workshops (2)	The ECML's activities include workshops aimed at exploring specific technological aspects of the Crisis Management process: to be held twice a year, the workshops provide a forum where research, market and end-users can meet and acquire a deeper vision of the proposed technology. In 2018 two workshops will be organized: oMobile Devices for Field Reporting oEarly Warning Systems for Natural Disasters (hazard type to be decided)	31/12/2018	Science-for-policy reports
												201803	Instrumentation and Sensor Analysis/development	Installation of the GNSS Sea Level Instrumentation device in order to get operational experience on the device. State of the art report on Sea Level Instrumentation and highlight of the added value to develop instrumentation at EU level. Organization of a workshop on Sea Level instrumentation	31/12/2018	Technical systems
												201804	UCPM Capabilities in DRM report	Science for Policy Report describing potential methodologies and metrics to describe capabilities in DRM, according to the requirements laid out in the Union Civil Protection Mechanism. The report intends to provide additional guidance for EU Member States. The report will include an assessment of current capabilities in selected Member States according to the methodologies and based on result of the ECML technology workshops. The report serves both response and prevention policy needs.	31/03/2018	Science-for-policy reports
222 - DRMKC JRC.E.1	437 - S&T for DRMKC Science and Technology for Disaster Risk Management Knowledge Centre	<p>The WPK will provide scientific, technical and operational support to the DRMKC by means of developing a communication strategy based on appropriated tools for collection, analysis and dissemination of data, research results and available information in the fields of DRM and DRR.</p> <p>The WPK will contribute to an improved science-policy interface through networking activities in the field of Risk Assessment, Risk reduction, Loss Data and Science-Policy Interface among the different actors of the DRM cycle. Organization of dedicated WS and training sessions involving EU MS will be one of the tasks. The coordination of the contribution to the UNISDR Science and Technical Partnership and its conferences will be part of our activities.</p> <p>In addition this WPK will stimulate the exchange of best practices and research results, as well as will provide tailored scientific and technical solutions to facilitate the implementation of the Sendai FW for DRR, the UCPM and other relevant EU and global policies and agreements in the context of DRR and DRM.</p>	JRC.E.1 Montserrat MARIN FERRER	9.1.1.a	ECHO	JRC	Ian Clark	CLIMA ENV GROW HOME RTD SANTE	<p>Civ Protection EU - Civil Protection Services in Member States UN ISDR - United Nations International Strategy for Disaster Reduction (UN-ISDR)</p>	02/01/2017 31/12/2019	INS-RS	1	Improved Science-Policy Interface in DRM	Together with Member States and Commission Services and other partners in the DRMKC, it is intended to provide a joint space for pulling knowledge and resources together, identify existing knowledge gaps and areas requiring more focused research and studies, foster partnerships and synergies among relevant stakeholders and develop	15/12/2017	Science-for-policy reports
												2	Networking activities: Loss Data Challenge	Promotion of partnership will be one of our specific objectives within the DRMKC. We will organize 2 WS inviting the 34 Countries involved in the UCPM in the frame of the Loss Data Working Group to discuss with them different scientific, technical and practical aspects of the implementation of the Sendai Framework for Disaster Risk Reduction. This WG involves representatives from the operational field, decision makers, scientist and the private sector as well as the National Statistical Offices.	15/12/2017	JRC contributions to policy documents
												3	Represent JRC in S&T Partnership and IRDR	The DRMKC is the central interface with international initiatives, including the UNISDR Scientific and Technological Partnership set up in response to the Sendai Framework for DRR. The deliverable will be the JRC contribution to the S&T Partnership. Also engagement with other international initiatives, including IRDR (Integrated Research for Disaster Reduction) fall under this.	20/12/2017	JRC technical reports
												4	Updated guidelines for NRAs	Contribute to improving a science-based methodology for National Multi-hazard risk assessments. The scope of the work is to allow the comparability of the NRAs at EU level on the basis of compatible methodologies, which will facilitate the work led by DGECHO on the potential revision of the Guidelines for Risk Assessment and Mapping, as well as the further prioritization of policies and funding meant to strengthen Disaster Risk Management National Capabilities.	20/12/2018	Science-for-policy reports
												5	Science for DRM report 2017	The DRMKC will publish on regular basis a report meant to support a solid science-policy interface for DRM. The multi-author and multi-hazard report is the first in a series that will fill the gap in preparation for Sendai framework for DRR and show the positive exploit of EU research funding. It shall provide reviews of the scientific evidence base and its practical use in various areas of disaster risk management in Europe: the translation of solid science into useful and used recommendations.	01/06/2017	Science-for-policy reports
												7	INSPIRE-compliant Loss Data Guidelines	Publish updated INSPIRE-compliant Guidelines on Disaster Loss and Damage Data	15/12/2017	JRC contributions to standards
												201701	Maintenance and follow-up of GDACS	The Global Disasters Alerts and Coordination System will continue to put emphasis and organize the annual meeting while responding and answering at the same time to users' requests. In view of the use of the Global Human Settlement Layer developed by JRC as supporting population density estimation method a dedicated comparison activity to identify differences and improvements will be performed. JRC will ensure the correct functioning of the system.	31/12/2018	Technical systems
201702	Implementation of new Statistical models in GDACS	Development of Tsunami and Tropical Cyclone calculation systems capable of providing the GDACS system with a dynamically based statistical approach of impact estimation (instead of considering single deterministic model in Tsunami or single model wind speed and/or surge height for Tropical Cyclones). Discussions and collaboration with NCAR/UCAR. Follow-up of Member states in the use of the Tsunami Analysis Tool and organization of 1 course per year on TAT. A dedicated paper will be written	14/12/2018	Article contribution to a monograph or other periodicals												
201703	Natural Disasters Emergency Reporting	JRC will continue to monitor Natural Disasters on a tactical basis and when needed will support ERCC by compiling and preparing ad-hoc reports in case of important natural disaster events. The content of these reports will form the basis of scientific publications that will allow to improve the quality of the produced impact estimations in the future. Furthermore, JRC will act as the technical responsible for the ARISTOTLE project, funded by DG-ECHO acting as Quality Check.	15/12/2017	JRC internal reports												
201704	Operational Storm Surge Model	Storm surge risk management modelling encompasses a number of processes that need to be addressed in a coupled mode before a comprehensive analysis model can be implemented. Wind waves, swell, tides and streams combine to raise sea level near coastal areas and inducing inundation. The main product of this work package is the creation of daily bulletins for several EU areas that are provided to the Meteorological agencies (Italian and Greek). Statistical verification.	15/12/2017	Article contribution to a monograph or other periodicals												
201705	Global Flood Partnership activities	Follow-up the activities of GFP and support in the organization of the annual meeting. Update of the Floods and classify them with the online procedure; verification of the entries performed by others. The activity is important to export the major floods in GDACS	31/05/2018	Technical systems												
201804	DRKMC Activities	Participation in the activities of DRKMC and provision of input as far as regards the Early Warning Systems; participation in the State of Science Report by coordinating the development of the related chapters on Tsunami and Tropical Cyclones, participation in the DRMKC Steering Committee	31/12/2018	JRC contributions to policy documents												
436 - CBRNSec JRC.E.7	622 - CB-THREATS Chemical & Biological Threats	<p>The main reason for JRC doing this work is to build bridges between the EU MS CBRN Action Plan and the CBRN CoE Risk Mitigation initiative's activities.</p> <p>The JRC endeavours to foster capabilities in the field of chemical & biological threats at international</p>	JRC.E.7 Josephine MCCOURT	9.1.1.a	DEVCO	JRC	TRISTAN SIMONART	HOME	<p>ECDC - European Centre for Disease Control EEAS - European External Action Service MIN Int Border - Ministries of Interiors or border control agencies</p>	01/01/2016 31/12/2018	INS-RS					

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5014 - EMERGE-R JRC.E.2	984 - NATECH Reducing the risks of industrial accidents caused by natural hazards	Enhance the capacity of the EU and its international partners to manage the risks of technological accidents triggered by natural hazards (Natech risk) by developing novel methodologies, tools and services for the identification, assessment and visualization of Natech risks, and through capacity building activities in the EU and beyond. This WPK aims to strengthen Natech risk governance and supports EU policy by improving prevention and preparedness in industry and civil society via the further development of the JRC's RAPID-N tool for rapid Natech risk assessment and mapping, supporting loss data collection, analysis and lessons learning including with the JRC's eNATECH database, and by leading the development of guidelines and recommendations for Natech risk management in collaboration with the MSs, industry and other international partners. This WPK supports the Seveso Directive, the Critical Infrastructure Protection Directive and the EU Civil Protection Mechanism. It also contributes to WPKs 3672, 4888, 489 and 437.	JRC.E.2 Elisabeth KRAUSMANN	9.1.1.a	ECHO	JRC	T. de Lannoy (ECHO A3), R. Schilro (ECHO A5), T. Fell (HOME), A. Kiriazis (ENV), A. Szolyak (ENER), T. Simonart (DEVCO), G. Paunescu (CLIMA)	CLIMA DEVCO GROW	AFAD - Prime Ministry Disaster and Emergency Management Agency (AFAD) CC EU - Candidate Countries EU E&I countries - Enlargement & Integration - countries K I U - Kyoto University MS EU - Member states EU OECD - Organisation for Economic Co-operation and Development (OECD) UN ECE - UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE UN ISDR - United Nations International Strategy for Disaster Reduction (UN-ISDR) UNEP - United Nations Environment Programme (UNEP)	01/01/2016 31/12/2020	INS-RS	05	Natech loss data	Collection, analysis and dissemination of loss data related to Natech accidents to allow a better understanding of Natech causal patterns, impact mechanisms and type and extent of losses. The results will support Natech scenario development and risk assessment regionally and globally, as well as accident trend analyses and the sharing of best practices for future disaster risk reduction. This activity will also augment the JRC's eNATECH database which includes loss data and accident scenarios.	31/12/2017	Scientific information systems and databases												
												06	Natech risk assessment case study	Carry out an earthquake Natech risk assessment in a selected region in the EU or its neighbourhood in collaboration with competent authorities and industry. This activity will showcase the updated Natech risk assessment capabilities of the RAPID-N tool for rapid Natech risk assessment and mapping and will produce Natech risk maps that can be used for emergency preparedness and land-use planning in the area at risk.	31/12/2017	JRC technical reports												
												07	Feasibility study on linking RAPID-N with GDACS	Report on the feasibility of linking RAPID-N with the Global Disaster Alert and Coordination System. This activity explores the technical challenges of bi-directional communication between the two systems to achieve the sending out of RAPID-N risk assessment results and maps together with the disaster alerts that GDACS provides to its user community.	31/12/2017	JRC technical reports												
												08	Natech data portal	Establishment of a Natech data portal for the exchange of best practices in Natech risk reduction, and for support to the Natech user community including RSS feeds and email alerts, as well as newsletters.	31/12/2017	Scientific information systems and databases												
												09	Capacity building in Natech risk assessment	Provide training to EU MS authorities on Natech risk reduction and Natech risk assessment. This will include introduction of the JRC's RAPID-N tool for rapid Natech risk assessment and mapping, and hands-on training on RAPID-N using a case-study application.	30/06/2017	Training												
												10	Forensic analysis of Natech accidents	Forensic analysis of onshore storm-triggered Natech accidents to identify accident causal mechanisms and scenarios, system and equipment vulnerabilities, and consequences for the population, the natural and built environment and the economy. Lessons learned will be identified for future accident prevention and consequence mitigation. This study will heavily rely on and contribute to the further populating with data of the eNATECH accident and near miss database.	31/12/2018	JRC technical reports												
												11	RAPID-N upgrade: Integration of new risk metrics	Extension of the JRC's RAPID-N tool for rapid Natech risk assessment and mapping to calculate individual risk and societal risk due to Natech accidents and mapping in a web-based environment.	31/12/2018	Scientific information systems and databases												
												12	New RAPID-N manual	Revision of the manual of the RAPID-N tool to accommodate architecture changes, the implementation of risk assessment functionalities related to floods as Natech accident trigger and pipelines as additional vulnerable infrastructure, as well as the inclusion of individual and societal risk metrics.	31/12/2018	JRC technical reports												
												13	EU Natech Expert Group	Preparation of the final ToR of the Expert Group, needs analysis and launch of identification of best practices for Natech risk reduction. This activity also supports the OECD Natech II project (2017-2020), to which the JRC contributes as member of the Steering Group.	31/12/2018	Science-for-policy reports												
												14	Natech risk scenarios	Identify Natech risk scenarios for different types of hazardous equipment for earthquakes and floods and implement them in the RAPID-N tool. This will augment the predictive capabilities of RAPID-N by providing a diverse basis of scenarios for risk assessment and mapping.	31/12/2018	Scientific information systems and databases												
												15	RAPID-N Alert function - Phase 1	Inclusion of an automatic near-real time damage estimation function in RAPID-N. This function will automatically assess damage to a hazardous installation in the RAPID-N database following a natural disaster and notify stakeholders (e.g. infrastructure managers, emergency responders, decision makers) to allow them to take quick action to contain potential hazardous-substance releases, fires and explosions.	31/12/2018	Scientific information systems and databases												
												16	Natech 2018 Symposium	Report on the outcome of the international Natech 2018 Symposium in which decision makers, industry, emergency responders and academia will discuss the state of play in Natech risk reduction, identify gaps and make recommendations on how to close these gaps.	31/12/2018	JRC technical reports												
												222 - DRMKC JRC.E.1	1194 - DRIVER DRIVER	The demonstration project aims to improve European Crisis Management Capacity by: 1) Establishing a crisis management tested 2)	JRC.E.1 Alessandro ANNUNZIATO	9.1.1.a	ECHO	GROW	QUEVAUVILLER Philippe	HOME	REA - Research Executive Agency of the European Commission	01/05/2014 31/10/2018	CON-IA	201701	Summary report on DRIVER's activities of 2017	The report will summarize the activities and the contribution to the DRIVER project in the various Work Packages in which JRC is involved	31/12/2017	JRC technical reports
												222 - DRMKC JRC.E.1	1856 - DRM2015 Scientific Support to Disaster Risk Management Actions	The purpose is to support DG-ECHO with new tools and methodologies to systematically assess humanitarian needs and use this data in strategic and operational decisions. This includes UKDFD supports JRC to maximise exploitation and use of Humanitarian Risk Index (InfoRM) developed by JRC, ECHO & Int. partners amongst humanitarian and development aid communities.	JRC.E.1 Montserrat MARIN FERRER	9.1.1.a	ECHO	ECHO	Ian Clark		FAO - THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO) IASC - UN Inter-Agency Standing	31/03/2015 30/03/2017	CON-AA	2	Tools enhanced EC humanitarian aid annual strategy	JRC delivers: Science & Policy Report describing the various deliverables for the DRM2015 project. These include a number of disaster risk information related datasets, improved Integrated Analysis Framework to support the EC Humanitarian Annual Aid Strategy cycle 2015, adapted InfoRM for disaster risk reduction, and a summary of improved INFO RM index and datasets. Improvements include tailored INFO RM at sub-national level for a number of countries globally; integration of new hazards e.g. biological and wide use of INFO RM by various types of organisations around the world engaged in humanitarian and other actions aimed at disaster risk reduction.	20/03/2017	Science-for-policy reports
												222 - DRMKC JRC.E.1	2041 - DFIDInform DFID INFORM	Increased resilience is an objective of the European strategy for disaster management. Also, the protection and refurbishment of urban areas deserves particular attention, owing to their potential for economic growth and energy efficiency in the housing sector, as well as because of their vulnerability to natural disasters. In the global context, the Sendai Framework aims to	JRC.E.1 Montserrat MARIN FERRER	9.1.1.a	ECHO	n/a	Ian Clark		Civ Protection EU - Civil Protection Services in Member States OECD - Organisation for Economic Co-operation and Development (OECD)	24/09/2014 23/09/2017	CON-TW	2	Enhanced Global Humanitarian Aid Actions	Detailed planning of impact analysis for safe and energy-efficient buildings in Europe: scope, input needed, format of output, methodology, assumptions, scenarios, etc.	15/12/2017	JRC technical reports
												437 - SAFE&CLEAN-CONSTRUCT JRC.E.4	2107 - RESURBAN Resilience of the urban built environment to natural and induced hazards	Support, maintain and update the EMM Installation for EEAS. Provide a mobile application for various devices. This installation has an increasing number of users within EEAS and will serve the Situation Response and Coordination (ERCC) by: 1. maintenance of ERCC disaster monitoring and warning systems and the ERCC Portal and 2. providing analytical and cartographic services for monitoring and reporting emergencies	JRC.E.4 Georgios TSIONIS	9.1.1.a	ECHO	JRC	Hans DAS	ENER ENV GROW REGIO		01/01/2015 31/12/2019	INS-RS	6	Framework for resilience analysis of EU buildings	Seismic risk assessment at EU level considering current conditions (existing structures) and different scenarios for combinations of existing, retrofitted and new structures	14/12/2018	JRC technical reports
213 - TMA CC JRC.I.3	3347 - EMM@EEASIV EMM@EEAS IV	Support, maintain and update the EMM Installation for EEAS. Provide a mobile application for various devices. This installation has an increasing number of users within EEAS and will serve the Situation Response and Coordination (ERCC) by: 1. maintenance of ERCC disaster monitoring and warning systems and the ERCC Portal and 2. providing analytical and cartographic services for monitoring and reporting emergencies	JRC.I.3 Marco VERILE	9.1.1.a	HOME	EEAS	J.M. Bruggeman			01/01/2017 31/12/2017	CON-AA	334701	EEAS Media Monitoring	Improved media monitoring and analysis tools for a better informed and aware European External Action Service (EEAS) assisting it to provide the Union with the necessary impetus for the external dimension of EU policy, especially crisis management, and to define the general political directions and priorities thereof.	15/12/2017	Science-for-policy reports												
222 - DRMKC JRC.E.1	3354 - MIC9 (ERCC3) MIC9 (ERCC3)	Support ECHO in implementing its new Emergency Response and Coordination (ERCC) by: 1. maintenance of ERCC disaster monitoring and warning systems and the ERCC Portal and 2. providing analytical and cartographic services for monitoring and reporting emergencies	JRC.E.1 Alessandro ANNUNZIATO	9.1.1.a	ECHO	ECHO	Juha AUVINEN			14/10/2015 13/07/2017	CON-AA	201701	Report on MIC9	Description of the activities performed and the results obtained under this AA	31/05/2017	JRC technical reports												
222 - DRMKC JRC.E.1	3355 - MIC-10 (ERCC4) MIC-10 (ERCC4)	Loss recording practices would need to be strengthened and expanded to include data useful beyond narrowly defined objectives and include, for prevention policy and disaster risk modelling. The quantification of expected disaster losses, together with uncertainty quantification, would help evaluating i) the amount of acceptable loss, ii) the necessary investments in risk management strategies for reducing losses, iii) tracking risk-based loss information and iv) measuring progress against targets of the Sustainable Development Framework and the Sendai Framework for disaster risk reduction. This Work Package aims to start developing an EU-wide and multi-hazard database for the systematic submission of loss data that will	JRC.E.1 Alessandro ANNUNZIATO	9.1.1.a	ECHO	ECHO	Juha AUVINEN			01/01/2017 15/06/2018	CON-AA	20160401	Enhanced ERCC Analytical Capabilities	Provide improvements to ERCC portal, GDACS and its underpinning hazard monitoring models and finalise the application for managing multi-source and dynamic information displayed through the ERCC Crisis Wall, summarised in a final report.	31/07/2017	JRC technical reports												
222 - DRMKC JRC.E.1	3397 - LossDb for DRMKC Loss Database for DRMKC	Loss recording practices would need to be strengthened and expanded to include data useful beyond narrowly defined objectives and include, for prevention policy and disaster risk modelling. The quantification of expected disaster losses, together with uncertainty quantification, would help evaluating i) the amount of acceptable loss, ii) the necessary investments in risk management strategies for reducing losses, iii) tracking risk-based loss information and iv) measuring progress against targets of the Sustainable Development Framework and the Sendai Framework for disaster risk reduction. This Work Package aims to start developing an EU-wide and multi-hazard database for the systematic submission of loss data that will	JRC.E.1 Francisco RIOS DIAZ	9.1.1.a	ECHO	JRC	Ian Clark	CLIMA ENV GROW HOME RTD	Civ Protection EU - Civil Protection Services in Member States INSPIRE LMO - INSPIRE Legally Mandated Organisations (LMO) UN ISDR - United Nations International Strategy for Disaster Reduction (UN-ISDR)	01/01/2017 31/12/2018	INS-UR	1	Disaster Loss Database Concept and feasibility	The increased vulnerability and exposure to disasters have led to a substantial number of policies and international agreements with direct focus in both DRR and DRM. This report will analyse how disaster loss data can contribute to the effective implementation and monitoring of the different legislations and international agreements and will propose how to address the challenge based on a number of Sendai indicators to be collected.	20/12/2017	Science-for-policy reports												
												2	Disasters Loss Database & Web Submission Tool V0.0	A scientific peer-reviewed will be produced to illustrate the added value of the loss Db to Risk Assessment, Capabilities Assessment and Risk Reduction fields. A technical report will be described in detail the architecture proposed for the new Disasters Loss Database web-service. A first version of the web-service data submission tool will be developed and tested with the Members States (2 or 3 maximum) participating to the feasibility study.	20/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)												

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
222 - DRMKC JRC.E.1	3399 - DRM2017 Scientific Support to Disaster Risk Management Actions	A key building block for the EU's Humanitarian Aid and Civil Protection policies is risk assessment addressing both the global and European level. Since 2013, the JRC and ECHO have supported earlier phases of this work in several administrative arrangements to support earlier phases of this work. The purpose of this AA between the JRC and DG-ECHO is to support DG-ECHO and the EU Member States with new tools and methodologies to systematically assess multi-hazard disaster risk in EU countries and globally. It addresses objective 1 of the Disaster Risk Management Knowledge Centre, and is the follow-up of AA33672. DG ECHO requests JRC to continue scientific and technical support in 5 areas: (1) disaster loss data recording, (2) science-policy interface, (3) risk assessment methodologies and (4) disaster risk management capability, (5) technical and scientific support to Sendai Framework for Disaster Risk	JRC.E.1 Montserrat MARIN FERRER	9.1.1.a	ECHO	ECHO	Julia STEWART-DAVID		Civ Protection EU - Civil Protection Services in Member States UN ISDR - United Nations International Strategy for Disaster Reduction (UN-ISDR)	01/01/2017 31/12/2018	CON-AA	1	Support EU risk assessment and capability process	JRC provides scientific multi-disciplinary input to the EU Risk Overview programme led by DG ECHO in the frame of the UCPM. The periodic overview of National Risk Assessments allows to monitor the improvements done on the EU risk management strategy and to identify emerging risks or increasing priorities. The overview outlines relevant useful outcomes for Risk Management Capability Assessment in terms of knowledge-based and evidence-based disaster risk management policies and practices among the PSs. The outcomes are expected to support PSs in identifying, prioritising and then selecting adequate measures to reduce, adapt to or mitigate the identified risks to acceptable levels.	01/12/2018	JRC technical reports
												2	Science Policy Interface Support Service	The support service (SS) consists of on-demand provision of scientific and technical advice, recommendations, strategies, guidance and tools in support to MS' identified needs in the following areas: risk assessment methodology and tools; the assessment of risk management capability; and loss data recording methodology. Moreover, the SS foresees tailor-made workshops managed by the JRC, gathering identified experts based on predefined needs by UCPM countries to facilitate sharing of best practice	31/10/2018	JRC technical reports
												3	Support to the implementation of Sendai Framework	JRC will provide technical guidelines to support UCPM participant countries towards Sendai Implementation (Targets A, B, C and D). The feasibility of developing INFORM according to Sendai indicators will be evaluated.	21/12/2018	JRC technical reports
426 - MAHB JRC.E.2	3672 - ECHO-MAHB 2016-2017 Seveso Capacity Building in EU Neighbour Countries 2016-2017	This project is part of the 2014-2020 civil protection policy and aims to strengthen risk governance and chemical accident prevention and preparedness in enlargement and European Neighbourhood Policy countries in support of Seveso Directive implementation. 2016-2017 focuses on developing bilateral collaborations, organisation of training activities, and development of online analysis tools to support policy decision making and implementation. This work is linked to Work Package 984 NATECH and supports WPK 437.	JRC.E.2 Maureen WOOD	9.1.1.a	ECHO	ECHO	Bart MATERNE		CC EU - Candidate Countries EU MS EU - Member states EU OECD - Organisation for Economic Co-operation and Development (OECD) UN ECE - UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE UNEP - United Nations Environment Programme (UNEP)	01/10/2016 30/09/2017	CON-AA	1	Training and Pilot Projects for Capacity Building	A Year 3 summary report of the capacity building activities conducted under the AA. It is assumed that a number of scoping and/or capacity building events will be undertaken to support strategy development and implementation in selective countries or regions (bilateral meetings, workshops, small projects, or special sessions inside an already planned event, or similar), and a chemical risk conference for competent authorities hosted by the JRC.	30/09/2017	Training
												2	GIS Consequence Assessment Model	Creation of an online software model to depict consequence calculations into a GIS platform to create consequence maps of a chemical accident. This model will serve as a companion model to the ADAM application but also will be designed to accept consequence inputs from other modeling applications. The application will also be designed to be easily adapted to Member State methodologies for land-use and emergency planning obligations.	31/03/2017	Scientific information systems and databases
												3	Natech Risk Assessment Tool	The beta version of a flood Natech risk assessment capability in RAPID-N will be completed. 6 months of CA staff - 1.5 (2016) and 4.5 (2017) - are allocated to the G05 Natech project.	30/09/2017	Scientific information systems and databases
												4	GIS - Area Risk Assessment Tool	Migration of the GIS-Area Risk Assessment tool output into the Minerva Portal. The web application will be designed to depict the results of area risk assessment/land-use planning conducted by aggregating the risk associated with a number of risk sources (i.e. separate chemical installations).	30/09/2017	Scientific information systems and databases
5014 - EMERGE-R JRC.E.2	3789 - NACRIT Natural hazard impact on critical infrastructures	Study the impact of natural hazards on critical infrastructures to understand the EU's vulnerability to this type of risk and enhance EU disaster preparedness and response. The WPK focuses on systematically analysing the vulnerabilities of critical infrastructures systems and their components to different types of natural hazards by identifying damage and failure mechanisms, potential consequences including cascading effects, and the effectiveness of protection measures. The WPK will also provide science-based recommendations and guidance to operators and decision makers on how to better assess these risks and how to effectively protect critical assets, in particular in view of climate change impacts. Engaging actors from industry, government, academia and civil protection, the activity will also aim to increase preparedness levels that are insufficient in many industry sectors in the EU. This WPK supports the Critical Infrastructure Protection Directive and the EU Civil Protection Mechanism. It also supports the objectives of the Sendai Framework for Disaster Risk Reduction and collaborates with staff from Directorate C and Unit E.1.	JRC.E.2 Elisabeth KRAUSMANN	9.1.1.a	ECHO	JRC	T. de Lannoy (ECHO), T. Fell (HOME), G. Paunescu (CLIMA), A. Szoljak (ENER)		CC EU - Candidate Countries EU MS EU - Member states EU MSB - Swedish Civil Contingencies Agency (MSB) NOAA - National Oceanic and Atmospheric Administration WMO - World Meteorological Organization (WMO)	01/01/2016 31/12/2019	INS-RS	04	Power grid recovery after natural hazard impact	Comparative study on the impact of different types of natural hazards (e.g. floods, high winds) versus the impact of space weather on the power grid. This study serves to understand the type and extent of impact that will influence power grid recovery times. The results of this study will support operator contingency planning and decision making for risk reduction.	31/12/2017	Science-for-policy reports
												06	Critical infrastructures & climate change - Floods	Assessment of the risk to selected critical infrastructures due to the impact of climate change on the severity and frequency of floods in certain regions. The study will identify potential infrastructure weaknesses with respect to floods, needs for additional protection measures in light of climate change and make recommendations to operators and authorities on areas where further attention should be paid, e.g. via appropriate land-use and emergency planning, and preparedness.	31/12/2017	Science-for-policy reports
												07	DRM State of Science Report	Contribute a chapter on "Technological risks" to the DRM State of Science Report and act as report coordinating lead author.	31/03/2017	Article contribution to a monograph or other periodicals
												08	Critical infrastructure & climate change - Storms	Assessment of the risk to selected critical infrastructures due to the impact of climate change on the severity and frequency of storms. The study will identify potential infrastructure weaknesses with respect to strong winds, needs for additional protection measures in light of climate change and make recommendations to operators and authorities on areas where further attention should be paid, e.g. via appropriate land-use and emergency planning, and preparedness.	31/12/2018	Science-for-policy reports
												09	Risk assessment methodology compendium	Compendium of methodologies to assess the risk of natural hazard impact on critical infrastructures, depending on infrastructure and natural hazard type, as well as identification of gaps.	31/12/2018	JRC technical reports
												10	Infrastructure protection against natural hazards	Identification of structural and organisational protection measures for critical infrastructures against selected natural hazards. The study will analyse the measures and systems needed to harden selected infrastructures in a cost-effective and sustainable way and assess the effectiveness of commonly implemented measures in protecting critical assets.	31/12/2018	JRC technical reports
541 - SEED JRC.E.1	3801 - DROUGHTS Addressing current and future risks due to droughts and extreme temperatures in Europe and globally	The WP addresses important emerging socio-economic and environmental risks resulting from droughts and extreme temperatures (heat and cold waves) by developing a global observatory for monitoring, forecasting and early warning of such events. Besides detailed information on meteorological, hydrological and vegetation parameters, the observatory will include combined impact indicators for different sectors (e.g., agriculture, forestry, public water supply, energy production, inland water transport, ecosystems), tailor-made for decision makers in the Emergency Response Coordination Centre (ERCC) and the humanitarian aid directorates of DG ECHO. This information is important for the evaluation of the severity of ongoing disasters and for timely decisions on the coordination of civil protection and aid interventions. In addition to the continuous monitoring, the JRC Team provides detailed analysis reports during severe ongoing events as well as input to reports on global climatological phenomena such as El Niño. The WP further addresses the needs of DGs ENV, REGIO, DEVCO, NEAR and CLIMA on up-to-date information concerning droughts and temperature extremes and the related risks by evaluating the exposure and vulnerability of different economic sectors and the environment and by assessing the likelihood of impacts under current and future climates. The latter will be done in close collaboration with the ADAPTATION project. Detailed information on drought impacts on food production will be provided in collaboration with the AGWARN WP under the Food and Nutrition Sec project.	JRC.E.1 Juergen VOGT	9.1.1.a	ECHO	JRC	Johannes Luchner, HoU, ECHO.BA1, Ian Clark ECHO.A.3		EEA - European Environment Agency GWP - Global Water Partnership NOAA - National Oceanic and Atmospheric Administration UN ISDR - United Nations International Strategy for Disaster Reduction (UN-ISDR) UNCCD - United Nations Convention to Combat Desertification (UNCCD) UNEP - United Nations Environment Programme (UNEP) WMO - World Meteorological Organization (WMO)	01/01/2016 31/12/2020	INS-RS	201701	Global Drought and Temperature Observatory (GDO)	Further development of a global observatory for monitoring, assessing and forecasting droughts and temperature extremes following feedback of end-users. The existing European and African Observatories will be integrated into a global system, which will include maps of high-level combined impact indicators for different sectors and tools for interactive report generation for decision makers. Outputs include an online portal, novel analysis and presentation tools, reports and publications.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in SCOPUS
												201702	Global Drought Risk Analysis	Effective decision and policy making requires analysis and knowledge of drought hazard exposure and environmental and societal vulnerability for an assessment of drought risk at global level. Here relevant data will be collected, analysed and stored. Outputs include maps, reports and publications as a contribution to a multi-risk assessment, including a chapter on drought risk for the "Science for Disaster Risk Management Handbook" produced under the DRMKC.	15/12/2017	Science-for-policy reports
												201703	EDO/GDO Expert Network Meeting	Outreach to international networks (e.g., IDMP, GDIS, GEO, EUROCLIMA) and fostering partnerships by organisation of an Expert and End-User Network Meeting for collection of feedback on recent EDO and GDO developments and for analysing future end user needs and priorities.	31/10/2017	Conferences and workshops organized by the JRC
												201704	Ad-hoc support report to the EUSF and the ERCC	Subject to requests from DG REGIO and DG ECHO, ad-hoc reports and maps on the severity and impacts of droughts and extreme temperatures in Europe and globally will be produced. This institutional deliverable is underpinning the AA's with ECHO NATHAZ2 and NATHAZ3.	22/12/2017	JRC contributions to policy documents
												201801	Global Drought and Temperature Observatory (GDO)	Further development of GDO. Improvement of software components, addition of new global data sets and refining the vulnerability, risk and impact assessments. Output includes reports and scientific publications.	15/12/2018	Article contribution to periodicals or to conference proceedings listed in SCOPUS
												201802	Training on GDO and Drought Risk Analysis	Provision of training to staff from the Emergency Response Coordination Centre (ERCC) and the humanitarian aid sectors at DG ECHO. This training should enable the duty officers at ECHO to start using the system and to better understand the specific characteristics of drought emergencies. It is foreseen that ECHO staff tests the system and provides feedback to JRC for improvement and fine-tuning to their needs.	31/10/2018	Training
												201803	GDO Expert and End User Workshop	Organisation of an Expert and End-User workshop for discussing the state-of-the-art and collection of feedback on GDO developments and end user needs and priorities.	30/11/2018	Conferences and workshops organized by the JRC

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Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
		The WP deliverables are strong contributions to disaster risk management and climate change adaptation, and for strengthening European and global resilience to climate risks. The system and										201804	Ad-hoc support report to the EUSF and ERCC	Subject to requests from DG REGIO and DG ECHO, ad-hoc reports and maps on the severity and impacts of droughts and extreme temperatures in Europe and globally will be produced. This institutional deliverable is underpinning the AA's with ECHO NATHAZ3 and follow up AA.	31/12/2018	JRC contributions to policy documents
541 - SEED JRC.E.1	3806 - ANYWHERE H2020 Enhancing emergency management and response to extreme weather and climate	ANYWHERE aims to develop a pan-European multi-hazard platform of products and services to enhance the emergency management and response capabilities of the regional and local	JRC.E.1 Peter SALAMON	9.1.1.a	ECHO	RTD	Juha Auvinen (DG ECHO)	CLIMA GROW	Civ Protection EU - Civil Protection Services in Member States WMO - World Meteorological Organization (WMO)	01/06/2016 31/08/2019	CON-IA	201701	Data sets from JRC early warning systems 2017	For this H2020 research project the JRC will deliver data produced by the JRC early warning systems (EFAS, EDO, EFFIS and GDACS) to the project partners.	29/08/2019	Project management related documents/reports identified as outputs of
541 - SEED JRC.E.1	3809 - NATHA-2 Enhancing the monitoring, early warning and analytical capacities of the ERCC	This project will support the Emergency Response Coordination Centre (ERCC) by improving its monitoring, early warning and analytical capacities with regard to hydrological extremes such as floods and droughts as well as with forest fires. The European Flood Awareness System (EFAS).	JRC.E.1 Jutta THIELEN DEL POZO	9.1.1.a	ECHO	ECHO	Juha Auvinen (ECHO.B.1)	ENV GROW		01/07/2016 31/12/2017	CON-AA	201701	Final report on JRC support to ERCC	Under this AA the JRC will provide scientific and analytical support to the ERCC during flood, drought and forest fire situations within the EU and global scale, adapt the JRC systems for floods, droughts and forest fires to the specific needs of ERCC in particular also with regard to the Eastern and Southern Neighbourhood countries as well as global scale. The JRC will be further developing synergies between the flood, drought and forest fire web systems in preparation for a multi-hazard system	22/12/2017	JRC technical reports
541 - SEED JRC.E.1	4000 - I-REACT Improving resilience for emergencies through Advanced Cyber Technologies	To provide an integrated real-time emergency system for flood and fires that protects citizens with effective information and targeted warnings, and that supports civil protections and responders throughout all stages of emergency events, ultimately reducing the social impact of floods and	JRC.E.1 Peter SALAMON	9.1.1.a	ECHO	RTD	Juha Auvinen (DG ECHO)	ECHO	Civ Protection EU - Civil Protection Services in Member States WMO - World Meteorological Organization (WMO)	01/06/2016 31/05/2019	CON-IA	201901	Integrating social media in early warning systems	Improving disaster risk management through the integration of social media analysis into early warning systems. For this H2020 research project, EFAS will serve as a testbed for the integration of social media analysis into flood early warning system. The overall aim by connecting social media analysis and early warning systems is to improve disaster risk management.	29/05/2019	Project management related documents/reports identified as outputs of the JRC Work Programme
426 - MAHB JRC.E.2	4382 - I-CAPP Chemical Accident Prevention and Preparedness for the Global Community	This project is aimed to maintain and enrich the EU's core knowledgebase for chemical accident prevention and preparedness and facilitate exchange and transfer of this information throughout the Member States and globally and in partnership with international organisations and third countries around the world. Given the great diversity of production processes that use dangerous substances, the ongoing evolution of technology, the dynamics of the marketplace, there is a demonstrated need for continuous analysis and information exchange to prevent the chemical accidents of the future. The JRC uses its unique position as the EU's in-house reference centre for analysis of chemical accident risks and management practices, to analyse trends in chemical risks and chemical risk management to help operators and governments address the newest and greatest concerns. This WPK also supports WPK 437. Please see the Note to the File with a justification for additional staff resources (risk assessment expert) in 2017-2018.	JRC.E.2 Maureen WOOD	9.1.1.a	ECHO	JRC	Bart Materne (ECHO), Tristan Simonart (DEVCO), A. Kiriazis (ENV)	DEVCO ENV GROW HOME NEAR	CC EU - Candidate Countries EU MS EU - Member states EU OECD - Organisation for Economic Co-operation and Development (OECD) UN ECE - UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE UNEP - United Nations Environment Programme (UNEP)	04/01/2016 15/12/2020	INS-RS	01	Emergency Response Lessons Learned - Phase 2(2017)	Draft report of results (Phase 2) of a comprehensive study of what can be learned about emergency response good practice from 30 years of chemical accidents in the EU's eMARS database and other databases in OECD countries. What mistakes are most common? What errors are being repeated? What has changed in 30 years? Are we getting better at it?	30/06/2017	JRC technical reports
												02	Emergency Response Lessons Learned - Phase 3(2018)	Final report of the emergency response lessons learned study following peer review	30/06/2018	JRC technical reports
												03	Accident Analysis Methodologies 2017-18	The main deliverable is the Accident Analysis Benchmark Exercise Workshop to present and discuss results of multi-stakeholder team exercises. A main result of the workshop will be recommendations for the Accident Analysis Handbook. In addition, the deliverable may include results of current collaborations on scientific articles/reports with the industry's Center for Chemical Process Safety (CCPS) and the European Association for Safety and Reliability (ESReDA).	29/06/2018	JRC technical reports
												08	GIS - Industrial Safety Analysis - 2017	Development of a novel tool (Industrial Safety Analysis - ISA) for aggregating the risk of different Seveso-type installations and depicting the individual risk maps in a Geographic Information System (GIS) as support to competent authorities (e.g., land-use planning, emergency response). The final outcome will be described in a summary report.	31/12/2017	Scientific information systems and databases
												10	ISA Tool for Land-Use Planning - 2018	Implementation of the different land-use planning (LUP) methodologies available in the EU Member States, within the Industrial Safety Analysis (ISA) tool.	15/12/2018	Scientific information systems and databases
												12	Common Inspection Criteria (CIC) - 2017	In collaboration with EU Seveso inspectors produce at least 2 technical briefs (CICs) on inspection good practice/risk management topics for inspectors of EU chemical processing sites for stakeholders in EU and implement pilot programme of new knowledge management strategy to increase visibility, accessibility, usability for inspectorates (online structure, design, translation, etc.)	22/12/2017	JRC technical reports
												13	Common Inspection Criteria (CIC) - 2018	In collaboration with EU Seveso inspectors produce at least 2 technical briefs (CICs) on inspection good practice/risk management topics for inspectors of EU chemical processing sites for stakeholders in EU and implement pilot programme of new knowledge management strategy to increase visibility, accessibility, usability for inspectorates (online structure, design, translation, etc.)	21/12/2018	JRC technical reports
												15	Scientific Collaboration and Exchange - 2017	A summary of the JRC Chemical Accident Risks Seminar, the ESREDA Conference on Foresight in Safety, and other JRC-hosted scientific and training events in 2017 on chemical accident risks, and and contribution/leadership roles supporting UNEP, UNECE, OECD and other partners.	22/12/2017	JRC technical reports
												16	Scientific Collaboration and Exchange - 2018	A summary of JRC scientific and training events in 2018, including bilateral exchanges of training, e.g., on the on the JRC ADAM risk analysis tool, chemical accident reporting and contribution/leadership roles supporting UNEP, UNECE, OECD and other partners.	15/12/2018	JRC technical reports
												17	Public Education Tools - 2017-18	The main deliverables include communication products for the public on chemical accident risks and chemical accident prevention and preparedness, with a view to the Open Day in 2018.	27/04/2018	Scientific information systems and databases
												18	State of the Science Report 2017	Final version of the State of the Science report for chemical accident disaster risk in collaboration with key partners including Member States, industry, UNEP, UNECE, and OECD partners, and contributions to other initiatives of international partners and the Disaster Risk Knowledge Cluster and Management Centre.	15/12/2017	JRC technical reports
												19	Knowledge Management Strategy/Interface 2018	MAHB interfaces/ contributions to the Disaster Risk Knowledge Management Centre (KMC) and other initiatives (e.g., Big Data) including report contributions, meetings, review and comment on documents, etc. Ongoing review of MAHB Knowledge Management Strategy (implementation is embedded in other deliverables). Deliverable will be a summary report of contributions and current status of MAHB Knowledge Management Strategy	15/12/2018	Project management related documents/reports identified as outputs of the JRC Work Programme
												20	Data Mining Tools/Big Data 2017	For chemical accident information data sets - Development of a Data Mining Tool prototype to collect and extract information from selected internal and external sources and transformation into an understandable structure (including elements of data warehousing) to facilitate Big Data analysis.	30/11/2018	Scientific information systems and databases
541 - SEED JRC.E.1	4843 - WILDFIRES Early warning, assessment and monitoring of wildfire impacts in Europe and globally	The assessment and management of wildfire risk is a major concern in Europe and many other regions of the globe. Wildfires, including forest fires, are a major cause of deforestation globally and the cause large economic and environmental impacts and human casualties in Europe and globally. The WPK Wildfires builds on the work on the European Forest Fire Information System (EFFIS) and the Global Wildfire Information System (GWIS) in the context of the EU Regulation Copernicus and the Group on Earth Observations (GEO) work program 2017-2020. Advanced statistical and modeling methods will be used to derive policy relevant information in all	JRC.E.1 Jesus SAN-MIGUEL-AYANZ	9.1.1.a	ECHO	JRC	Juha AUVINEN	CLIMA DEVCO ENV GROW REGIO	FAO - THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO) Fo Fi Serv - Forest and forest fire services in the MS UN ECE - UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE	01/01/2017 31/12/2018	INS-RS	4843201701	Science for Disaster Risk Management - Wildfires	Report providing solutions in Disaster Risk Management for policy makers in Europe and globally through the process of understanding risk, communicating disaster risk and managing it.	30/11/2017	Science-for-policy reports
												4843201702	Enhanced active fire detection and mapping	Integration of active fire detection data and algorithms from satellite sensors for enhanced active fire and burnt area mapping in Europe and globally.	15/12/2017	Technical systems
												4843201703	Calibration of global wildfire danger indices	Calibration of wildfire danger forecast indices will be performed through the use of remote sensing active fire counts from MODIS, VIIRS, and other satellite sensors for different regions of the world supporting the development of the Global Wildfire Information System under the Copernicus Regulation.	18/12/2017	Technical systems
												4843201801	Science for Disaster Risk Management - Wildfires	Contribution to the development of science for Disaster Risk Management with respect to Wildfires in the context of the DRMKC	14/12/2018	Science-for-policy reports
												4843201802	Analysis of global fire regimes	Analysis of fire regimes in Europe and globally on the basis of data from EFFIS and GWIS.	13/12/2018	JRC technical reports
												4843201803	Wildfire risk assessment	Development of methods and datasets for the assessment of wildfire risk in Europe and globally	15/12/2018	Science-for-policy reports
												1	Collaboration and Technical Exchange	A Year 4 summary report of collaboration and technical exchange activities supporting Neighbourhood countries in Seveso implementation. Activities under this heading may include bilateral meetings, workshops, small projects, or special sessions inside an already planned event, as well as strategy building. There will also be one workshop for all countries organised by the JRC. Some deliverables may also be inserted under 4.1 Training.	28/09/2018	JRC technical reports
												2	ADAM PreRollout Testing/Verification 2017-2018	All functionalities of ADAM will be tested (GUI and dependences). The outcome of all calculus moduli will be verified on a list of reference accident scenarios buy using ADAM Desktop as the validation tool. Also, includes strategic planning/development of support services for future roll-out of the ADAM tool (foreseen in 2018-2019 AA) to facilitate Help Desk, Training and Verification, and User Feedback management.	28/09/2018	Scientific information systems and databases

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
426 - MAHB JRC.E.2	4888 - ECHO-MAHB 2017-2018 Seveso Capacity Building in EU Neighbour Countries 2017-2018	The project is part of the Copernicus protection policy and aims to strengthen risk governance and chemical accident prevention and preparedness in enlargement and European Neighbourhood Policy countries in support of Seveso Directive implementation. 2016-2017 focuses on developing bilateral collaborations, organisation of training activities, and furthering development of online analysis tools to support policy decision making and implementation. This work is linked to Work Package 984 NATECH and also supports WPK 437. Please see note to the file with justification for request for additional staff resources in 2017-2018.	JRC.E.2 Maureen WOOD	9.1.1.a	ECHO	ECHO	Bart MATERNE	DEVCO ENV NEAR	CC EU - Candidate Countries EU MS EU - Member states EU OECD - Organisation for Economic Co-operation and Development (OECD) UN ECE - UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE UNEP - United Nations Environment Programme (UNEP)	02/10/2017 30/09/2018	CON-AA	3	Creation of structure for multithreads 2017-2018	Creation of a suitable structure to allow multithread input and calculation to allow different users to use the ADAM platform at the same time, when required.	28/09/2018	Scientific information systems and databases
												4	MINERVA Communities Web Platform 2017-2018	To elaborate the Minerva Communities Technology Exchange Platform based on MAHB curation of chemical accident prevention and preparedness (CAPP) information and feedback from users and stakeholders. The primary focus of this task is currently envisioned is functionality improvement (including security) and content development. Some planned content activities could include the creation of language-specific sections and development of online tutorials for using eMARS, etc.	28/09/2018	Scientific information systems and databases
												5	Accident Information System (AIDA)-2018	Training of AIDA Users and incorporation of feedback for ongoing improvement of the web application.	28/09/2018	Scientific information systems and databases
												6	Shortcut methods from ADAM - 2018	Application of ADAM to generate a database containing endpoint damage distances for typical scenario types and different dangerous substances. This database will be used to generate shortcut methods to be incorporated in any external risk management/emergency planning tool to assess the accident consequences. This will facilitate the integration of ADAM into Rapid-N in 2019 and 2020 as well as potentially systems of Neighbourhood countries.	31/05/2018	Scientific information systems and databases
												7	Regional RAPID-N risk assessment and mapping case	Carry out a Natch risk assessment for a selected industry in a EU neighbour country and map the associated risk using the JRC's RAPID-N tool. Depending on the target country's needs, the study will either be an earthquake or a flood-related Natch risk assessment.	28/09/2018	Scientific information systems and databases
												8	Seveso Capacity Self-Assessment Tool 2017-2018	Case study application of the Seveso Capacity Self-Assessment tool and development of a prototype of an online Seveso Implementation Capacity Assessment Tool.	28/09/2018	Scientific information systems and databases
224 - GHSL JRC.E.1	4944 - UIS3 Urban information and analysis to help plan and target humanitarian and recovery interventions	The Syria crisis is a profoundly urban crisis: damage, destruction and displacement are concentrated in major urban centres and cities. UN Habitat and the JRC have been analysing these	JRC.E.1 Thomas KEMPER	9.1.1.a	NEAR	NEAR	Arnaud BORCHARD	DEVCO ECHO FPI	UN HABITAT - United Nations, Human Settlement Programme (UN HABITAT) WB - World Bank	01/01/2017 31/12/2018	CON-AA					
213 - TMA CC JRC.I.3	5023 - EMM@EEAS V EMM@EEAS V	Support, maintain and update the EMM Installation for EEAS. Provide a mobile application for various devices. This installation has an increasing number of users within EEAS and will serve the Situation	JRC.I.3 Charles MACMILLAN	9.1.1.a	HOME	EEAS	F Kerloch			01/01/2018 31/12/2018	CON-AA	502301	EEAS Media Monitoring	Improved media monitoring and analysis tools for a better informed and aware European External Action Service (EEAS) assisting it to provide the Union with the necessary impetus for the external dimension of EU policy, especially crisis management, and to define the general political directions and priorities thereof.	31/12/2018	Technical systems
541 - SEED JRC.E.1	5088 - COAST Development of coastal flood forecasting tools for Europe	Coastal zones in the EU contain large human populations and significant socio-economic activities. Coastal cities face a high risk from increasingly costly flooding due to sea level rise, increased storminess and continued urbanization. The COAST WP will perform underpinning research to develop impact-based coastal hazard early warning tools as a measure to increase preparedness for severe flood events and thus reduce the associated risks for the citizens, property and economy. This includes setting up and validating modelling tools for forecasting extreme coastal water levels including the effects of tides, waves and storm surges. This WP builds on the JRC exploratory research project CoastAIRisk and will represent an essential contribution to the existing European Flood Awareness System (EFAS) under the operational Copernicus Emergency Management Service. The coastal hazard forecasting system will be developed to the specific needs of a variety of decision makers for improved disaster risk	JRC.E.1 George BREYIANNIS	9.1.1.a	ECHO	JRC	Juha AUVINEN	CLIMA GROW	- University of Cantabria Deltarea - Stichting Deltarea Hydro Met Serv - National and regional hydrological and meteorological services UN ISDR - United Nations International Strategy for Disaster Reduction (UN-ISDR) WMO - World Meteorological Organization (WMO)	01/01/2017 31/12/2019	INS-UR	201701	Coastal early warning tools	Development of prototypes of tide, wave and surge forecasting tools along Europe's coastlines to be embedded in EFAS in collaboration and agreement with the H2020 project ANYWHERE. Setting up, testing and validation of hydrodynamic modelling tools driven by weather predictions to forecast tides, waves and surges. Scientific publication reporting on the development and validation of tidal, wave and surge forecasting tools along segments of Europe's coastlines.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												201702	Database on coastal vulnerability and exposure	Development of European layers on exposure and vulnerability. This involves the collection and cataloguing of relevant exposure (e.g., land use, population, settlements, infrastructures) and vulnerability (coastal flood protection, damage functions), and the development and application of tools for the cataloguing, spatial interpolation, statistical analysis and validation of the collected information.	31/12/2017	Scientific information systems and databases
												201801	Impact-based coastal flood forecasting	Scientific publication reporting on the development and application of a prototype impact-based module for Europe to forecast socio-economic impacts of coastal extreme events.	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
541 - SEED JRC.E.1	5096 - NATHA-3 Enhancing the monitoring, early warning and analytical capacities of the ERCC	The AA aims to implement the requirements of articles (9), (8.c), and (21.f) of the Decision No 1313/2013/EU of the Council and the European Parliament on a Union Civil Protection Mechanism. It will be a cornerstone of DG ECHO's strategy with regard to weather driven natural disasters in Europe and globally. This AA sets out the regular	JRC.E.1 Peter SALAMON	9.1.1.a	ECHO	ECHO	Juha AUVINEN	GROW		01/06/2017 31/12/2018	CON-AA	201801	Final report on JRC support to ERCC	Under this AA the JRC will support DG ECHO and the ERCC by improving its monitoring and early warning systems with regard to floods, droughts and forest fires. This includes scientific and analytical support, adaptation of the Global Flood Awareness System (GloFAS) and EFAS to the specific needs of DG ECHO, adaptation of the Global Drought Observatory (GDO) to the special needs of DG ECHO, maintenance of EFFIS and adaptation of FFAS, as well as trainings and expert workshops.	31/12/2018	JRC technical reports
222 - DRMKC JRC.E.1	5100 - DFID2017 DFID INFORM 2017	This contract gives continuity to the contract 33499. UKDFID supports JRC to maximise exploitation and use of Humanitarian Risk Index (INFORM) developed by JRC, ECHO & Int. partners amongst humanitarian and development aid communities globally. JRC will continuously improve & maintain INFORM web-based platform through which INFORM analyses & data are disseminated and communication is facilitated amongst its partner. JRC will collaborate to the organization of INFORM workshops; JRC will develop	JRC.E.1 Montserrat MARIN FERRER	9.1.1.a	ECHO	n/a	Ian Clark	DEVCO	- United Nations Office at Vienna, The Security and Safety Section, 24 hour emergency service (IAEA) FAO - THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO) IASC - UN Inter-Agency Standing Committee UN HABITAT - United Nations, Human Settlement Programme (UN HABITAT) UN OCHA - United Nations, Office for	22/09/2017 21/09/2020	CON-TW	2	Interim report: support, maintenance, validation	JRC has developed a system for supporting the creation, calculation and validation of GNA/FAO. The system supports visual analytics of results, as well as a validation workflow to guarantee quality results. JRC adapts the system continuously to the needs of the Inform project, including support for subnational data recording and seasonal variation. This includes: customization of web-based system, data management, management of user access and training.	20/12/2018	Technical systems
												3	Severity Index	JRC will contribute to define, design, measure and compare the severity of humanitarian crises globally (i.e. between rather than within crises) and on an ongoing/regular basis. Specifically, with a focus of developing a measure of severity that could be applied to communicate the current status and possible future status of crises in a systematic and comparable way. JRC will furthermore contribute to the harmonisation of existing approaches and promotion of best practices.	20/12/2017	JRC technical reports
6485 - KM4SSM JRC.E.7	5843 - KnowTransfer Knowledge transfer, Training and Education Networking	The legacy work on CBRN training of outside-EU parties will continue by the dedicated sub-group in the Unit. On some files, the JRC has built up recent expertise that is of value to EU authorities, and measures will be taken to make this appropriately available (open sourcing, trainings) – e.g. in the field of maritime security for Copernicus's exploitation.	JRC.E.7 Herman VAN WIMERSMA GREIDANUS	9.1.1.a	DEVCO	JRC	n/a	GROW MARE	MS EU - Member states EU	01/01/2017 31/12/2017	INS-RS	1	CBRN - Report and implementation of training tool	Training and consultancy. It extends the training tools and platforms for applications in other fields (in other units and directorates).	31/12/2017	Technical systems
												2	Knowledge transfer of maritime security & surveill	The tool set and expertise built up in previous IPSC unit G03 will be made available as open source software, algorithm/process descriptions and trainings to authorities, operational users and R&D entities. This follows requests already received, e.g. from ESA but also from inside JRC (B1, C5). This will support the uptake of the use of Copernicus, leading to better return of the billions invested by the EU in that program. Collab: I4, E6, D6, ENTR, MARE, DEVCO, ESA.	30/06/2017	Training
6485 - KM4SSM JRC.E.7	5863 - KnowPolicyComm Maintaining and improve competences in the EU	The Unit will assemble briefings from contributions by the KP units, adding its knowledge as needed. In some areas, the Unit will lead the file. This will be the case for defence, an area that is new for the Commission which is receiving emphasis from President Juncker. Security has always been 'neighbouring' to defence. Now synergies (dual-use) have to be considered even more closely. Hybrid threats, that run across many domains, are a new issue. Commission policy makers, in GROW, MARE, HOME and TRADE but also in EEAS, need technical expertise. The Unit will (a) continue with implementing Action 5.2.4 from EU Maritime Security Strategy; (b) expand support to GROW on the European Defence Action Plan & the Preparatory Action for Defence Research; (c) consider to deploy activities related to hybrid threats (connection with cybersecurity topic); (d) consider synergy with export control of dual-use goods projects in DIR.G, through G.10; (e) consider synergy in CB - biosafety with F.7 and	JRC.E.7 Encarnacion LUQUE PEREZ	9.1.1.a	HOME	JRC	n/a	GROW MARE TRADE	MS EU - Member states EU	01/01/2017 31/12/2017	INS-RS	1	Routine scientific inputs	Comments and inputs to policy documents circulated at the request of policy DGs, including ISCs. Lead or contribute to routine briefing and also work on tender evaluation committees as requested by policy DGs. Collaboration: Dir A, H2, all relevant units.	31/12/2017	JRC contributions to policy documents
												2	Briefings	Assemble briefings from contributions by the KP units, integrating its knowledge as needed, under coordination of Director's office. The presentations requested by the DG and the DDGs will be treated as briefings too.	31/12/2017	JRC contributions to policy documents
												3	EUMSS Action 5.2.4	Lead a network of experts to draft a common civil-defence R&D agenda for maritime security. Includes one workshop at JRC or in BX. This work continues from IPSC-G03. Collaboration: MARE, HOME, EEAS, RTD, EDA.	30/06/2017	JRC technical reports
												4	EDAP support	Provide scientific support to GROW for European Defence Action Plan including Preparatory Action for Defence Research. Reviewing documents, attending meetings with MS, giving technical inputs. In addition, look for opportunities where JRC support is needed in relation to defence and dual-use issues (e.g., hybrid threats). Collaboration: GROW, EDA.	31/12/2017	JRC contributions to policy documents
												5	Copernicus security support	Help GROW with the implementation of the Copernicus security service, fill gaps not handled by other units (E1, E6). Evaluate the implementation of GROW's delegation agreements for security services with EMSA, Frontex, EUSC, primarily on fitness for purpose. Next-generation Copernicus. The topic remains relevant and it is expected that MARE, GROW, HOME, DEVCO and EEAS will continue to need scientific advice. Collaboration: D6, E1, E6, policy DGs.	31/12/2017	JRC technical reports

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
		E.2; (f) continue technical advice support to TRADE (export control of CB dual-use items). The Unit will support the Directorate (KP units and KCs in their communication activities, using tools e.g. infographics, web pages, workshops, press, social media – in collaboration with H2 and corporate										6	Communication support activities	Implement a new communication culture and training; Provide support to scientific presentations, workshops etc.	31/12/2017	Training
												7	Comm - Contribute to Dir. E's global initiative	Support to Directorate's activities presence in selected events, chosen among UN global disaster risk reduction forum, Cancun, 2017; GMES Summer school in Norway, September 2017; Resilience conference in Brussels, September 2017; International Population Conference, Cape Town, South Africa December 2017.	31/12/2017	Training
9.1.1.b fight global, trans-regional and emerging threats - support activities contributing to stability and peace, including analysis, the provision of methods and tools, capacitybuilding and collaborating with international partners to monitor precious raw materials, ensure maritime security and counteract global and trans-regional threats, including climate change; develop earlywarning systems and capacitybuilding activities.																
220 - PEACE&STABILITY JRC.E.1	286 - Science4Peace Statistics, Remote Sensing & Information Technologies for Peace and Stability	Support to the Instrument contributing to Stability and Peace, the EU INTCCN and its Operational Hybrid Fusion cell. Intends to provide common, evidence-based tools for DGs addressing Juncker priority #9 "EU as Global Actor". The work package focuses on three areas. (1) To further develop the Global Conflict Risk Index conflict risk (GCRI), to disseminate and promote its use by EEAS and related DGs (FPI, DEVCO, NEAR, as well as ECHO and HOME); The GCRI provides conflict risk data useful for (a) prioritization of conflict prevention activities (EEAS FPI, NEAR), (b) addressing root causes of disaster risk (ECHO) and sustainable development (DEVCO), (c) root cause for migration (HOME) (2) To improve geospatial technology (remote sensing and GIS mapping) for analysis of open source information in EEAS INTCCN (Global Atlas). (3) To contribute to the monitoring, certification and implementation of raw materials. Support EU Chairmanship of the Kimberley Process in 2018. Support Council Regulation (EC) 2368/2002 on the Kimberley Process Certification Scheme in the EU, including representation of the EU in the Working Group on Statistics and during in-field review missions. Science4Peace integrates expertise from three domains (remote sensing, statistics and geospatial technology) and applies it synergistically for conflict prevention, early warning and monitoring. First, the	JRC.E.1 Winfried OTTOY	9.1.1.b	FPI	JRC	Joris HEEREN	DEVCO ECHO HOME NEAR TRADE	EEAS - European External Action Service MS EU - Member states EU UN Kimb WG - UN Kimberley Process working Groups	02/01/2017 01/01/2019	INS-RS	201701	Country specific satellite monitoring methodology	Adaptation of the joint JRC-USGS monitoring methodology to a country of interest (DRC)	15/12/2017	Science-for-policy reports
												201702	Country reports based on open news sources	Collection, analysis and presentation of information gathered from open news sources both by regular (either bi-weekly or monthly) reports with recent relevant facts, in-depth analyses and visualisation of key facts for countries designated by FPI based on the review visit calendar and KP related events of interest.	15/12/2017	Science-for-policy reports
												201703	Expansion of ADAMAS reconciliation KP wide	The first version of the ADAMAS information system was adopted by the competent authorities of the EU MS in summer 2015. ADAMAS is an information system to collect and manage the EU's KP data with the view of improving the data quality to allow scientific analysis. In 2017 developments will focus on the adaptations of ADAMAS for use by other participants of the KP in the view of a common approach to reconciliation	15/12/2017	Scientific information systems and databases
												201704	KPCS reconciliation: methodological improvements	The JRC (co)represents the EU in the KP's Working Group on Statistics during teleconferences and on the KP Inter-Sessional and Plenary meetings and contributes regularly research and methodology for the improvement of the data quality and the statistical analysis of the KP data. The JRC shall deliver a report presenting a proposal for a common approach to reconciliation among KP participants.	15/12/2017	Validated methods, Reference methods and measurements
												201705	Submission of draft article to scientific journal	Scientific article on the link between artisanal mining and refugee flows and traits	15/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												201706	Conflict risk indicators	Development of statistical methods to describe short and long term conflict risk in quantitative terms, according to needs of (1) EEAS and Commission external services (conflict early warning), (2) post-2015 development and disaster risk frameworks, (3) migration drivers. Combine structural data, media monitoring and geographic open source data into hybrid quantitative conflict risk model.	31/12/2017	JRC technical reports
5120 - NDA4SSD JRC.G.II.7	2215 - C-BORD Effective Container inspection at	The 19 members strong C-BORD consortium (composed of 4 companies, 4 universities, 5	JRC.G.II.7 Hamid TAGZIRIA	9.1.1.b	HOME	HOME	Wiktor Wojtas	DEVCO ENER	- UNIVERSITA DEGLI STUDI DI PADOVA	01/06/2015 30/11/2018	CON-IA	201701	Report on the second year C-BORD tests	Technical report on the results obtained the second test campaign of C-BORD instruments in ITRAP.	31/12/2017	JRC technical reports
222 - DRMKC JRC.E.1	3360 - COOL-2017 COOL Application for EEAS (2017)	JRC has developed an application for the Consular Crisis Management Division of the European External Action Service, named COOL (Consular OnLine) where Member States and a few third	JRC.E.1 Brian DOHERTY	9.1.1.b	ECHO	ECHO	Nerijus SKRUODYS (EEAS)		EEAS - European External Action Service	01/01/2017 31/12/2017	CON-AA	201701	COOL for EEAS and MSs	Further developed and maintained COOL system, allowing enhanced crisis management capabilities of the EEAS and the EU MSs in the area of evacuation of EU MSs citizens stranded during emergencies and crisis outside the EU territory. Also Final report summarising maintenance and development activities of COOL.	31/10/2017	Technical systems
220 - PEACE&STABILITY JRC.E.1	3387 - S2KP2016 Scientific/Technical facility in support to Kimberley Process	The Kimberley Process Certification Scheme is an international agreement to stem the flow of rough diamonds. The JRC provides support by managing the EU Kimberley Process Certification Scheme (KPCS) data and by monitoring the KP by means of satellite imagery, open news sources and statistical data. To this and the JRC uses in-house developed information systems and methodologies, such as ADAMAS, ARIADNE and the joint JRC-USGS monitoring methodology for the assessment of the production activity of artisanal mining in Ivory Coast and the Central African Republic. Based on this expertise the JRC also provides assistance during audits by the KPCS Working Group on Monitoring during reviews and contributes to trainings to improve the KPCS data quality.	JRC.E.1 Winfried OTTOY	9.1.1.b	FPI	FPI	Joris Heeren, Daniele Senzanonna	DEVCO TRADE	EEAS - European External Action Service MS EU - Member states EU UN Kimb WG - UN Kimberley Process working Groups	11/04/2016 10/10/2017	CON-AA	201712	Support to WGM reviews, training and assessments	(co)representation and support of the EU in KP Working Group on Monitoring (WGM) matters on request of FPI as chair of the WGM. The JRC provides support by participating to review visits and missions and the associated reporting and by contributing to trainings organised by the WGM chair and assisting in the evaluation of KP participants KPCS statistics	28/02/2018	JRC contributions to policy documents
												201714	Quarterly submission of EU KPCS data	The JRC by means of ADAMAS manages and regularly updates the EU's KPCS data for quarterly submission to the KP's Working Group on Statistics. To improve the quality of the data the JRC carries out reconciliation exercises both with the competent EU authorities and other KP participants. Once a year the JRC drafts a section on the EU data for EU KP Annual report.	28/02/2018	JRC contributions to policy documents
												201720	Report: KP monitoring, reviews, reconciliation I	Progress report on the output of the KPCS certificate management and monitoring (satellite, open news sources, statistics).	16/09/2017	Project management related documents/reports identified as outputs of the JRC Work Programme
												201722	Report: KP monitoring, reviews, reconciliation II	Final report on the output of the KPCS certificate management and monitoring (satellite, open news sources, statistics).	15/03/2018	Project management related documents/reports identified as outputs of the JRC Work Programme
220 - PEACE&STABILITY JRC.E.1	3400 - GCRI4 Global Conflict Risk Index - Phase 4	The Global Conflict Risk Index AA provides scientific and technical support to FPI and EEAS to exploit open source indicator information for conflict risk assessment. GCRI data and products	JRC.E.1 Tom DE GROEVE	9.1.1.b	FPI	FPI	MAC AONGUSA Ronan	DEVCO ECHO	EEAS - European External Action Service	01/05/2016 31/10/2017	CON-AA	1	Report	The report will describe the deliverables according to the technical annex	31/10/2017	JRC technical reports
220 - PEACE&STABILITY JRC.E.1	3508 - S2CM2016 Scientific/Technical Facility in support to Crisis Preparedness/Response	Support to Juncker priorities "EU as Global Actor" and specifically the Instrument contributing to Stability and Peace (IcSP), one of the key external Contributing to the Juncker priority "EU as Stronger Global Actor", the JRC provides evidence-based conflict risk assessments to the Commission, EEAS and Member States. The GCRI conflict	JRC.E.1 Christophe LOUVRIER	9.1.1.b	FPI	FPI	Oliver NETTE	DEVCO NEAR	EEAS - European External Action Service	01/07/2016 31/10/2017	CON-AA	350402	Final report	Final report for FPI	30/11/2017	Technical systems
220 - PEACE&STABILITY JRC.E.1	4951 - GCRI V Global Conflict Risk Index - Phase V	The purpose of this AA between the FPI and JRC is the continuation of the support to the EU's implementation of the Kimberley Process Certificate Scheme's data and to the monitoring of the KPCS in support of the Kimberley Process Workgroup on Monitoring, till the end 2017 chaired	JRC.E.1 Winfried OTTOY	9.1.1.b	FPI	FPI	Oliver NETTE	DEVCO ECHO HOME NEAR	EEAS - European External Action Service	01/11/2017 31/10/2018	CON-AA	1	Final report	The final report of the AA will describe the work performed according to the technical annex	31/10/2018	Project management related documents/reports identified as outputs of
220 - PEACE&STABILITY JRC.E.1	4952 - KP VII Scientific/Technical facility in support to Kimberley Process	The purpose of this AA between the FPI and JRC is the continuation of the support to the EU's implementation of the Kimberley Process Certificate Scheme's data and to the monitoring of the KPCS in support of the Kimberley Process Workgroup on Monitoring, till the end 2017 chaired	JRC.E.1 Winfried OTTOY	9.1.1.b	FPI	FPI	Joris HEEREN	TRADE		11/10/2017 10/11/2018	CON-AA	201801	Support to WGM reviews, training and assessments	(co)representation and support of the EU in KP Working Group on Monitoring (WGM) matters on request of FPI as chair of the WGM. The JRC provides support by participating to review visits and missions and the associated reporting and by contributing to trainings organised by the WGM chair and assisting in the evaluation of KP participants KPCS statistics	31/10/2018	JRC contributions to policy documents
220 - PEACE&STABILITY JRC.E.1	5068 - S2CM2017 Scientific/Technical Facility in support to Crisis Preparedness/Response	Support to Juncker priorities "EU as Global Actor" and specifically the Instrument contributing to Stability and Peace (IcSP), one of the key external assistance instruments that enable the EU to take a lead in helping to prevent and respond to actual or emerging crises around the world. To support the IcSP, JRC has developed the Global Crisis Atlas, which is an IT based platform for map products on crisis preparedness, response	JRC.E.1 Christophe LOUVRIER	9.1.1.b	FPI	FPI	Oliver NETTE	DEVCO NEAR	EEAS - European External Action Service	02/10/2017 01/10/2018	CON-AA	1	Final report	The overall aim of this project is to provide crisis/security monitoring and mapping products integrated in the Global Crisis Atlas, in order to provide the context to understand, monitor, anticipate, prevent and respond to situations of crisis or emerging crisis. The final report will describe the individual deliverables in the contract, including: 1. Map products and atlases; maps are made available through the Global Crisis Atlas 2. Situation and impact assessments. 3. Datasets	31/10/2018	JRC technical reports
9.1.2 Global nuclear safety and security																
9.1.2.a technical assistance and scientific support to EU partner countries and international institutions for the implementation of the Instrument for Nuclear Safety Cooperation, EC support programme to the IAEA and Instrument contributing to Stability and Peace, and participation in International Working Groups;																
5120 - NDA4SSD JRC.G.II.7	238 - SEA-CONGO Combating illicit trafficking of nuclear and radioactive materials in South	The project has been developed fully in line with the Strategy paper for the longer-term actions under the Instrument for Stability (IFS) and the	JRC.G.II.7 Kamel ABBAS	9.1.2.a	DEVCO	DEVCO	Head of Unit Devco.B.5		Chulalongkorn University - Tha Chulalongkorn University Cust Cambodia - General Department	21/12/2012 20/06/2017	CON-AA	3	Training activities in South East Asia	Final report of the training activities in the field of radiation detection techniques and procedures for South East Asia Project	20/12/2017	JRC technical reports
421 - INZSAF JRC.G.II.7	239 - ABACC Safeguards Strengthening the Safeguard	Creation at ABACC of two new capabilities based on ITU Safeguards technologies:	JRC.G.II.7 Francois LITTMANN	9.1.2.a	DEVCO	DEVCO	Mr Martin Andersen (DEVCO)	ENER	- AGENCIA BRASILEIRO- ARGENTINA DE CONTABILIDADE A	27/09/2012 24/03/2017	CON-AA	1701	End of Laser & Ultrasonic tasks	Following extension of 6 months, last deliverables of 2016 will be finished by March 2017	31/03/2017	Technical systems
421 - INZSAF JRC.G.II.7	684 - IAEA-ECSP Coordination of EC Support	Coordination of European Commission Support Programme (EC-SP) to IAEA including:	JRC.A.7 ZDENKA PALAJOVA	9.1.2.a	ENER	JRC	Paul Meylemans		EEAS - European External Action Service	01/01/2014 01/01/2018	INS-RS	684201703	Status Report on EC-SP to IAEA	Yearly Status Report on EC-SP to IAEA	31/12/2017	JRC technical reports

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
436 - CBRNEsec JRC.A.7	754 - CBRN CoE 3 Chemical Biological Radiological and Nuclear Centres of Excellence	The Centres of Excellence initiative was launched in 2010 and enjoys currently a considerable state of maturity thanks to the contribution of all the implementation partner including, from the start, a strong JRC support to DG DEVCO in the implementation of the EU CBRN Risk Mitigation Centres of Excellence Initiative. The JRC will continue the successful activities of support to Partner Countries through the provision of scientific and technical inputs, support to the analysis of CBRN needs in partner countries and regions and development of National Action Plans, contribution to the preparation of terms of reference for	JRC.A.7 MARGARIDA GOULART DE MEDEIROS	9.1.2.a	DEVCO	DEVCO	tristan.simonart@ec.europa.eu	GROW HOME MOVE TAXUD TRADE	EEAS - European External Action Service IAEA - International Atomic Energy Agency (IAEA) WHO - World Health Organization	19/10/2012 18/12/2018	CON-AA	201701	NAQ and NAP support	NAQ support to the CoE Partner Countries and data analysis reports of the data provided during the NAQ missions. Support to the development of CBRN National Action Plans (NAPs) by the partner countries' authorities, under the local coordination of the NFP priorities for enhancing capabilities in terms of prevention, detection, preparedness and	18/12/2018	JRC technical reports
												201702	Support to the project cycle and CoE network	Support to the drafting of project's Terms of Reference, evaluation and ranking of MS consortium offers, evaluation of project implementation. Development and maintenance of the public and private website and internet portal, as well as management of visibility and communication tools for the CoE, publication and distribution of regular newsletters. Mapping of trainings, compilation of training materials, development of a CoE training programme. Maintenance of the CoE Open Source Centre.	18/12/2018	JRC contributions to policy documents
												201703	Support EU Export control outreach programme	Support activities to EU Export control outreach programme (EU P2P programme).	18/12/2018	JRC contributions to policy documents
5120 - NDA4SSD JRC.G.II.7	1370 - IS MED – FSU – B07 Combating illicit trafficking of radioactive and nuclear materials (focus North Africa)	The project has been developed fully in line with the Strategy paper for the longer-term actions under the Instrument for Stability (IFS) and the corresponding Indicative programme for 2009-2011. The project will enhance the fight against illicit trafficking of nuclear and radioactive materials in Mediterranean Basin and FSU countries. The support will bring capacity building by deploying radiation detection equipment, providing sustainable training, and enhancing international	JRC.G.II.7 Kamel ABBAS	9.1.2.a	DEVCO	DEVCO	Head of Unit Devco.B.5	HOME	CNRP Morocco - Morocco National Centre for Radioprotection - Centre national de la radioprotection - Maroc Cust Algeria - Algerian Customs - Douanes algériennes Cust Belarus - State Customs Committee of the Republic of Belarus Государственный таможенный комитет Республики Беларусь Cust Morocco - Marocain Customs -	01/01/2010 30/06/2017	CON-AA	ReportTASK MED	report on taskMed	Report on taskmed	30/06/2017	JRC technical reports
												SATLot1Dz	Site Acceptance test for LOT - RPM1 - Algeria	Manage Installation of Radiation Portal Monitors (RPM) on Site and Carry out site acceptance testing in Algeria	28/02/2017	Technical systems
												SATLot1MA	Site Acceptance test for LOT - RPM1 - in Morocco	Manage Installation of Radiation Portal Monitors (RPM) on Site and Carry out site acceptance testing	30/04/2017	Technical systems
												TRAINLot1Dz	Training on the use of Radiation Portal Monitors	Training on the use of Radiation Portal Monitors once installation and site acceptance testing completed	31/03/2017	Training
												TRAINLot1Ma	Training on the use of Radiation Portal Monitors	Training on the use of Radiation Portal Monitors once installation and site acceptance testing completed	31/05/2017	Training
196 - SINSP JRC.G.I.4	3303 - TAREG 01/16 Support to International Nuclear Safety Policy (INSC AP2016)	This Work Package contributes to the overall objective to promote an effective nuclear safety culture and implementation of the highest nuclear safety, safeguards and radiation protection standards, continuous improvement of nuclear safety and responsible nuclear and radioactive wastes management. The Work Package provides the direct technical and scientific support required by DG DEVCO for the programming, preparation, contracting, monitoring and evaluation of the projects of the Instrument for Nuclear Safety Cooperation (INSC), which provides assistance for improving nuclear safety and nuclear safeguards in countries outside the EU. Within the WPK, technical documents are prepared, including terms of reference, technical specifications contract notice, support in tendering evaluations, etc. The activity includes carrying out expert missions to Brussels, but also to beneficiary countries outside the European Union. The main methodology is the use of expertise and the skill of systematic assessment. DG DEVCO is responsible for the management of the EC Instruments but does not have all necessary technical and scientific expertise which is provided by JRC.	JRC.G.I.4 YNTE STOCKMANN	9.1.2.a	DEVCO	DEVCO	A van der Meer	ENER	EEAS - European External Action Service	01/01/2017 31/12/2019	CON-AA	201701ToR	Terms of Reference and technical Specifications	Specific requirements necessary to fulfil the action as described in the Action Document. 3-5 per year	31/12/2017	JRC technical reports
												201703TR	Project management reports	Reports to DG DEVCO on the activities of JRC performed under the Administrative Arrangement Tareg 01/16 for "Technical Support by the Joint Research Centre for the project cycle management of nuclear safety projects": - Annual report on activities - Technical Meeting reports - Technical policy advice	31/12/2017	JRC technical reports
												201704TIPINS	TIPINS updated	The data contains project related information which is supplied by DG DEVCO and DG NEAR combined with technical assessment of project results and lessons learned, determined by JRC experts, which can be used for nuclear safety improvement. The deliverable addresses the activities carried out during the year 2017 in the scope of the information system as well as the foreseen future activities.	28/12/2017	Datasets
												201705TIPINS	Support documentation for TIPINS	The TIPINS information system is a web-tool that contains a database of Nuclear Safety contracts financed by the European Union and implemented by DEVCO and ELARG. The main purpose of this tool is to provide an overview of policy implementation through graphs and statistics based in real time data as well as to facilitate the technical assessment of contract outputs and the identification of related lessons learned.	31/12/2017	Scientific information systems and databases
												201801ToR	Terms of Reference or Technical Specification	Technical Terms of References and Technical Specifications for tendering and contracting of projects of the Instrument for Nuclear Safety Cooperation (INSC), 3-5 per year	31/12/2018	JRC technical reports
												201804TIPINS	TIPINS 2018	The data contains project related information which is supplied by DG DEVCO and DG NEAR combined with technical assessment of project results and lessons learned, determined by JRC experts, which can be used for nuclear safety improvement. The deliverable addresses the activities carried out during the year 2018 in the scope of the information system as well as the foreseen future activities.	31/12/2018	Datasets
												201805TIPINS	Support documentation for TIPINS 2018	The TIPINS information system is a web-tool that contains a database of Nuclear Safety contracts financed by the European Union and implemented by DEVCO and ELARG. The main purpose of this tool is to provide an overview of policy implementation through graphs and statistics based in real time data as well as to facilitate the technical assessment of contract outputs and the identification of related lessons learned in 2018	31/12/2018	Scientific information systems and databases
												277 - FACIL JRC.G.II.6	3510 - SUPPIO_2 International Cooperation in Nuclear Security	Nuclear Security remains an area of concern. Close cooperation at international level is crucial. This includes: Providing support to international organizations in the area of nuclear detection and forensics, and initiatives such as IAEA, GICNT, ITWG, Europol, Interpol, "Border Monitoring Working Group" (BMWG), INSEN, WINS, etc. Bilateral cooperation with key players in this field, such as US Department of Energy, CEA, AWE, JAEA, IAEA, KAERI, DSO, EK Cooperative activities are carried out with these partners at conceptual and technical level through consultancies, workshops, exchange of information or joint R&D work.	JRC.G.II.6 Maria WALLENUS	9.1.2.a
3510201702	International working groups reports 2017	- Participation in internal networks and working groups like Border Monitoring Working Group (BMWG), Global Initiative to Combat Nuclear Terrorism (GICNT), International Nuclear Security Educational Network (INSEN) - Support to IAEA Consultancy Meetings in the area of Nuclear Security - Participation to Nuclear Security Meetings, Workshops etc worldwide (p.e Nuclear Security Summit 2016 and others) A technical report will be compiled as yearly report on these contributions	31/12/2017	JRC technical reports												
3510201703	Contribute to ITWG activities	Continue to actively contribute to the work of the Nuclear Forensics International Technical Working Group by co-organizing the annual meeting. The latter includes: - to continue co-chairing the ITWG, hence providing guidance on the orientation of the group - to provide input to the Task Groups - to draft technical guidelines - to participate in comparative exercises. The 2017 meeting will be hosted at JRC-ITU Karlsruhe.	31/12/2017	Conferences and workshops organized by the JRC												
3510201801	Scientific reports	Results of collaborative research activities carried out with the various international partners will be presented at meeting and workshops or documented as JRC reports.	31/12/2018	JRC technical reports												
3510201802	International working groups reports	Participation in international networks and working groups like Border Monitoring Working Group (BMWG), Global Initiative to Combat Nuclear Terrorism (GICNT), International Nuclear Security Educational Network (INSEN) - Support to IAEA Consultancy Meetings in the area of Nuclear Security - Participation to Nuclear Security Meetings, Workshops etc worldwide. A technical report will be compiled as yearly report on these contributions.	31/12/2018	JRC technical reports												
3510201803	Contribute to the ITWG activities	Continue to actively contribute to the work of the Nuclear Forensics International Technical Working Group by co-organizing the annual meeting. This includes: - to continue co-chairing the ITWG, hence providing guidance on the orientation of the group - to provide input to the Task Groups - to draft technical guidelines - to participate in comparative exercises.	31/12/2018	JRC contributions to standards												
277 - FACIL JRC.G.II.6	3627 - RECU ITDB Reporting Culture	The ITDB offers valuable technical information on incidents of illicit trafficking and other unauthorised activities involving nuclear and other radioactive	JRC.G.II.6 Maria WALLENUS	9.1.2.a	HOME	HOME	Wojtas Wiktor	IAEA - International Atomic Energy Agency (IAEA)	15/12/2016 14/06/2018	CON-AA	3627201701					
											3627201801	Final report	The report shall describe the work accomplished and the results obtained when carrying out the project.	30/04/2018	JRC technical reports	
421 - IN2SAF JRC.G.II.7	3682 - SFG in China Safeguards in China and world-wide ESARDA courses	Support of EC to Chinese authorities for the implementation of nuclear safeguards. The Beneficiary is the Chinese Ministry of Commerce (MOFCOM) which oversees the cooperation activities on behalf of the Chinese government and the End-User is the Chinese Atomic Energy Agency. The main tasks will consist of the transfer of	JRC.G.II.7 Patrice RICHIR	9.1.2.a	DEVCO	DEVCO	CHRISTINA THORMAEHLEN			01/07/2016 31/12/2018	CON-AA	201602	Participation to ESARDA symposium	Participation of Chinese lecturers to the next ESARDA symposium	31/12/2018	Conferences and workshops organized by the JRC
												201603	Definition and setting-up of training facilities	Definition of training activities of interest Participation of Chinese partners to training activities in JRC Setting-up of training infrastructures in China	31/12/2017	JRC technical reports
												201701	Organisation of ESARDA courses worldwide	Organisation of ESARDA courses (typically 1 week courses, typically 2 per year) Expected release date : end of each year till 31/08/2020	31/12/2017	Training
9.1.2.b development of methods, technologies and standards for the detection of nuclear and radioactive materials outside regulatory control and fighting the illicit trafficking of such materials; supporting EU policy on nuclear non-proliferation through the implementation of the EU export control regime and the analysis of open source information. Operational support for Member States and international organisations;																
									- BRITISH NUCLEAR GROUP SELLAFIELD LT - URENCO NEDERLAND BV*			1	A new americium CRM	Certificate of a new americium reference material required for method validation in nuclear forensics and safeguards, jointly developed with CEA/CETAMA under the JRC-CEA/DEN COLLABORATION AGREEMENT No. 33819 Ref CEA DEN 3578; supporting	01/07/2017	Reference Material

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
325 - METRO JRC.G.2	631 - NS-AgeDating Standards in support to nuclear forensics and safeguards	Nuclear safeguards conclusions are based to a large extent on comparison of measurement results between operator and safeguards laboratories. Nuclear forensics deals with consistency of information, coherence between materials or samples, conformity of findings with declared processes and comparison of external and internal data. The JRC has therefore put effort in the development of new certified reference materials and the provision of conformity assessment tools, particularly for 'age-dating' of uranium and plutonium samples and for isotopic fingerprinting, which is of importance to both communities, supporting the COMMISSION REGULATION (Euratom) No 302/2005 of 8 February 2005 on the application of Euratom safeguards, the International Atomic Energy Agency (IAEA), and the Nuclear Forensic International Technical Working Group (ITWG).	JRC.G.2 Yetunde AREGBE	9.1.2.b	ENER	JRC	DGENER.E.1 (Euratom Safeguards); E. Mair, P Sorin (DEVCO)	DEVCO GROW HOME JRC	- Seibersdorf laboratories - IAEA AREVA NP - AREVA NP Main Company CEA - Commissariat à l'Energie Atomique et aux Energies Alternatives CETAMA - Commission d'ETablissement des Méthodes d'Analyse du CEA (CETAMA) France FZJ - Forschungszentrum Jülich IAEA - International Atomic Energy Agency (IAEA) IAEA-MEL - Marine Environment Laboratory of IAEA JAEA - Japan Atomic Energy Agency KAERI - Korea Atomic Energy Research Institute LLNL - Lawrence Livermore National Laboratory NBL - New Brunswick Laboratory (NBL) US NMCC - Nuclear Material Control Center (NMCC) - Japan	04/01/2016 21/12/2018	INS-RS	2	New americium CRM certification report	Certification report of a new americium reference material required for method validation in nuclear forensics and safeguards, jointly developed with CEA/CETAMA under the JRC/CEA/DEN COLLABORATION AGREEMENT No. 33819 Ref CEA DEN 3578, supporting Council Decision 2012/212/CFSP	01/11/2017	Validated methods, Reference methods and measurements
												3	uranium reference particles CRM	Development of a set of certified uranium reference particles certified for major and minor uranium isotope ratios and amount content in the frame of the EC support programme to the IAEA	06/11/2017	Reference Material
												4	New uranium particle CRM certification report	Certification report of a new uranium particle CRM required for method validation in nuclear forensics and safeguards	05/03/2018	Validated methods, Reference methods and measurements
												5	REIMEP Pu-age-dating report	Report of an external quality control campaign for age-dating of nuclear material in nuclear forensics and nuclear security, supporting Council Decision 2012/212/CFSP.	17/12/2018	Validated methods, Reference methods and measurements
												6	CRMs for nuclear security	A publication on the development of new CRMs required for method validation in nuclear forensics and security	01/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												7	Strategic Trade Review 2017	The journal is edited by JRC experts and published on line on the web-site of Liege university. The WP will continue editing and producing 2 "Strategic Trade Review" issues in 2017, depending on on-going and planned recruitments.	31/12/2017	Books and monographs with JRC editorship
5121 - NPTC JRC.G.II.7	681 - STREX Strategic export control	The WP in its various forms since 2011 supports the harmonised implementation of dual-use items' export control policies (EC Regulation 428/2009 and amendments; restrictive measures against certain countries). This has been recognised officially in various statements by Member States, by DG TRADE and also in the latest REPORT FROM THE COMMISSION TO THE COUNCIL AND THE EUROPEAN PARLIAMENT COM(2016) 521. The main activities encompass EU Guidelines for harmonised implementation of the dual-use controls; periodical analyses of confidential denied export authorisations and the EU dual-use Pool of Experts' technical advices. Very important is also the contribution to annual amendments of EC Regulation 428/2009's Annex I ('EU dual-use	JRC.G.II.7 Filippo SEVINI	9.1.2.b	TRADE	JRC	Anders JESSEN	- United States Department of Energy EEAS - European External Action Service ESARDA - European Safeguards R&D Association WCO - World Customs Organization	01/01/2014 31/12/2018	INS-RS	40	Strategic Trade Review 2017	The journal is edited by JRC experts and published on line on the web-site of Liege university. The WP will continue editing and producing 2 "Strategic Trade Review" issues in 2018, depending on on-going and planned recruitments.	31/12/2018	Books and monographs with JRC editorship	
											45	Research on strategic export control topics	Research on topics to be further identified among: Relationship between dual-use and customs codes; Understanding illicit procurement trends remains key to support the definition of strategic trade control policies	31/12/2017	JRC technical reports	
											70	Strategic Trade Review 2018	The journal is edited by JRC experts and published on line on the web-site of Liege university. The WP will continue editing and producing 2 "Strategic Trade Review" issues in 2018, depending on on-going and planned recruitments.	31/12/2018	Books and monographs with JRC editorship	
											75	Research on strategic export control topics	Based on the results of 2017 and resources available, execute research on topics to be further identified among: Relationship between dual-use and customs codes; Understanding illicit procurement trends remains key to support the definition of strategic trade control policies	31/12/2018	Article contribution to a monograph or other periodicals	
5120 - NDA4SSD JRC.G.II.7	711 - DETECT4NS Detection for Nuclear Security	A new method for detection of SNM with a high potential for practical applications is being developed. The method concerns interrogation of a fissile sample with pulses of epithermal neutrons with subsequent detection of coincident prompt fission neutrons in an array of liquid scintillation detectors. The neutron coincidences in short time intervals are a strong signature for the presence of fissile material. The Project includes experimental investigations at the PUNITA facility. Provide R&D and S/T support to EU's nuclear security policy by focusing on detection methods and instrumentation, their evaluation, comparison, categorization striving for harmonization /standardization in the field. This WP constitutes the scientific backbone for a number of outreach projects in the area of nuclear. Relevant and related user-laboratory access in detection for nuclear security is part of this project. A larger set of international partnerships exists and multiple weeks of test	JRC.G.II.7 Hamid TAGZIRIA	9.1.2.b	HOME	JRC	Home - D.1.: W. Wojtas	ENER	- Atomic Weapons Establishment CEA - Commissariat à l'Energie Atomique et aux Energies Alternatives NRCN - Nuclear Research Centre Negev, Israel Tech Serv - Member States and their Technical Services/type approval authorities	01/01/2016 31/12/2018	INS-UR	1	Fission neutron coincidences as signature for SNM	Scientific report regarding the performance of SNM detection in shielded containers in the PUNITA facility. The present scalable configuration of 8 scintillation detectors is applied. The task includes a study of the best suited PSD method in an active system of high count rates and pulse pile-up, as well as the tailoring of the interrogating neutron spectrum to yield the best detection limit for specific neutron shields.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												2	Alternatives to He3 for security instrumentation	Laboratory testing of specific alternatives to He-3 for neutron detection for applications in nuclear security. A new prototype well-counter based on 2-inch BF3 gas proportional counters will have been designed and constructed. The instrument is to be characterized in terms of parameters relevant for neutron multiplicity counting and compared to 3He based instruments.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												4	R&D, Testing/benchmarking of detection equipment	Report(s) on testing, evaluation and benchmarking campaigns of detection systems and methodologies for nuclear security.	31/12/2017	Validated methods, Reference methods and measurements
												7	Participation to international working groups	- Participation in internal networks and working groups like Border Monitoring Working Group (BMWG), Global International Combating Nuclear Terrorism (GICNT), International Nuclear Security Educational Network (INSEN) - Support to IAEA Consultancy Meetings in the area of Nuclear Security - Participation to Nuclear Security Meetings, Workshops etc worldwide (p.e Nuclear Security Summit 2016 and others) A technical report will be compiled as yearly report on these contributions	31/12/2017	JRC technical reports
												130	Open Source information for non-proliferation-2017	R&D on the use of open source information to support nuclear non-proliferation: it will reflect on the role, e.g. potentiality and limitations, of open source analysis in informing the non-proliferation analysts about possible undeclared activities on clandestine sites. Synergy with WP756.	23/12/2017	Article contribution to a monograph or other periodicals
5121 - NPTC JRC.G.II.7	712 - OSINS Open source information for non- proliferation and nuclear security	The work-package monitors open source information related to nuclear non-proliferation and security and performs technical analysis on selected non-proliferation issues for supporting EU institutions (mainly Commission and EEAS). It also adapts and integrates existing JRC products and develops dedicated software tools that support the analysis activities at the JRC and other relevant organizations, such as the IAEA. It includes substantive work, as well as methods and tools development with a predominance of support activity. To properly carry out the above-described tasks, it includes a research dimension, where the use and the potential of Open Source information and analysis are investigated adopting a systemic perspective. This activity is also synergic to some of the work on the IAEA State Level Concept carried out within the INSAF Work Package. The work package entails elements of knowledge production and management OSINS is acting as reference for the EU institutions (EC and EEAS) on the nuclear-related technical aspects of the Iranian nuclear file. Its technical analyses, including the commentaries on the IAEA reports to the BoG on the safeguards implementation in Iran, represented an authoritative and dependable source of knowledge for the EU negotiators during the JPA/JCPOA negotiations. With the beginning of the implementation phase of the JCPOA (January 2016), the focus will be on	JRC.G.II.7 Giacomo COJAZZI	9.1.2.b	ENER	JRC	Head of Unit ENER.E.1, P. Meylemans	DEVCO HOME TAXUD TRADE	EEAS - European External Action Service EU SITCEN - EU SITCEN - EU Situation Centre IAEA - International Atomic Energy Agency (IAEA)	01/01/2014 31/12/2018	INS-RS	140	News monitoring and management-2017	Daily monitoring and collection of nuclear security related open source information and production of a news review (JRC Nuclear Security News) which provides information awareness and early warning to EC-DGs and EU targeted services. The activity includes the maintenance of the IT infrastructure for the archival, management and dissemination of the collected information. The infrastructure will be open to targeted users in 2017.	23/12/2017	Scientific information systems and databases
												160	Nuclear Security Media Monitor (NSMM)-2017	Operation, maintenance and update of the Nuclear Security Media Monitor (NSMM). Maintenance and update will involve both the system and the monitored information sources over the web. Based on JRC's EMM technology, NSMM automatically monitors open source information relevant to nuclear security. New functionalities (e.g. specific country targeting) will be added according to internal and external needs. NSMM is used by IAEA safeguards and security departments (support task EC-D-01880). With I.3	23/12/2017	Scientific information systems and databases
												170	Open Source information for non-proliferation-2018	R&D on the use of open source information to support nuclear non-proliferation: it will reflect on the role, e.g. potentiality and limitations, of open source analysis in informing the non-proliferation analysts about possible undeclared activities on clandestine sites. Synergy WP756	21/12/2018	Article contribution to a monograph or other periodicals
												180	News monitoring and management-2018	Daily monitoring and collection of nuclear security related open source information and production of a news review (JRC Nuclear Security News) which provides information awareness and early warning to EC-DGs and EU targeted services. The activity includes the maintenance of the IT infrastructure for the archival, management and dissemination of the collected information.	21/12/2018	Scientific information systems and databases
												200	Nuclear Security Media Monitor (NSMM)-2018	NSMM operation, maintenance and update. Maintenance and update will involve both the system and the monitored information sources over the web. Based on JRC's EMM technology, NSMM automatically monitors and analyses open source information relevant to the nuclear security domain. According to the needs defined together with IAEA in 2017, NSMM functionality will be extended based on JRC's I.3 EMM technologies.	21/12/2018	Scientific information systems and databases
												100	Nuclear and Strategic Trade Atlases - 2017	Interactive visual collections of country and commodity trade profiles. Profiles for a Nuclear Trade Atlas relate to the Nuclear Suppliers Group control lists (in collaboration with the IAEA under EC Support Task EC-D-1662). Profiles for a Strategic Trade Atlas relate to commodities promoted for export controls by the World Customs Organisation	22/12/2017	JRC technical reports
110	The Big Table admin tool - 2017	Development of an administration tool to maintain The Big Table (TBT) database up-to-date. The tool will facilitate the addition of new documents to the collection as well as the revision of existing ones. The tool will support the maintenance of correspondence tables linking related items listed in different documents of the collection. The tool will be used to maintain a database of registered users.	23/12/2017	Scientific information systems and databases												

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
5121 - NPTC JRC.G.II.7	756 - STANP Strategic trade analysis for non proliferation	Research and development on strategic trade analysis techniques mutated from statistical and economic methods. Design and development of information technology tools to host, structure, visualise and present trade data by commodities, geopolitical areas, regulations and export guidelines on strategic trade.	JRC.G.II.7 Cristina VERSINO	9.1.2.b	TRADE	JRC	A. Jessen, Head of Unit DG TRADE E1 (WTO coordination, OECD, Export Credits and Dual Use); S. Chardon, DG TRADE E.1.	DEVCO ENER TAXUD	IAEA - International Atomic Energy Agency (IAEA) US DoE - US Department of Energy (DOE) WCO - World Customs Organization	01/01/2014 31/12/2018	INS-RS	130	Trade Analysis for Acquisition Paths - 2018	In the context of the IAEA's State Level Concept, exercises in trade data visualization for Acquisition Path Analysis (APA). Trade analysis based on Harmonized System commodities of relevance to specific acquisition paths (Pu or HEU) or indicating the availability in countries of materials or equipment of relevance to competences and capabilities in the APA. Developed jointly with the IAEA under EC Support Task EC-D-1662 'Improving the Analysis of Covert Nuclear Trade'. Link WP INSAF 436.	21/12/2018	JRC technical reports
												140	The Big Table tool collection maintenance - 2018	The Big Table (TBT) is JRC's search tool on a collection of reference documents for IAEA safeguards, export controls and trade nomenclatures. With tailored document collections two versions of TBT are in use respectively at the IAEA (EC Support Programme, Task EC-D-1162) and several EU Member States licensing and customs authorities. The two document collections will be updated to ensure newly published versions of documents are made available in the TBT database.	21/12/2018	Scientific information systems and databases
277 - FACIL JRC.G.II.6	903 - NUFOR Nuclear Forensics method and signature development	Development and further optimization of analytical methodologies for Nuclear Forensics. Identification and consolidation of measurable parameters (signatures) providing hints on the history of the material. This includes: Study the use of stable isotopes, use of chemical impurities, and morphological studies Initiate a plutonium age dating performance testing Modification of "classical" forensic techniques, such as visualization of latent fingerprints and recovery of DNA from contaminated evidence. Analysis of seized samples upon request of MS or IAEA.	JRC.G.II.6 Zsolt VARGA	9.1.2.b	HOME	JRC	Wiktor Wojtas HOME A.1.002	DEVCO ENER	- University of California, Los Alamos National Laboratory CEA - Commissariat à l'Energie Atomique et aux Energies Alternatives EEAS - European External Action Service EUROPOL - EUROPOL IAEA - International Atomic Energy Agency (IAEA) JAEA - Japan Atomic Energy Agency LLNL - Lawrence Livermore National Laboratory STUK - Radiation and Nuclear Safety Authority US DoE - US Department of Energy	01/01/2014 31/12/2018	INS-RS	903201701	Scientific Publications	The scientific results will be published in peer reviewed journals and presented at conferences.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index
												903201801	Nuclear Forensics Signature and Method Development	The scientific results will be documented in JRC reports, published in peer reviewed journals or presented at conferences.	31/12/2018	Article contribution to periodicals or to conference proceedings listed in SCOPUS
												903201802	Report on illicit trafficking materials	If nuclear material is detected outside of regulatory control, the competent national authority may request an in-depth nuclear forensic analysis. Results of such specific investigations as well as general considerations and information analysis related to nuclear forensics and illicit trafficking will be documented.	24/12/2018	JRC technical reports
436 - CBRNEsec JRC.A.7	1820 - ITRAP ITRAP+10 PHASE 2	The objective, based in the experience gained implementing the first phase, is: To strengthen the capacity of the EU MS labs for testing of detection radiation equipment. To test Mobile detection equipment, based on revised testing procedures. To give feedback to standardisation organisations from experience gained through the implementation of ITRAP+10.	JRC.A.7 MARIANA GONÇALVES	9.1.2.b	HOME	HOME	Wiktor Wojtas, DG HOME A1	DEVCO TAXUD		17/12/2013 16/12/2017	CON-AA	171	WP2 : Intercomparison exercise	Identifying EU national labs to be recognized in testing of equipment: Revision of the testing procedures and organisation of a round robin exercise. Reports on the procedures and on the intercomparison results.	30/09/2017	Validated methods, Reference methods and measurements
												172	WP5: feedback to standardisation organisations	Provide feedback to standardisation organisations from experience gained in ITRAP+10 and participating to the organisations meetings. A report on the impact of the project on standards will be released.	15/12/2017	JRC technical reports
												173	WP1 : Project Final Report	Deliverables of the WP1 Project Management are the Inception Report, the periodic Progress Reports (6-monthly) and the Final Report	16/12/2017	JRC technical reports
5120 - NDA4SSD JRC.G.II.7	3576 - ND-Security Development of Active Neutron Interrogation Techniques for Nuclear Security and Nonproliferation	Innovative active neutron interrogation techniques will be developed for those cases where classical passive interrogation techniques are not applicable. This work is performed in the framework of Action Sheet 7 of the collaboration of the JRC with the Japanese Atomic Energy Agency (JAEA) on nuclear safety, security and safeguards.	JRC.G.2 Peter SCHILLEBEECKX	9.1.2.b	ENER	JRC	Head of Unit DGENER.E.1; Peter SCHWALBACH (ENER.E1)		JAEA - Japan Atomic Energy Agency SCK-CEN - Belgian Nuclear Research Centre (SCK-CEN)	01/01/2016 30/12/2018	INS-RS	2	Standard samples for NRTA and NRCA	Design, fabrication and characterization of standard samples for neutron resonance analysis by neutron transmission (NRTA) or neutron capture measurements.	01/12/2017	JRC technical reports
												3	Benchmark data for non-actinide content	Production of benchmark neutron-transmission and neutron-capture data for the validation of non-actinide content in non-destructive analyses for safeguards and security. From past experience it was shown that a good knowledge of transmission and capture data are critical for accurate analyses and that such benchmark data for construction materials and fission products are in demand.	01/11/2018	JRC technical reports
277 - FACIL JRC.G.II.6	3660 - QUALINU ENSURING QUALITY AND BUILDING EXPERTISE IN NUCLEAR FORENSICS	This activity aims at improving the response to nuclear security events, analytical and evaluation skills in the nuclear forensic area, exchange of expertise at European and international level, as well as awareness and interagency cooperation. This includes: - Networking of experts from Member States using	JRC.G.II.6 Maria WALLENUS	9.1.2.b	HOME	HOME	Wojtas Wiktor	DEVCO ENER	IAEA - International Atomic Energy Agency (IAEA)	15/12/2016 14/06/2018	CON-AA	3660201701	Intermediate report - 1	Intermediate project report will be provided to DG HOME	30/06/2017	JRC technical reports
												3660201702	Training in nuclear forensics	Provide comprehensive training strategy to various experts from member states	31/12/2017	JRC technical reports
												3660201801	Final report	Final report describing results of the project	30/04/2018	JRC technical reports
5120 - NDA4SSD JRC.G.II.7	3674 - He3ALT-Phase II 3He Alternative Neutron Coincidence Counter based on LiZnS+ XFuelBuilder	The recognition of 3He gas shortage several years ago prompted significant research and development toward alternative 3He neutron detector technology first for security then safeguards applications. Following Monte Carlo modelling a small prototype LiZnS based counter was built and extensive testing was carried out at the JRC in Ispra in collaboration with Symetrica (UK) and within an AA with DG-ENER. The sub-system was successfully tested and performed very well in international inter-comparisons and benchmarking campaigns. It is now proposed to build, test, characterize and calibrate a full system which is expected to outperform its competitors including the standard HLNCC-II (He3 based) as regards efficiency and the Figure of Merit (by 60%) commonly used as performance indicator. XFuelBuilder is a MonteCarlo-based modelling software application to supply an effective support to the nuclear inspectorates for the analysis of active Neutron Coincidence Collar (NCC) measurements.	JRC.G.II.7 Hamid TAGZIRIA	9.1.2.b	ENER	ENER	HoU ENER E1 - Paul Meylemans			15/12/2015 30/06/2018	CON-AA	2	Full neutron coincidence counter	This deliverable will build and deliver a full scale He-3 alternative neutron detection system based on LiZnS technology and following successful monte carlo modelling and experimental evaluation and intercomparison of the scaled down prototype.	30/06/2017	JRC technical reports
												3	Evaluation, testing, characterization and calibration	Within this deliverable extensive campaign of measurements will be carried out at the JRC in Ispra using nuclear reference materials to characterize and calibrate the full neutron coincidence counter system and evaluate its performance compared to standard He3 based HLNCC which, from Monte Carlo modelling, it is expected to outperform by 60% in term of figure of merit.	31/10/2017	JRC technical reports
												4	Other deliverables - publications	Report and publish results of the performance of the counter	30/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												XFuelBuilder	Main graphical assembly/rod panel	A panel to define or edit the assembly/rod: 3 command and a new graphic region will be added allowing users to create a new assembly/rod, retrieve it from the ones already stored inside XFuelBuilder database or to save it into the database. The open operation will built-up a new window , Assembly retrieve, Query, Results etc. It will be possible to reconfigure specific rod properties. Detector Setup and MCNP commands will be moved from the main panel into the 3D graphics window.	30/04/2017	Scientific information systems and databases
												XFuelBuilderRep	Technical Report, User Manual, Publication	Produce a Technical Report and/or User Manual and/or Publication	14/12/2017	JRC technical reports
												XFuelBuilderSim	Simulation & Measurements comparison management	The Detector Setup and the MCNP commands (execution of Monte Carlo Simulation) will be started directly on the new area of the main window, managed starting from the 3D visualization panel of the actual front-end. The user will be guided to set up the Simulation parameters, the MCNP-PTA execution and the final report. The Simulation results, measurement comparison and user comments will be stored in the data model (database) of the XFuelBuilder software application.	30/06/2017	Scientific information systems and databases
												A20	Emerging technology of concern	Upon request from DG TRADE, and after consultation with Member States experts in the Dual-Use Coordination Group, JRC will provide an assessment related to one emerging dual-use technology of concern. The assessment will address issues such as the analysis Organisation of one EU in-reach event based on input by the Dual-Use Coordination Group, possibly in synergy with other events organised at JRC, to be further considered with DG TRADE and TAXUD.	31/12/2017	External study reports
A40	EU in-reach capacity building		31/12/2017	Training												
B30	IT support for dual-use related data analysis	IT support for the collection, analysis and visualisation of key EU export control data. Databases containing license data, COMEXT data on the dual-use related trade and associated meta-data (e.g. regulatory documents, trade nomenclatures).	31/12/2017	Scientific information systems and databases												
B31	IT support for dual-use related data analysis	IT support for the collection, analysis and visualisation of key EU export control data. Databases containing license data, COMEXT data on the dual-use related trade and associated meta-data (e.g. regulatory documents, trade nomenclatures).	31/12/2018	Scientific information systems and databases												
9.1.2.c support for Member States, partner countries and international institutions (IAEA, etc.) to enhance technical knowledge on nuclear security using the European Nuclear Security Training Centre (EUSECTRA). Training to support the implementation of the EU non-proliferation policy;												3511201701	Messübungen für die Allgemeine Gammaskopimetrie	Training course for BIS experts on gamma spectrometry methods for the measurement of nuclear materials to increase nuclear security preparedness	30/06/2017	Training

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Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
277 - FACIL JRC.G.II.6	3511 - BFS Training for BFS	Under the contract n. 30692 with the German Federal Office for Radiation Protection (Bundesamt für Strahlenschutz - BFS), 2 hands-on training exercises per year are held for BFS Mobile Expert Support Teams on detection, categorization and identification of nuclear or other radioactive materials.	JRC.G.II.6 JANOS BAGI	9.1.2.c	HOME	n/a	n/a		BFS - Bundesamt fuer Strahlenschutz	01/01/2016 31/12/2018	CON-TW	3511201702	Messübungen für die Allgemeine Gammaskopimetrie	Training course for BIS experts on gamma spectrometry methods for the measurement of nuclear materials to increase nuclear security preparedness	31/12/2017	Training
												3511201801	Messübungen für die allgemeine gamma spektrometrie	Dedicated training course for BFS experts.	30/06/2017	Training
												3511201802	Messübungen für die allgemeinen Gamma Spektrometrie	Advanced measurement exercises for BIS experts to enhance Germany's nuclear security preparedness	31/12/2018	Training
65 - DANTE JRC.G.10	3625 - SUCAB Support capacity building in nuclear security through training at EUSECTRA	The capability to address nuclear security threats depends on the availability of an appropriate technical infrastructure and on the human capital for operating it. Capacity building activities are carried out in the nuclear security area and in the nuclear safeguards field. This includes the development of training modules for training of professionals, cross discipline training, re-training and train-the-trainers. Moreover, it covers the development of scenarios for table-top and for JRC will provide training on nuclear detection including conceptual aspects of nuclear security and nuclear detection, basics of radiation detection, practical training using portal monitors.	JRC.G.II.6 Jean GALY	9.1.2.c	DEVCO	JRC	Devco: Eddie Maier	ENER HOME TAXUD	Cust Aut MS - MS Customs Authorities IAEA - International Atomic Energy Agency (IAEA) MS EU - Member states EU US DoE - US Department of Energy (DOE) WCO - World Customs Organization	01/01/2016 30/12/2018	INS-RS	362520171	Training of IAEA Safeguards inspectors	Training courses will be provided to inspectors of the IAEA, including issues related to the Additional Protocol.	30/12/2018	Training
												362520172	Training for Euratom Inspectors	Training on nuclear material measurement methods will be provided to inspectors from DG ENER. This includes training activities such as NDA refresher training and active well neutron counter.	30/12/2018	Training
												362520173	Updating of training programmes and equipment	Based on previous years training experience and taking into account advances in technical developments, the established training programmes have to be reviewed - where necessary - and technical facilities will be further developed	30/12/2018	Training
												362520174	Development of new training courses	New training courses will be developed and respective scenarios will be established, tested and validated	30/12/2018	Training
65 - DANTE JRC.G.10	5115 - NDT-3 Nuclear Detection Training on behalf of DoE	JRC will provide training on nuclear detection including conceptual aspects of nuclear security and nuclear detection, basics of radiation detection, practical training using portal monitors.	JRC.G.II.6 Jean GALY	9.1.2.c	HOME	n/a	W. Wojtas, HOME.A.1.002	DEVCO TAXUD	Cust Aut MS - MS Customs Authorities MS EU - Member states EU US DoE - US Department of Energy	01/10/2016 30/09/2018	CON-TW	51151	Nuclear detection training	Organisation and execution of training courses and workshops related to nuclear detection methods.	31/12/2017	Training
												51152	Nuclear detection training	Organisation and execution of training courses and workshops related to nuclear detection methods.	31/12/2018	Training
65 - DANTE JRC.G.10	5117 - NDT-HOME Nuclear Detection Training EU HOME	Organisation and provision of training for law enforcement community at the EUSECTRA	JRC.G.II.6 Jean GALY	9.1.2.c	HOME	HOME	W. Wojtas, HOME.A.1.002	TAXUD	INTERPOL - INTERPOL Law-enforcement Nat. Auth. - MS Law-enforcement National Authorities	02/01/2017 03/01/2018	CON-AA	51171	Nuclear training for law enforcement	Organisation and execution of training courses related to nuclear detection methods and/or radiological crime scene management.	31/12/2017	Training
9.1.2.d contributing to safeguards, proliferation resistance, and physical protection of innovative designs of nuclear reactors in synergy with the GIF.																
5121 - NPTC JRC.G.II.7	436 - INSAF Innovative concepts and methodologies for nuclear safeguards and non proliferation	Support to the evolution of the non proliferation regime through the investigation of concepts such as: safeguards by design (SbD), proliferation resistance (PR) methodologies, design and evaluation of state level approaches (SLA) for nuclear safeguards. The work package ensures the participation in international fora (Generation IV International Forum, Proliferation Resistance and Physical Protection WG - PRPPWG, IAEA International Project on Innovative Nuclear Reactors and Fuel Cycles - INPRO, for PR related activities, EC support programme for related activities such as SbD, SLA) and in house developments on related issues. The work package performs R&D on concepts and methods related to the future shape of international nuclear safeguards (relevant for policy anticipation as well as ensuring the domain knowledge on	JRC.G.II.7 Giacomo COJAZZI	9.1.2.d	ENER	JRC	Head of Unit Unit E.1, P. Meylemans		GIF - Generation-IV International Forum IAEA - International Atomic Energy Agency (IAEA)	01/01/2014 21/12/2018	INS-RS	130	Contribution to GIF PRPPWG-2017 activities	Ensures the EURATOM representation and contribution to the activities of the Generation IV International Forum (GIF) Proliferation Resistance and Physical Protection Working Group (PRPPWG). The deliverables will be defined in the PRPPWG 2017-2018 annual work-programme. Support to analogous activities of IAEA in the area of PR and Safeguards by Design. Support to GIF-EURATOM coordination and related initiatives.	23/12/2017	Project management related documents/reports identified as outputs of the JRC Work Programme
												150	Methodological support to IAEA on SLC	The IAEA continues the development of the State-level concept (SLC) for the implementation and evaluation of safeguards. The SLC is a holistic approach to safeguards implementation based on a State-level approach (SLA).	21/12/2018	JRC technical reports
												160	Contribution to GIF PRPPWG-2018 activities	Ensures the EURATOM representation and contribution to the activities of the Generation IV International Forum (GIF) Proliferation Resistance and Physical Protection Working Group (PRPPWG). The deliverables will be defined in the PRPPWG 2017-2018 annual work-programme. Support to analogous activities of IAEA in the area of PR and Safeguards by Design. Support to GIF-EURATOM coordination and related initiatives.	21/12/2018	Project management related documents/reports identified as outputs of the JRC Work Programme
												170	R&D on Safeguards Approaches	The WP will investigate various aspects related to safeguards design and implementation such as synergies in safety, security and safeguards (3Ss), risk informed approaches to EURATOM safeguards, etc.. It will be carried out in collaboration with DG ENER.	21/12/2018	Article contribution to a monograph or other periodicals
9.2 International cooperation and development																
9.2.1 2030 agenda on sustainable development																
9.2.1.a support the monitoring and implementation of the SDGs by developing and integrating knowledge management tools and organising information on related policies, indicators, methods, and data, facilitating the integration of the social, economic, and environmental information necessary to achieve the SDG targets, the SDG targets, taking into account international monitoring frameworks and indicators, and national																
337 - DeCarbLocal JRC.C.2	261 - CoM South Covenant of Mayors South	The project aims to adapt the "Covenant of Mayors" (CoM) to the ENPI South Mediterranean Partner Countries. The purpose is to provide the ENPI South countries and the project beneficiaries with technical and scientific assistance, analysis and input to support the project implementation, including Sustainable Energy Action Plans guideline and implementation and monitoring guidelines. The WPk contributes to the achievement of the	JRC.C.2 PAOLO BERTOLDI	9.2.1.a	DEVCO	DEVCO	DI PIETRANTONIO Nicola (NEAR) <Nicola.DI-PIETRANTONIO@ec.europa.eu>	ENER		18/12/2012 17/07/2017	CON-AA	3	SEAP implementation monitoring	Under this task the monitoring guidelines of the SEAP implementation shall be developed. Then by using these guidelines the monitoring of the SEAP implementation shall be carried out.	07/07/2017	Science-for-policy reports
												4	Overall assessment of the CoM South	Overall assessment report based on the SEAP submitted and evaluated, type of measures implemented, achieved and predicted CO2 and energy savings, best practices multi-level governance	31/07/2017	Science-for-policy reports
												6	Training on SEAP and monitoring	Training of local actors and trainers is provided in each country participating in the CoM South. In 2017, 2 to 3 trainings will be provided	30/06/2017	Training
224 - GHSL JRC.E.1	374 - GHSL-CORE GHSL - Baseline data production, methodological developments and international partnerships	Establish the core methods and the baseline spatial data for development of global human settlement and exposure indicators using satellite and socio-economical census data. Consolidate scientific methods & systems for reliable & automatic information gathering/extraction analysis DG REGIO relies on the information and tools developed by the work package to inform the EU Urban Agenda and the UN process for the Conference on Housing and Sustainable Urban Development. In addition, the work supports the post-2015 Int. frameworks, namely Sendal framework for Disaster Risk Reduction (DRR), Sustainable Development Goals, particularly its Goal 11 (make cities & human settlements inclusive, safe, resilient, sustainable). Climate Change and the Global Urban Agenda (Adopted in 2016). In line with remit of Sendal Framework for DRR: 1. Support international scientific partnerships on Remote Sensing of Human Settlements including capacity building, sharing data and methods 2) Support the Group of Earth Observation through coordinating the Human Planet Initiative which establishes a new community of practice aimed at supporting the family of post-2015 frameworks with methods and	JRC.E.1 Martino PESARESI	9.2.1.a	REGIO	JRC	Lewis Dijkstra (REGIO) Lewis.DIJKSTRA@ec.europa.eu	NEAR	GEO - The Group on Earth Observations UN HABITAT - United Nations, Human Settlement Programme (UN HABITAT) UN ISDR - United Nations International Strategy for Disaster Reduction (UN-ISDR) UNDP - United Nations Development Programme WB - World Bank	01/07/2016 31/12/2019	INS-RS	ATLAS2017	Human Planet Atlas 2017	Collaborative work from the int. partnership set in the GEO Human Planet initiative - updated information on the human presence in the planet, cross-cutting thematic issues related to the monitoring of the implementation of the post-2015 international frameworks Political executive summary voted by the experts in the scientific committee. Contribution to the annual UN Multi-stakeholder Forum on Science Technology and Innovation for the SDGs.	31/12/2017	JRC technical reports
												ATLAS2018	Human Planet Atlas 2018	Collaborative work from the int. partnership set in the GEO Human Planet initiative - updated information on the human presence in the planet, cross-cutting thematic issues related to the monitoring of the implementation of the post-2015 international frameworks Political executive summary voted by the experts in the scientific committee. Contribution to the annual UN Multi-stakeholder Forum on Science Technology and Innovation for the SDGs.	31/12/2018	JRC technical reports
												CAPACITY2017	Capacity Building on GHSL framework 2017	Report on supporting capacity building, sharing data and processing methods related to the GHSL framework with key int. partners (INPE-Brazil, RADI-China, SANSAs-South Africa). Production of country-wide GHSL baseline and indicators data using locally-collected Earth Observation and population census sources.	31/12/2017	JRC technical reports
												CAPACITY2018	Capacity Building on GHSL framework 2018	Report on supporting capacity building, sharing data and processing methods related to the GHSL framework with key int. partners (INPE-Brazil, RADI-China, SANSAs-South Africa). Production of country-wide GHSL baseline and indicators data using locally-collected Earth Observation and population census sources.	31/12/2018	JRC technical reports
												GHSL2017	GHSL Baseline data and indicators 2017	Updated GHSL baseline data and derived post-2015 frameworks indicators, including new satellite and census sources, enhanced spatial data baseline and consolidated set of derived indicators.	31/12/2017	Scientific information systems and databases
												GHSL2018	GHSL Baseline data and indicators 2018	Updated GHSL baseline data and derived post-2015 frameworks indicators, including new satellite and census sources, enhanced spatial data baseline and consolidated set of derived indicators.	31/12/2018	Scientific information systems and databases
243 - REEU+ JRC.C.2	1390 - RE-GIS-Africa Exploiting Renewable Energy potential in a changing Africa	The opportunities provided by Renewable energies for the low carbon society will be assessed by means of geographical analysis (GIS) and technological insights. The availability and exploitability of raw resources for renewable energy production is assessed for the African continent with a view to changing boundary conditions (e.g., technology progress, climatic changes, etc.). Knowledge will be shared with key African research partners within the context of the	JRC.C.2 Sandor SZABO	9.2.1.a	DEVCO	JRC	Felice Zaccheo (DEVCO C.5); G. GRAPSAS (DEVCO)	CLIMA ENER RTD	ECOWAS - Economic Community Of West African States ECREEE - ECOWAS centre for renewable energy and energy efficiency IEA - International Energy Agency IRENA - International Renewable energy Agency	01/01/2014 31/12/2018	INS-RS	1	Socio-Economic data layers for RES investments	Collection and analysis of new socio-economic data layers to complement existing datasets and geographic information on renewable energy resources. This will enable the beneficiaries to better understand renewable energy investment drivers and distributions in Europe and Africa. The layers will include household, populated areas, network data (ie. substations), brownfield data (old industrial sites, degraded lands).	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												2	Maintenance & update of former African databases	The datasets and information systems that were compiled during the REU former and ongoing African activities (AFRETEP, REN2AF, deliverables for EUEI; AEEP, IRENA and ECREEE) will be continuously updated in the REMEA and Capacity4Dev websites. It will continue the update of geographical information layers of availability of renewable energy sources in Africa by means of data mining, collection and harmonization. Its methodology will focus on national & distributed level of energy system analyses.	31/12/2018	Scientific information systems and databases

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
		...former RENAF project.										4	Analysis of RE Markets & Finance Barriers	Analysis of the economic determinants of equity risk premiums, including investor risk aversion, information uncertainty and perceptions of macroeconomic risks. The application of social discount rates by policy making and weighted average cost of capital (WACC) rates by the market players create discrepancy between the set goals and the pace of implementations. The analysis uses an adapted financial calculation (given risk premium over a discount rate).	30/06/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
222 - DRMKC JRC.E.1	3379 - ECHO AA 2016-17 ECHO AA 2016-17	EU Aid Explorer (formerly TR-AID) is a web based corporate tool of the European Commission (https://euaidexplorer.ec.europa.eu). It has been	JRC.E.1 Anjula GARG	9.2.1.a	ECHO	ECHO	Mr. Marco Panigalli (HoU), Pierre Charlier (Policy Officer)	DEVCO FPI NEAR	MS EU - Member states EU	21/12/2016 20/12/2017	CON-AA	1	Further Customised and maintained EAE for ECHO Explorer.	Report on implementation of the AA and its completed tasks. These tasks include adding new functionalities and tailoring existing ones, as defined by DG ECHO, in the EU Aid Explorer.	31/12/2017	JRC technical reports
402 - EUPolicyLab JRC.I.2	3778 - FOR-FOODVISION Designing a common EU narrative for the future food system: a vision for Europe	This project aims to build a shared vision of the future global food system amongst relevant Commission services, through a foresight approach. The project will look at the food system in its entirety and consider major trends that will likely shape the future, and how this may impact the sustainability of the food system. Through a	JRC.I.2 TINE VAN CRIKINGE	9.2.1.a	DEVCO	DEVCO	Maria KETTING	AGRI MARE RTD SANTE TRADE	FAO - THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO)	15/03/2016 14/07/2017	CON-AA	2	Report on future sustainable food system	The report will describe the sustainable food system(s) that will be developed through a foresight process involving the main stakeholders, selected DGs and experts.	01/02/2017	JRC contributions to policy documents
												3	Report on policy options for a future sustainable	The report will describe the policy elements of the sustainable food system and consider the implications for EU policy in the future.	28/02/2017	JRC contributions to policy documents
567 - KnowSDGs JRC.D.6	4206 - SPice SDGs Science Policy Interface	The UN Agenda 2030 for Sustainable Development, with 17 SDGs and 169 targets, offers an integrated and complex development framework that cuts across many EU policies. Sharing knowledge will avoid gaps and duplication whilst facilitating the analysis of trade-offs and promoting synergy, coherence and co-benefits. This WPK will develop knowledge management tools that organise information on policies, indicators, methods, data and policy position documents related to the achievement of the SDGs. It will support the Better Regulation Tools to ensure further mainstreaming of sustainable development into European policies and initiatives	JRC.D.6 Apollonia MIOLA	9.2.1.a	SG	n/a	tbc	CLIMA DEVCO ECHO ENV ESTAT NEAR REGIO	OECD - Organisation for Economic Co-operation and Development (OECD) UN FCCC - UN Framework Convention on Climate Change (UN-FCCC) WB - World Bank	01/01/2017 30/12/2020	INS-RS	2017002	Community of Practice (Connected space)	A Community of practice using the Connected platform designed according to the commonly agreed architecture, which will provide a common portal for storing, making accessible, and comparing cross-service documentation, along with material from EU Member States and international institutions, to support the Commission work on SDG	31/07/2017	Scientific information systems and databases
												201701	Community of Practice (Knowledge management)	The on line Community of Practice in Connected will be complemented with offline activities such as workshops, meetings, conferences involving external stakeholders from the international scientific community, private sector, civil society. I will contribute to the global community of organisations and experts committed to collaboratively generating, managing and sharing knowledge and data to mobilise a sustainable future. In collaboration with all relevant JRC units.	30/12/2018	JRC technical reports
												201703	Internal JRC network	An internal JRC network working on SDG-related Knowledge Production (data, models, indicators, process...), which will also feed into the community of practice	31/12/2017	JRC technical reports
												201704	Support EU monitoring framework	Support the Commission services' work on the EU monitoring framework including evaluation of the fitness-for-purpose of indicators for monitoring and implementation across SDG goals and related targets.	31/12/2017	JRC technical reports
												201801	Trade-offs and synergies between SDGs	Facilitate the study of trade-offs and synergies between SDGs and their targets in relation to EU policy priority areas as identified by EU policy DGs, including possible implementation into identified sectorial policies.	31/03/2018	Science-for-policy reports
												201802	Web-based science-policy interface platform	A web-based science-policy interface platform on SDGs and ensure that their implementation is informed by evidence. It will include functionality for cross-policy analysis and communication with respect to SDG policy implementation. It will contribute to the UE multi stakeholders platform as indicated by the EU Communication COM(2016) 739 final.	29/09/2018	Scientific information systems and databases
4856 - ARCTIC JRC.C.5	4914 - ARCTIC SusDev Sustainable Development of the Arctic Region	In line with the Joint Communication to the European Parliament and the Council for an integrated European Union policy for the Arctic (JOIN(2016) 21 final) this work package will promote the sustainable development in the Arctic focusing on marine productivity, fish stocks as well as offshore safety.	JRC.D.2 Jann MARTINSOHN	9.2.1.a	MARE	JRC	CLOCCHIATI (MARE.C.1); PETERSEN (EEAS.III.B.1); GAMBARELLA (RTD.I.4); Sebastian RODRIGUEZ ALFARO (MARE.C.3)	CLIMA ENER ENV REGIO	AACA - Adaptation Actions for a Changing Arctic EEAS - European External Action Service	01/01/2017 31/12/2017	INS-RS	201701	Arctic fish stock model assessment	Following the Arctic Science Ministerial meeting in September 2016 (in which the JRC will be part of the EU delegation) fisheries modelling and stock assessment approaches, including JRC in-house modelling frameworks such as a4a, and considering harvest control rules, will be evaluated and reviewed with respect to their applicability and value for arctic stocks	15/12/2017	JRC technical reports
												201702	Extension of the primary production monitoring	The activity will collect and process Earth Observation (EO) data sets relevant to the assessment of marine biology in the Arctic Ocean. The focus would be on documenting phytoplankton population in the region using ocean color EO data. EO-derived distributions of phytoplankton chlorophyll-a concentration (an Essential Climate Variable) should then be used by the JRC marine primary productivity model to build a primary production budget for the Arctic Ocean.	15/12/2017	Scientific information systems and databases
												201703	Hydrocarbon exploration in the Arctic ocean	A study to identify specific risks (safety and environmental) related to hydrocarbon exploration and production activities in the Arctic Ocean. The outcome of this investigation could contribute to the preparation of guidelines for the competent authorities related to risk assessment, environmental impact and investigation that should be taken into consideration when licensing platforms etc.	15/12/2017	JRC technical reports
												201704	Potential productivity marine food webs from EO	Potential productivity of Arctic marine food webs from Earth Observation data Potential fish production relates to the intensity and frequency of chlorophyll-a fronts as these mesoscale features efficiently transfer the organic matter along food chains from phytoplankton to top predators. This mapping product that tracks hot spots of marine productivity is daily derived at few kilometres resolution. The potential fish production can thus be monitored after climate change independently of mortality by fishing, which is key information for a sustainable exploitation.	15/12/2017	JRC technical reports
4856 - ARCTIC JRC.C.5	4915 - ARCTIC Coop International Cooperation in the framework of the Arctic	This work-package contains existing JRC "science for diplomacy" cooperation with the Arctic Council and its subsidiary bodies together with a foresight study regarding the potential for development of hydrocarbon extraction in the Arctic. Additional activities covering variously Governance - the Arctic Council is itself a unique form of participative governance; Education, Skills and Employment; Citizen access to digital health and digital services in general; Traditional knowledge and its links with art and science will be added to the work-package during 2016-7 in accordance with the eventual JRC strategy for the Arctic that is due to be produced by the JRC Task Force on the Arctic by the end of 2016.	JRC.C.5 Julian WILSON	9.2.1.a	MARE	JRC	CLOCCHIATI Alessia (MARE.C.1); PETERSEN Terkel (EEAS.III.B.1); GAMBARELLA Attilio (RTD.I.4) ENV.C.2	CLIMA ENER ENV REGIO RTD	AACA - Adaptation Actions for a Changing Arctic AMAP - Arctic Monitoring and Assessment Programme EEAS - European External Action Service	01/01/2017 30/12/2018	INS-RS	201701	Foresight analysis for Arctic energy development	A study to identify the socio-ecological context of the conditions and capabilities required for the potential development of a hydrocarbon based energy industry in the Arctic Sea, including aspects such as availability of skilled work force, support services (e.g. transport, electricity), waste water disposal infrastructure. The study will collect physical, geological, meteorological and other parameters, which could be important for future analysis.	30/11/2017	JRC technical reports
												201702	JRC Science for Arctic Diplomacy Report	Summary of JRC contributions to the EU Arctic Policy and reporting to EEAS and relevant DGs on JRC participation in Arctic Council activities and working groups, during the second half of the US Chairmanship 2015-2017 and the beginning of the Finnish Chairmanship 2017-2019. Ex PACAR deliverable 201701	15/11/2017	JRC contributions to policy documents
												201703	The role of traditional knowledge in the Arctic	A concept paper about broader societal engagement of the Arctic communities in governing their environment and livelihoods tapping into different ways of knowing namely "traditional knowledge" and its links with art and science. This paper will include a review of existing engagements and will outline best practices, as well as discuss the impacts of current and future trends that are in need of further deliberation. Joint deliverable with wpk 2880 Science and Technology Studies.	30/11/2017	JRC technical reports
567 - KnowSDGs JRC.D.6	4926 - TWI2050 The World in 2050	This WPK will contribute to the development of a long-term vision for Sustainable Development to prepare a long-term implementation of the SDGs by contributing (inter- alia) to the project "The World in 2050" (TWI2050) and coordinating the interdisciplinary input from across JRC. The focus	JRC.D.6 Apollonia MIOLA	9.2.1.a	DEVCO	n/a	DEVCO Directorate A and C	CLIMA ECHO ENV ESTAT REGIO SG	OECD - Organisation for Economic Co-operation and Development (OECD) UNEP MAP - United Nations Environment Programme Mediterranean Action Plan	01/01/2017 28/12/2018	INS-RS	2017002	Narrative for Europe	Workshop on a narrative for Europe as regional dimension of the global narrative.	31/12/2017	Training
												201701	Contribution to global narrative	Contribution to the preparation of the global narrative on desired development outcomes within planetary boundaries for 2050 over the entire duration of the TWI2050 Project.	30/12/2017	JRC technical reports
												201703	Narrative for Africa	Workshop on a narrative for Africa as regional dimension of a global narrative.	31/12/2017	Training
												201801	Report from workshops	Report summarising the main findings of the two workshops	30/03/2018	JRC technical reports
9.2.2 Food security and nutrition, rural development and sustainable agriculture1																
9.2.2.a monitor agricultural resources, analyse situations of food and nutrition insecurity (including food poverty) and provide support with modelling and information systems to build more resilient communities in countries, including to the impacts of climate change.																
482 - Food & Nutrition Sec JRC.D.5	616 - AGRO-DEV Analysing Agriculture for Developing Countries	AGRO-DEV analyses the impact of EU cooperation policies/programmes on agri-food sector and on food security and poverty level in selected African economies, in support and/or anticipation of competitive activities for DG DEVCO (TS4FNS administrative arrangements and possible continuations). Effects range from	JRC.D.4 Sergio GOMEZ Y PALOMA	9.2.2.a	DEVCO	JRC	DEVCO C1	AGRI RTD		07/01/2013 28/01/2020	INS-RS	1	Modelling Agriculture for Dev. Countries (Micro)	Improvement of the methodology for quantitative Quantitative Impact Analysis of EU and Country Policies on selected African Countries at Micro (Farm-Household) and Regional	28/01/2020	Science-for-policy reports
												2	Modelling Agriculture for Dev. Countries (Macro)	Improvement of the Methodology for Quantitative Impact Analysis of Country Policies on selected African Countries at Macro level, with particular focus on the nutritional, demographic aspect of the single-country CGE model (STAGE_DEV) and link with the micro level analysis, in support to activities under TS4FNS 1, 2, 3 and 4	29/01/2020	Science-for-policy reports
												201701	Improved crop monitoring methods for food security	Continue the methodological improvement of crop monitoring methods for food security based on Earth Observation and Agro-meteorological data. This includes also yield forecasting in countries outside Europe with limited data availability.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in
												201702	Post-Harvest Loss estimation for policymaking	Continue the support to APLIS+ project by leading the development of early warning systems for postharvest losses increases or aflatoxin production linked to climatic drivers APLIS+ postharvest losses estimates will be a direct contribution to the Global Food Loss Index (SDG 12).	31/12/2017	Scientific information systems and databases

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
482 - Food & Nutrition Sec JRC.D.5	1003 - MARS-FS Monitoring Agricultural Resources for Food Security	This work package will support the Copernicus project. The methods and information systems developed, will be applied further to strengthen capacity and collaboration with relevant scientific networks in developing countries, in collaboration with UN agencies (mainly the Food and Agriculture Organization of the United Nations (FAO) and the World Food Programme (WFP)) and international research centres (CGIAR, regional and national research centres). In the JRC, data and methods produced by this work package will be used by operational and competitive work packages (e.g. AGWARN and TS4FNS) as the main information source for reports and bulletins about food availability in countries exposed to high risk of food insecurity. The work package will also provide information on postharvest losses, which is necessary to estimate food availability and to prepare food aid interventions, by contributing to the APHLIS+ project (African Postharvest Losses Information System). The activities for supporting the APHLIS+ project include the development of two early warning systems, one about increased postharvest losses due to rainfall at harvest time and one about pre-harvest aflatoxin contamination linked to drought. APHLIS data directly contribute to the Food Loss Index of SDG 12.	JRC.D.5 Felix REMBOLD	9.2.2.a	DEVCO	JRC	J-P Halkin, HoU C1	AGRI ECHO RTD	AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO) AREC - African Regional Economic Communities AU - African Union CGIAR - Consultative Group on International Agricultural Research ECOWAS - Economic Community of West African States EEAS - European External Action Service IFPRI - INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE IGAD - Intergovernmental Authority on Development NEPAD - OST - New Partnership for Africa's Development (NEPAD) WFP - World Food Program of the United Nations	01/01/2016 31/12/2018	INS-RS	201704	Agricultural statistics in developing countries	Evaluation of cost efficiency of area estimates and mapping by-products obtained from regional inventories by combining Sentinel imagery and area-frame-sampling field survey. A close coordination with the FAO global strategy for Agricultural Statistics is targeted, as well as research on structural aspects such as the evolution of field size in developing countries or tuning the suitable sampling frames for agricultural surveys.	31/12/2017	JRC technical reports
												201801	Improved crop monitoring methods for food security	Continue the methodological improvement of crop monitoring methods for food security based on Earth Observation and Agro-meteorological data. This includes also yield forecasting in countries outside Europe with limited data availability.	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												201802	Postharvest Loss estimation for policy making	Continue the support to APHLIS+ project by leading the development of early warning systems for postharvest losses increases or aflatoxin production linked to climatic drivers. APHLIS+ postharvest losses estimates will be a direct contribution to the Global Food Loss Index (SDG 12).	31/12/2018	Scientific information systems and databases
												201803	Science and policy community of practice	Play a central role in reinforcing and managing the international community of practice on agricultural monitoring. This will build on the CRAM and IMAAFS conference heritage, exchange information with the GEOGLAM and FSIN platforms and have a training dimension in collaboration with the MESA project (H.5).	31/12/2018	Training
												201804	Agricultural statistics in developing countries	Contribution to policy documents describing the methods and impact of the Global Strategy for Improved Agricultural Statistics (10 million Euro initiative funded by DG DEVCO and implemented by the FAO). Evaluation of cost efficiency of area estimates and mapping by-products obtained from regional inventories by combining Sentinel imagery and area-frame-sampling field surveys.	31/12/2018	Science-for-policy reports
482 - Food & Nutrition Sec JRC.D.5	1023 - RESIFOOD Resilience-building for improved food & nutrition security	This work package will address the determinants of household vulnerability and resilience to food and nutrition insecurity, in line with the Commission's Communication COM(2012) 586 and with geographic focus on Africa. It will (i) assess household and community resilience to food and nutrition insecurity, and (ii) investigate the determinants of the resilience to food and nutrition insecurity in different environments and settings. Nutrition as an input and outcome of resilience will also be addressed, in particular those nutrition policies that promote the 1 000-day window of opportunity (to improve nutrition for mothers and	JRC.D.5 Francois KAYITAKIRE	9.2.2.a	DEVCO	JRC	Jean-Pierre HALKIN	ECHO RTD	FAO - THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO) AU - African Union ECOWAS - Economic Community of West African States EEAS - European External Action Service IGAD - Intergovernmental Authority on Development WFP - World Food Program of the United Nations	01/01/2014 31/12/2017	INS-RS	1	Report - Resilience measurement methods	Technical report on the development of methods and tools to assess household and community resilience to food and nutrition insecurity. The development is coordinated with the FAO and the CILSS through EU-funded projects (ECOAGRIS and INFORMED).	31/12/2017	JRC technical reports
												2	Resilience & malnutrition determinants modelling	Technical report on the modelling results and policy recommendations to improve resilience to food and nutrition insecurity in selected countries to be defined in consultation with DG DEVCO.	31/12/2017	JRC technical reports
												201701	Ad-hoc assessment on food and nutrition insecurity	Reports on the status of food and nutrition security in specific countries or regions based on an integrated assessment and considering the capacity of communities to recover from shocks. Such reports may be requested by the Commission to inform project preparation. Expected release date: 15-12-2015; 15-12-2016.	31/12/2017	Science-for-policy reports
482 - Food & Nutrition Sec JRC.D.5	1719 - TS4FNS Technical and scientific Support to agriculture and Food and Nutrition Security sectors (TS4FNS).	This description describes the 1st TS4FNS package. The JRC provides support for: i) improvement of information systems on agriculture, nutrition and food security, ii) policy and economic analysis to support policy decision-making process and iii) scientific advice on selected topics concerning sustainable agriculture and food and nutrition security. Support is provided in selected developing countries mostly in sub-Saharan Africa (description attached below)	JRC.D.4 Sergio GOMEZ Y PALOMA	9.2.2.a	DEVCO	DEVCO	Jean Pierre Halkin DEVCO C1	AGRI RTD	FAO - THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO) AU - African Union ECOWAS - Economic Community of West African States EEAS - European External Action Service IGAD - Intergovernmental Authority on Development WFP - World Food Program of the United Nations	04/12/2013 03/12/2017	CON-AA	1	Macroeconomic analysis in 3 African countries	Modelling impacts of ex-ante national policies (input subsidies, investments in agriculture infrastructure, education and health, social protection, trade and trade facilitation, food aid among others) on national economic systems, mainly through single-country Computable General Equilibrium (CGE) models calibrated on the most updated national accounts data for Kenya, Senegal and Ethiopia	31/12/2017	Science-for-policy reports
												2	DATA-M	Delivery on the web of data visualizations and dashboards for presenting agriculture and nutrition statistics	31/12/2017	Scientific information systems and databases
												3	Microeconomic analysis of public policies	Modelling impact analysis of selected policy measures - e.g. input subsidies, price support, etc. - at the micro/local levels in selected African Countries, such as Niger and Ethiopia	31/12/2017	Science-for-policy reports
482 - Food & Nutrition Sec JRC.D.5	2249 - TS4FNS 2nd PART Technical and scientific Support to agriculture and Food and Nutrition Security sectors 2ND PART	This description describes the 2nd TS4FNS package. The JRC will provide support for: i) improvement of information systems on agriculture, nutrition and food security, ii) policy and economic analysis to support policy decision-making process and iii) scientific advice on selected topics concerning sustainable agriculture and food and nutrition security. Support is provided in selected developing countries mostly in sub-Saharan Africa Contract signed. 4156000€	JRC.D.4 Sergio GOMEZ Y PALOMA	9.2.2.a	DEVCO	DEVCO	Jean-Pierre Halkin DEVCO C1	AGRI	FAO - THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO) AU - African Union CGIAR - Consultative Group on International Agricultural Research GEO - The Group on Earth Observations USAID FEWS NET - USAID Famine Early Warning Systems Network (FEWS NET) WFP - World Food Program of the United Nations WMO - World Meteorological Organization (WMO)	19/12/2014 31/12/2018	CON-AA	1	Macroeconomic analysis selected African countries	2 African countries to be agreed with DEVCO	31/12/2017	JRC technical reports
												2	Microeconomic analysis of public policies	Modelling impact analysis of selected policy measures - e.g. input subsidies, price support, etc. - at the micro/local levels in selected African Countries, e.g. Ivory Coast, Tanzania, Senegal	31/12/2017	JRC technical reports
												3	CAP impact on agriculture & food security	Analysis of the impact of CAP on agriculture and food security in selected heterogeneous developing countries. Countries to be agreed with DEVCO in collaboration with DG AGR	31/10/2017	JRC technical reports
												6	Monitor landuse changes in hot spot African Areas	Mapping and monitoring of changes in agricultural land use in some hot spot areas in Africa High spatial resolution land use map of some hotspots for competition among the different land uses, mainly where agricultural land is scarce. The product and its related analysis will feed the IES work on competition for land. JRC.H.4; JRC.H.5	31/12/2017	JRC technical reports
482 - Food & Nutrition Sec JRC.D.5	3363 - TS4FNS - Part 3 Technical and scientific Support to agriculture and Food and Nutrition Security sectors (TS4FNS).	This description describes the 3rd TS4FNS package. The JRC provides support for: i) improvement of information systems on agriculture, nutrition and food security, ii) policy and economic analysis to support policy decision-making process and iii) scientific advice on selected topics concerning	JRC.D.4 Sergio GOMEZ Y PALOMA	9.2.2.a	DEVCO	DEVCO	Jean-Pierre Halkin DEVCO C1		FAO - THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO) AU - African Union CGIAR - Consultative Group on International Agricultural Research GEO - The Group on Earth Observations USAID FEWS NET - USAID Famine Early Warning Systems Network (FEWS NET) WFP - World Food Program of the United Nations WMO - World Meteorological Organization (WMO)	21/12/2015 20/12/2018	CON-AA	1	Policy impact at the Macro level	Report on the Macro Economy in selected African Countries	31/12/2018	Science-for-policy reports
												2	Mitigation / GM crops in Africa	Report on Policies related to Climate Changes Mitigation practices / GM crops in Africa, socio-economic implications	31/12/2018	Science-for-policy reports
												3	Microeconomic analysis of public policies	Modelling impact analysis of selected policy measures - e.g. input subsidies, price support, etc. - at the micro level in selected African Countries to be decided in agreement with DEVCO	31/12/2018	Science-for-policy reports
482 - Food & Nutrition Sec JRC.D.5	4868 - AGWARN Global Agricultural Early Warning	The work package will support the EU food security related policies and projects by managing the ASAP (Anomaly hot Spots of Agricultural Production) global agricultural early warning and monitoring information system and by producing monthly short reports about agricultural production anomalies. Such analysed information about global hotspots of agricultural production anomaly is crucial for providing timely and easily understandable warnings to policymakers about food production shortages to come, and to support their decisions regarding early response measures. The information produced will be made available in near-real time to colleagues in DG DEVCO and in EU Delegations as well as to the general public. Furthermore, the information produced will enable the JRC to contribute to existing international monitoring systems that produce internationally consolidated food security early warning information, such as the GEOGLAM crop monitor for countries at risk (EWCM), which includes contributions by the World Food Programme (WFP), the Food and Agriculture Organization of the United Nations (FAO), FEWSNET, etc.). The information system will be global but focusing	JRC.D.5 Felix REMBOLD	9.2.2.a	DEVCO	JRC	Jean-Pierre HALKIN	AGRI ECHO NEAR	FAO - THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO) AU - African Union CGIAR - Consultative Group on International Agricultural Research GEO - The Group on Earth Observations USAID FEWS NET - USAID Famine Early Warning Systems Network (FEWS NET) WFP - World Food Program of the United Nations WMO - World Meteorological Organization (WMO)	01/01/2017 31/12/2019	INS-RS	201701	Operational agricultural early warning information	Monthly updates about global hotspots of agricultural anomalies based on the ASAP (Anomaly hot Spots of Agricultural Production) system. The warning messages will be edited by MARS agriculture analysts looking at both an automatic warning classification system based on remote sensing and agro-meteo data as well as auxiliary data sources. The warning messages will be understandable to non-remote sensing and spatial data experts in policy DGs and outside the EC.	31/12/2017	Scientific information systems and databases
												201702	Early warning system maintenance and development	Continue the development of the ASAP system both in terms of improvement of indicators and methods and also on the system architecture side. This will include for example the inclusion of water balance indicators instead of simple rainfall anomalies and also the improvement of near real time filtering of Earth observation data.	31/12/2017	JRC technical reports
												201703	Contribution GEO crop monitoring countries at risk	Scientific input to the G20 GEOGLAM (GEO Global Agricultural Monitoring) initiative through the MARS interface with the global community of practice. Support of GEOGLAM component 3 about crop monitoring for countries at risk. Operational monthly contribution to global reports of the EWCM (Early Warning Crop Monitor), the section of GEOGLAM providing special information for countries at risk in addition to the Agricultural Market Information System (AMIS) crop monitor.	31/12/2017	JRC contributions to standards
												201801	Operational agricultural early warning information	Monthly updates about global hot spots of agricultural anomalies based on the ASAP (Anomaly hot Spots of Agricultural Production) system. The warning messages will be edited by MARS agriculture analysts looking at both an automatic warning classification system based on remote sensing and agro-meteo data as well as auxiliary data sources. The warning messages will be understandable to non-remote sensing and spatial data experts in policy DGs and outside the EC.	31/12/2018	Scientific information systems and databases
												201802	Early warning system maintenance and development	Continue the development of the ASAP system both in terms of improvement of indicators and methods and also on the system architecture side. This will include for example the inclusion of water balance indicators instead of simple rainfall anomalies and also the improvement of near real time filtering of Earth observation data.	31/12/2018	JRC technical reports

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
		mainly on countries with high risk of food insecurity and in this sense it will be fully complementary to the JRC's MARS crop forecasts for Europe, which provide more detailed information for DG AGRI. It will also allow for the provision of timely information about agricultural drought impact to the climatic drought risk modelling provided by the JRC's Global Drought Observatory (GDO).										201803	Contribution GEO crop monitoring countries at risk	Scientific input to the G20 GEOGLAM (GEO Global Agricultural Monitoring) initiative through the MARS interface with the global community of practice. Support of GEOGLAM component 3 about crop monitoring for countries at risk. Operational monthly contribution to global reports of the EWCM (Early warning crop monitor), the section of GEOGLAM providing special information for countries at risk in addition to the AMIS crop monitor.	31/12/2018	JRC contributions to standards
												201804	Analysis of major crop production anomalies	A summary report including ad-hoc analyses of agricultural production anomalies and the expected impact on food security for countries concerned, based on specific requests from DG DEVCO and regarding areas at high risk of food insecurity. Such scientific advice, provision of early warning, and objective assessments are typically requested by DG DEVCO to evaluate food aid requests and response planning for countries concerned	31/12/2018	Science-for-policy reports
482 - Food & Nutrition Sec JRC.D.5	4906 - TS4FNS - 4 Technical and Scientific Support for Food and Nutrition Security - Part 4	The objective of the FNS is to support EU institutions and the partner countries in the formulation of policies and programmes on sustainable agriculture and food and nutrition security, through the provision of demand-driven technical and scientific advice. The JRC provides support for: i) improvement of information systems on agriculture, nutrition and food security, ii) policy and economic analysis to support the policy decision-making process, and iii) scientific advice on selected topics concerning sustainable agriculture and food and nutrition security. The main geographical focus is Sub-Saharan Africa, with actions in other areas of the world affected by food crises or areas of particular concern.	JRC.D.5 Francois KAYITAKIRE	9.2.2.a	DEVCO	DEVCO	Jean-Pierre HALKIN	ECHO NEAR		01/01/2017 31/12/2019	CON-AA	5	Food security information systems	Reports related to JRC support to regional and national information systems on food security and nutrition in DG DEVCO priority countries. The reports will cover activities related to the JRC support to the Cadre Harmonise, IPC, SADC VAC and similar initiatives in other regions of the world.	31/12/2017	JRC technical reports
												6	Food and nutrition security reports	Drafting of food and nutrition security assessment reports or contribution to joint bulletins in the event of crises, including political or natural disaster-related crises and conflicts, which could produce or exacerbate food crises.	31/12/2017	JRC technical reports
												7	Global analysis of food crises	Annual report on food crises in the world.	31/12/2017	Science-for-policy reports
												8	Improved food and nutrition security analysis	This item covers several products contributing to the elaboration of improved resilience, food and nutrition security analysis methodologies and processes. It also includes the maintenance of the data infrastructure and tools to maintain the capacity to monitor and assess the food security situation in countries at risk of food crises.	31/12/2017	JRC technical reports
482 - Food & Nutrition Sec JRC.D.5	5805 - IMPALA Innovation in Monitoring Production of	Food supply information and monitoring remains a challenging task in Africa despite the rapidly	JRC.D.5 Felix REMBOLD	9.2.2.a	DEVCO RTD	RTD	Jean-Pierre HALKIN	AGRI ECHO		01/10/2017 30/09/2020	CON-IA	202005	JRC contributions to reports of the consortium	JRC contributions to reports of the consortium	30/09/2020	JRC technical reports
9.2.3 Climate change, environment, natural resources, and water																
9.2.3.a analysis, capacitybuilding, provision of data, maps and methodologies on the extent of and vulnerability to climate change in developing countries, including guidance towards a more targeted allocation of climate finance;																
222 - DRMKC JRC.E.1	292 - RCDFA Risk, Climate and Development Funding Analytics (Extension of WPK Transparent Aid)	This WP covers the core applied R&D activities underlying the EU Aid Explorer (EAE), the web-based corporate tool of the European Commission that tracks development and humanitarian funding by major donors to beneficiary countries. It aims to support the three post-2015 international frameworks on Disaster Risk Reduction (DRR), Sustainable Development Goals (SDGs), and Climate Change (COP21). This Work package will address target F of Sendai for building Funding	JRC.E.1 Anjula GARG	9.2.3.a	DEVCO	JRC	Ellen Kelly (Policy Officer), HoU(Erica GERRETSEN), Marco Panigalli (HoU), Pierre Charlier (Policy Officer), Michel Bucher	ECHO FPI NEAR	MS EU - Member states EU	01/01/2014 31/12/2019	INS-RS	2	Gap Analysis: funding data for Sendai,SDG,CC,Addis	The report aims to research gaps in funding data which make it difficult to track the funding for SDGs, Sendai, Paris and AAAA. It will include a study of funding data for Remittances, Foreign Direct investment, and OECD's TOSSD (Gap Analysis: funding data for Sendai,SDG,CC,Addis Ababa Action Agenda AAAA)	31/12/2018	Science-for-policy reports
												201701	EAE updated with Data for DRR, Remittances, FDI	Research the data availability for remittances, Foreign Direct investment, DRR financing and devise ways to incorporate this data in the EU Aid Explorer tool. The report aims to research the major funding types with the final aim of incorporating this data in EU Aid Explorer to incrementally increase data coverage that shows how much funding recipient countries receive	31/12/2017	Technical systems
9.2.3.b monitoring, provision of scientific advice, development of ICT tools, dissemination of information and capacitybuilding for partners in developing countries, to support multilateral or bilateral agreements related to natural resources, with a focus on forestry, land, and land use change, soil, raw materials, biodiversity, ecosystem services, agriculture and water, where appropriate in cooperation with relevant international																
568 - WEF Nexus JRC.D.2	143 - BASAL Bases Ambientales para la Sostenibilidad Alimentaria Local	Overall aims at developing tools to support Cuban decision-makers compare differential environmental/socio-economic impacts of their decisions regarding water resources and land use management. JRC contribution consists of activities to collect, model, analyse and display historical & scientific data concerning the environmental and socio-economic changes in study areas to help facing water & land use-related problems particularly under effects of climate variability/change.	JRC.D.2 Cesar CARMONA MORENO	9.2.3.b	DEVCO	DEVCO	DEVCO.G - Latin America and Caribbean	RTD	MINAG - Ministerio de la Agricultura (MINAG), Cuba	20/12/2012 19/12/2017	CON-AA	11	Final Report	Report summarising the activities implemented.	19/12/2017	JRC technical reports
												14301	BIOMA Running climate change impact assessments	This activity will consist of developing configuration files of current systems to be run as reference for simulations under climate change scenarios, providing an impact assessment. Starting from the evaluation of such impacts, alternate production configurations will be built and tested in order to define optimized adaptation strategies. Systems will be evaluated both as productivity and via environmental indicators to estimate the sustainability of systems.	28/12/2017	JRC technical reports
												14302	BIOMA Web portal testing	The prototype portal will be presented to stakeholders to verify its matching with their demand and to further refine its operational capabilities. As final step of the web portal development, and of the BioMA desktop application customization, procedures will be developed in the platform to enable specific data views. Emphasis will be placed on maintainability and extensibility of the components to support further developments	28/12/2017	JRC technical reports
												14303	BIOMA Presentation, discussion, and dissemination	Two events will be run targeting the scientific community (BioMA application and platform presentation, and final training) and stakeholders (web portal resources and use). These will be run in Cuba, organized by the Cuban partners with the technical and scientific contribution of JRC personnel	31/12/2017	JRC technical reports
												14304	Development of the Water model user applications	The main objective of this process is to contribute to the improvement of the decision maker local knowledge that can integrate it in the regional-national strategy. This will have a direct impact on the local-national decisions. The variables that the end-users might be allowed to play with will include external variables (such as climate conditions) and policies (such as land use allocation, agricultural techniques or water management options).	30/09/2017	Scientific information systems and databases
												14305	Training of Trainers on the use of Water model	Training and the support tool development will be under the coordination of the WS-Water4Dev team, and will be carried out in the capacity building centres (Centros de Creación de Capacidades y Gestión del Conocimiento) that will be fitted out within the BASAL project.	29/10/2017	JRC technical reports
												14306	Workshop with stakeholders use of the Water models	The groups of experts trained by the WS-Water4Dev team, supported by JRC staff, will carry out training workshops with the end-users of the Water model, firstly at local level, and subsequently at national scale.	31/12/2017	JRC technical reports
701 - NC-Forest JRC.D.1	503 - ReCaREDD Strengthening regional capacities for reporting on mitigation actions of forest sector	The project will contribute to sustainable forest management by enhancing the capacity of existing institutions to report on their mitigation actions in the forest sector (REDD+) and by providing relevant information to policy makers. This project will use the best available knowledge to engage with partner countries to jointly develop forest monitoring techniques and to strengthen national capacities to report on REDD+ challenging activities, such as forest degradation and forest	JRC.D.1 Frederic ACHARD	9.2.3.b	DEVCO	DEVCO	Ms Cristiana PASCA PALMER HoU, DEVCO.C.2	CLIMA ECHO ENV	FAO - THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO)	13/11/2013 12/05/2018	CON-AA	201701	Technical support to partner countries in Tropics	Scientific & technical support to enhance capacities of developing countries regarding mapping and monitoring of deforestation & forest degradation, and related carbon emissions and sinks (focusing on 10 countries in Sub Saharan Africa, Southeast Asia and South America)	12/11/2017	Training
												201702	Technical assistance to customer DGs	Provision of technical assistance, independent opinion and/or peer review on projects activities, studies and assessments produced in the context of REDD+ or FLEGT with related organisation of expert meetings or workshops	12/11/2017	JRC contributions to policy documents
												201703	Information systems - regional forest observatory	Scientific information systems and databases for regional forest observatories in two or three selected regions (e.g. West and Central Africa, Southeast Asia).	12/11/2017	Scientific information systems and databases
541 - SEED JRC.E.1	1732 - EUROCLIMA 2 Desertification, drought, and crop yield estimation in Latin America under a changing climate	The JRC contribution to EUROCLIMA 2 will address the dissemination and deepening of knowledge about desertification, land degradation and drought as well as on crop growth modelling in Latin America, considering the potential effects of climate change, and allowing to link research results to climate change mitigation and adaptation measures, including where feasible issues of disaster risk management.	JRC.E.1 Paulo BARBOSA FERREIRA	9.2.3.b	DEVCO	DEVCO	Jean-Paul JOULIA	AGRI CLIMA ECHO	UNCCD - United Nations Convention to Combat Desertification (UNCCD) UNEP - United Nations Environment Programme (UNEP)	15/01/2014 30/06/2017	CON-AA	13	Workshop and Training 3	The third and final Workshop should take place at the end of the last year presenting the final results of the project. The third training will be a specific training on web-mapping technology that will allow LA partners to learn how to implement similar web-mapping systems to the one developed in EUROCLIMA. The Workshop could be done in	30/04/2017	Training
												17	Report on climate change adaptation options	Building on deliverable 16 and the knowledge on specific agro-management regions in LA adaptation options identified in close collaboration with LA partner organization will be evaluated in the context of climate change; for example, changed management practices regarding irrigation, crop rotation, tillage, or change of crop varieties. With the help of model simulations qualitative and quantitative estimates of vulnerabilities will be obtained.	31/05/2017	JRC technical reports
												18	Estimates of Climate change impact on yields	Report and accompanying database on bio-physical simulations with the tailored crop growth models to explore potential yields - in comparison to a baseline scenario close to today's conditions - at climate change horizons of 2030 and possibly 2050 on the basis of the previously developed state-of-the-art. climate scenarios.	30/04/2017	JRC technical reports
												20	Conference on agriculture climate change impacts	In this Conference the results of the model simulations, including adaptation options, will be presented to the partner organizations, scientific public, and decision makers. EUROCLIMA 2 results will be confronted with findings of other related climate change studies performed in LA by partner organizations and third party.	30/04/2017	Training
												3	Climate change impacts on land degradation	Methodologies for evaluation/modelling of climate change impacts on land degradation processes will be explored in order to have a better understanding on which degradation processes could be more affected by climate change	31/03/2017	JRC technical reports

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Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
												4	Final land degradation maps	Final land degradation maps will be linked to expected, documented effects of climate variability and change to gain more insight into the cause and effect feedback loops contributing to enhance climate change preparedness.	31/05/2017	JRC technical reports
												5	Economic valuation of land degradation	Economic valuation of land degradation and mitigation options considering the effects of climate change. Human-Environment (H-E) system productivity maps, as well as final land degradation maps, will be linked and integrated with econometric models to contribute to the valuation of land degradation and mitigation options and also considering the effects of climate change.	15/06/2017	JRC technical reports
568 - WEF Nexus JRC.D.2	1757 - MEKROU Water for Growth and Poverty reduction in the Mekrou Transboundary River Basin	The overall objective is to support Economic Green Growth and Poverty Reduction in African countries (Burkina Faso, Benin and Niger) in order to foster peace and security, and to ensure continued water supply to developing areas. The specific objectives are: 1. Establishment of the long-term planning of the Cooperation Framework on Water for Growth in	JRC.D.2 Cesar CARMONA MORENO	9.2.3.b	DEVCO	DEVCO	Andre Liebaert (DEVCO.C.5)		ARC - AGRHYMET Regional Centre (ARC)	01/01/2014 31/12/2017	CON-AA	201701	Annual Report	Report on the activities carried out during the year and will assess the performance of the project, in correspondence with the expected results and based on the project indicators.	31/01/2017	JRC Technical reports
												201702	Final report	A final report highlighting the main outcomes of the project and the main policy recommendations at both national and local levels to ensure the adequate and sustainable application of the support provided by the project.	31/12/2017	JRC Technical reports
568 - WEF Nexus JRC.D.2	2143 - ACE WATER 2 African Center of Excellence Phase 2	Aims at supporting the development of the NEPAD Water African Network of Centres of Excellence in linking research and policy making in the field of transboundary water management. It will enlarge the existing Water Centres of Excellence, currently active in Western and Southern Africa, to Eastern and Central Africa, and facilitate the establishment	JRC.D.2 Cesar CARMONA MORENO	9.2.3.b	DEVCO	DEVCO	Antoine Saintraint (DEVCO C5)			11/12/2015 31/08/2020	CON-AA	1	2016 Annual Report	JRC technical report describing the activities implemented during 2016	15/02/2017	JRC technical reports
												2	2017 Annual Report	JRC technical report describing the activities implemented during 2017	15/02/2018	JRC technical reports
												5	Regional database Hydro-Climatology Data-Prototype	Technical report describing the Architecture of the Data Base and Applications	15/12/2017	JRC technical reports
												6	Regional database Hydro-Climatology Data-Analysis	Technical report describing the Hydro-Climatology Data Analysis	15/12/2018	JRC technical reports
4842 - GCAD JRC.D.6	3784 - GLOBES Global Observatories for Biodiversity and Ecosystems Services	This WPK will further maintain and develop the reference information and underpinning web services that are supporting EU policies on global biodiversity and associated development goals. More precisely, this WPK will maintain and develop the information tools required to assess, monitor and forecast biodiversity and ecosystem services at the global scale (with a focus on protected areas), help the EU ensure maximum aid effectiveness, and underpin indicator development	JRC.D.6 Gregoire DUBOIS	9.2.3.b	DEVCO	JRC	Philippe MAYAUX	AGRI CLIMA ENV GROW	EEA - European Environment Agency EEAS - European External Action Service UN CBD - UN Convention on Biological Diversity UNDP - United Nations Development Programme UNEP - United Nations Environment Programme (UNEP) WB - World Bank	01/01/2017 31/12/2020	INS-RS	1	DOPA database and web services 2017	The reference information generated by the Digital Observatory for Protected Areas (DOPA) needs to be regularly updated with new indicators and with data from the World Database on Protected Areas (WDPA), the IUCN Red List of Threatened Species, the Copernicus Global Land Services and the data produced from DOPA's modeling tools. This information needs to be further processed and distributed through web services.	30/12/2017	Scientific information systems and databases
												2	eConservation 1.0	Who is doing what, where and with what funding in biodiversity and ecosystems conservation? eConservation is a component of the DOPA developed as a web based tool providing assistance with the planning and monitoring of funded projects focusing on biodiversity and ecosystem conservation. The tool will be a searchable interface where projects can be retrieved according to their location, objectives, time frame, budget, the organizations involved (donors and implementing agencies), etc.	01/10/2017	Scientific information systems and databases
568 - WEF Nexus JRC.D.2	3888 - WEF-AFRIMED Nexus perspectives for the Mediterranean region and Africa	The Work Package links technical capacity at the JRC on data, modelling and information systems in Africa and the Mediterranean Neighbourhood to the EC Nexus Dialogues Programme to facilitate mainstreaming of water, energy and food security in regional and global policies. Provide scenario and tradeoff analyses exploring opportunities for economic growth and water-energy-food security in the Mediterranean region and Africa. Help measure progress by countries towards objectives of EU assistance by assessing the effectiveness of investment mechanisms across different sectors (energy, food, industry, urban, environment, tourism) taking into account e.g. structural reasons for resource scarcity, increased urbanization, adaptation to climate change, use of clean technologies and non-conventional supply. By working with regional and international organisations provide assistance to the EU NEXUS Dialogues and Water Diplomacy and bring a stronger nexus brief to water-related discussions in the European Neighbourhood Instruments.	JRC.D.2 Cesar CARMONA MORENO	9.2.3.b	DEVCO	JRC	Paolo Ciccarelli, Antoine Saintraint DG DEVCO C5	ENV HOME NEAR REGIO	FAO - THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO) AMCOW - African Ministers' Council on Water UN ECE - UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE UNEP MAP - Barcelona Convention for the Protection of the Mediterranean Sea Against Pollution (United Nations Environment Programme for the Barcelona Convention) UNESCO IOC - United Nations Educational Scientific and Cultural Organization - Intergovernmental Oceanographic Commission	01/01/2016 31/12/2018	INS-RS	201701	WEF indicators in the Mediterranean region	Development of spatially explicit WEF Nexus indicators for the Mediterranean region through model simulations of water resource availability and quality and allocation across energy and food sectors. The indicators will also contribute to monitor progress against achievements of the SDG targets taking into account their linkages and trade-offs.	29/12/2017	JRC technical reports
												201702	Assessing tradeoffs in the Mediterranean region	Elaboration of socio-economic scenarios through ad-hoc socio-economic surveys and consultations with stakeholders. These scenarios will be tested with the WEF indicators for a gap analysis between current baselines and possible pathways of regional development and for an assessment of synergies and trade-offs leading to policy recommendations.	29/12/2017	Science-for-policy reports
												201703	WEF NEXUS Assessment in the Niger River Basin	Modelling-based assessment supported by stakeholder consultations for the evaluation of the water dependency of food security and the potential for investment in agriculture and energy production in the Niger River basin. Include a feasibility study for a Water NEXUS Module of the e-Station products (GMES&AFRICA, id 5013) to allow the identification and testing of strategies for the development of integrated water management plans in the Niger region under conditions of climate variability.	28/12/2017	Scientific information systems and databases
												201705	WEF interactions assessment: rural electrification	Analyse under a WEF perspective the feasibility of the use of renewables at different scales and the implications of non-traditional vs. traditional energy sources. Impacts on water quality, access to water and irrigation will be considered in the analysis of decision making options. Production costs of electricity from renewables (PV, Bioenergy, Hydropower) will be assessed in Western Africa together with the way in which renewable energies can be developed for rural electrification	31/12/2017	JRC technical reports
												201708	Database for African Atlas on WEF Cooperation-SDGs	Building on the global Atlas on water conflicts 2016, the WEF Cooperation Database will support the development of the regional African Atlas on WEF Cooperation and SDGs. This will be integrated into a Spatial Information System to analyse the impacts of water-related disasters and water availability on water quality, health, access to water and energy/agriculture production and will feed into the development of the EU Migration Index (WPK id 3402)	29/10/2017	Datasets
												201801	e-WATER-NEXUS Module Tool in the e-Station	Integration of the e-WATER-NEXUS module in the e-Station developed by GMES&AFRICA (id 5013) to specifically assess the impact of climate variability on water resources management and availability and the impact on agriculture and socio-economy in transboundary river basins in Africa. The e-Water NEXUS module will be installed in African institutions.	31/12/2018	Technical systems
												201802	African Atlas on WEF Cooperation & SDGs	As a contribution to the definition and implementation of the EC Development policies (DEVCO, EEAS), based on the African WEF DB, the African Atlas on WEF Cooperation and SDGs will stress hotspots of disequilibrium between the different WEF components under different climate variability scenarios, natural resource supply, socio-economic and human demand at multiple spatial scales in Africa. The Atlas will provide GIS layers to feed the development of a EU Migration Index (WPK id 3402)	31/12/2018	Technical systems
												201803	WEF interactions assessment: biogas and waste	Two reports based on expert consultation and considering the impacts on water quality, access to water and irrigation with a focus on the following renewable energy options: - Biogas in West Africa (Feedstock and Resources availability, Conversion, Support Schemes and Market); - Waste to Energy in West Africa (Feedstock and Resources availability, Conversion, Support Schemes and Market)	31/12/2018	JRC technical reports
												201804	WEF NEXUS Assessment in the Mediterranean region	Identification in the WEF context of areas of potential investment opportunities in agriculture, water savings and reuse, and clean energy production in the Mediterranean regions in view of complying with the major Sustainable Development Goals linked to water and food security and clean energy provisioning	30/12/2018	JRC technical reports
												1	BIOPAMA Reference Information System (RIS)	A set of IT tools supporting EU policies on biodiversity and development cooperation by mapping, collating, analysing, validating and communicating in a systematic and digestible way reference data, methods, tools and knowledge	31/12/2017	Scientific information systems and databases
												11	Open DOPA 1.0	Tools for validating global datasets on species, threats and ecosystems in protected areas. The collected data will allow to assess for the first time key information gaps and address information reliability. A first phase in 2017 will develop a prototype of these tools which will subsequently be rolled out during 2018.	31/07/2017	Scientific information systems and databases
												2	BIOPAMA Regional Reference Information System RRRIS	A set of regional instances (nodes) of the BIOPAMA Reference Information System, based on a common technology platform, but reflecting the specific geographic context and thematic priorities of each region, namely: Pacific Islands Protected Area Portal Caribbean Gateway Southern African Development Community Trans-Frontier Conservation Area Portal East African Community Regional Reference Information System Central Africa Forest Observatory / Central African Protected Areas Network Portal	31/12/2017	Scientific information systems and databases

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Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category	
4842 - GCAD JRC.D.6	4902 - BIOPAMA 2 Biodiversity and Protected Areas Management in ACP countries, Phase II	As a follow-up from BIOPAMA, this project will further develop and reinforce the RIS and the existing regional observatories, as well as building new Observatories, and taking the information platform of BIOPAMA to a level where it is directly supporting local, national and regional decision making. The work directly supports the EU Biodiversity for Life Flagship Initiative, national agencies and the UN Convention on Biological Diversity (CBD) in their activities to help developing countries to manage biological resources in a sustainable way, including support to development of DOPA. BIOPAMA 2 will underpin much of the institutional work of project 4842, providing a critical mass of resources, skills and experience in biodiversity, ICT and natural resource management. BIOPAMA 2 is in line with the EU Agenda for Change, the EU Biodiversity Strategy 2020 and contributes directly to at least 4 Sustainable Development Goals and three RIO principles.	JRC.D.6 Stephen PEEDELL	9.2.3.b	DEVCO	DEVCO	Philippe MAYAUX	AGRI CLIMA ENV	ACP - African region Economic Communities AU COM - African Union Commission COMIFAC - Commission des Forêts d'Afrique Centrale (COMIFAC) Forest commission of central africa IUCN - International Union for Conservation of Nature SADC - Southern African Development Community UN CBD - UN Convention on Biological Diversity	01/01/2017 31/12/2022	CON-AA	3	State of Protected Areas	Bi-annual reports for the ACP region, compiled using input from each project region on the state of protected areas, using the knowledge base of the BIOPAMA Reference Information System and its regional nodes	31/12/2018	Science-for-policy reports	
												5	BIOPAMA RIS Training	A package of resources and activities to support the technical capacity building objectives of the project, focused on the RIS and its components, namely: Training course materials, Training courses, workshops to be run within stakeholder regions and institutions On-line learning resources To be done through direct training and training-of-trainers	31/12/2017	Training	
												6	Management Effectiveness and Governance Assessment	Testing, development and enhancement of the IMET (Integrated Management Effectiveness Toolkit), and the analysis and visualisation of the results of the on-site assessments through the BIOPAMA RIS, presented as a JRC Technical Report to be updated every 2 years	31/12/2018	JRC technical reports	
												9	Management Effectiveness & Governance	Review of methods and indicators for assessment of protected areas management and governance, including IMET and equivalent tools	31/12/2018	Article contribution to periodicals or to conference proceedings listed in SCOPUS	
568 - WEF Nexus JRC.D.2	4904 - WEF SENEGAL Managing the Water-Energy-Food Nexus in the Senegal River basin	The Senegal River Basin Development Authority (OMVS, in French) is an organisation grouping Guinea, Mali, Mauritania and Senegal with the purpose of jointly managing the Senegal River and its drainage basin. With the development of important activities in processing industry, water, agriculture and energy, the OMVS aims to promote a sustainable development at economic and human level to stabilise migration in the region. Key issues linked to environmental degradation and water management in the river basin will be considered to identify and implement concrete mitigation and adaptation measures through the integration of a NEXUS Water-Energy-Food Security Dialogue developed at the scale of the river basin. The project aims at fostering sustainable resource management through public policies based on scientific and technical knowledge by the development of data-based products and	JRC.D.2 Cesar CARMONA MORENO	9.2.3.b	DEVCO	DEVCO	Paolo CICCARELLI (DEVCO), Marta MOREN ABAT (ENV)	AGRI ENER ENV	AMCOW - African Ministers' Council on Water NEPAD - OST - New Partnership for Africa's Development (NEPAD)	01/03/2017 31/12/2020	CON-AA	201701	SENEGAL River Basin Baseline Report	Provide an overview of the situation on WEF resources use and allow the definition of the baseline situation in the river basin (Senegal, Mauritania, Mali, Guinea). Inventory of hydro-climatic information from regional climate service centres in order to determine climate change projections to allow the integration of climate change considerations in the existing hydro-economic modelling, provide an overview of the current situation on water resources use and allow the definition of the baseline	31/12/2017	JRC technical reports	
												201702	Development of a WEF NEXUS Dialogue Platform	The objective is to put in place a dialogue platform to determine the WEF Interaction Matrix by combining statistical data (coming from the OMVS and Countries data bases on energy consumption, water withdrawal, agriculture production, irrigation, ...) together with technical parameters a coarse scale. The data will establish the linkages "Water-Energy-Agriculture" and by activity sectors. In a second stage, from the WEF Interaction Matrix, it will be identified collaboration strategies.	31/12/2017	JRC technical reports	
												201801	Development of a Prototype of the Decision Support	Development of a Prototype of a Decision Support System for Environmental Monitoring through the detection of environmental trends and anomalies at the river basin level. The System will contribute to the monitoring of the River Basin Organisation priorities: Water Quality, Environmental Degradation, Impact of the Climate Change and Variability on the water resources and associated economic activities (agriculture, industry, energy production), water accessibility and health of the population.	31/12/2018	Scientific information systems and databases	
564 - CESAR JRC.D.6	5013 - GMES&Africa Global Monitoring of Environment and Security in Africa	The Land Resources Monitoring (LRM) Unit of JRC has been involved from the very beginning in the process launched by the EC in the late '90ies" to support Africa in the use of Earth Observation Technologies for sustainable development. Upon demand of DEV and AIDCO services (now	JRC.D.6 Marco CLERICI	9.2.3.b	DEVCO	DEVCO	Zdenka DOBIASOVA	JRC	ACP Sec - African Caribbean and Pacific (ACP) Secretariat - The Secretariat of the African, Caribbean and Pacific Group of States AMCOW - African Ministers' Council on Water	01/01/2017 31/12/2020	CON-AA	1	eStation 2.0 Evolution	The « Environmental Station » (eStation) is a tool conceived by the JRC in the frame of the AMESD and MESA projects. Its role is to process automatically the data disseminated through the EUMETCast broadcasting system in order to assist the thematic expert in monitoring the environment and in the writing of their reports. Within GMES&Africa it will be maintained and further developed, for including the EO products made available from Sentinel constellation.	31/12/2018	Scientific information systems and databases	
568 - WEF Nexus JRC.D.2	5442 - EC NEXUS-DEV Science supporting the EC-Nexus Dialogues	The EC NEXUS DEV competitive project is inscribed in the framework of the DEVCO project on "EC Nexus Dialogues" Phase I (2016-2018). The project will implement research studies, building up teams of nexus experts from the countries/regions to support "EC Nexus Dialogues" Phase I and to guide Phase II i.e. leveraging of investment projects. The specific objective is to support scientifically the EC nexus processes and dialogues in 2 of the selected 5 regions: Africa (Nile, Niger, Senegal and SADC) and the Neighbourhood (with particular focus on the MENA region) leading to the establishment of scientifically	JRC.D.2 Cesar CARMONA MORENO	9.2.3.b	DEVCO	DEVCO	Antoine SAINTRAINT	ENV NEAR	IUCN - International Union for Conservation of Nature UN ECE - UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE	01/01/2017 31/12/2019	CON-AA	201701	Position Paper on NEXUS-SGDs in Partner Countries	This paper will be complementary to the work to be implemented by the JRC WEF NEXUS institutional project (AFRIMED WPK). Based on a close collaboration with key international organisations working in this domain (IUCN, IWA, UNECE, IASA, the "Geneva Nexus Group", ...), this paper will provide a state of the art, study cases and lessons-learned, technical analysis, ... of the WEF Nexus relevant and directly linked to the SDG goals and their targets and how the latter would be addressed by Policy Make	31/12/2017	JRC technical reports	
												201702	Research support to Africa NEXUS dialogues	Short-term research support following requests from regional nexus dialogues (to be co-defined by DEVCO and JRC in collaboration with GIZ and partners). This activity will be seeking the collaboration of JRC partners such as the NEPAD CoE networks and others regional and international networks. The JRC will provide relevant WEF information and indicators that will feed into the policy-making debate and will be used to inform member states, partner countries and regional organisations.	31/12/2018	JRC technical reports	
9.2.4 Energy																	
9.2.4.a map out and monitor activities, develop geographical information system (GIS) tools, provide technical assistance, share best practice and build capacity in support of international, bilateral, and regional energy cooperation initiatives, including renewable energy.																	
243 - REEU+ JRC.C.2	4480 - CAP4DEV Mapping electrification impacts and sustainable energy planning for African cities	The project supports the implementation of the Covenant of Mayors work on sustainable energy planning to African cities. There are 2 components: 1) Creating a web-based application to show the results and status of the ElectrIF projects in a geographically-based context. 2) Supporting the implementation of the Covenant of Mayors (CoM) in Africa.	JRC.C.2 Sandor SZABO	9.2.4.a	DEVCO	DEVCO	Felice Zaccheo	CLIMA CNECT				CON-AA	1	Creating a web based application for the ElectrIF	JRC will support the selection process within the Electrification Financing Initiative (ElectrIFI). DEVCO requires GIS-based information related to rural electrification projects on a regional scale. The JRC will contribute with its expertise in various energy technologies, GIS data analysis in the energy/electricity sector.	30/06/2018	Scientific information systems and databases
													2	Covenant of Mayors: sust. energy African Cities	The JRC supports the implementation of the Covenant of Mayors (CoM) in Sub-Saharan Africa with adapted methodologies and reporting tools. The JRC will participate in the advisory board of the CoM for Sub-Saharan Africa to share experience from the Covenant EU-28, ENPI East and ENPI South. It is assumed that up to 6 cities of the region will join the CoM.	30/06/2018	Science-for-policy reports
9.2.5 Horizontal policies: aid effectiveness, transparency and policy coherence																	
9.2.5.a Develop methodologies, indicators and ICT tools, and carry out macroeconomic analyses of development issues in support of the agenda for change, policy coherence for development and aid effectiveness; focus on measuring the impact of EU aid.																	
222 - DRMKC JRC.E.1	2061 - DEVCO EAE 2016 TR-AID DEVCOAA	EU Aid Explorer (formerly TR-AID) is a web based corporate tool of the European Commission (https://euaidexplorer.ec.europa.eu). It has been	JRC.E.1 Anjula GARG	9.2.5.a	DEVCO	DEVCO	Erica GERRETSEN (HoU), Ellen Kelly (Policy Officer)	ECHO FPI NEAR	MS EU - Member states EU OECD - Organisation for Economic Co-operation and Development	01/04/2016 31/03/2017	CON-AA	1	New developments implemented within the AA	The final report will contain the details of the tasks implemented for this AA	31/03/2017	JRC technical reports	
222 - DRMKC JRC.E.1	3380 - DEVCOAA 2016-17 DEVCO AA 2016-17	EU Aid Explorer (formerly TR-AID) is a web based corporate tool of the European Commission (https://euaidexplorer.ec.europa.eu). It has been	JRC.E.1 Anjula GARG	9.2.5.a	DEVCO	DEVCO	Erica GERRETSEN (HoU), Ellen Kelly (Policy Officer)	ECHO FPI NEAR	MS EU - Member states EU	01/04/2017 31/03/2018	CON-AA	1	Further developed EAE to meet SDG17	Report on implementation of the AA and its completed tasks. Tasks include development in the EU Aid Explorer to accommodate the requirements of meeting SDG goal 17, target: finance.	31/03/2018	JRC technical reports	
10 A Union of democratic change																	
10.1 Methodological support for better regulation																	
10.1.a competence Centre on Modelling - contribute to highquality impact assessments of policy proposals and policy options, and promote their application at EU and Member State level;																	
6039 - CC-MOD JRC.I.1	2303 - Corporate Modelling Corporate Modelling Inventory & Knowledge Management System	The objectives of the Corporate Modelling Inventory and Support Service work package are to develop and operate a Commission-wide knowledge management tool for modelling, to provide a corporate modelling support service, and to set-up a Community of Practice. The Corporate Modelling inventory - MIDAS - allows anyone working on the Commission network to find models in use in any Commission Service for policy support, and to assess their (re-)use for specific policy purposes. The models reported in MIDAS are interlinked, as they answer complex questions, in particular for activities like ex-ante Impact Assessments. MIDAS captures these interdependencies, and allows to identify synergies early in the process, which leads to greater	JRC.I.1 Nicole OSTLAENDER	10.1.a	SG	JRC	Mona BJORKLUND (SG.C2)	AGRI CLIMA CNECT COMP DEVCO DIGIT ECHO EMPL ENER ENV EPSC ESTAT FISMA GROW HOME MOVE					2017001	MIDAS Corporate 2017	Upgraded corporate modelling inventory and knowledge management system. This will be the result of the technical developments, the coordination of information about the models in use within the different DGs, the Quality Assurance of the inventory (including a review of data management practices), and information provided by the operational CC-MOD.	31/12/2017	Scientific information systems and databases
													2017002	Report: analysis of modelling activities in the EC	Strategic analysis of modelling in the Commission including a gap analysis	31/12/2017	JRC technical reports
													2017003	Report on the ISG-MI and the Community of Practice	The WPK provides the secretariat to the Inter-service Group on Modelling Inventory (ISG-MI), facilitates the Community of Practice on Modelling, and discusses and interacts with other relevant Commission-wide fora (e.g., the Impact Assessment Working Group) to promote a coherent use of modelling in EU policy making. This report summarizes the activities conducted in 2017.	20/12/2017	JRC technical reports
													2018001	Report on the ISG-MI and Community of Practice	The WPK provides the secretariat to the Inter-service Group on Modelling Inventory (ISG-MI), facilitates the Community of Practice on Modelling, and discusses and interacts with other relevant Commission-wide fora (e.g., the Impact Assessment Working Group) to promote a coherent use of modelling in EU policy making. This report summarizes the activities conducted in 2018.	22/12/2018	JRC technical reports

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Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
		efficiency and better results for policy making. Through access to related data, past policy contributions and related publications, MIDAS furthermore enhances the transparency of models and model results used for policy making, and our understanding of the ongoing support within and						NEAR REGIO RTD SANTE TAXUD TRADE				2018002	MIDAS Corporate 2018	Upgraded corporate modelling inventory. This will be the result of new technical developments, the coordination of information about the models in use within the different DGs, the Quality Assurance of the inventory, and information provided by the operational CC-MOD. This version supports the corporate business processes related to the running, updating and evolution of the modelling inventory towards open science for better regulation.	22/12/2018	Scientific information systems and databases
6039 - CC-MOD JRC.1.1	3812 - BASELINE SCENARIOS Baseline scenarios for a long term integrated policy assessment in the EU	The objective of this Work Package is to improve the quality and consistency of baseline scenarios used for the policy modelling at the Commission. In close collaboration with modelling teams and the relevant policy DGs, currently used baseline scenarios in the modelling support for policy will be mapped and compared across models. Based on these insights, a number of harmonised baseline scenarios will be elaborated. The constructed baseline scenarios will be used for policy impact assessment by modelling teams, they will ensure that the output of different models is more directly comparable.	JRC.1.1 Eckehard ROSENBAUM	10.1.a	SG	JRC	Stephen White (DG ENV.A.2) stephen.white@ec.europa.eu; Viviane Andre (DG ENV.A.2) viviane.andre@ec.europa.eu	ENV EPSC ESTAT GROW SG	EEA - European Environment Agency OECD - Organisation for Economic Co-operation and Development (OECD)	01/01/2016 31/12/2018	INS-RS	2017001	Identification and comparison of baseline scenario	Identification, mapping and comparison of baseline scenarios for different policy areas including proposals for a methodology for developing a harmonised baseline scenario.	20/06/2017	Science-for-policy reports
												2017002	Scenario-building methodology: A literature review	A comprehensive literature review outlining different existing methodologies for building scenarios used in foresight and modelling, that is, linking qualitative and quantitative research, allowing the identification of a methodology that can be applied to designing baseline scenarios.	30/06/2017	JRC technical reports
												2017003	Development of harmonised baseline scenarios	Jointly with modelling teams and relevant policy DGs, harmonised baseline scenarios will be developed for a number of policy areas. Among others, this deliverable will contribute to the development of a post-2016 EU Reference Scenario.	15/12/2017	Science-for-policy reports
												2017004	Workshop with "Community of Experienced"	An interactive workshop with the community of those who have experience in linking qualitative and quantitative research, to collaboratively identify ways of merging the respective methodologies.	31/12/2017	Training
												2018001	Implementation and testing of baseline scenarios	Implementation and testing of alternative baseline scenarios using a suitable set of models with a view to examine the implications of different assumptions for key variables such as population trends or energy prices for trends in GDP growth, energy use and emissions.	30/06/2018	Science-for-policy reports
6039 - CC-MOD JRC.1.1	5029 - SAMO_2 Sensitivity Analysis of Model Output	This work-package is part of the competence centre "Modelling" with focus on sensitivity analysis and uncertainty quantification. These tools are increasingly employed by practitioners in any field of science for the assessment, validation and verification of simulation models and computer codes in the presence of uncertainty. The JRC is world leader in this subject, contributing with its competence to the methodological development and the diffusion of the discipline worldwide. The objective is to keep track of all scientific advancements in the field of Sensitivity analysis, contribute to this advancements with new methods (research), and to assist, guide and educate JRC staff (training) and other DGs of the European Commission (policy support and training) in the set up and execution of sensitivity analyses, and facilitate the acquisition of skills. The SAMO workpackage will provide ad-hoc support to Policy DGs on model quality assurance. In the impact assessment guidelines the Secretariat General (SECGEN) recommends the use of mathematical models and their quality assurance. Sensitivity analysis is recommended as a tool for quality assurance in the toolboxes of the impact assessment guidelines.	JRC.1.1 Daniel ALBRECHT	10.1.a	SG	JRC	Mona BJORKLUND HARRATI	ENER REGIO		01/01/2017 31/12/2018	INS-RS	SAMO200	Sensitivity analysis of the RHOMOLO Model	The work package will support the competence centre on modelling by performing sensitivity analysis and uncertainty quantification of the RHOMOLO Model.	31/12/2018	Science-for-policy reports
												SAMO201	Ad-hoc support to DG-REGIO	In collaboration with DG REGIO, we will investigate sensitivity analysis methodologies for improving the quality of econometric models used to identify the major determinants of regional economic growth. The results will be beneficial to the discussion on the future design and conduct of Cohesion Policy (post-2020).	31/12/2018	JRC technical reports
												SAMO202	Uncertainty and sensitivity analysis of the SHERPA	JRC.C.5 developed an integrated assessment model - SHERPA - to support regional and local decision makers to assess expected changes in pollution levels driven by different policy options. As SHERPA potentially helps policy makers to decide of the best local air quality policies, quality insurance through uncertainty and sensitivity analysis of the SHERPA turns out to be indispensable.	31/12/2017	JRC technical reports
												SAMO203	Sensitivity analysis of a Gas Supply model	In collaboration with JRC.C.3, a review will be carried out to study how Sensitivity Analysis (SA) can be used in security of gas supply. It aims to improve the operation of gas transmission systems, especially in cases of gas crises. A case study will be developed. The SA methods will certainly help improving the quality of models such as GEMFLOW, ProGasNet or EUGAS. Results can be used in support of DG-ENER and the implementation of Regulation 994/2010.	31/12/2017	Science-for-policy reports
												SAMO204	Support - Lab. of Interoperability of Smart Grids	The work package will contribute to the upgrading of the methodology of design of experiments currently being devised in the laboratory of interoperability of smart grids. This will optimize the execution of simulations and real experiments.	31/12/2018	JRC technical reports
												SAMO206	Training course - Sensitivity Analysis to JRC staff	This training course will give an overview of the field of Sensitivity Analysis to a selected number of JRC colleagues that need in their daily activities the use of computer codes with uncertainty in their inputs. Practical, hands-on training will also be given in the course.	31/12/2017	Training
												SAMO207	Methodological advances in sensitivity analysis	To maintain the world leadership of the JRC, continuous research is needed in cooperation with members of JRC scientific network in order to develop new methodologies of sensitivity analysis. One scientific journal article on methodological advances in sensitivity analysis will be published.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												SAMO208	Syllabus on Sensitivity Analysis	A syllabus with first principles and hands-on on Sensitivity Analysis, including case studies from different areas of science, research and industry, will be written both with contributions from JRC staff and external experts in SA.	31/12/2017	Books and monographs with JRC editorship
												SAMO209	Training course - sensitivity analysis to EC staff	This training course will give an overview of the field of sensitivity Analysis to a selected number of EC colleagues that need in their daily activities the use of computer codes with uncertainty in their inputs. Practical, hands-on training will also be given in the course.	31/12/2018	Training
												SAMO210	Summer School on Sensitivity Analysis 2018	This is the tenth summer school organized by the JRC since 1999. Summer schools on sensitivity analysis are organized every two years to attract students and researchers worldwide. The number of participants is kept below 40 to allow better interaction between lecturers and students. The school lecturers are JRC staff as well as experts from academia that belong to the JRC scientific network.	31/12/2018	Training
												SAMO211	Methodological advances in Sensitivity Analysis	Following the review of RHOMOLO and gas supply models - made in collaboration with REGIO.B.3 and JRC.C.3, new sensitivity analysis methodologies can be developed. One scientific journal article on methodological advances in sensitivity analysis will be published.	31/12/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												SAMO212	Handbook on Sensitivity Analysis	Syllabus (2017) will be completed and converted in a multi-authored handbook with first principles on Sensitivity Analysis (Sensitivity Analysis), including case studies from different areas of science, research and industry. The handbook will be written both with contributions from JRC staff and external experts in Sensitivity Analysis. Wiley is a priori the most likely publisher.	31/12/2018	Books and monographs with JRC editorship
6039 - CC-MOD JRC.1.1	5240 - SMCE Social Multi-Criteria Evaluation	Multi-Criteria Evaluation builds on formal modelling techniques serving the purposes of decision and policy making; in the policy cycle, it refers to the policy formulation step. When a public policy needs to be implemented (at a European, National or regional level), there is a need of comparing different options and valuating and evaluating them (ex-ante) to assess their social attractiveness. The main achievement of Social Multi-Criteria Evaluation (SMCE) is the fact that the use of various evaluation criteria has a direct translation in	JRC.1.1 Giuseppe MUNDA	10.1.a	SG	JRC	Mona BJORKLUND HARRATI	CNECT DEVCO REGIO	Tech Serv - Member States and their Technical Services/type approval authorities	01/01/2017 31/12/2017	INS-RS	1	Impact Assessment	Multi-criteria evaluation is an obvious tool for impact assessment. It has already been included into the SecGen Better Regulation Tool Box. JRC and DG Connect extensively commented that part of the document. A specific approach devoted to EC impact assessment needs can be developed in collaboration with policy DGs (in particular collaborations with DG Connect have already been planned).	31/12/2017	JRC technical reports
												3	Multi-Criteria Evaluation in environmental policy	The objective is to produce a survey of the theoretical foundations, mathematical implementations and empirical applications of multi-criteria evaluation of environmental policies. In particular: a) the basic ideas of MCE considering the technical, empirical and epistemological aspects, b) the main mathematical aggregation procedures that are employed in MCE and c) the future research directions.	31/12/2017	JRC technical reports
6039 - CC-MOD JRC.1.1	5241 - MODEL QUALITY REVIEW Model quality and transparency assurance	The objective of this Work Package is to facilitate the transparency and quality of models used by the Commission. To achieve this objective, the CC-MOD organises scientific reviews of the model quality and transparency. The model review is done by external experts from academics with involvement of the CC-MOD. First, the workhorse models used by the Commission will be reviewed.	JRC.1.1 D'ARTIS KANCS	10.1.a	SG	JRC	Mona BJORKLUND HARRATI	AGRI CLIMA CNECT COMP DEVCO EAC ECFIN EMPL	Tech Serv - Member States and their Technical Services/type approval authorities	01/01/2017 31/12/2017	INS-RS	2017001	Scientific dissemination of the modelling work	The deliverable will provide outlet for the scientific dissemination of the modelling work.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index
												2017002	Technical dissemination of the modelling work	The deliverable will provide outlet for the technical dissemination of the modelling work.	31/12/2017	JRC technical reports

10.1.b competence Centre on Microeconomic Evaluation - provide technical advice, methodological support, specialised training and exchange on counterfactual impact evaluations;

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603 - CC-ME JRC.1.1	3945 - CC-ME.BR-REFIT Competence Centre on Microeconomic Evaluation - BR and REFIT	The objective of this WP is to deliver advice on technical issues associated with ex post evaluation of interventions in line with the "Better regulation for better results - An EU agenda". This will have a particular focus on REFIT initiatives. More specifically, this work-package will include: A. Advice to DGs on technical issues associated with ex post evaluation of interventions B. Participation in the steering of CIE analysis on selected REFIT evaluations and other ex post quantifications of impact under the "Better regulation agenda"	JRC.1.1 PAOLO PARUOLO	10.1.b	SG	JRC	Jonathon STOODLEY			01/01/2016 31/12/2017	INS-RS	4	Training on CIE analysis (data and methods)	To provide training to all policy DGs on ex-post evaluation, and on the needed conditions for this to be feasible and effective in the EU policy cycle. These conditions include: -data availability, linkage and collection; -presence of proper competencies in house and in the private sector; -needed policies for an efficient market for providers of CIE;	30/11/2017	Training
												5	Advice on devising appropriate CIE	Advice to policy DGs on technical issues associated with ex post evaluation of interventions addressed to individuals or firms (micro units). CC-CE.SG will advise on the most appropriate ex-post CIE methods to use and on data collection requirements for REFIT and other ex post evaluation studies of programmes addressed to individuals or firms (micro units).	31/12/2017	Training
												6	Econometric study on REFIT data	In case data on some ex post REFIT evaluation is available, an econometric study on its impact will be carried out.	31/12/2017	JRC technical reports
603 - CC-ME JRC.1.1	3981 - CC-ME.INST Competence Centre on Microeconomic Evaluation - Institutional	This work-package contains the core institutional activities of the Competence Centre on Counterfactual Evaluation, that are needed to deliver on its stated goals and services. These activities will be synergistic with respect to the support work foreseen under the remaining work-packages tailored to the needs of SG or policy DGs. (CC-ME.SG, -GROW, -RTD, -EAC, -CRIE III) In particular they will be centered around important policy questions, with special reference to counterfactual impact evaluation methods and applications to labour, education, inequality, migration, competitiveness, growth. Many of the foreseen output reports are relevant for the economic as well as social impact of policies of the European Union.	JRC.1.1 PAOLO PARUOLO	10.1.b	SG	JRC	Jonathon STOODLEY	EAC ECFIN EMPL		01/01/2016 31/12/2017	INS-UR	5	Parental job loss on children's education	Does an economic crisis have adverse effects on the next generations? A large body of literature has shown that job loss reduces future career prospects, future earnings and affects negatively marital stability and health status of the unemployed. However, the evidence on the intergenerational effects of job loss is still scarce. The aim of this project is fill this gap and estimate the effect of parental job loss, on children's educational attainment, using longitudinal data.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in SCOPUS
												6	Technology shocks and labour market dynamics	The paper investigates the effects of technology shocks on sectoral employment and gross job flows. A multi-sector model of the labour market and a distinction neutral and investment-specific technological progress will be considered. If firms can update their technology fast and/or costless, technological obsolescence is delayed, while if technological choices are irreversible and updating is costly, the outcome bears more with the creative-destruction dynamics.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in SCOPUS
												7	The long-lasting effects of cognitive abilities	The aim of this project is to estimate the long-term effect of cognitive abilities in early in life on human capital in adulthood using the recent Survey of Health, Ageing and Retirement in Europe (SHARE). In particular, interest will centre on a wide range of adult outcomes measured at age 50 or more (e.g health status, cognitive abilities, financial literacy). The SHARE survey, interviews adults in 12 European countries, allowing us to estimate returns to math and language skills.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in SCOPUS
												8	Tax amnesty and the distribution of earnings	The aim of this paper is to analyse the effect of tax amnesties on the distribution of earnings. The identification strategy is based on the idea that the taxpayers' behaviour in terms of tax evasion changes across the implementation of the reform. The econometric analysis is carried out within the Difference-in-Differences approach framework by using the Changes-in-Changes method in order to extend the estimation of effects to quantiles of whole income distribution.	31/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
10.1.c competence Centre on Composite Indicators and Scoreboards - contribute to developing monitoring and benchmarking tools.																
661 - COIN JRC.1.1	1030 - COIN_International Strengthening the JRC International network on Composite Indicators & Scoreboards	The WP includes six strands of activity: (a) support to EU Member States requests on the revision of indicator frameworks (e.g. request by P. Altmair's office on measuring well-being in Germany), (b) audits of composite indicators and indicator frameworks conducted by the JRC upon request of international organizations and EC services that are active in the EU and international policy arena, (c) extending the functionalities of the COIN Explorer (a JRC platform under development in 2016 that maps indices and scoreboards in use by the EC and helps drawing country-specific policy recommendations), (d) production of the new version of the JRC-OECD Handbook on Composite Indicators and Scoreboards, (e) research activities on methodological advances for composite indicators, (f) training to EC officials (& open to the wider public where applicable) on the development quality assurance, communication and visualization of composite indicators and scoreboards. Currently, 19 requests for JRC audits are being considered: (1) MIT Lab on the development of a walkability index (together with the KC on Territorial Development and DG REGIO), (2) World Intellectual Property Organization on the Global Innovation Index, (3) INSEAD business school on the Global Talent Competitiveness Index (4) NESTA on the European Digital City Index, (5) Tax Justice Network on the Financial Secrecy Index, (6) GSMA on the Mobile Connectivity Index, (7) ITU on the Cybersecurity Index, (8) Elcano on the Global Presence Index, (9) UN on Justice Index for Arab regions, (10) UN Human Development Index, (11) European Institute for Gender Equality on the European Gender Equality Index, (12) UNICEF on Child Poverty, (13) JRC and partners on the Index for Risk Management (INFORM), (14) European Central Bank on the Systemic Risk Heatmaps for the EU Member States, (15) George Mason University on the Global Women Entrepreneur Leaders Scorecard, (16) European Monitoring Centre for Drugs and Drug Addiction on drug addiction indicators and patterns in the EU Member States, (17) ITU on the ICT Development Index, (18) Yale and Columbia University on the	JRC.1.1 Michaela SAISANA	10.1.c	JRC	JRC	Michaela SAISANA	- Yale University - MASSACHUSETTS INSTITUTE OF TECHNOLOGY - Columbia University FAO - THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO) ECB - European Central Bank EMCDDA - European Monitoring Centre for Drugs and Drug Addiction INSEAD - Institut européen d'administration des affaires ITU - International Telecommunication Union OECD - Organisation for Economic Co-operation and Development (OECD) UN ECE - UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE UNDP - United Nations Development Programme		01/01/2014 31/12/2018	INS-UR	2017001	JRC audit European gender equality index	Series of (at least 4) JRC audit reports (either contributions to monographs or JRC technical reports) that describe the statistical properties and sensitivity of global (or EU) composite indicators. These JRC audits are to be conducted upon invitation of key partners who shape international policies through the development of international indices. These indices have to be of direct relevance to Commission priorities.	25/11/2017	Article contribution to a monograph or other periodicals
												2017002	JRC audit global talent competitiveness index	Series of (at least 4) JRC audit reports (either contributions to monographs or JRC technical reports) that describe the statistical properties and sensitivity of international composite indicators. These JRC audits are to be conducted upon invitation of key partners who shape international policies through the development of international indices. These indices have to be of direct relevance to Commission priorities.	22/10/2017	Article contribution to a monograph or other periodicals
												2017003	JRC audit Cyber security index	Series of (at least 4) JRC audit reports (either contributions to monographs or JRC technical reports) that describe the statistical properties and sensitivity of international composite indicators. These JRC audits are to be conducted upon invitation of key partners who shape international policies through the development of international indices. These indices have to be of direct relevance to Commission priorities.	28/10/2017	JRC technical reports
												2017004	JRC audit global innovation index	Series of (at least 4) JRC audit reports (either contributions to monographs or JRC technical reports) that describe the statistical properties and sensitivity of international composite indicators. These JRC audits are to be conducted upon invitation of key partners who shape international policies through the development of international indices. These indices have to be of direct relevance to Commission priorities.	15/12/2017	JRC technical reports
												2017005	Academic publications on composite indicators 1	A series of academic publications (at least 4) with key institutional partners in the network on topics related to Commission priorities that are monitored through indicator scoreboards or composite indicators. These articles will aim at advancing the understanding and monitoring of multidimensional phenomena (both methodological advances and literature reviews).	15/12/2017	Article contribution to periodicals or to conference proceedings listed in SCOPUS
												2017006	JRC audit of an international index Other	Series of (at least 1) JRC audit reports (either contributions to monographs or JRC technical reports) that describe the statistical properties and sensitivity of international composite indicators. These JRC audits are to be conducted upon invitation of key partners who shape international policies through the development of international indices. These indices have to be of direct relevance to Commission priorities.	31/12/2017	Article contribution to a monograph or other periodicals
												2017007	Academic publication 3	A series of academic publications (at least 4) with key institutional partners in the network on topics related to Commission priorities that are monitored through indicator scoreboards or composite indicators. These articles will aim at advancing the understanding and monitoring of multidimensional phenomena (both methodological advances and literature reviews).	30/11/2017	Article contribution to periodicals or to conference proceedings listed in SCOPUS
												2017009	Trainings on Composite Indicators 1	The JRC will organize at least 1 event (training, seminar, workshop) with key institutional/academic partners in the network on topics related to Commission priorities that are monitored through indicator scoreboards and composite indicators.	15/12/2017	Training
												2017011	Monitoring micro-credit and labour market outcomes	Access to microcredit can help offset the adverse effects of the financial crisis by promoting new business initiatives for individuals who have otherwise no access to credit. The objective of this research activity is to explore the possibility to monitor micro-credit effectiveness on business survival and labor market outcomes using data from microfinance institutions.	18/12/2017	Science-for-policy reports
												2017012	COIN Tool-Excel - Updates	Update and addition of new functionalities to the COIN Tool, an Excel based guide developed by COIN (beta version 2016) that "automatically" assesses some of the statistical validity properties and robustness of composite indicators.	20/07/2017	Scientific information systems and databases
												2017013	COIN Explorer Platform-Update	Update to the COIN Explorer (beta version 2016), an open access platform to hundreds of indices and scoreboards in use by the EC. The platform provides quick access to the index definition and aims, conceptual framework, underlying indicators, short methodological description, interactive visualisation of results, and related documents where these indices are used and/or support the EU policy formulation and impact assessment.	28/10/2017	Scientific information systems and databases
												2017014	COIN Tool User's Guide - Update	Update to the User's Guide for the COIN tool, which helps index developers to "automatically" assess some of the statistical properties and robustness of their composite indicators and scoreboards	30/09/2017	JRC technical reports

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		Key Performance Indicators on Smart Sustainable Cities.										2017017	Handbook on Composite Indicators & Scoreboards	Ten years of its release, a revised and updated version of the 2008 JRC-OECD Handbook on Constructing Composite Indicators will be produced that notably extends the content of the Handbook in terms of methods used, lessons learned from the more than 100 JRC audits on composite indicators, case studies analysed and key recommendations when using indicator frameworks to draw policy conclusions. The drafting of the report is ongoing since 2016.	02/05/2018	JRC technical reports
												2018015	Towards an EU Walkability Index	The report builds on existing literature and aims at proposing a WALKABILITY INDEX for the EU (at neighbourhood, city and functional urban area level). Policy goals underpinning the index development: to promote low-carbon mobility, increase road safety, promote physical activity of local populations. The index could further inform urban planning in the EU. [jointly by the CC on Composite Indicators and Scoreboards, the KC on Territorial Development, the REGIOTRANS project, MIT lab, DG REGIO].	30/09/2018	Science-for-policy reports
												2018016	Well-being in Germany	Upon request of P.Altmaier's office, this report will assess the way well-being is currently monitored in Germany. It will aim at providing suggestions and recommendations for the refinement and further development of the indicator framework and will assess the sensitivity of the key findings to the methodological and normative assumptions.	30/09/2018	JRC technical reports
661 - COIN JRC.1.1	3962 - Consumers&Markets Monitoring & Benchmarking tools for JUST, GROW, EMPL	The WP includes institutional activities in support to three policy DGs. (1) [DG JUST] Consumer Conditions and Markets. Better consumer conditions, together with a proper functioning of the internal market, contribute to boosting economic growth and consumers' welfare. This study aims at helping to improve the Consumer Conditions Scoreboard and the Consumer Markets Scoreboard as tools for monitoring the integration and efficiency of the Single Market, and to distil key policy recommendations. It is a follow up to a three year AA with DG JUST that ended in September 2015. (2) [DG GROW] Retail Market Scoreboard & CLP and REACH regulations – enforcement monitoring. First, the JRC will assess the current version of the Retail Market Scoreboard, which offers an overview of the functioning of the retail sector, will analyze the properties of restrictiveness indicators and whether these could form part of the Retail Market Scoreboard, and look into the possible improvement of E-commerce country knowledge and integrating e-commerce data in the analysis of the retail sector. These analyses will complement the efforts of DG GROW, and will serve as an evidence base for recommendations drawn in the	JRC.1.1 MARCOS DOMINGUEZ TORREIRO	10.1.c	EMPL	JRC	Lars Michael ENGSTED	GROW JUST	- NATIONAL INSTITUTE FOR CONSUMER RESEARCH - European Consumers' Organisation - CONSUMERS INTERNATIONAL - CONSUMERS ASSOCIATION THE QUALITY OF LIFE OECD - Organisation for Economic Co-operation and Development (OECD) Reg Aut Empl - Candidate Countries / Members States regulatory authorities on Employment	01/01/2016 20/12/2018	INS-RS	2017001	Flexicurity: the EU Approach to Labour Market	As per the recent request of DG EMPL (Martin Uebe, DG EMPL B1 unit), the JRC will also update the statistical analysis of the EMCO-modified list of indicators adopted by the Commission to monitor the four components of flexicurity. The statistical analysis will	31/08/2017	JRC technical reports
												2017002	Social Benchmarks	In line with the Five Presidents report, this report will propose social benchmarks for different population groups and in areas like childcare, minimum income, skills, unemployment benefits and common standards for public administration. The social benchmarks will be defined in terms of upper and lower limits between which countries should place themselves, by having 'corridors' within which national systems would range.	27/10/2017	Science-for-policy reports
												2017003	CLP & REACH regulations: Scoreboard	This report delves into the conceptual framework and methodological steps undertaken for the development, statistical analysis and drawing policy inference of a scoreboard that aims at monitoring the enforcement of two key regulations on chemicals: REACH and CLP.	30/09/2017	JRC technical reports
												2017004	Social AAA Scoreboard	This report delves into the conceptual framework and methodological steps undertaken for the development, statistical analysis, visualisation and drawing policy inference of a scoreboard that monitor progress towards a social AAA to underpin the European Pillar of Social Rights (EPSR) along three key dimensions: equality of opportunities; dynamic, flexible and fair labour market; and solidarity.	31/05/2017	Science-for-policy reports
												2018001	JRC revision to the Retail Market Scoreboard	In line with the Single Market Strategy (section on retailers), this report will assess the current version of the Retail Market Scoreboard, which offers an overview of the functioning of the retail sector. The report will analyze the properties of restrictiveness indicators and whether these could form part of the Retail Market Scoreboard. It will also look into the possible improvement of E-commerce country knowledge and integrating e-commerce data in the analysis of the retail sector.	26/07/2018	Science-for-policy reports
												2018002	Report on Markets compensatory features	The report will aim to capture markets that can compensate for each other and feed this information in the indicator frameworks for the consumer markets scoreboard.	30/11/2018	JRC technical reports
661 - COIN JRC.1.1	3967 - Budget&more Indicator frameworks for BUDG, ECFIN	The WP includes institutional support to two policy DGs. (1) [DG BUDG] Budget Focused on Results. In line with the Juncker Commission key priority to focus the EU budget on achieving policy and programme results, the JRC will conduct analytical work in this area, complementing last year's activity and proposal for a methodology on performance based budgeting tailor-made to the current and next multi annual financial framework. (2) [DG ECFIN] International Policy Coordination & Macroeconomic Imbalances Procedure Scoreboard (MIP). First, the JRC will support the development of scoreboards and indicators in international policy coordination. Currently, the G20 are discussing the scope for developing a	JRC.1.1 WILLIAM EDWARD BECKER	10.1.c	BUDG	JRC	Carnaccini Marco	ECFIN SG		01/01/2016 20/07/2018	INS-RS	2017001	Literature review on the EU budget reforms	This report aims at providing a thorough review of the key findings on the impact of EU budget-related reforms and outlining future directions. It will also review studies on the territorial redistributive power of the EU Budget and summarise the empirical evidence at national and regional level in the EU.	30/09/2017	Science-for-policy reports
												2017002	Macroeconomic Imbalances Procedure scoreboard	This report delves into the statistical associations between the components of the MIP and the robust clustering of Member States along the MIP components in order to complement existing policy inferences on the monitoring of macroeconomic imbalances in the EU.	30/09/2017	JRC technical reports
												2018001	Recommendations on the G20 MAP framework	This report will review bottlenecks related to the Mutual Assessment Process (MAP), an economic coordination strategy that aims at both monitoring and supporting G20 countries in their follow through on commitments made under the "Framework for Strong, Sustainable and Balanced Growth". Yet, the MAP's indicative guidelines and commitment have been considered not clear enough to ensure accountability and cooperation of member states. A feasible indicator framework will be proposed.	30/09/2018	Science-for-policy reports
661 - COIN JRC.1.1	3968 - C3Monitor&more Monitoring & Benchmarking tools for EAC, RTD, NEAR, DIGIT, CNECT, GROW	The WP includes institutional activity in support to six policy DGs. (1) [DG EAC] C3 Monitor; European Institute of Innovation and Technology (EIT) and Marie Skłodowska-Curie actions (MSCA); Public spending and educational outcomes. First, the JRC will develop the Cultural and Creative Cities Monitor, following request of the JRC Director General and in agreement with Commissioner Navracsics. It is an evaluation tool that aims at monitoring cultural and creative initiatives at city level in Europe and at assessing the impact of specific culture-oriented initiatives on cities' economic and social development. The tool could help to better prioritise resources and to advocate for building upon one of Europe's key strengths: its talented and diverse creative population, with a focus on smart specialization in terms of cultural and creative activities. Second, the JRC will study the inter-linkages, statistical coherence of the "key performance indicators" frameworks identified in "Horizon 2020 indicators - Assessing the results and impact of Horizon" aiming to measure the fulfilment of the EIT and MSCA strategic objectives. This will include a feasibility study of developing summary indicators as well as ways for effective data visualization. The outcomes will further strengthen the monitoring of the implementation of Horizon 2020. Third, the JRC will delve into the linkages between education spending and educational outcomes in the EU. (2) [DG GROW] Audit of the EC Innovation Union Scoreboard & Summary Innovation Index. The JRC will assess the statistical soundness of the index and the impact of key modelling assumptions on the country scores. This analysis will serve as a quality control of the index and the indicator	JRC.1.1 Michaela SAISANA	10.1.c	EAC	JRC	TIBOR NAVRACSICS	CNECT DIGIT GROW NEAR RTD - MASSACHUSETTS INSTITUTE OF TECHNOLOGY FGFAF - Fraunhofer Gesellschaft zur Förderung der Angewandten Forschung E.V. WIPO - World Intellectual Property Organization		01/01/2016 31/12/2018	INS-RS	2017001	Update of the C3 Monitor	Update and further development (with additional functionalities) of the interactive visualization tool (data and communication of results) for the Cultural and Creative Cities Monitor.	30/11/2017	Scientific information systems and databases
												2017002	Update of the C3 Monitor - Methodology	A methodological report that describes the refinements and updates to the Cultural and Creative Cities Monitor. This report will build on suggestions and comments by city representatives, academics and EU policy makers (following presentation of the C3 monitor at various workshops and international conferences).	30/11/2017	JRC technical reports
												2017003	Validation report- Summary Innovation Index	The JRC assessment of the EC Summary Innovation Index will focus on two main questions: (a) Is the index multi-level structure statistically coherent? (b) What is the impact of modelling assumptions on the index ranking? This report will answer these questions and highlight issues where the developing team may further reflect upon in order to improve the index framework and the related policy recommendations.	30/09/2017	JRC technical reports
												2017004	Impact of EIT & MSCA	The study delves into the inter-linkages, statistical coherence of the "key performance indicators" frameworks identified in "Horizon 2020 indicators - Assessing the results and impact of Horizon" aiming to measure the fulfilment of the European Institute of Innovation and Technology (EIT) and Marie Skłodowska-Curie actions (MSCA) strategic objectives. This study will include a feasibility study of developing summary indicators as well as ways for effective data visualization.	31/10/2017	JRC technical reports
												2017005	Public spending and educational outcomes	The study delves into the links between education spending and educational outcomes in the EU aiming to analyse to what extent higher spending in education (measured either as percentage of GDP or per capita) translate into higher educational outcomes. The associations between educational spending and inequality of opportunity will also be analysed. The impacts of education spending on educational achievements and economic growth will be reviewed thoroughly.	31/05/2017	Science-for-policy reports
												2017006	Insights in the Creative Europe Programme	A synthetic report that provides specific insights about the contribution of Creative Europe's funded-projects to the development of a vibrant cultural scene and creative economy in Europe, approximated by data coming from the C3 Monitor. This work would help complement both the mid-term and final evaluation report that the European Commission will submit by 31 December 2017 (mid-term).	30/09/2017	Science-for-policy reports
												2018001	Governance in the Neighborhood countries	This report will assess the statistical properties and reliability of eight existing composite indicators that were developed by international organizations, and which have been selected by DG NEAR in order to monitor progress of Neighborhood countries on issues related to Governance, Rule of Law, Press Freedom, and other. The key findings of the report will contribute to DG NEAR's better policy recommendations to neighborhood countries.	30/11/2018	JRC technical reports
		The WP includes institutional activities in support to five policy DGs. (1) [DG ENV] Environmental Pressures Index. The JRC will revise the current version of the indicator framework underpinning the monitoring of environmental pressures and risks in the EU MS over the last decade. The aim is to arrive at reliable annual maps of environmental pressures across the European countries. (2) [DG CLIMA & DG AGRIF] Heat Wave Magnitude Index daily & Human Exposure Heatwave Risk Index. Th										2017001	Heatwave under COP21 agreement	The COP21 agreement, signed in Paris on December 2015 by 195 countries, is designed to reduce greenhouse gas emissions and limit the average rise in global temperatures to well below 2 °C above pre-industrial times. This report calculates climate indices that measure the intensity duration and frequency of heat wave events. It will identify those regions that will be most impacted by heat waves when global mean temperature will reach 2oC global mean temperature.	25/11/2017	Science-for-policy reports
												2017002	Impacts of climate extreme hazards	This report studies the impact of climate extreme hazards on population, agriculture and the economy using different composite indicators. The indices will be calculated both for past and future climate conditions using simulated daily temperatures (Coupled Model Intercomparison Project Phase 5- CMIP5).	28/10/2017	Science-for-policy reports

JRC 2017- 2018 WORK PROGRAMME																	
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category	
661 - COIN JRC.1.1	3970 - Environment&Climate Indices for ENV, CLIMA, ENER, REGIO, AGRI	JRC will continue working on the further development of these indices that allow one to evaluate the impacts of global warming of 1.5°C and 2°C above pre-industrial levels and showing how the translation of CO2 emissions into regional and impact-related climate targets could be more powerful because such targets are more directly aligned with individual national interests. (3) [DG ENER] Indicators for monitoring the evolution of EU energy poverty and vulnerability. The JRC will work on a proposal of a coherent and robust set of indicators to measure the evolution of EU energy poverty and vulnerability and monitor progress against predefined goals. A "workable" definition of energy poverty will be proposed and the related indicator framework will be developed in such a way, so as to bring different streams of information together and thus help to form an assessment of recent developments relevant to alleviating energy poverty and reducing vulnerability. The indicator framework will also be helpful in evidencing best practices in the Member States and in identifying remaining bottlenecks in the Internal Energy Market. (4) [DG REGIO] EU Strategy for the Adriatic Region. The JRC will assess the feasibility of using composite indicators to follow the	JRC.1.1 SIMONE RUSSO	10.1.c	ENV	JRC	Barbara BACIGALUPI	AGRI ENER REGIO	IPCC - Intergovernmental Panel on Climate Change WCRP - World Climate Research Programme (WCRP) WMO - World Meteorological Organization (WMO)	01/03/2016 31/12/2018	INS-RS	2017003	Climate change and energy consumption	The study advances the literature on how climate change affects energy demand systems. It projects the effects of climate change on housing energy demands in the EU. It examines the prospects for saving energy with advanced building designs in the context of potential global warming.	18/11/2017	Science-for-policy reports	
												2017004	Forum on the Impacts of Climate Change	Policy Research Forum on evaluating the impacts of climate change in the EU on five key dimensions: health, agriculture, finance, migration, infrastructures. The Forum aims at stimulating the policy debate on the impacts of climate change by confronting the lessons learned from the different perspectives of policy makers, researchers and practitioners and therefore identifying the way ahead. Climate Change Mitigation Policies will be identified.	30/06/2017	Science-for-policy reports	
												2018001	Monitoring EU energy poverty & vulnerability	The report aims at proposing a coherent and robust set of indicators to measure the evolution of EU energy poverty and vulnerability and monitor progress against predefined goals. A "workable" definition of energy poverty will be proposed and the related indicator framework will be developed. The findings are expected to be helpful in evidencing best practices in the Member States and in identifying remaining bottlenecks in the Internal Energy Market.	30/09/2018	Science-for-policy reports	
												2018002	Environmental Pressures Index: Policy implications	This report describes the policy implications for the EU Member States that stem from the key findings of the analysis of the environmental pressures index and its underlying indicator framework (ongoing JRC work in 2016 in support to ENV).	30/11/2018	Science-for-policy reports	
												2018003	Indices for the EU Strategy on the Adriatic Region	The JRC will assess the feasibility of developing and using composite indicators to follow the advancement of the EU Strategy on the Adriatic and Ionian Region (EUSAIR) along key dimensions. The Adriatic and Ionian region faces a number of challenges, such as environmental degradation, inefficient transport connections and a lack of strong trans-border cooperation. The EUSAIR aims to tackle these challenges by promoting economic growth and prosperity in the Adriatic-Ionian region.	30/11/2018	Science-for-policy reports	
10.2 Support for innovative policymaking																	
10.2.a support innovation in EU policymaking through the development of generic tools and processes, including anticipation, behavioural insights, design for policy, citizens engagement, media monitoring, data, and text mining.																	
213 - TMA CC JRC.1.3	438 - EMM Media Monitoring and Open Source Information Analysis for Policy Support	Advance, maintain and operate multi-lingual data harvesting and analysis components of JRC European Media Monitor-EMM, to provide timely and relevant information on open source news and publications in support to EU policy. Develop tools	JRC.1.3 Charles MACMILLAN	10.2.a	JRC	JRC	Charles MACMILLAN	CNECT COMM DGT EAC ECHO	Council EU - Council of the European Union ECDC - European Centre for Disease Control EEAS - European External Action	01/01/2017 29/12/2020	INS-RS	438201700	Text Mining Analysis and Media Monitoring	Research and development of text mining and analysis capabilities to further the quality and capabilities of the current software and services supported by EMM. Respond to Institutional ad-hoc requests for advice on, or execution of text mining and analysis tasks. Deliver the systems, operational support and services to meet the objectives of the EMM work package. This deliverable will be linked to a number of publications and releases of	31/12/2017	Technical systems	
213 - TMA CC JRC.1.3	2781 - TIM Tools for Innovation Monitoring	This work package applies text mining and analysis techniques to the field of Innovation and technological development. Technologies and innovations that are known are monitored from their inception to them entering the market. Databases related to innovation are connected and then processed by complex text mining engines. Example of databases are: Patents (Patstat + full text patents), Publications, Trademarks, Companies, News... Various visualisation concepts are then developed to explore the data: from small datasets with high granularity (e.g. technology monitoring) to large datasets with low granularity (e.g. urban innovation). Various automated monitoring tools are then developed, combining various databases and visualisation concepts, to bring data to policy makers and allow better understanding of innovation and technological development: - "TIM Edge" monitors emerging technologies. Goal: help policy makers (PM) to timely address technological evolutions and disruptions by developing proper policies. System launched end 2016. - "TIM Territories" visualises innovation at the level of city/regions/countries. Goal: support decision-	JRC.1.3 Olivier EULAERTS	10.2.a	JRC	JRC	Olivier EULAERTS	AGRI CNECT ENER ENV ESTAT GROW MOVE REGIO RTD			01/01/2015 30/12/2018	INS-RS	1	TIM Edge 2.0	A version 2.0 of the TIM Edge system (launched end 2016) will be implemented before end 2017. Bugs will be fixed, additional functionalities implemented, composite indicators for technological development will be developed and added, additional emerging technologies will be added after e.g. a crowd sourcing exercise.	31/12/2017	Scientific information systems and databases
													11	TIM for EDA 1.0	This activity is performed in the context of the collaboration between JRC and the European Defence Agency. A pilot system will be developed before the signature of an Administrative Arrangement with the Agency. Specific tasks: Development of a monitoring system for tracking technologies and news related to the field of Defence. This work package brings together EMM (G2) and TIM.	31/12/2017	Scientific information systems and databases
													12	TIM Technology Editor 2.0	The deliverable is the tool for creation and management of datasets about innovation. It is the tool on which all other TIM products rely. It is accessible to all Commission staff (end 2016) + staff of other EU institutions (Parliament, council, OLAF, EIB/EIF, ...) + staff of 6 executive research agencies. TIM Tech Editor allows its users to create their own datasets and explore the data using all functionalities of TIM. This second version integrates new developments and other fixes.	31/12/2017	Scientific information systems and databases
													6	TIM for the EUIPO/OHIM	The European Union IP Observatory and the OHIM both have a marked interest in JRC skills in text mining, both for media and innovation domains. Within the context of JRC and OHIM collaboration, recently reinforced by both Directors-General, this project will: - develop a technology and media monitoring system for technologies related to the mandate of the EUIPO; - develop a visual interface for visualisation of the trademark registry. This project might be framed into an AA after a pilot phase	02/04/2018	Scientific information systems and databases
													7	TIM Tech - Energy	This deliverable aims at developing a customised and automated technology watch system to monitor technological development in the field of Energy. This deliverable is a collaboration with the SETIS team (unit F6).	30/06/2017	Scientific information systems and databases
624 - KNOWQUALITY JRC.1.1	2880 - JRCXSTS Science and Technology Studies	This work package is integral part of the Competence Centre on Modelling. Consolidation of a strong competence on critical thinking using Science and Technology Studies (STS) across the JRC, through raising awareness, capacity building on specific methods, establishment of interdisciplinary spaces of collaboration within existing projects, and in general contributing to develop a culture of reflexivity and quality assurance that a boundary institution such as the JRC ought to preserve. This WP puts a strong emphasis on implementing citizen engagement about science and technology that is relevant for policy making as well as an interdisciplinary space where natural and social sciences, as well as the humanities and the arts meet to examine a policy relevant scientific issue with the aim of exploring and assuring social robustness of policy relevant science. Deepening the interface with other ways of knowing is understood here as a matter of quality assurance of policy making by the relevant extended peer communities. The WP will apply methodologies from the STS field to different policy files where science is relevant.	JRC.1.1 Angela MARTINHO GUIMARAES PIRES PEREIRA	10.2.a	RTD	JRC	Rene VON SCHOMBERG	CNECT EMPL GROW RTD SG			01/01/2015 31/12/2019	INS-RS	1	Science and Technology Studies Seminar Series	A series of invited seminars (contro-corrente STS talks) with renowned scholars and practitioners of science and technology studies will be organised, aiming at raising awareness of science and technology studies and how these types of reflexive activities can help with scientific practice at the JRC. At least four seminars per year (2017 and 2018) will be organised. The set of talks will be eventually published as a book available to all staff.	14/12/2017	Training
													2	DIY Science and Technology - quality issues	Study of social and ethical issues as quality issues arising in the realms of DIY science. It explores quality assurance as social robustness.	21/12/2018	Books and monographs with JRC editorship
													Arctic	Citizen Engagement with Arctic Communities	In the framework of WP 4915 (ARCTIC, 4856) Unit 1.1 will cooperate with Unit C.5 in order to develop a concept paper about broader societal engagement of the Arctic communities in governing their environment and livelihoods tapping into different ways of knowing namely "traditional knowledge" and its links with art and science. This paper will include a review of existing engagements and will outline best practices as well as discuss the types of issues in need of societal engagement.	22/12/2017	JRC technical reports
													NatureWork	Nature of Work	Organisation of citizen engagement on the institutional file "Nature of Work" (JRC.A.1). It will explore the following contributing to the policy discussions: a) What are the expectations, imaginaries and suggestions from citizens as to the future of work? How do they relate to possible policies? b) Is the "collaborative economy" the only emerging form of "occupation", "jobs" and work? c) What are the possible impacts of social and ethical nature of current narratives about future of work.	14/12/2017	Science-for-policy reports
													STSTraining	STS Capacity Building	Organisation of training on Public Engagement and other STS methods at the JRC and other services of the European Commission in the framework of the Better Regulation Toolbox.	22/12/2017	Training
213 - TMA CC JRC.1.3	3348 - EMM2016 DG COMM EMM SERVICES 2016	Support to DG COMM. This AA covers all technical operational work to support the media monitoring activities of DG COMM. This includes the operational work on EMM (Internet Media)	JRC.1.3 Marco VERILE	10.2.a	COMM	COMM	CATTOIR Philippe (COMM)			01/04/2016 31/03/2017	CON-AA	201701	EC Media Monitoring	Improved media monitoring and analysis tools for a better informed and aware EC at all levels, enabling EC services to deliver their key aims, which is to provide the Union with the necessary impetus for its development and to define the general political directions and priorities thereof.	31/03/2017	Science-for-policy reports	
213 - TMA CC JRC.1.3	3462 - EMM2017 DG COMM EMM SERVICES 2017	Support to DG COMM. This AA covers all technical operational work to support the media monitoring activities of DG COMM. This includes the operational work on EMM (Internet Media)	JRC.1.3 Marco VERILE	10.2.a	COMM	COMM	CATTOIR Philippe (COMM)			01/04/2017 31/03/2018	CON-AA	D1	EC media Monitoring	Improved media monitoring and analysis tools for a better informed and aware EC at all levels, enabling EC services to deliver their key aims, which is to provide the Union with the necessary impetus for its development and to define the general political directions and priorities thereof.	31/03/2018	Technical systems	
213 - TMA CC JRC.1.3	3464 - MOSES2017 Council Media Monitoring 2017	Further development and customisation of a Media Monitoring system for the Council General Secretariat on request of the Council DG for Press, Communication and Transparency, Reijo	JRC.1.3 Marco VERILE	10.2.a	COMM	CONS	T De Remiro Crespo			01/01/2017 31/12/2017	CON-AA	346401	European Council Media Monitoring	Improved media monitoring and analysis tools for a better informed and aware European Council, enabling it to deliver its aims, which is to provide the Union with the necessary impetus for its development and to define the general political directions and priorities thereof.	31/12/2017	Technical systems	
213 - TMA CC JRC.1.3	3466 - EPMM2016 European Parliament Media Monitoring 2016	Development and customisation of a Media Monitoring platform based on the components developed for Commission's DG COMM, on	JRC.1.3 Marco VERILE	10.2.a	COMM	EP	Floerintina Citu			01/04/2016 31/03/2017	CON-AA	346601	EP Media Monitor	Improved media monitoring and analysis tools for a better informed and aware European Parliament assisting it to provide the Union with the necessary impetus for EU policy and to define the general political directions and priorities thereof.	31/03/2017	Technical systems	
		The project will demonstrate how open source software and hardware, digital maker practices and open design can be effectively used by local										3	Guidelines for storylines in Making Sense Toolkit	Predefine the structure and curate the participant's storylines during the pilots, by using visual, textual and multimedia/online elements, e.g. taking and posting picture or screenshot of work-in-progress; 15 sec video summarizing work uploaded and archived on Instagram with hashtags; posts on social media sites as Twitter and Facebook; posts in YouTube and Flickr; short reflective paragraphs about their project and processes; project sketches on Instrutable; and final 4m video.	30/06/2017	Science-for-policy reports	

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
624 - KNOWQUALITY JRC.1.1	3623 - MAKINGSENSE Making Sense	communities to adapt environmental monitoring tools, make sense of their local territories and address pressing environmental problems in air, water, soil and sound pollution. The project will develop a Making Sense Toolkit, based on the Smart Citizen platform, and test it in pilots in Amsterdam, Barcelona and Prishtina. Based on the pilots, the project will develop a conceptual and methodological framework for participatory environmental practices. It will show how to provide citizens and communities with appropriate tools to enhance their everyday environmental awareness, to enable active intervention in their surroundings, and to change their individual and collective practices. Partners: Waag Society (NL), Institute of Advanced Architecture of Catalunya/IAAC/FabLab BCN (ES), Dundee University (UK) and Peer Education Network/PEN (KS).	JRC.1.1 Alexandre POLVORA	10.2.a	CNECT	CNECT	Fabrizio SESTINI	ENV RTD		01/11/2015 30/10/2017	CON-IA	4	Impact assessment	Define a set of indicators and tools able to assess technical and social changes deriving from the project's activities. Collect and analyze data from the Smart Citizen Platform, website and social media profiles; conduct initial and final surveys to participants in the pilots and also in-depth interviews with selected participants; and carry out content analysis of Making Sense Toolkits.	30/09/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												6	Video documentary	Contribute to the making of a documentary showcasing the highlights of the 3 pilots, interviews with community members and champions, project leaders and experts. It will be shared online and at events.	30/11/2017	Public information documents
												7	Final results	All partners of the project will contribute to disseminating the results in Europe, and also globally, via publications in peer-reviewed scientific journals.	30/11/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
402 - EUPolicyLab JRC.1.2	3765 - FOR-KNOW Foresight knowledge management and advance	The objective of this workpackage is the infrastructure knowledge base for the foresight work of the unit. The workpackage serve also as umbrella for other foresight activities of the unit aiming at contributing to the strengthening of the foresight knowledge base and the foresight toolbox of the Unit. For 2017, one objective for 2017 is to pilot and test through sense-making sessions the repository of global trends on specific policy issues (i.e. the future of education, migration, water management). Another objective aims at having the JRC working more systematically with SG (as	JRC.1.2 Fabiana SCAPOLO	10.2.a	SG	JRC	n/a	DEVCO EAC EMPL SG	- United Nations Environment Programme FAO - THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO) OECD - Organisation for Economic Co-operation and Development (OECD)	04/01/2016 31/12/2018	INS-RS	3	Report on sense making sessions on global trends	The report will provide a summary of the outcomes of the sense making sessions and will offer a reading of the influence of global trends in a system thinking logic of policy issues	29/09/2017	Science-for-policy reports
												4	Synergies of disciplines to policymaking	This report will illustrate and discuss how different disciplines (e.g. foresight, behavioural insights, design for policy) can build on synergies and become a more effective tools in supporting evidence based policy and how these disciplines can streamline activities where possible to become complementary to each other. The report will also gather insights from the discussion in a workshop where experts from the different disciplines are brought together to discuss synergies.	31/01/2017	Science-for-policy reports
												5	New version of serious game	The report will provide new variations of the serious game on different application areas and new version of the serious game applied to different scenarios developed by other organisation (i.e. OECD scenarios on migration).	29/09/2017	Science-for-policy reports
402 - EUPolicyLab JRC.1.2	3779 - DESIGN4POLICY Design for policymaking	This is an umbrella WP that brings together the activities of the EU Policy Lab where experimentation, co-design and innovation in policy making are central. Building on the tools and results developed in the first design for policy pilot projects implemented in 2016, the EU Policy Lab will engage with SG on one policy challenge: The challenge is the implementation of the new stakeholder consultation policies of the Better Regulation Package (BRP). Several innovations have been introduced by the BRP, and mainstreaming these changes across the Commission presents important challenges, ranging from the uptake of new procedures to a change of culture towards the integration of consultation as a key element of policy development and implementation. Service design methods will be used to identify the main problems	JRC.1.2 EMANUELE CUCCILLATO	10.2.a	SG	JRC	Carmen Preising, HoU SG C4	CNECT		01/01/2016 28/12/2018	INS-RS	2017001	Additional pilots co-design for EU policies	Additional pilots will be designed with policy DGs addressing concrete problems with two main objectives: 1) to find tailored solutions, and 2) to draw lessons that can be fed into the a final report, covering applicability of methods and policy impacts.	15/09/2017	Science-for-policy reports
												2017002	Service design for better stakeholder consultation	The report includes an overview of the process and methods used; a synthesis of the insights generated in the exploratory research; the service model for providing stakeholder consultation support services to DGs; an implementation roadmap with prototyping and testing of selected services; recommendations to the SG for future application and possible extension to other policy areas; review of the learnings from a methodological point of view.	31/10/2017	Science-for-policy reports
												2017003	Innovation in policy making	The report will on one hand present an analytical analysis of the lessons and opportunities drew from the pilots, and on the other hand offer recommendations to embed methods and techniques for innovative EU policy making processes.	15/12/2017	Science-for-policy reports
												2017004	Masterclasses on new approaches to policy	A series of masterclasses to train JRC and other Commission and EP staff will be organised in 2016 and 2017 on relevant methods and concepts for innovative policy making and implementation in the areas of foresight, behavioural insights and design. When adequate, masterclasses will be combined with lectures to be organized in collaboration with the EP.	15/12/2017	Training
402 - EUPolicyLab JRC.1.2	3802 - BIs4EU Behavioural Insights for EU Policies	This work package has a fourfold objective: 1) raise awareness among policy-makers on the utility of behavioural insights, and promote them to make policy interventions more effective through the identification of "behavioural elements" (the behavioural determinants of the success of a policy intervention) and "behavioural levers" (what activates those determinants); 2) systematise the application of behavioural insights to EU policy-making, and increase their	JRC.1.2 Emanuele CIRIOLO	10.2.a	JRC	JRC	n/a			01/01/2016 31/12/2017	INS-RS	10	Behavioural Insights at work: 2017 Annual Report	In full coordination with WP 3283 (BESTIP), this report will be composed of tables documenting the JRC's contribution to behavioural projects by EC services in 2016. It shall document concrete, traceable contributions to EC behavioural projects and demonstrate the breadth and depth of support being offered by the JRC. This is a shared deliverable with WP 3283 (BESTIP), where it appears as Deliverable 5.	15/12/2017	Science-for-policy reports
												5	Training	In coordination with JRC.1.2 and JRC.1.3 Units, build on the already existing general knowledge of behavioural sciences and focus on what is fit for the EU policy context. Deliver trainings with a focus on the specific practical needs of Commission officials, describing how in the policy-making process behavioural evidence can be incorporated (e.g., impact assessment, evaluation).	31/12/2017	Conferences and workshops organized by the JRC
624 - KNOWQUALITY JRC.1.1	3947 - QUALITYPRACTICE Sensitivity Auditing and other Quality Assurance Tools	This work package implements in practice the ideas of quality assurance firmly rooted in the quality concepts developed within the Post-normal Science framework and in Science and Technology Studies. It will not only critically reflect on prevalent narratives that underpin policy making in Europe but it will also examine knowledge inputs to policy making files using a toolbox of quality assurance methodologies (qualitative and quantitative), which includes amongst others: •Extended peer review •Sensitivity auditing •Pedigree analysis •Quantitative story-telling •NUSAP (notational system to diagnose uncertainty in science for policy) •Social multi-criteria evaluation •Ethics The work package will develop activities for capacity building at the JRC and "rough guidance" for practitioners, addressed mainly to JRC researchers, to assist them in using these	JRC.1.1 Angela MARTINHO GUIMARAES PIRES PEREIRA	10.2.a	SG	JRC	Mona BJORKLUND HARRATI	CLIMA CNECT ENER GROW JRC RTD		01/01/2016 31/12/2019	INS-RS	1	Knowledge Assessment of prevalent narratives in EU	Series of Inspirational expert workshops with academics and practitioners, inviting a critical reflection about the narratives and grand challenges that underpin European policy making, in themes such as: inequality, fairness, nexus security, crisis of the scientific enterprise, politics of anticipatory research, democratic deficit, etc. all issues of direct interest of DG RTD/DDG1-A4 and beyond. Outcomes include reports and other scientific publications.	21/12/2018	Science-for-policy reports
												2	Knowledge Quality Assessment Studies	Through knowledge quality assurance methodologies, such as "extended peer review", "quantitative story-telling", "sensitivity auditing", "pedigree analysis" and other social research methods, this deliverable consists of a service that performs assessment of knowledge inputs to policy making in selected institutional files to be decided.	21/12/2018	JRC technical reports
												3	Quality Assurance in a DIY era	A PhD project focusing on frameworks of knowledge assessment in an era where expertise is highly distributed and not confined to traditional systems of knowledge production, as well as received notions of excellence, validity and relevance need inquiry. The project will examine DIY science, including citizen science, open science formats, maker spaces, etc.	15/12/2018	PhD thesis
												SAuditingClimate	Climate change	In collaboration with Unit JRC.E.1, Project 4846, Unit 1.1 will look into selected climatic simulation models using sensitivity auditing methodologies in order to understand the impacts of those assumptions in climate policy. Furthermore, it will explore extensions to current modelling activities by deploying institutional analysis, public engagement and social multi-criteria evaluation methodologies in the development and assessment of climate change adaptation scenarios.	22/12/2017	JRC technical reports

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
213 - TMA CC JRC.I.3	4280 - TIMTAG TIM TAG	The aim is to produce a powerful tagging software that receives a text as input and is able to tag relevant words. A tagging system is an important first step for several automated text analysis processes, for improving search engines and for automatic clustering and classification of documents. TimTag will be dedicated to the tagging of scientific texts, whether from scientific papers, patents, books, reports or other sources written in English. To achieve good results the tagging system will contain a knowledge base of concept/entity that is built by merging state-of-the-art specialised databases. The tagging system will be a standalone tag system, composed by two different subsystems.	JRC.I.3 NAIS MIELE	10.2.a	JRC	n/a	n/a			04/01/2016 31/03/2017	INS-PC	1	Tagging software	The aim is to produce a powerful tagging software that receives a text as input and is able to tag relevant words. A tagging system is an important first step for several automated text analysis processes, for improving search engines and for automatic clustering and classification of documents. TimTag will be dedicated to the tagging of scientific texts, whether from scientific papers, patents, books, reports or other sources written in English.	31/03/2017	Scientific information systems and databases
761 - SciArt JRC.A.5	4305 - SciArt Art for Science in a policy support context	This work package provides the theoretical and practical foundations for a much closer collaboration between artists, scientists and policy makers than we currently have in the JRC, in pursuit of a more interdisciplinary and exploratory JRC agenda in the coming years. Epistemological research will be carried out, with a survey of current practices, a summer school with experts, a workshop with artists, etc., to develop an improved understanding of the opportunities and benefits of an integrated art and science approach as well as a well-founded JRC policy proposal.	JRC.A.5 Adriaan EECKELS	10.2.a	JRC	JRC	--	CNECT RTD		01/01/2016 30/12/2019	INS-RS	201701	JRC 2017 Resonances Festival	A Festival that is the result of the 2016 Summer School, exhibiting installations developed by JRC scientists in collaboration with artists, with the aim of developing innovative ways of communicating science to scientists, policy makers and the public. It will also highlight practical examples of the benefits of the close collaboration between different knowledge systems and disciplines.	30/11/2017	Conferences and workshops organized by the JRC
												201702	Review article	Review publication on the philosophical developments in Art and Science in the last fifty years, from the specific viewpoint of an emerging paradigm shift visible for example in French structuralist philosophy, science studies and emerging 'SciArt'. The review will also include a census of existing SciArt programmes in the major research centres like the MIT, CERN and Sciences Po (Paris). Attention will be given to the influence of global warming on epistemological practices.	14/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												201703	2017 SciArt Summer School: Big Data	Organisation of a summer school on SciArt on the theme 'Big Data' with participation of JRC scientists, artists and policy makers. The Summer School should be a mix of conference and SciArt workshop in preparation of the 2018 Resonances Festival.	30/09/2017	Science-for-policy reports
												201704	Embedded Artists Programme	Develop, organize and maintain an 'Embedded Artist' programme for the JRC. Set up the organisation, liaison between artist(s) and scientists. This deliverable is subject to changes following the results of the 2016 Summer School Round Table.monitoring, objectives.	01/10/2017	JRC technical reports
												201705	Catalogue for the 2017 Resonances Festival	Catalogue to be finalised before the opening of the 2017 edition of the Resonances festival.	31/10/2017	Books and monographs with JRC editorship
												201706	Collaboration Agreements with SciArt Players	Establish a collaboration with one or more SciArt institutions, separate or joint, whether public or private, scientific or artistic. Find and define synergies, strategies, exchanges, taking care that complementary measures reinforce and enhance the action range of all institutions involved. This deliverable is subject to changes following the results of the 2016 Summer School Round Table.monitoring, objectives.	31/12/2017	JRC contributions to standards
												201707	Critical Metaphor Analysis of the Lisbon Strategy	Investigation of a corpus of EU policy documents originating in the mid-80s until 2013 to critically analyse the use of the metaphors in the policies centred on competitiveness, growth and jobs.	20/12/2017	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
												201801	Organise the 2018 Embedded Artists Programme	Organise the 2018 edition of the Embedded Artist programme, complete with 2017 Report, call for expression of interest, selection and logistics. This deliverable is subject to changes following the results of the 2016 Summer School Round Table.monitoring, objectives.	01/03/2018	JRC technical reports
												201802	2018 Resonances Catalogue	Prepare and publish catalogue for the 2018 Resonances Festival, in time for the opening of the Festival. This deliverable is subject to changes following the results of the 2016 Summer School Round Table.monitoring, objectives.	30/11/2017	Books and monographs with JRC editorship
												201803	2018 edition of the Resonances Festival	Organise the 2018 edition of the Resonances Festival, based on the results of the Workshop of the 2017 Summer School, complete with events, talks, performances, in a European city to be decided, making it a success. This deliverable is subject to the results of the policy debate during the 2016 Summer School/Round Table.	30/09/2018	Science-for-policy reports
												201804	2018 Summer School	Organise the 2018 edition of the SciArt Summer School, with a theme to be decided, continuing the tradition of Conference/Symposium/Round Table coupled to a workshop between artists, scientists and policy makers, in preparation of the 2019 Resonances Festival. Make sure that the workshop is a success, proposing new collaborative works of art/installations by scientists/artists, of a high communicative and/or artistic level. Subject to the results of the policy 2016 Summer School Policy Debate.	30/09/2018	Science-for-policy reports
												201805	Review Article on SciArt Programme	Publish a review article on the results of the first three years of the JRC SciArt programme, taking into account the philosophical/epistemological/art historical context and building on the 2017 article. This deliverable is subject to the results of the policy debate during the 2016 Summer School/Round Table.	31/12/2018	Article contribution to a monograph or other periodicals
												201806	Participate to SciArt Conferences/Exhibitions	Participate to at least two or more SciArt Conferences/Exhibitions, making sure to disseminate nature and benefits of the JRC SciArt project within the art and museum networks. This deliverable is subject to the results of the policy debate during the 2016 Summer School/Round Table.	31/12/2018	Article contribution to a monograph or other periodicals
781 - MAGIC JRC.I.1	4400 - Nexus-DiSp Nexus Dialogue Space	This WP represents the main contribution of the JRC to the project MAGIC even if the JRC contributes to other work packages of the project	JRC.I.1 Angela MARTINHO GUIMARAES PIRES PEREIRA	10.2.a	RTD	RTD	Frederik ACCOE	CLIMA CNECT ENER		01/06/2016 31/05/2020	CON-IA	1	NEXUS DIALOGUE SPACE	Platform for the interaction of MAGIC with EU staff using a dedicated web application of the project (briefs, feedbacks, FAQ, help-line). This deliverable includes the concept note	15/06/2017	Scientific information systems and databases
213 - TMA CC JRC.I.3	4907 - MOSES2018 Council Media Monitoring 2018	Further development and customisation of a Media Monitoring system for the Council General Secretariat on request of the Council DG for Press, Communication and Transparency, Reijo	JRC.I.3 Marco VERILE	10.2.a	COMM	CONS	T. De Ramiro Crespo			01/01/2018 31/12/2018	CON-AA	D1	European Council Media Monitoring	Improved media monitoring and analysis tools for a better informed and aware European Council, enabling it to deliver its aims, which is to provide the Union with the necessary impetus for its development and to define the general political directions and priorities thereof.	31/12/2018	Technical systems
213 - TMA CC JRC.I.3	4908 - EPMM2017 European Parliament Media Monitoring 2017	Development and customisation of a Media Monitoring platform based on the components developed for Commission's DG COMM, on	JRC.I.3 Marco VERILE	10.2.a	COMM	EP	Florentina Ciltu			01/04/2017 31/03/2018	CON-AA	D1	EP Media Monitor	Improved media monitoring and analysis tools for a better informed and aware European Parliament assisting it to provide the Union with the necessary impetus for EU policy and to define the general political directions and priorities thereof.	30/03/2018	Technical systems
213 - TMA CC JRC.I.3	4909 - EMM2018 DG COMM EMM SERVICES 2018	Support to DG COMM. This AA covers all technical operational work to support the media monitoring activities of DG COMM. This includes the operational work on EMM (Internet Media	JRC.I.3 Marco VERILE	10.2.a	COMM	COMM	Philippe CATTOIR			01/04/2018 31/03/2019	CON-AA	D1	EC media Monitoring	Improved media monitoring and analysis tools for a better informed and aware EC at all levels, enabling EC services to deliver their key aims, which is to provide the Union with the necessary impetus for its development and to define the general political directions and priorities thereof.	31/03/2019	Technical systems

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213 - TMA CC JRC.I.3	4910 - EPM2018 European Parliament Media Monitoring 2018	Development and customisation of a Media Monitoring platform based on the components developed for Commission's DG COMM, on this work package will conceptualise and implement a makerspace for the JRC: Thinkers 'n' Tinkers. A Makerspace is a physical open space oriented towards community engagement. It is a space where people can gather and share their experience and expertise as well as work on their projects, developing critical thinking about what they develop. Makerspaces are specifically designed to promote active participation, knowledge sharing, citizenship and collaboration of its users through experimentation and exploration. The concept shall target at least two sites of the JRC: Ispra and Petten. To start with a first development will be Ispra. This will be done in straight collaboration with two other units at the JRC: E.4 (WP 4020) and B.6 (WP 3826) but it shall be completely open to ALL units of the JRC. Specifically, Unit E.4 is developing a IoT security and trust testing framework, within project ARMOUR (WP 4020) for DG CNECT, which needs to build a testing space to define a compliance test suite to ensure interoperability between IoT systems and connected Plug'n'Play smart objects. This testing space is conceived in the form of makerspace; hence, Thinkers 'n' Tinkers will be	JRC.I.3 Marco VERILE	10.2.a	COMM	EP	CILTU Fiorentina			01/04/2018 31/03/2019	CON-AA	D1	EP Media Monitor	Improved media monitoring and analysis tools for a better informed and aware European Parliament assisting it to provide the Union with the necessary impetus for EU policy and to define the general political directions and priorities thereof.	31/03/2019	Technical systems
624 - KNOWQUALITY JRC.I.1	4941 - MAKER-TNT Developing a Makerspace at the JRC		JRC.I.1 Angela MARTINHO GUIMARAES PIRES PEREIRA	10.2.a	CNECT	JRC	Georgios TSELENTIS	JRC RTD		02/01/2017 20/12/2019	INS-PC	ENGAGEMENTair	Air Quality	We will use the makerspace to engage citizenry on building sensors and apps to collect environmental data that will feed into the Citizen Science platform developed by JRC.B.6 (WP 3826). A first case on air quality will be experimented, where together with sensing activities also deliberative activities will take place where citizens are engaged in a conversation about collaborative partnerships for better air quality in urban environments	30/03/2018	Article contribution to periodicals or to conference proceedings listed in the Thomson-Reuters' Science Citation Index Expanded (SCI-e) or Social Science Citation Index (SSCI)
213 - TMA CC JRC.I.3	5107 - TIM TRENDS TIM - Trends in science and	The detection and the monitoring of emerging trends in technological development and in	JRC.I.3 Olivier EULAERTS	10.2.a	JRC	JRC	Olivier EULAERTS	RTD		01/01/2017 03/10/2018	INS-RS	1	TIM TRENDS 0.1	First pilot system to detect trends in science and innovation using computational linguistics, text mining, network analysis.	30/06/2019	Scientific information systems and
5102 - BIs JRC.I.2	5110 - BIsBIAP Follow-up of Behavioural Insights	This is a follow-up of the flagship JRC publication, BIAP 2016. This activity will entail a strengthening	JRC.I.2 Emanuele CIRIOLO	10.2.a	JRC	JRC	n/a	SG		01/01/2017 31/12/2018	INS-RS	1	Behavioural Insights Applied to Policy 2018	A follow up of Behavioural Insights Applied to Policy, European Report 2016.	30/03/2018	Science-for-policy reports
5102 - BIs JRC.I.2	5113 - BIsSupport BIs support activity for policy DGs	The EC already applied BIs to policymaking across a number of policy areas, including consumer protection, competition, environment, energy, and health, to name just a few. This activity will entail BIs support to a number of policy DGs - besides those with whom we have already working (i.e.,	JRC.I.2 Emanuele CIRIOLO	10.2.a	JUST	JRC	Lucie DAVOINE	CLIMA CNECT COMM DIGIT ENER		01/01/2017 31/12/2018	INS-ER	1	3rd Policy Brief of Behavioural Studies for EU	Series of JRC Policy Briefs on applying behavioural insights to EU policy-making. It will build on the JRC's experience of providing behavioural support to EU policy-making. It will focus qualitative methodology for behavioural studies in EU policy-making building on the experience of JRC providing BIs in support to EU policymaking. It focuses on qualitative methodologies for BI studies on EU policymaking.	16/06/2017	Science-for-policy reports
5102 - BIs JRC.I.2	5114 - BIsHorizontal Training and horizontal activities on BIs	Since the creation of the UK Behavioural Insights Team, a large number of UK Government officials benefited from training on BIs. Likewise, the World Bank has provided training on social norms and a	JRC.I.2 Emanuele CIRIOLO	10.2.a	SG	JRC	HAAG Marcel (SG), Marcel.Haag@ec.europa.eu	HR SG		01/01/2017 31/12/2018	INS-RS	1	Behavioural Insights at work: 2017 Annual Report	This report will be composed of tables documenting the JRC's contribution to behavioural projects by EC services in 2016-17. It shall document concrete and traceable contributions and demonstrate the breadth and depth of support being offered by the JRC to policy DGs.	30/09/2017	Science-for-policy reports
213 - TMA CC JRC.I.3	5128 - TIM GPA TIM - Grant and Proposal Analyser	There is an increasing pressure on the European Commission for better spending of public money and for impact assessment of funding decisions. This adds to the pressure of doing more with less	JRC.I.3 Olivier EULAERTS	10.2.a	JRC	JRC	Olivier EULAERTS	AGRI BUDG CLIMA CNECT	EACI - Executive Agency for Competitiveness & Innovation (EACI) REA - Research Executive Agency of the European Commission	01/01/2017 31/12/2018	INS-RS	1	TIM GPA 1.0	First version of a software to manage and exploit knowledge contained in grant/proposal databases of the Commission. This version 1.0 includes a customised interface, integration of various databases, ECAS login, website interface.	28/06/2018	Scientific information systems and databases
402 - EUPolicyLab JRC.I.2	5132 - PILPROLAB EP Pilot project on policy labs	The 'Labs for Europe' aims at connecting EU policy making with policy labs. The objectives are to	JRC.I.2 Christian SVANFELDT	10.2.a	SG	JRC	n/a		EP - European Parliament	01/01/2017 31/12/2017	INS-RS	1	Labs for Europe policymaking	Expert group report consolidating insights and learnings on how (design for) policy labs may contribute to EU policymaking and implementation	29/12/2017	Science-for-policy reports
213 - TMA CC JRC.I.3	5500 - TMA CC Support TMA Competence Centre Support	Provide the support as described in the concept note for the Competence Centre as far as not already covered in the EMM and TIM related work	JRC.I.3 Charles MACMILLAN	10.2.a	JRC	JRC	n/a			01/01/2017 31/12/2018	INS-RS	5500201700	TMA CC Support	Continued support to the TMA CC user community as described in the TMA CC Concept Note, specifically for the Institutional support to EU Agencies and data broker activities of the CC	31/12/2018	Scientific information systems and databases
213 - TMA CC JRC.I.3	5841 - TMA for EDA Media and Technology monitoring	This activity is performed in the context of the collaboration between JRC and the European	JRC.I.3 Olivier EULAERTS	10.2.a	JRC	n/a	n/a		EDA - European Defense Agency	01/01/2017 01/02/2018	CON-TW	2018001	EDA Monitoring system for media and innovation	EDA Monitoring system for media and innovation	01/01/2018	Technical systems
402 - EUPolicyLab JRC.I.2	5861 - FUTURGOV Future of Government in an open Government setting	Contemporary society is rapidly changing. The emergence of social inequalities, migration, and the use of new technologies to communicate and access information, deeply affect both the political participation of European citizens and the relationship between citizens, business and governments which are key pillars for an inclusive, prosperous and United European Union. The evolving complexity of European society needs to be faced and analysed in order to identify adequate future Governance models to promote across the EU. The project Future of Government in an open Government setting addresses this new phenomenon in a future oriented perspective (looking up to 2030) with the aim of helping public administrations and society to better understanding the changing relationship between citizens, business and governments, where new roles, new actors and new responsibilities appear, new models of trust and accountability of government may be required, and new forms of democracy and Governance may materialise and finally in which new role of government may be needed, etc. The project will explore changing forms of democracy, public service design as well as policy-making where technology (e.g. social media, use	JRC.I.2 Xavier TROUSSARD	10.2.a	CNECT	CNECT	Andrea SERVIDA, HoU CNECT.DDG1.H4	EPSC HOME JUST SG		01/01/2017 31/12/2018	CON-AA	2017001	Scoping Report Future of Government in an open Gov	The report will include a literature review and analysis on the changing relationships between citizens, business and governments. It will also describe the main methodological approach of the project and an analysis on the main drivers contributing to the change of forms of democracy, public service design as well as policy-making looking from the individual, the society (citizenship and State); the politics (representativeness and governance systems).	15/09/2017	Science-for-policy reports
												2017002	Additional pilots co-design for EU policies	Additional pilots will be designed with policy DGs addressing concrete problems with two main objectives: 1) to find tailored solutions, and 2) to draw lessons that can be fed into the a final report, covering applicability of methods and policy impacts.	15/09/2017	Science-for-policy reports
												2017003	Service design for better stakeholder consultation	The report includes an overview of the process and methods used; a synthesis of the insights generated in the exploratory research; the service model for providing stakeholder consultation support services to DGs; an implementation roadmap with prototyping and testing of selected services; recommendations to the SG for future application and possible extension to other policy areas; review of the learnings from a methodological point of view.	31/10/2017	Science-for-policy reports
												2018001	Final report future of Government in an open Gover	The final report will describe the results of the case studies that the project has examined. It will also include an analysis of resulting possible threats and opportunities at European level with pointers to relevant EU policies (including the various governance models to consider and with specific attention to the open government EU policies). Policy recommendations and possible roadmap for future actions will be provided	15/12/2018	Science-for-policy reports
												2018002	Future of Governance in an open Government context	The report summarizes the findings of action research on future of government in an open government context and puts forward policy recommendations. It will describe the ongoing and future transformation in the relationship between various parts of the society (e.g. political parties, governance systems, citizens, private entities) and the emergence of new actors and forms of interactions.	21/12/2018	Science-for-policy reports
11 A stronger knowledge management capacity																
11.1 Tools and skills for knowledge management																
11.1.1.a translation of knowledge into policy - translate data, information and knowledge into policy, including through training and an inventory of country, regional and local knowledge:																
264 - GMO JRC.F.5	2128 - GMO TRG IV Global Harmonisation of GMO Analysis Support to Regional Networking	The present constitutes phase IV of the project "Towards Global Harmonisation of GMO Analysis by Creating and Supporting Regional Networks of Excellence" carried out by the JRC in the frame of the DG SANTE "Better Training for Safer Food Programme" (BTSF) in support to the implementation of Regulation (EC) 853/2004. The activities complement the EURL GMFF mandate under the same Regulation. Regional Workshops (targeted to Latin America and the Caribbean, Africa, Middle East and North Africa, Asia, and New MS, CC, potential CC, ENP countries) and Training Courses are organised as a means to disseminate the concept and benefit of networking. The forthcoming recast of the In vitro Diagnostic Medical Devices (IVD) Regulation package foresees an obligatory performance assessment as a step to assess diagnostic genetic tests. Such an assessment should ideally follow an agreed international standard, yet for the latest generation of tests, this is currently lacking. This exposes consumers to uncertain quality of so called life style genetic tests and furthermore hampers the	JRC.F.7 Maddalena QUERCI	11.1.a	SANTE	SANTE	Thierry CHALUS - SANTE.G.4 - Thierry.Chalus@ec.europa.eu	NEAR TRADE	Non EU - non EU countries	01/07/2016 30/06/2018	CON-AA	1	Regional Workshops on GMO Analysis	Regional workshops dedicated to Africa, MENA, LAC, Asia and East Europe regions. Purpose is to consolidate and/or strengthen the existing interest and commitment of regional experts in regional networking. Participants will be invited to share experience and good practice and to suggest/define a roadmap for the subsequent period according to the status/needs of each region.	30/06/2018	Conferences and workshops organized by the JRC
												2	Training Workshops/Activities on GMO Analysis	Thematic workshops and training activities for non EU countries. Topic to be defined according to regional needs and priorities.	30/06/2018	Training
												3	Final Project Report	Technical and Financial Final Report to the Project providing consolidated information on the completion of activities foreseen within the Administrative Arrangement	15/09/2018	Project management related documents/reports identified as outputs of the JRC Work Programme
275 - MedicalTechnology JRC.F.2	3704 - HealthMETH In vitro diagnostic performance assessment	The forthcoming recast of the In vitro Diagnostic Medical Devices (IVD) Regulation package foresees an obligatory performance assessment as a step to assess diagnostic genetic tests. Such an assessment should ideally follow an agreed international standard, yet for the latest generation of tests, this is currently lacking. This exposes consumers to uncertain quality of so called life style genetic tests and furthermore hampers the	JRC.F.7 Alexandre PATAK DENNSTEDT	11.1.a	GROW	n/a	Hans Erik HANSSON	SANTE	CEN - European Committee for Standardization EDMA - European Diagnostic Manufacturers Association (EDMA) EMA - European Medicines Agency (EMA) EUROMED - Eucomed represents the Medical Technology industry in Europe	01/01/2016 28/12/2018	INS-RS	1	Method Performance for in vitro diagnostics	Report on state of play of genetic in vitro diagnostics, harmonisation and quality assurance issues; foresight concerning relevant developments in the field of genetic testing drawn from meetings and other collaboration with existing networks. (The work started in 2016).	31/08/2017	JRC technical reports
												2	Standardised assessment of in vitro genetic tests	This deliverable will consist of a first draft for EU guidelines on method performance parameters to serve as basis for further discussion and consensus building among the relevant stakeholders, stemming from desk based studies (e.g. of existing attempts for guidance), workshops (with stakeholders and experts), network meetings.	30/11/2017	JRC technical reports

JRC 2017- 2018 WORK PROGRAMME																
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6820 - JPB4EC JRC.A.1	4460 - JPB4DGENV JPB Customization for DG ENV	<p>The project objective is the customisation of JRC JPB system to support the DG ENV EKC (Environment Knowledge Community) planning process.</p> <p>The EKC community plans the production of Knowledge in the environment policy area.</p> <p>Planning requires a high degree of cooperation, coordination and cross-cutting work to reach the goals of EKC. Current basic office-like tools employed by DG ENV do not satisfy the planning process needs. New tools are required to support the coordinated construction of the EKC plan from</p>	JRC.A.1 Marco BARBERO	11.1.a	ENV	n/a	Elena MONTANI	CLIMA ESTAT RTD	EEA - European Environment Agency	29/03/2016 31/12/2017	CON-AA	2016001	Business and IT Requirements	Analysis of the EKC planning process and definition of the IT requirements to support it.	28/02/2017	Project management related documents/reports identified as outputs of the JRC Work Programme
												2016002	EKB IT System	The final operation IT system.	30/11/2017	Technical systems
												2016003	Project final report	The final report of the project execution.	31/12/2017	Project management related documents/reports identified as outputs of the JRC Work Programme
68 - Food Forensics JRC.F.4	5144 - DNA-FOOD-FRAUD Food fraud economics and control	<p>This WPK will identify (together with relevant parent DGs) and review major fraud issues related to biological materials, characterize them in terms</p>	JRC.F.7 MAURO PETRILLO	11.1.a	SANTE	JRC	JRC	MARE SANTE TAXUD		01/01/2017 31/12/2017	INS-UR	1	Report on DNA based Food fraud economics & control	State of the art report on (at least one) case study, discussing the relevance of that case for EU policy, its characteristics, and the (potential) relevance of complementing existing control methods with molecular biology approaches	31/12/2017	JRC technical reports
5183 - KMHCF JRC.F.7	5184 - KMGF-F Knowledge for Health and Consumer Safety	<p>The work package will anticipate knowledge needs, map knowledge gaps, analyse, elaborate and share available knowledge and suggest research topics to be carried out in the JRC in support to EU policies on consumers, food safety and health. While some topics have already been identified as of emerging priorities (e.g. genome editing, big data and bioinformatics etc.) and will be elaborated in the near future, constant scanning, following meta-analysis and taking into consideration policy demand, available knowledge feasibility, added value and potential policy impact will allow the early identification of trends and emerging areas of interest/impact.</p> <p>More specifically, within the planned period, the work package will address the health impact of some agricultural practices (e.g. pesticides), the policy options for Genome editing and related technologies, the potentiality of bioinformatics and big data in e.g. AMR management. In addition it will contribute to strengthen the analysis, elaboration, sharing and proper use of available knowledge via the development and implementation of tools and strategies to improve the mining of interesting knowledge.</p>	JRC.F.7 Guy VAN DEN EEDE	11.1.a	SANTE	n/a	to be decided	AGRI CNECT GROW RTD TAXUD		01/01/2017 31/12/2017	INS-RS	10	Health impact of agricultural practices	Study of the impact that different agricultural practices have on health, like organic food production versus non organic, the use of pesticides (e.g. glyphosate) and the impact in the development of antimicrobial resistance by the use of antibiotics in meat production.	31/12/2017	JRC technical reports
												20	Options for the governance of Genome editing	The deliverable includes the study, discussions, consultation – also through the organisation of experts meetings – and the formulation of options for the governance of Genome editing and related technologies when used in breeding crops and animals, its challenges and the gaps to be bridged. The study will also discuss the uptake of the technologies in the academies and industries and will discuss the ethical issues associated with it.	31/12/2017	JRC technical reports
												30	Implementation of emerging sequencing technologies	Next-Generation Sequencing (NGS), also known as high-throughput sequencing, is the catch-all term used to describe different modern technologies that allow nucleic acids sequencing much more quickly and cheaply than previously, revolutionising modern biological sciences. The deliverable aims to evaluate the potential of this new technology on the current international action plans against Antimicrobial Resistance and the necessary steps for its implementation, through an experts' workshop.	31/12/2017	JRC technical reports
												40	Ad-hoc reports on specific and emerging issues	In line with its mandate to serve as knowledge reference for Commission services and EU policy makers and to provide state-of-the-art science and robust evidence base to support the development and implementation of EU policies on Health and Consumer Safety, Unit F.7 will provide briefings, ad-hoc reports and collect expert opinion on specific and emerging issues.	31/12/2017	JRC technical reports
												50	Novel tools for improved knowledge mining&mapping	This deliverable is a set of implemented tools and strategies that will be developed to improve the mining of interesting knowledge related to health and consumer protection in public resources (web, scientific literature), as well as the mapping of scientific competences available within the Directorate F. This will also include the identification of a case study where Machine Learning or Deep Learning can be applied and deliver a Proof-of-concept in making sense of big data related to health.	31/12/2017	Scientific information systems and databases
												60	Horizon scanning	A horizon-scan policy report covering policy needs in health and consumer issues and indicating scientific and technological developments that may be of relevance for policy makers. This report will serve as input into the Work Programme and will contribute to the definition of the role of Directorate F in the medium to longer term. The report will include a review of the existing JRC clusters in the area of Health and Consumer Safety and will present options for their future roles.	31/12/2017	Science-for-policy reports
241 - OSCK JRC.C.7	5380 - HS-ECC Horizon scanning in energy and climate change	<p>In line with the JRC strategy, the purpose of HS function is to identify, discuss and communicate to relevant policy makers, emerging issues (risks and opportunities) that might have policy and societal implications for Europe. The WPK will implement the HS function in the field of energy and climate change through a pilot phase running till mid-2017.</p> <p>This pilot phase aims at refining the horizon scanning process before its implementation over all JRC nexus in the course of 2017.</p> <p>More specifically, the pilot phase will run in three</p>	JRC.C.7 Alain MARMIER	11.1.a	SG	JRC	n/a	CLIMA ENER EPSC GROW MOVE RTD	EEA - European Environment Agency SET-Plan Com - SET-Plan Community	01/01/2017 31/12/2018	INS-RS	1	Pilot report on horizon scanning	This report will summarise the outcomes of the horizon scanning pilot project in the field of energy and climate change. Both results and process will be evaluated. This evaluation will highlight points for improvements noticed throughout the pilot phase. This evaluation will also feed into a cost-benefit analysis for deciding on the full scale implementation of the horizon scanning at the JRC.	30/06/2017	Science-for-policy reports
												2	2017 report on horizon scanning	This report will summarise the outcomes of the horizon scanning project in the field of energy and climate change throughout 2017.	31/10/2017	Science-for-policy reports
												3	2018 report on horizon scanning	This report will summarise the outcomes of the horizon scanning project in the field of energy and climate change throughout 2018.	31/10/2018	Science-for-policy reports
241 - OSCK JRC.C.7	5381 - CVN Communication, Visualisation and Networking	<p>Strategic communication is key to the future success of the JRC, and indeed the Energy Union. The communication initiatives aim to foster recognition – in both political circles and the wider community – that good energy policy decisions must draw on robust scientific evidence. The key objectives are:</p> <ul style="list-style-type: none"> • Develop a stronger Social media presence of Dir. C activities in collaboration with the JRC social media team • Harvest important content/deliverables and anticipate/plan communication actions using a team of antennas (communication correspondents) in each unit of Dir. C • Develop visualisation tools, competences, culture and knowledge within Dir. C • Web presence: edit and publish content related to Energy, Transport & Climate on the Science Hut (research topics pages, tools and databases, events etc.) and on the SETIS website; participate in the Web Steering Committee; approve requests for new websites of Dir. C in the Web Registry; • Interactive dissemination tools: in collaboration with the scientists, develop new interactive tools for the Visitors Centre and the future Virtual visitor centre. • Contribute to JRC corporate publications • Events management/coordination for high level 	JRC.C.7 Darren MCGARRY	11.1.a	JRC	JRC	n/a	SET-Plan Com - SET-Plan Community	01/01/2017 31/12/2018	INS-RS	1	Concept note on the development of visualisation	This concept note will be prepared in close collaboration with H1, H2, and a cross section of visualisation experts from across the JRC	30/04/2017	JRC technical reports	
											2	SETIS Portal - 2017 Edition	Maintenance and further development of the SETIS online portal, which is the main instrument for public dissemination of the SET-Plan activities and achievements. The SETIS website is continuously updated with new assessments and information on energy technology developments in Europe, enriched with online tools and disseminates the SETIS magazine, which is also produced under the same deliverable.	31/12/2017	Scientific information systems and databases	
											3	JRC Science Hub / Web presence - Dir. C 2017	Content management / development - Update content related to Dir. C research topics, laboratories, news and events, develop new actions to enhance / promote Dir. C work via modern web based communication tools. Develop means to structurally monitor Dir. C web presence / impact.	31/12/2017	Scientific information systems and databases	
											4	TOR for a network of science communication	The Terms of reference for a network of science communication in energy will be developed. Input will be sought via other centres of expertise. Were feasible, transport and Climate change could be added at a later stage. Other centres of expertise will be identified, collaboration and cross fertilisation with other Commission and Parliament initiatives will also be sought.	30/06/2018	JRC technical reports	
											5	SETIS Portal - 2018 Edition	Maintenance and further development of the SETIS online portal, which is the main instrument for public dissemination of the SET-Plan activities and achievements. The SETIS website is continuously updated with new assessments and information on energy technology developments in Europe, enriched with online tools and disseminates the SETIS magazine, which is also produced under the same deliverable.	31/12/2018	Scientific information systems and databases	
											6	JRC Science Hub / Web presence - Dir. C 2018	Content management / development - Update content related to Dir. C research topics, laboratories, news and events, develop new actions to enhance / promote Dir. C work via modern web based communication tools. Develop means to structurally monitor Dir. C web presence / impact.	31/12/2018	Scientific information systems and databases	
6483 - K4Growth&Innovation JRC.B.7	5523 - KM-Growth&Inno Knowledge Management for Growth and Innovation	<p>KM-Growth&Inno will aim to support EU policies in the fields of Finance, Innovation and Growth by mapping, collating, analyzing, quality checking and communicating in a digestible way all the relevant scientific data, methods, tools and knowledge available worldwide in this area. Activities to anticipate knowledge needs, map knowledge gaps and suggest research topics to be undertaken in the JRC linked to current Commission priorities in terms of economic growth, competitiveness and innovation will be carried out. On a selected number of topics clearly related to the policy priorities, the Unit will host knowledge centres.</p>	JRC.B.7 Xabier GOENAGA BELDARRAIN	11.1.a	SG	JRC	ALBANE DEMBLANS	CNECT COMP EAC ECFIN EMPL ENER ENV EPSC ESTAT FISMA		01/01/2017 31/12/2018	INS-RS	1	Lessons learnt on KM (internal report), 2017	A report produced within Dir B and JRC aimed to improve future JRC contributions to European Semester (ES) Reports. To include workflows within JRC and between JRC and policy DGs, the interest and challenge to integrate JRC contributions to the preparation of ES country reports by Commission country teams and identification of new cross-country research questions that could be addressed by JRC in future. Done in consultation with ES core DGs (SG, ECFIN, EMPL, GROW) and other JRC units.	31/05/2017	JRC technical reports
												2	Policy Issues report, 2017	A report on topical, emerging cross-policy issues with the potential of having significant policy implications. To include an assessment of the ES Country Reports, EC Annual Growth Survey, reports by leading international organisations, reports by Dir B Units, activities and consultation with leading experts in the fields of Finance, Innovation and Growth. This will be done in co-operation with Units B1-B6, other JRC Units concerned and external stakeholders.	01/12/2017	Science-for-policy reports

JRC 2017- 2018 WORK PROGRAMME																	
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DGs' Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category	
		More specifically, the work package will deliver on the following areas in collaboration with the JRC and relevant Policy DGs: 1. Reinforce Country specific knowledge to better support the European Semester and other country based initiatives, in coordination with unit H1. 2. Monitor Finance, Innovation and Growth research and policy developments. 3. Develop a strategy for JRC communication to support the Commission's policy agenda and give JRC work targeted visibility and						GROW NEAR REGIO RTD SANTE TAXUD TRADE				3	Funding Instrument report (internal)	An internal report on scenarios, ex-ante and ex-post qualitative and quantitative assessments of the impact of the main EU funding instruments (CAP, ESIF, FP and EFSI) of the next financial perspectives in collaboration with Dir A, other Units in Dir C, Dir D, Dir E and Dir B, under the leadership of DDC.02.	30/06/2017	JRC technical reports	
												4	Communication events: lessons for JRC (internal)	An internal report on lessons learnt from major Dir B comms activities, with a focus on analysing and evaluating the communication dimension of selected WP deliverables, e.g. corporate taxation, industrial R&D scoreboard or the Digital Competence Framework. It will cover the team(s) involved, tasks performed and results obtained, and critically address areas for improvement. It will help steer and improve knowledge-based comms in Dir B and units in preparing comms activities.	30/06/2017	JRC technical reports	
6485 - KM4SSM JRC.E.7	5540 - KnowReLandCoP Making sense of the collective scientific knowledge: Repositories, Studies, CoP	The whole JRC now needs new functionalities dedicated to the new KM tasks. Whereas corporate solutions are expected from unit H2, Unit E7 will concern itself with specific design aspects and implementation for the Directorate. Deliverable: One important repository will be a database (catalogue) of all of the recent, ongoing and planned R&D projects related to space, security & migration funded in Europe (EU or national level). This follows a clear need, already expressed by policy DGs. Two topics are singled out for landscape studies, with the goals to understand the political situation (desirability for new EU policies), the global technical situation, and the JRC's current and potential activities, in a holistic way also taking into account related policy areas. The first topic is 'Security for space', with an eye on the EU's two Flagship programs, Galileo (satellite navigation) and Copernicus (Earth observation). This will focus on the intersection of space and security, ranging from how space contributes to security to how to secure the EU's space assets. The second topic is Cybersecurity, a file with high importance where the JRC is already working, but where a broader approach is merited.	JRC.E.7 Paola PICCININI	11.1.a	HOME	JRC	n/a	CNECT DEVCO	MS EU - Member states EU	01/01/2017 31/12/2017	INS-RS	1	Web-based system on activity cross-awareness	Improved system for JRC scientists to know what others in JRC are working on, with a taxonomy for the space, security & migration domains, building on tools to be developed together with H2. Access for authorised users only (password), individual scientists may (should) directly upload information (in contrast with the JRC Science Hub that is fully public). Collaboration: H2, all KP units in the Directorate.	30/09/2017	Scientific information systems and databases	
												2	Web-based system on mission report	Mission reports contain valuable knowledge that is at present very difficult to access. The need to improve this has been often expressed. A system will be set up so that mission reports will become easier to search. The same taxonomy as for the previous subtask will be used. Collaboration: H2, all KP units in the Directorate.	30/09/2017	Scientific information systems and databases	
												3	EU projects database with web interface	Database of European R&D projects on space, security & migration. Include projects that have ended in the last 5 years, ongoing projects and current calls. To contain R&D projects that are funded at EU-level plus those funded at MS level. TBD: Also include projects funded outside EU. Collaboration: All KP units in the Directorate, RTD.	30/09/2017	Scientific information systems and databases	
												4	Cybersecurity landscape study	Study on the topic of cybersecurity to identify (a) the EU policy landscape, (b) COM stakeholders, (c) other authorities and stakeholders, EU-level and national, (d) the ongoing JRC work, its results and potentials, (e) other EU and global R&D activities and their results. Results: (a) Main open problems; (b) Suggested solutions (such as: new policies, better implementation, standardisation, operational actions, R&D). Groundwork for potential cybersecurity KC. Collaboration: E3, E2, policy DGs	31/10/2017	JRC technical reports	
												5	Space & security landscape study	Study on the intersection of space and security (use of space for security, and security of space-related infrastructure). Elements as for landscape study on Cybersecurity. Collaboration: All KP units in the Directorate, policy DGs, EEAS, ESA.	31/12/2017	JRC technical reports	
												6	Communities of Practice	It will be assessed which clusters (about ten for Directorate E) could become into communities of practice, possibly merging / transforming their topics. A community of practice on Space will certainly be set up and managed, in collaboration with unit D6; one on Migration and Demography, in collaboration with unit E6.	30/06/2017	Scientific information systems and databases	
6539 - GEO&POL-KM JRC.H.1	5580 - KM-CES Country knowledge management and support to the European Semester	The KM-CES WPK will support the implementation of both the country-knowledge and European Semester Connected pilots and ensure that they are progressively extended to all Member States. Together with DG COMM, the WPK will provide Community management for country knowledge sharing platforms, ensuring that for the Semester	JRC.H.1 David MAIR	11.1.a	JRC	JRC	Krzysztof MARUSZEWSKI	COMM SG		01/07/2016 31/12/2018	INS-RS	2	Connected country-knowledge spaces	Set up of Connected country-knowledge spaces for 10 EU member states and related community management.	31/12/2017	Technical systems	
												3	Geographic knowledge mapping	Complete, together with the 6 KM units, an inventory of JRC country knowledge and in due course all Commission country-knowledge.	31/12/2017	JRC technical reports	
												4	Final report about Connected for the Semester	Drafting a final report aimed at assessing the use of Connected for the Semester.	30/06/2017	JRC technical reports	
												1	Data/knowledge translation into policy	Developing training in evidence for policy for scientists and policy-makers worldwide; co-ordinating a network of academic institutions and public sector bodies interested in training, education and capacity building at the science/policy interface.	30/06/2018	Training	
6539 - GEO&POL-KM JRC.H.1	5581 - K-POL Translation of Knowledge and Evidence into Policy	The K-POL WPK will aim at developing methods, concepts and skills in translating data, information and knowledge into policy, striving to develop overall JRC and Commission skills in this area. This will include developing methods and concepts for evidence and policy and training and capacity building and related issues such as data4policy. Activities will include developing further the Part 1 course on the role of the JRC in EU decision-making and managing the current pilot contract to deliver Part 2 training for JRC scientists in working with policy-makers, as well as developing associated training tools, such as a handbook. Further specific courses will be identified, building on the master-class topics identified for the	JRC.H.1 David MAIR	11.1.a	JRC	JRC	Krzysztof MARUSZEWSKI			01/07/2016 31/12/2018	INS-RS	2	Evidence for policy network	Establishment and co-ordination of a network of academic institutions and public sector bodies interested in training, education and capacity building at the science/policy interface.	30/09/2017	Training	
												3	Training and capacity-building for evidence&policy	This deliverable will include a series of training and capacity-building activities to promote professionalisation of KM for policy, such as: JRC-IASA summer school, INESA summer school, JRC session at AAAS 17 February on Evidence & Policy, workshop and training for JRC scientists in research synthesis/systematic reviews, Part 1 course on the role of the JRC in EU decision-making, Part 2 training for JRC scientists in working with policy-makers.	31/12/2018	Training	
												4	Guidelines in communication of Data4Policy	Development of guidelines and best practice in communication of Data4Policy, notably on visualisation of data and knowledge.	30/06/2017	JRC technical reports	
												201701	Metadatafile of EDGAR gridmaps	Description of latest (most recent year estimates) of the Emissions Database for Global Atmospheric Research as starting point for the delivery of emissions gridmaps	22/12/2017	Scientific information systems and databases	
4855 - GHG-MoVe JRC.C.5	5741 - CO2 GRID Towards a European capacity to monitor anthropogenic CO2 emissions	CO2 GRID aims to improve our ability to monitor CO2 emissions following the Paris agreement. The JRC Emissions Database for Global Atmospheric Research contributes with global high spatial and temporal resolution gridmaps of CO2 and selected tracer gas (e.g. CO) emissions, with full uncertainty and covariance matrices. These will	JRC.C.5 Greet JANSSENS-MAENHOUT	11.1.a	GROW	RTD	Hugo ZUNKER (GROW.1.2), BERGMAN Hans (CLIMA.C.2), IERLAND Willem (CLIMA.C.1)	CLIMA ENER ENV RTD	- EUROPEAN SPACE AGENCY IPCC - Intergovernmental Panel on Climate Change UN FCCC - UN Framework Convention on Climate Change (UN-FCCC)	12/01/2017 30/11/2020	CON-IA	201801	Improved gridmaps and uncertainty framework	1) Setting up uncertainty framework (also because of the workpackage lead in the H2020 proposal CHE) 2) Emissions database work: Updating the statistics to latest year, updated spatial proxy datasets, updated temporal proxy datasets	21/12/2018	JRC technical reports	
11.1.b knowledgemanagement methods and tools - develop common platforms for the use of data, information, and knowledge in support of policymaking; provide access to knowledge sources; facilitate communities of practice and improve communication.																	
6519 - TC-KM JRC.H.2	5560 - KM-Meth Knowledge Management Methodology	By keeping abreast of methodological advances in knowledge management, the WPK will aim at ensuring that the JRC and the Commission have the best possible knowledge management tools available and exploited. Working with DIGIT, ESTAT, OP, COMM, CNECT, SG, it will develop common platforms for the use of data, information, and knowledge in support to policy making. In addition, the WPK will lead the JRC's initiatives to innovate in knowledge management for policy, in particular the management of tacit knowledge, and help representing the JRC in global fora and expert groups in the field. A one-stop-shopfor knowledge will be created in order to provide an entry point for questions from policy makers. This will provide pointers to knowledge resources and experts. In light of knowledge sharing and collaboration across the Commission, the WPK will also cover the Connected@Commission project following the decision of the ABM SC in July 2016. Furthermore	JRC.H.2 Marc WILKENS	11.1.b	JRC	JRC	Krzysztof MARUSZEWSKI	CNECT COMM DIGIT ESTAT GROW OP SG			01/07/2016 31/12/2018	INS-RS	1	Renewed and simplified PUBSY	After ten years in service, a simplification of PUBSY is required in line with the needs of a modern, knowledge-oriented JRC. An Action Plan will be produced in 2016 posing the base for a renewed and simplified version of the PUBSY system in 2017 and possibly entailing also the review of the supported processes.	30/06/2017	Scientific information systems and databases
													2	Roll-out of Connected Commission project	The Connected Commission project is a key contribution to the ongoing development of a future high quality, user-centric ecosystem of collaboration and connectivity tools which are necessary for the Commission. It will provide Commission processes and staff with an, easy to use, general purpose collaborative working tool, featuring advanced functionalities, to assist their daily work both inside and outside the office.	30/09/2017	Technical systems
													4	Community of Practice methodology	In order to promote cross-disciplinary knowledge sharing, a common methodology for the creation and implementation of Community of Practices at Commission level will be developed.	30/06/2017	JRC technical reports
													5	Connected@JRC	Continuous maintenance of the platform by animating it through the creation of new collaborative spaces and tools, such as One-Stop-Shop for knowledge, Connected@JRC staff Skills Campaign, and JRCwiki.	31/12/2018	Scientific information systems and databases
													6	Knowledge Management Toolbox	The Knowledge Management Toolbox will represent an inventory of knowledge resources like data, tools, publications, models, knowledge and competence centres. It will be included in the Connected platform.	30/06/2017	Scientific information systems and databases
													2	Seamless access to scientific eResources	Following the reorganisation with directorates spread over different sites, review the service offer in cost effective ways taking into account budget constraints. The ideal aim is to provide access to all JRC for all scientific resources.	30/06/2017	Scientific information systems and databases
6519 - TC-KM JRC.H.2	5561 - K-Access Access to knowledge resources	The WPK manages the JRC eLibrary including access to bibliographic databases. It implements innovative scientific literature alert services in collaboration with DG RTD and fosters synergies with "Research family DG" Libraries. It coordinates the JRC contribution to the Open Science strategy	JRC.H.2 Marc WILKENS	11.1.b	JRC	JRC	Krzysztof MARUSZEWSKI	OP RTD		01/07/2016 31/12/2018	INS-RS	3	Open Access agreements with publishers	Group agreements with publishers to streamline and simplify the administrative burden in handling open access articles that until now are handled on individual basis.	30/06/2017	Scientific information systems and databases	
												2	JRC on social media	Management of the JRC Social Media presence including facebook, twitter, linkedin, and youtube to connect with policy-makers and stakeholders, and Mendeley and Research Gate to connect with scientific Community. Establish guidelines and training for usage of social media.	31/12/2018	Technical systems	
6519 - TC-KM JRC.H.2	5562 - K-Comm Knowledge based communication	The WPK aims at developing in cooperation with Directorate A and the thematic Directorates strategy and practice for communicating scientific knowledge for policy by better targeting groups and products with high impact. The WPK objective is managing the JRC digital communications tools, including social media, the JRC events (like JRC@60 events) and visitor centre, including virtual science tour tools. Specifically, activities	JRC.H.2 Marc WILKENS	11.1.b	JRC	JRC	Krzysztof MARUSZEWSKI			01/07/2016 31/12/2018	INS-RS	3	Strategy for JRC Visitor's Centre	Operate the JRC visitors centre including promoting virtual lab videos and multi-media tools for maximising dissemination to policy DGs, stakeholders and students, training tool guides, deployment of a content management system.	31/12/2018	Technical systems	
												4	JRC@60 events	Organisation of events aimed at celebrating sixty years of JRC.	31/12/2017	JRC technical reports	

JRC 2017- 2018 WORK PROGRAMME																
Project / Owner Unit	Work Package ID, Acronym and Title	Work Package Description	Owner Unit / Work Package Contact	JRC KO	Main Pol. DG	Funding DG	DG's Contact	Add. Pol. DG	External Beneficiaries	Start / End	Funding Type	Del. Id	Title	Description	Expect. Rel. Date	Category
		include: i) managing events in Brussels, Ispra and the JRC flagship events and coordinating with the vertical KM units the events management process in the other JRC sites; ii) managing the visuals/graphics competence group including developing a capacity of powerful infographics to										5	JRC Web Presence and Governance	Coordination and harmonisation of JRC Web presence in order to ensure that websites project a coherent view of JRC's vision and activities, and to ensure that websites are properly managed throughout their entire life cycle.	31/12/2017	Scientific information systems and databases
												6	JRC Communication Strategy	Developing JRC Communication Strategy, under the coordination of Directorate A, in order to ensure that communication activities and products, including corporate events and visits are in line with the strategic objectives of the JRC.	30/06/2017	JRC technical reports
11.2 Intellectual property rights																
11.2.a manage the JRC's and the Commission's portfolio of intellectual property rights; advise and assist the Commission on intellectual property matters; increase awareness of intellectual property rights within the Commission and in the European Parliament;																
430 - CIPS - IP Support JRC.I.4	203 - Fusion IPR Management of Fusion-related IPR	Management of the IP portfolio of the fusion-related technologies for DG RTD	JRC.I.4 WOUTER VERBURG	11.2.a	RTD	RTD	IBBOTT Christopher			25/07/2012 31/12/2017	CON-AA	20161	Yearly report on IP&TT actions for ITER	Yearly report on the activities performed under the AA	20/12/2017	JRC Technical reports
430 - CIPS - IP Support JRC.I.4	425 - CIPS - IPSup Central IP Service - IP Support	The main activities under this project are: detection and protection of IP assets (software, database, technical invention ...) of the EU institutions and enforcement of IP rights; advisory role to JRC and Commission on IP issues; IP portfolio management, legal and technical assistance in the aim to create the necessary infrastructure and tools for an efficient management of IP in the Commission.	JRC.I.4 WOUTER VERBURG	11.2.a	SG	JRC	VALILA Ari	AGRI BEPA BUDG CDP-OSP CLIMA CNECT	CoE - Council of Europe Council EU - Council of the European Union EP - European Parliament	01/01/2014 31/12/2018	INS-RS	4	Yearly Activity Report	Activities and statistics on the activities of the Central IP Service are produced once a year and used to report to hierarchy and stakeholders.	31/12/2017	JRC technical reports
430 - CIPS - IP Support JRC.I.4	739 - CIPS - IPGov Central IP Service - IP Governance	1. Raising awareness and imparting training 2. Perform inventory and audit of IP rights of the Commission 3. Drive the IPR network 4. Develop an IT tool for IP assets.	JRC.I.4 WOUTER VERBURG	11.2.a	SG	JRC	Ari VALILA	AGRI BEPA BUDG CDP-OSP CLIMA CNECT COLLEGE COMM		01/01/2014 31/12/2018	INS-RS	6	IP advice	Delivery of IP advice	31/12/2017	JRC contributions to policy documents
430 - CIPS - IP Support JRC.I.4	1709 - 2014-0368 AA WITH DG AGRI	Protection of the PGI/PDO/TSG symbols	JRC.I.4 WOUTER VERBURG	11.2.a	AGRI	AGRI	Cyrille Laplace			06/05/2015 05/05/2017	CON-AA	1	trade mark registrations	The objective is to obtain trade mark registrations for the quality symbols. Once registered, action against abuse of the symbols can be more efficient.	30/04/2017	Science-for-policy reports
430 - CIPS - IP Support JRC.I.4	2268 - IPR-EP IPR Support to the European Parliament	to provide customer driven support to various directorates of the European Parliament in line with the support provided to the EC, in particular training and legal advice on IP as well as	JRC.I.4 WOUTER VERBURG	11.2.a	SG	SG	Christelle Courtade		EP - European Parliament	01/09/2014 31/12/2017	CON-AA	2	Legal advice, training	Legal advice and training in the filed of IP for staff of the EP.	31/12/2017	Training
430 - CIPS - IP Support JRC.I.4	3921 - Galileo IP IP support to Galileo Satellite	IP Support to DG GROW in relation to Galileo activities, management of the IP portfolio, advice	JRC.I.4 WOUTER VERBURG	11.2.a	GROW	GROW	Max Mara			01/05/2016 01/05/2019	CON-AA	2	Legal Advice on IP	Legal advice on IP related to GNSS and Earth Monitoring.	31/12/2017	JRC technical reports
430 - CIPS - IP Support JRC.I.4	5860 - DG AGR12 New trade mark filings quality symbols	New trade mark filings quality symbols DG AGR1	JRC.I.4 WOUTER VERBURG	11.2.a	AGRI	AGRI	n/a			01/01/2017 31/12/2019	CON-AA	2018001	Trade Mark registrations	Registration of the quality symbols as trade marks in in Norway, Ukraine, Turkey, Morocco, Colombia, Brazil, India, Vietnam and Taiwan	31/12/2018	JRC technical reports
11.2.b promote collaboration on intellectual property rights and technology.																
432 - TTO JRC.I.4	428 - TTO Technology Transfer Office	IP & Knowledge transfer are the roots of innovation in today's knowledge society. Building on its expertise as Technology Transfer Office and Central IP Service for the European Commission, Unit DDG.03 operates both at an operational level, e.g. by promoting the exploitation of the IP portfolio of the Commission or by supporting programmes such as Galileo or ITER, and at a policy level, e.g. by contributing to the policy making process related to innovation and by organising the activities of a pan-European Network.	JRC.I.4 Annarita FERRERI	11.2.b	JRC	JRC	MCCUTCHEON Patrick	GROW RTD	EACI - Executive Agency for Competitiveness & Innovation (EACI) REA - Research Executive Agency of the European Commission	01/01/2014 31/12/2020	INS-RS	2	patent applications	Not all the patent declarations will be successful in their patentability analysis. This will give an indication the ability to assess the quality of the inventions/concepts proposed. This indicator measures the ability of the TTO to commercialise the assets of the JRC portfolio.	31/12/2017	Technical systems
432 - TTO JRC.I.4	440 - TTO Circle European Technology Transfer Offices Circle	The European TTO CIRCLE network promotes collaboration between large public RTOs in the field of innovation and technology transfer by building bridges and creating added value among them. It implements as a commitment of the Innovation Union Communication (SEC(2010) 1161). The project is also a laboratory for testing in the frame of its technology transfer activities, the JRC supports the development of regional innovation ecosystems in Europe. In particular Unit DDG1.03 will coordinate technology transfer initiatives in the context of the EU macro-regional	JRC.I.4 SERGIO GRANDE	11.2.b	JRC	JRC	Patrick MC CUTCHEON	GROW	- LEIBNIZ-INSTITUT FUER FESTKORPER- UND WERKSTOFFFORSCHUNG DRESDEN E.V. - Max Planck Society - Danish Technological Institute - Natural Environment Research	01/01/2014 31/12/2020	INS-RS	3	License agreement	The target for 2017 is 18 License agreements on JRC technologies and software	31/12/2017	Technical systems
432 - TTO JRC.I.4	441 - RegInnoPar Regional Innovation Partnerships		JRC.I.4 Zeljka BABIC	11.2.b	REGIO	JRC	Katja Reppel (REGIO)	GROW NEAR RTD		01/01/2016 31/12/2018	INS-RS	4	management of patent portfolio	The exercise started in 2017 to periodically review the number of patents to ensure that only the promising ones are kept must continue in 2017	31/12/2017	Technical systems
												5	Proof of concept	launch call for proof-of-concept proposals in the JRC and accept between 4-8 projects depending on budget request and availability	31/12/2017	Technical systems
												1	Plenary meeting of the TTO CIRCLE	The meeting will be organised in Oxford in May/June with interactive sessions and a report	31/07/2017	Training
												2	Thematic Workshops	Two thematic workshops will be organised in 2017 on topics which have been identified together with the TTO CIRCLE members. The first one will be on open science and technology transfer which will take place in February. The second topic will be identified at the next plenary meeting. A technical report will be prepared after each conference.	31/12/2017	Training
												1	Macro-Regional Innovation Week	replicate the format from 2016 (executive one-week course), to be organised in the Alpine macro-region with the involvement of other 3 macro-regions- establishing and reinforcing the dialogue and interconnections among different macro-regions and their actors - coordination of innovation and technology transfer activities in different macro-regions supporting the development of a competitive innovation ecosystem - training course or	31/10/2017	Training