# Interim Evaluation Report

# Seventh Framework Programme (2007-2013)

# Thematic Evaluation
# of the Joint Research Centre's activities in the area of

## *Safety of Food and Consumer Products*

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## The Evaluation Panel

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## Preface by the Chair Person

In July of 2010 I had the honour and pleasure to chair the panel of international experts responsible for performing the evaluation of the JRC's Thematic Area "*Safety of Food and Consumer Products"* as part of its overall activities in the European Community's 7$^{th}$ Framework Programme (FP7). The Thematic Area comprises 18 Actions carried out by four JRC Institutes: IHCP (Institute for Health and Consumer Protection) – contributing 10 Actions, IRMM (Institute for Reference Materials and Methods) – contributing 6 Actions, IPCS (Institute for Protection ad Security of the Citizens) – contributing 1 Action, and IES (Institute for Environment and Sustainability) – contributing 1 Action.

The evaluators were extremely pleased with the high levels of competence of the researchers and the modern infrastructure, high levels of exploratory research and relevance for consumers of the overall programme. However, the panel recognises that there is certain room for improvement in particular areas, which are described more in detail in the body of the Report

On behalf of the panel, I would like to acknowledge the facilitation of the Directors and the Heads of Units (in providing detailed information), other researchers and administration staff and also the very good organisation of material presented which helped the evaluation process proceed efficiently.

Finally, I express my gratitude to all members of the panel, whose matching expertise contributed to a more comprehensive view on the achievements and weaknesses of the evaluated Actions.

Tamara Lah Turnšek

## Executive Summary

This report presents the results of the mid-term evaluation of the JRC's Thematic Area *Safety of Food and Consumer Products* as part of its overall activities in the European Commission's 7th Framework Programme (FP7)**.** The report together with the reports of the other four Thematic Areas will form the basis of the mid-term evaluation of all JRC's non-nuclear activities in FP7.

The 18 JRC Actions comprising this particular Thematic Area are performed by four JRC Institutes: IHCP (The Institute for Health and Consumer Protection) – contributing 10 Actions, IRMM (The Institute for Reference Materials and Methods) – contributing 6 Actions, IPCS (The Institute for Protection and Security of the Citizens) – contributing 1 action, and IES (The institute for Environment and Sustainability) – contributing 1 Action.

The evaluation of JRC's Actions under a number of Thematic Areas is a break from past tradition and is based on a recommendation from the ex-post FP6 evaluation of the JRC to move towards smaller evaluations focusing at thematic level. The Thematic Area *Safety of food and consumer products* is thus a synthesis of the Actions originally categorised under a different structure in the JRC's FP7 Multi-Annual Work Programme (MAWP) covering the period 2007-2013. The motivator for the contributing Actions has therefore been understood from the objectives as originally derived from the MAWP and described in the JRC's related annual management plans (AMPs).Moreover, JRC is giving a substantial follow-up to the recommendations of the ex-post FP6 evaluation and many resulting relevant actions are already in progress. These activities are in line with the new JRC Strategy for 2010-2020 and are an important step towards it.

The evaluators were generally very satisfied with the high levels of competence of the researchers as well as the modern JRC infrastructures and the relevance and approach of JRC's Actions towards meeting the needs and problems of European policy makers. The Actions differ to a certain degree from the points of view of policy-support and research-based work. Whereas many of the Actions are good in their scientific performance reflected in publications in peer reviewed journals others have some room for improvement.

The panel emphasises that proactive research is essential to feed into policy formulation. However, the panel notes that the JRC is not just another research Institute and that the work and performance of the JRC is not to be viewed divorced from the policy aspects towards which it is primarily geared. The panel tried to identify weaknesses at the science-policy interface which when tackled could further strengthen JRC's impact in the policy and legislative processes.

Most of the Actions undertaken by the JRC in this Thematic Area support the implementation of European legislative documents and may be applied for the needs of upcoming EU policies. Some of the most important points arising during the evaluation process were:

- Whereas many actions provide a high degree of support to EU policy makers and EU Member States at policy-implementation stages, **JRC needs to develop a more proactive approach in earlier stages of the policy cycle**

- The underlying objectives of many of the activities within the Thematic Area are indirectly linked to health. As this is very important for the Europe 2020 agenda, the panel recommends giving a more thorough consideration of the **relevance to health and the quality of life** in this Thematic Area **and not just focusing on the narrower field of the actual title (Safety of Food and Consumer Products).** This would be of particular importance in

addressing cross-cutting policy demands and the understanding of complex life science issues in view of real life programmes / forecasts

- There is a need to strengthen the integration of various scientific disciplines and institute roles to provide more holistic levels of support and advice to policy makers. In particular**, there needs to be further integration between JRC's activities in potentially conflicting areas** (such as energy efficient buildings vs. indoor air quality; greater demands for biomass vs. challenges to food supply.) This infers that the work of JRC on the low carbon economy has to be linked with the work of this particular Thematic Area as well.

- This further highlights the need for JRC to ensure the application of holistic scientific advice (based on sound scientific analysis and results) when considering the implications of policies from a wide range of different angles. Some Actions provide examples of how **policy needs are linked with research on open questions, by working with various disciplines and calling on internal and external knowledge. This holistic, added value approach** can serve as a learning experience for other Actions.

- The Thematic Area needs to be reinforced in terms of the specific resources required to align it with the goals of the JRC's new strategy, particularly if it is to widen its focus of **becoming more active in the early stages of the policy cycle.** It is questionable whether the Thematic Area can continue, on the basis of its **existing resources**, to provide the same level of policy-implementation support at the same time as taking on new initiatives.

- Certain Actions clearly demonstrate their expertise in the development of quality methodologies. A priority in the future has to be the initial framing of the methods development to relevance for policy needs (i.e. to balance sensitivity of methods with actual fit-for-purpose regulatory needs). **This step from "what is possible to analyse" to "what is needed" will help speed up the development and standardisation of the required methods.**

- The JRC Actions under consideration provide practical examples of **the added value of new knowledge applied to techniques, methods, materials, and innovative methodologies** in the direct support of policy and legislation. There would be much reciprocal benefit were JRC to make **more opportunity for collaboration on research** aiming at better policy and regulation with a number of **high-level research institutions in the EU Member States** and to provide **more visibility to these collaborations.**

- The panel observes that there is room for **improvement concerning the reporting of the outcome and impact of the Actions under evaluation**, not only towards the Actions' direct customers but also to policy maker in Member States.

# 1 Introduction

## *1.1 Historical Background of the Actions in the Thematic Area under Evaluation*

The 18 Actions currently comprising the Thematic Area (TA) of *Safety of Food and Consumer Products* fall under the responsibility of four JRC Institutes, namely: Institute for Health and Consumer Protection (IHCP); Institute for Reference Materials and Measurements (IRMM); and Institute for the Protection and Security of the Citizen (IPSC); Institute for Environment and Sustainability (IES), with the main weighting towards IHCP (10 Actions) and IRMM (6 Actions). IPSC and IES each contribute 1 Action to the TA.

At the outset of FP7, the original Action plans were formulated with regard to the policy themes of JRC's Multi-Annual Work Programme (MAWP) 2007-2013 under the following headings:

*Policy Theme 1*: Prosperity in a knowledge intensive society

Agenda 1.1 Competitiveness and innovation

Sub-Agenda 1.1.1 Reference materials *(Action numbers starting with 111…)*

Sub-Agenda 1.1.5 Chemicals *(Action numbers starting with 115…)*

Agenda 1.5 Life Sciences and Biotechnology *(Action numbers starting with 15…)*

*Policy Theme 2*: Solidarity and the responsible management of resources

Agenda 2.3 Environment and health *(Action numbers starting with 23…)*

*Policy Theme 3*: Security and freedom

Agenda 3.3 Food and feed safety and quality *(Action numbers starting with 33…)*

The TA *Safety of food and consumer products* is thus a synthesis of the Actions originally categorised under the MAWP. As no objectives have been associated with the thematic area, the motivator for the contributing Actions is to be understood from the objectives derived from the MAWP and as described in the JRC's annual management plans (AMPs). The general underlying and integrating link of the majority of activities comprising the TA can be related not necessarily only to the safety and quality of food and consumer products but also indirectly to health.

The activities within the TA can essentially be placed in context in consideration of the expertise and competences of the different JRC Institutes involved.

The focus of IRMM's Actions in the TA has primarily been concerned with ensuring the provision of appropriate reference materials and measurement standards for support of EU policies (there has been close collaboration with a number of standardisation bodies, including ISO and CEN). Within the Actions IRMM also hosts four EU Reference Laboratories (Mycotoxins; Polycyclic Aromatic Hydrocarbons; Trace Elements; and Feed Additives). In terms of reference materials, IRMM's activities cover: quantification of genetically modified organisms; food and feed analysis (for safety, quality, and authenticity purposes); and microbiological analysis (food and water pathogens). In addition, certain specific health-related domains are addressed via the provision of protein and DNA

reference materials for the calibration and quality control of bioanalyses and via activities in the field of food allergens.

IPSC's Action concerns the development and utilisation of methods and technologies for identification and tracing of animals and animal products. A particular focus has been on the development of animal-disease controls, the effectiveness of which are evaluated via simulation of epidemics.

The Action of the IES is a small one which works in close collaboration with a sister Action in IHCP in addressing the impact of environmental factors on health.

Whereas the IRMM, IPSC, and IES Actions have remained more or less unchanged since the beginning of FP7, IHCP's Actions have undergone significant change due mainly to the Institute's re-organisation towards a matrix structure at the beginning of 2009. Although many of the issues tackled by IHCP have remain the same (apart from the work that has been handed over to the European Chemicals Agency), the work is organised in different Actions. IHCP now differentiates between two classes of Actions – *Operational Actions* which describe the work of the competence groups (each of which may be contributing to a number of different policy areas) and *Policy Support Actions* which serve as the integrating level towards a given policy/legislative domain.

### *1.2 Thematic Interim Evaluation Panel*

The thematic evaluation in the field of *Safety of Food and Consumer Products* in the context of an overall EC FP7 interim evaluation of the JRC's direct actions, took place at the JRC's ISPRA premises on July 7-9, 2010, by the panel of experts, comprised by *Prof. Danuta Koradecka (Poland) , Prof. Jana Hajslova (*Czech Republic), *Dr. Gernot Klotz (Belgium) and chaired by Tamara Lah (Slovenia).*

This particular evaluation forms one of several parallel thematic evaluations of the JRC's portfolio of activities in the European Commission's Seventh Framework Programme. Once completed, these evaluations will be subject to a meta-evaluation resulting in a final consolidated evaluation report that will allow the European Commission to assess the continued relevance of the framework programme's objectives.

In the evaluation of the general performance of 18 Actions (see Annex 1) comprising the Thematic Area *Safety of Food and Consumer Products*, the panel addressed – as specified in the Terms of Reference - four main criteria: (i) rational and relevance, (ii) implementation, (iii) achievements and performance level, and (iv) forward-looking aspects

### *1.3 Evaluation Methodology*

The panel performed its evaluation on the basis of a number of inputs. Comprehensive material was provided prior to and throughout the evaluation process including general information (such as JRC's multi-annual work programme and the sets of annual management plans and annual work plans pertinent to the period of evaluation) and also more specific information (such as the actual outputs of the thematic area in terms of publications, project reports and highlights, PR articles, collaborative networks, and customer feedback). Facts and figures and statistical information on resources as well

as on key performance indicators were also provided and further information was given during the panel's visit on the basis of questions arising in discussions between the panel and JRC staff.
In addition, the panel was able to visit the JRC's Ispra-based laboratories relevant to the TA, which allowed the panel to meet and discuss with individual researchers.

Finally, at the end of the panel visit a general discussion with JRC senior staff involved in the thematic area – including Director, Heads of Units and Action Leaders of IHCP with senior staff from IRMM participating by video conference. Topics of the final discussion revolved around the major questions concerning: (a) the response of the JRC Actions towards the Grand Challenges not only of the European Research Area, but also of the European and global policy, and (b) with respect to increased attention on providing policy options to key customers (instead of focusing on a narrower sectorial policy support and analysis).

# 2 Evaluation Results

The following section is structured below according to the four broad questions addressed by the evaluation.

In general, the evaluators were pleased with the high levels of competence of the researchers and modern infrastructure as well as the high levels of relevant research. However, as the JRC is not just another research Institute, several short falls were identified to meet the request for added value of JRC work towards policy makers.

## *2.1 The Rationale and the Relevance*

**2.1.1 To what extent are the objectives and the approach of the activities in this thematic area pertinent to the needs and problems European of policy makers?**

The objectives and the approach of JRC in the TA are to a great extent pertinent to the needs and problems of European policy makers and were carried out according to the mission and JRC Multi-Annual Work Programme (MAWP) covering the period 2007 - 2013 in the general area of *Safety of Food and Consumer Products.*

According to the Council Decision 2006/975/EC, Actions carried out by JRC in this TA are in line with the MAWP sections:

- Agenda 1.1. – Competitiveness and innovation
- Agenda 1.5. – Life sciences and biotechnology
- Agenda 2.3 – Environment and Health
- Agenda 3.3 – Food and feed safety and quality

Most of the Actions support implementation of EU directives, other legislative documents and upcoming EU policies, for example: alternative methods for Cosmetic testing (OECD 437); biocidal products (98/8/EC); export and import of dangerous chemicals (Regulation EC No 689/2008); classification, labelling and packaging of dangerous chemicals (directive 67/548/EEC, Regulation EC 1272/2008, GHS); chemicals policy (REACH); general product safety directive (2001/95/EC); control of heavy metals in food (2002/22/EC); release into the environment and marketing of GMOs (2001/18/EC); environmental quality standards (2008/105/EC); human bio-monitoring (EHAP-Action No 3); and construction (Directive 89/106/EEC).

In some policy areas the JRC Actions develop and standardise methods facilitating the implementation of regulations. For example, there is a strong focus on harmonisation, especially in the validation of methods and methodologies and standards across the EU Member States (e.g. in the areas of GMOs and of food safety). The resulting recommendations to EU policy makers and organisations (such as OECD, WHO and many others) are seen to be at a good level. However, dissemination and communication of results have to be additional priorities in future work.

Other activities address the traceability of animals and animal products with particular focus on animal-disease controls.

There is also strong policy implementation support via the provision of reference materials (for example for purposes related to quality and safety of food including quantification of GMOs and microbiological analysis of food and water pathogens).
The impact on policies can further be improved in the areas of indoor air quality, environmental noise, nanomaterials safety assessment and in the activities addressing endocrine disrupters.

As a general observation, it was difficult for the panel to understand the time line for deliverables from the information provided.

It is suggested that the strong expertise in analytical skills should be complemented by a more thorough consideration of relevance to health and quality of life, as well as relevance of models to real life scenarios. This should enhance the application of knowledge in better addressing cross-cutting policy issues, thereby meeting the needs of the EU for better anticipation and consideration of the necessary policy options.

Moreover, it is important to strengthen the integration of various scientific disciplines and institute roles to provide more holistic levels of support and advice to policy makers. In particular**, there needs to be further integration between JRC's activities in potentially conflicting areas** (such as energy efficient buildings vs. indoor air quality; greater demands for biomass vs. challenges to food supply.) Such topics infer that the work of JRC on the low carbon economy has to be linked with the work of this particular TA as well. This further highlights the need for JRC to ensure the application of holistic scientific advice (based on sound scientific analysis and results) when considering the implications of policies from a wide range of different angles. The panel also recommends cross-linking with other JRC Institutes, especially with the JRC's Institute for Prospective Technological Studies (IPTS), and other EU institutions for elaborating foresight in selected pertinent fields.
**In conclusion, many Actions demonstrate a strong support to EU policy makers and EU Member States, however, as stated above, the communication of the impact of the work could be improved and there is room better cross-Thematic-Area integration.**

**2.1.2 To what extent is the policy support work based on relevant, sound and innovative *science* results*?***

Work conducted in support of policy is to a great extent based on the most up-to-date and innovative scientific achievements (e.g. nanobioscience). All projects use or adapt the latest research techniques and methods.
Themes within these Actions correspond to the main areas of progress in knowledge and technology where research supports and strengthens response to European social, economic, environmental and industrial challenges. A major strength – as particularly demonstrated by certain IHCP actions such as alternative to animal testing – lies in their scientific networking and coordination of activities at the EU level. On the basis of consensus reached in these networks, the JRC is able to provide

consolidated scientific advice and recommendations to the policy DGs and this can accelerate the regulatory process.

The deliverables in most Actions were carried out in strong compliance with standards (CEN, ISO, GLP, OECD, IUPAC, and Codex Alimentarius). Many laboratories of the actions are ISO accredited as some projects provide a reference function.

Some Actions also contribute towards innovation, e.g. the work in the nanotechnology area and development of the system for detecting GMOs based on micro Real-time PCR (patent for the COSYPS system).

JRC has also set up a specialised laboratory able to provide a unique testing service for animal tagging for food traceability purposes and monitoring of animal diseases.

**In conclusion, as the majority of the work in these actions is in support to Member States' laboratories in the implementation of policies, it necessarily requires robust results which for the most part draw from innovative approaches.**

**2.1.3** To what extent do the JRC activities in this area provide (Community) **added value**?

JRC's role focuses not only on supporting the implementation of existing regulations, but also on developing amendments / revisions to these regulations, providing contribution to new ones and to international standards, as well as technical examination of applications submitted to the Commission.

The added value of the Actions under evaluation comes from the generation of new knowledge and techniques, methods, materials, and innovative methodologies, for example:

- new knowledge was successfully applied in many validated methods in the area of toxicity. Particular Actions are active in international collaborative projects and the methods were developed within competitive projects within FP6/FP7 Programmes in many research areas (such as optimisation and pre-validation of an *in vitro* test strategy for predicting human acute toxicity, human sensitivity, Actions 15015, 15018, 15019)
- a series of analytical methods was developed for testing contaminants in various types of food and other products (Actions 33004, 33002, 15014, 15020) and
- authorisation of many food and feed additives (Action 33002) was provided

Activities in 2011 will aim also tackle the harmonisation of genetic testing techniques.

A number of Actions have contributed to innovation e.g. development of nanosensors and high-throughput systems for rapid toxicity testing of chemicals (in support to the European Centre for the Validation of Alternative Methods – ECVAM, c.f. Actions 15024, 15018, 15015); provision of test results of innovative construction materials for photo-catalytical degradation and permeability of indoor air pollutants (Action 15014); development of a high-throughput system for multi-target GMO

detection (Action 15016, which provides a very useful tool for harmonisation of genetically modified organisms' analysis for the GMO Community); development of a ruminal bolus for the electronic identification of ruminants and its technological transfer into the European SME routine industrial production (Action 33001).

It should be highlighted that the above mentioned important developments, given as good examples, could only be made by the high level of expertise within JRC Institutes, in cross-institutional collaboration and in cooperation with other institutes in EU and non-EU countries. The added value, which also draws on the inputs of external organisations, can only be fully achieved by improving the knowledge management process. This would be achieved by better communication and efficiency in knowledge transfer and awareness of the JRC actions within the EU. By this the full benefits deriving from the complementarity of the work, as well as the avoidance of duplicating work across the EU, can be achieved.

JRC should also be more visible by opening its infrastructures. In this regard, there is still room for improvement in providing efficient, user-oriented platforms for scientific studies as well as for knowledge management.

**In conclusion, in each Action and Institute dissemination of activities and results should be encouraged and the impact of knowledge transfer across JRC and the European Research Area (ERA) in general should be monitored, preferably through the Board of Governors of JRC.**

**2.1.4**. How does this **added value** compare to the **baseline options** (i.e. no EU-policy/no change from FP6 to FP7)?

All Actions are in some way a continuation of activities realized within FP6, but as noted, FP7 is focused more on research themes, cutting across disciplines, than on research instruments (as it was in FP6). As a consequence, the Actions have for the most part been re-organised and are generally managed in a much more efficient way.

FP7 orientation on thematic areas, including "Food, Agriculture and Fisheries, and Biotechnology", makes the whole Programme more flexible and sensitive to the needs of consumers and industry.

Certain new activities have started in the course of FP7, such as in the area of nutrition. In addition the work of ECVAM has been reviewed and now draws on the input of a number of different competences across the JRC and is no longer served by just one Unit alone. It is also important to point out the clear role of the JRC as seen in the transfer out of its activities of its former European Chemicals Bureau (ECB) to the newly established European Chemicals Agency (ECHA). In this work, the JRC was instrumental in the development of the new European Chemicals legislation (REACH). Once its support in facilitating the implementation of REACH became more routine and operational in nature, the activities were handed over to the Agency.

In view of the new JRC corporate strategy, however, the panel expresses its fears that, for the second half of FP7 for the Thematic Area under evaluation, the funds allocated may not be sufficient to continue and complete the research currently in progress in relation to its stakeholder and customer demands.

Considering that FP8 is likely to be significantly different, targeting more the societal challenges by new foci on themes like "aging population" and other problems (food, water quality), it is recommended that the focus of JRC move from purely analytical activities to more integrated assessments of food safety and consumer products safety, meeting more circumspectly the needs of policy makers and thereby helping realise the aim of JRC to be a provider of policy options. Policy anticipation, formulation and evaluation should definitely pay a larger role in JRC's activities which tends to focus too much on the policy implementation.

The JRC should also aim to contribute to enhance its contribution to capacity building, which is necessary for harmonised activities within EU, in particular in the new EU member states. For example, JRC could play a more active role in nanotechnology platforms with respect of safety of nanotechnology products (cosmetics, medicaments /drugs).

## *2.2 Implementation*

**2.2.1 To what extent does the JRC have the competences required for achieving its objectives in this thematic area set in the context of the EC FP7?**

The competences of JRC are based on the high level of its personnel's scientific and professional skills that to a large extent meet the requirements necessary to achieve the objectives set out in the TA *Safety of food and consumer products*. JRC's own competences are increased by cooperation and networking with other institutions, especially with EU member states and the associated partners.
It is recommended that using its competences, JRC should put even more effort into networking and thereby contribute to the consolidation of state-of-the-art knowledge in order better to unify and guide policy within this TA and to meet its main objective in increasing consumers' safety and health. The panel also recommends that JRC should place more emphasis on dissemination as well as communication of its results and evaluation work achievements and impacts, so that the implementation by consumers and collaborating institutions and national EU partners would be more able to profit from the whole work of the JRC across the whole of the EU.

**2.2.2 Is the balance between the different activities in this area appropriate and is the level of funding adequate to achieve the objective set in the context of the EC FP7?**

It needs to be stressed that the actions under evaluation differ significantly in their sizes (man power and equipment). It is important that the necessary critical mass is achieved in order to supply solutions on questions arising from policy makers. This is of utmost importance to ensure the continuation of work in specific areas. It was difficult for the panel to understand the real value for money and cost benefits. It seems that the level of funding of some the JRC's actions under evaluation is not adequate to achieve the activities set out in the context of the continuation of FP7.

There are gaps in evaluation of the impact on health (such as cancer/carcinogenesis, or hormone effecting agents) which should be complemented by the expertise of JRC in collaboration with JRCs partners. However, this may not always be the case and therefore the implementation of some of the JRC activities is not sufficient. This should be improved to obtain better "yield" of the JRC Actions. For example, are the In vitro methods, introduced by ECVAM really sufficiently and adequately used by health/medical community and thereby having an impact on disease prevention? The action towards better dissemination of information on alternative methods to animal testing to enhance their uptake and application are already underway: the data base DB-ALM aims to maintain and increase its services by regular revision of its data sector and establishing a web-based tool for the regular update of the INVITTOX protocols.

**2.2.3. Are the facilities of the JRC appropriate for achieving its objectives in this thematic area set in the context of the EC FP7?**

In general, the JRC has appropriate technical facilities and some high quality infrastructure for achieving the objectives set out in the context of FP7. This potential is increased by access to relevant facilities and resources in the cooperating institutions, both in the EU and non-EU countries. Some restructuring and investments in JRC–owned building infrastructure is needed, some special experimental facilities are however in the process of being upgraded and there is a large construction process underway to co-locate personnel within IHCP and IES (for example, IHCP today is spread over 15 buildings).

The panel noted that the laboratories in general are well equipped but more emphasis should be made to share equipment not only within the JRC but also with external partners. This would serve to strengthen the work in areas of integrating science disciplines. This is already the strength of existing research institutes all over Europe.

**2.2.4 To what extent does the JRC run its activities in this thematic area in a cost-effective manner?**

Due to the complex nature and variety of policies served, it is necessary to know the full context of the work. Some policies may require more overheads than others, especially those which are involved in regulatory issues (where the emergence of unforeseen crisis situations may occur).

The panel observes that there have been already attempts to use the resources in a more cost effective way. For example due to re-organisation towards better efficacy, the annual budget (specific credits) in particular of the IHCP decreased by 15% in the last year. The panel believes that the activities are rationalised at present. The actual cost-effectiveness of the work is difficult to assess since cost-effectiveness has to be placed in context of long-term policy outcomes. Looking at the output and the flat rate of the budget (2007-2009), there seems to be good budget management in place.
There is also a noted awareness among many of the management and staff of need for careful expenditure of public funds.

**2.2.5 Are the arrangements for planning, monitoring, reporting and evaluation appropriate and effective? Are they transparent?**

The arrangements for reporting and monitoring are appropriate and effective and described in great detail in a good and transparent manner on the research. Reporting on the impact of policy making is mostly missing in all areas and needs significant improvement. JRC also has the obligation to ensure the formulation of science based information towards policy makers. In some cases, the planning of regulatory research is not effectively translating into regulatory reports and policy implementation. For example, indoor air quality research could have benefitted by having an up-front policy concept.

The results, achievements and impacts in the area of research are well reported. There are many scientific and technical deliverables in all Actions. However, in some cases the objectives could be described more precisely.

There is however still a window for improvement in the more effective use of generated knowledge either by stakeholders all over Europe and globally or by EU policy makers and a more transparent presentation of the data/databases so that they are accessible by the professional and scientific community.

Procedures for work programme planning and execution are well described and fall under ISO 9001 certification. Monitoring of work is performed via achievements of indicators and completion of objectives and deliverables. Quality of deliverables is ensured to a great extent by a set of internal reviews prior to release.
Evaluation of work is performed at central JRC level on an annual basis via the JRC's periodic Action review (PAR) process. The results of this internal evaluation provide an indicator of the effectiveness of an Action in terms both of scientific and policy impact.
However, the panel was concerned over the extent of the bureaucratic burden of quality management.

**2.2.6. To what extent does the JRC give a follow-up to the recommendations of the JRC FP6 Ex-post evaluation ("King-report")**

JRC has given a substantial follow-up to the recommendations of the ex-post FP6 evaluation and many resulting actions are already in progress. Examples include greater focus on more integrated approaches in the assessment of risks and hazards by chemicals to humans and the environment. The evaluation panel supports the enhancement of these activities and recommends their uptake also in other areas.

Nevertheless, the management of exploratory research could be improved. The benefits will not only be reflected in higher scientific quality but also in the acquisition of new knowledge that could feed directly into the policy process, especially towards policy anticipation.
The restructured IHCP work programme anticipates to a great extent the new JRC strategy, as the principle of this exercise was to create competence groups and enhance horizontal collaboration in order to break down 'silos'. For example, nearly all operational Actions are supporting the policy of

Alternative Methods & ECVAM and the Systems Toxicology operational Action in particular is supporting several policy supporting Actions.

Quality assurance in management as well as in publications is taking place. JRC publications list with impact factors is available and will be accessible on the internet in future. Enhancement of infrastructure which is in line with new strategic goals is in progress
It is further recommended that all information exchange functions in the JRC are improved as already suggested above.

## *2.3 Achievements and performance level*

**2.3.1 In consideration of the Council Decisions ("whereas" clauses) to what extent do the JRC's FP7 direct actions in this area?**

**2.3.1.1 Provide customer driven support to European policy makers?**

The mission of JRC is to provide customer-driven support from both technical and scientific aspects for EU policies. With regard to this TA and from the point of view of policy implementation, JRC responds well to its mission. In terms of policy formulation and adoption JRC is less active (only up to 5% of its activities). The panel however recognized the effective *ad hoc* policy support, reported by most of the Actions. In future, more particular attention should be paid to policy anticipation, as already mentioned above and which is also underlined in the New JRC Strategy for 2010-2020.

JRC's participation in international committees and working groups also testifies to the relevance of its work at the European and international level. In particular, the work of the European Chemicals Bureau (ECB) was widely praised by the associated Commission policy DGs as well as the Member States' competent authorities. The ECB in fact represents a good example of the added value of the JRC in bringing a necessary entity to fruition and handing it over when the activities become established. The major part of the operational tasks of ECB was handed over to the European Chemicals Agency (ECHA) in 2009.

The achievements of all Actions provide evidence of customer-driven scientific, technical and political support, but to different extents. The "customers" are very well described in all Actions. However, according to the JRC Customer Satisfaction Survey 2008, the assessment of satisfaction (taking into account all types of customers, i.e. internal, to the EC, external to the EC, paying customers, non-paying customers, single (receiving product from one JRC institute), multiple (receiving products from more than one JRC Institute) varied significantly depending on the customer type. Evaluation of the general satisfaction of customers with JRC products and services takes into account three main aspects: scientific quality of the products, overall quality of the project management and relevance of the product / service for the specified purpose. Whereas the general level of satisfaction is **relatively high** (scoring 78% 72% 77% and 73% respectively for the categories of: scientific quality, management quality, relevance, and overall performance), the panel considers that there is a space

for improvement in all these scores, based on thorough analysis of each customer's needs, particularly under the EU Agenda.

**2.3.1.2 Engage in international cooperation activities for the purpose of implementing the JRC programme?**

International cooperation in most of Actions, not only within the EU and the candidate countries but also with the USA and even the Far East, is rather good.

JRC successfully participates in many external networking activities under the indirect actions of FP7 and the level of the network partners is large, including experts from industry, academia and research organisations. Moreover number of Actions under evaluation are active in (and some have the Chair of) working groups of international Organisations such as OECD, WHO, CEN, ISO.

The panel strongly recommends increasing the collaborative activities, including the participation in FP7 indirect actions by inviting/networking with institutions in old and new EU member states alike, thereby opening up the excellent infrastructure, which may not be available easily for the latter countries.

The panel also stresses that practical dissemination of the results and products at Member State level, especially in the new EU Member States needs significant improvement.

**2.3.1.3 Promote the integration of New Member States' /Candidate Countries' organisations and researchers in its activities in particular on the implementation of the S&T components of the *acquis communautaire*?**

JRC shares its knowledge with the new EU member states to a certain degree, depending on the specific Action. It has supported integration of New Member States through joint workshops and training courses as well as information events in many areas. A good example in the field of GMOs is the establishment of the network of National Reference Laboratories at EU level (ENGL) and globally. The JRC actions under evaluation host 6 EU Reference Laboratories (EURLs – e.g. EURL for contact materials, EURL for GM food and Feed, EURL for mycotoxins, EURL for polycyclic aromatic hydrocarbons, EURL for heavy metals, EURL for feed additives) and other Centres ( (e.g. the European Bureau for Wine and Spirit Drinks BEVABS, ECVAM, and formerly the ECB). In some of the Actions (e.g. 33001 – Monitoring, control, and traceability in the food chain) essential contributions to training of researchers from the New Member States should be especially highlighted (numerous training courses, analyses and workshops). However, as already stated above, the New Member States should be more actively integrated into competitive actions and encouraged and promoted in coordination and management functions.

**2.3.2** To what degree do the JRC activities in this thematic area support the creation of the European Research Area, e.g. through provision of access to JRC's facilities and contribution to the mobility and training of (young) researchers?

The activities in the thematic area support the creation of the European Research Area through the sufficient provision of access to JRC facilities and contribution to the mobility and training of (young) researchers. In some Actions PhD students and other visiting scientists carry out some of the scientific work in the JRC (e.g. Action 15020). In response to the King report's recommendation, adapting better hiring procedures and preparing new staff recruitment policy approaches and procedures may be enhanced and still remains a challenge. However solutions are underway, a good example of which is the grant-holders' recruitment programme enabling JRC to recruit necessary expertise quickly. Also, whereas IHCP has managed to stimulate intra-institute collaboration to a much greater degree, inter-institute collaboration is not yet as strong as it could be. The resolution of this difficulty is, however, at the heart of the new JRC strategy.

**2.3.3** To what degree did the JRC participate in networking activities under the indirect actions of FP7 and what is the level of the network partners?

The Actions via their hosting Institutes have many collaboration agreements with external organizations working in similar areas of interest. This collaboration helps to meet JRC's aims, namely harmonisation and validation of methods and measurements, elaboration of common standards, and the provision of support in the implementation of European legislation.

In relation to indirect actions and based on the information provided by the JRC the panel estimates that the thematic area is participating in more than 70 projects comprising more than 300 partner organisations in total . Moreover partners include experts from industry, academia and research organisations).

**2.3.4 From an expert point of view, how does the work in this thematic area compare to similar work done at top organisations in the relevant fields?**

It should be particularly stressed that the level of research carried out e.g. in the thematic area of nanobiosciences meets scientifically the top quality level. However, due to the specific mission of the JRC and to the lack of existing benchmarking data, it is difficult to make a fair comparison.

As an example, in the field of alternative methods to animal testing**,** the JRC's work cannot be compared to that of any other organisation, due to the fact that in Europe there are no institutions or organizations undertaking such activities on such a large scale. On the global level activities of these activities (ECVAM) are comparable with sister validation organisations in the US, Japan, and Canada.

### *2.4 Forward looking*

**2.4.1 What options should be explored for the future orientation of the thematic areas and the overall non-nuclear activities of the JRC in view of the EU 2020 strategy?**

In order to develop future orientation in the thematic area in view of the EU 2020 strategy, is the panel recommends the JRC to:

- enhance its visibility and professional networking with national (reference) laboratories also by clearly formulating the deliverables (results) and their implication in particular areas;
- enhance the scientific partnership with academic and research institution within EU member states and candidate countries;
- explore further possibilities of cooperation globally;
- strengthen the knowledge transfer, where relevant, with potential industrial partners enhancing the innovation process within the EU;
- plan carefully the mobility of researchers, in particular younger scientists from the (new) EU member states to enhance EU networking;
- maintain the funding at the current level to meet the Grand Challenges of EU 2020 in this area particularly in relation to the ageing population and the increase of food demand and the sustainable management of natural resources (as mentioned previously e.g. low carbon society);
- increase the functioning and effectiveness of the horizon scanning and foresight functions to facilitate the formulation of policy options.

# 3 Summary and Recommendations

The panel was generally satisfied with the performance and impact of the work falling under the *Safety of Food and Consumer Products*. The focus of the TA is primarily on supporting the implementation of policies which it does effectively particularly in the validation and harmonisation of methods ranging from the detection and quantification of GMOs to detection of chemicals migrating from food packaging and containers and to the validation of alternative methods to animal testing. It also has a large focus in the reference and standardisation functions via the supply of reference materials.

The panel firmly believes that the new JRC, 2010-2020 Strategy will be implemented easily in all Actions under this evaluation (Annex 1). IHCP Actions in particular will be able to remould itself relatively easily to the new strategy due to the Institute's recent restructure.

Some of the main concerns and recommendations of the panel pertain to:

(i) The need for JRC to become more proactive in the policy anticipation stages (policy formulation and adoption) and not stay merely within the policy implementation stage as currently. The panel recommends that JRC enhance its holistic, integrated approach to being better able to provide a more innovative approach towards becoming a trusted provider of science-based policy options to EU policy makers. This would also shift the focus from the present customer-driven approach towards a stronger forward-looking capacity (reactive vs. proactive).

(ii) The concerns over the planned significant future downsizing of the TA (from approximately 19% to 13% of the total JRC staff) and the removal of the focus on health at a time when health is receiving a major political focus. In the face of such cutbacks, the JRC would need to collaborate more extensively with the national EU institutions to complement its activities and meet current customer demands. Such reductions would also call into question whether JRC can realistically support the whole policy cycle in the thematic area (see recommendation above). Moreover the TA requires new skills to understand societal needs and to carry out socio-economic benefit and risk assessment, which in collaboration with IPTS could provide useful policy foresight into upcoming issues.

(iii) The need to support the new Europe 2020 policy with regard to mobility of researchers. JRC should be more proactive in encouraging and facilitating the exchange of scientists, in particular from the new EU member states. Also, the panel recommends that the Actions in the TA be more integrated across the European Research Area, and in particular to analyse national research policy in the relevant areas and actively to pursue scientific exchange with national research institutions.

(iv) JRC's visibility. Whereas the panel recognised the extensive global networking and harmonising activity of the TA's Actions in enhancing global collaboration and exchange in databases, materials and methods with non-European countries, JRC scientists could increase their visibility more. One practical way would be to organise more workshops and training courses in the member states,

especially the new ones. Scientists from these countries should also be given more ready access to JRC infrastructures. The JRC should more actively seek to open its extensive databases to research institutions, the public and industry (wherever possible) to encourage innovation and collaboration between private and public R&D institutions.

(v) The low level of publication rates in some policy areas (e.g. GMOs). Whereas the panel is aware of the different balances of policy to science work in the various activities of the JRC, the panel emphasises that proactive research is essential to feed into policy formulation. The panel recommends that more attention be given to increasing publication rates in these policy areas.

(vi) The practical dissemination of the results and products. The panel expressed its concern over the apparent lack of wide dissemination of JRC's results at Member State level, especially in the new EU Member States. The panel recommends that steps be taken to ensure wider dissemination of JRC results.

**Annex: 1 JRC Actions evaluated**

| Action | Acronym | Title |
|---|---|---|
| 11102 | Europ RM | European Reference Materials Technology developments and quality management |
| 11103 | SEMI | Support to European measurement infrastructure (and CRL for heavy metals) |
| 15012 | Biotech RM | Reference materials for biotechnology and life sciences |
| 15014 | CAT | Chemical Assessment and Testing |
| 15015 | IVM | In-Vitro Methods |
| 15016 | MBG | Molecular Biology and Genomics |
| 15018 | ST | Systems Toxicology |
| 15019 | AM & ECVAM | Alternative Methods and ECVAM |
| 15020 | GMOs | Genetically Modified Organisms |
| 15021 | NT | Nanotechnology |
| 15022 | CPN | Consumer Products and Nutrition |
| 15024 | NBS | Nanobiosciences |
| 23007 | HE | Health and Environment |
| 23001 | ENVIHEALTH | Health impact assessment of environmental risk factors |
| 33001 | CI-Animals &Food | Monitoring, Control and Traceability in the Food Chain |
| 33002 | Feed SQ & CRL | Feed safety and Community reference Laboratory for Feed Additives Authorisation |
| 33003 | Food RM | Reference materials for food safety and microbiology |
| 33004 | Food SQ | Food safety and quality control (and CRLs for mycotoxins and PAHs) |

# Annex 2

## TERMS OF REFERENCE
## for the establishment of a panel of experts to carry out a thematic evaluation of the Joint Research Centre's activities in the area of Safety of Food and consumer products

## 1 Introduction

The Seventh Framework Programme of the European Community (EC)[1], the Seventh Framework Programme of the European Atomic Energy Community (Euratom)[2] and in particular their two specific programmes[3,4] for the direct actions carried out by the Joint Research Centre (JRC), specify the need to carry out interim and ex-post evaluations of the JRC's actions under these programmes.

Previous evaluations of the JRC targeted both EC and Euratom framework programmes at the same time with all scientific themes in one single exercise. Since the Ex-post FP6 evaluation of the JRC activities in 2008 recommended[5] changing to smaller evaluations focusing at thematic level instead; the JRC decided to follow suit and organise its interim evaluations of FP7 based on a series of thematic evaluations.

The ex-post FP6 evaluation already pointed out that the policy-theme structure that FP7 uses for the JRC work programme is not appropriate for a thematic evaluation. Moreover, it strongly suggested that the JRC should make "*smaller, competence or sector-oriented external evaluations*". The JRC decided to follow this recommendation and introduced the term "thematic evaluations" for these smaller evaluations, to indicate a distinction from "programme evaluation".

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1 Decision (1982/2006/EC) of the European Parliament and of the Council of 18 December 2006 concerning the Seventh Framework Programme of the European Community for research, technological development and demonstration activities (2007-2013), Official Journal of the European Union L 412/1;

2 Council Decision (2006/970/Euratom) of 18 December 2006 Concerning the Seventh Framework Programme of the European Atomic Energy Community (Euratom) for nuclear research and training activities (2007 to 2011), Official Journal of the European Union L 400/60;

3 Council Decision (2006/975/EC) of 19 December 2006 concerning the Specific Programme to be carried out by means of direct actions by the Joint Research Centre under the Seventh Framework Programme of the European Community for research, technological development and demonstration activities (2007 to 2013), Official Journal of the European Union L 400/368;

4 Council Decision (2006/977/Euratom) of 19 December 2006 concerning the Specific Programme to be carried out by means of direct actions by the Joint Research Centre implementing the Seventh Framework Programme of the European Atomic Energy Community (Euratom) for nuclear research and training activities (2007 to 2011), Official Journal of the European Union L400/434;

5 Ex-post Evaluation, Joint Research Centre Direct Actions in the 6th Framework Programmes (2002-2006), Final Report September 2008 and the response from the Commission: "Ex-post evaluation of the Direct Actions under the Sixth Framework Programmes for Research Technology Development and Demonstration carried out by the Joint Research Centre", SEC(2008)3105

The JRC is currently developing a corporate strategy around a number of core themes as recommended in the ex-post FP6 evaluation and the organisation is gradually converging towards a future programme structure. Without pre-empting the structure of the corporate strategy, the JRC adopted the following working structure to facilitate "thematic evaluations" that will feed into the interim "programme evaluation":

- *Safety of food and consumer products*
- *Sustainable management of natural resources*
- *Contribution to the Lisbon agenda*
- *Energy and transport*
- *Security and antifraud* (all defined through the EC framework programme)

A sixth thematic area in the JRC work programme is that of *Nuclear safety and security* funded through the Euratom framework programme. In February 2010 a panel of external experts finalised the interim evaluation of the JRC direct actions in the Euratom FP7 *de facto* completing a thematic evaluation in the field of nuclear safety and security.

These are the terms of reference for a panel of experts set up by the JRC to carry out a thematic evaluation of its activities in the field of *Safety of food and consumer products* in the context of an overall EC FP7 interim evaluation of the JRC's direct actions. This panel of experts will analyse existing evidence on the activities of the JRC, and prepare a final report in which it will provide conclusions and recommendations as regards the JRC's implementation of its activities related to Safety of food and consumer products under the EC FP7.

# 2 Mandate, deliverables and timetable

## *2.1 Legal basis*

The EC FP7 legal text[1] contains the provision for an interim review in the Article 7.2, which states: *"No later than 2010, the Commission shall carry out, with the assistance of external experts, an evidence-based interim evaluation of this Framework Programme and its specific programmes building upon the ex-post evaluation of the Sixth Framework Programme. This evaluation shall cover the quality of the research activities under way, as well as the quality of implementation and management, and progress towards the objectives set."*

The relevant ex-post evaluation referred to in the legal basis is the ex-post FP6 evaluation of the JRC[5].

Specific inter-institutional and Commission requirements further frame this evaluation; in particular those related to the Financial Regulation (Article 27.4), the Implementing Rules (Article 27.3)[6] and evaluation standards[7].

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6 Council Regulation (EC, Euratom) No 1995/2006 of 13 December 2006 amending Regulation (EC, Euratom) No 1605/2002 on the Financial Regulation applicable to the general budget of the European Communities (OJ L 390 of 30.12.2006, p. 1) and Commission Regulation no. 478/2007 of 23 April 2007, amending Commission Regulation no. 2342/2002 (OJ L 111 of 28.4.2007, p.1)

7 "Responding to Strategic Needs: Reinforcing the use of evaluation", SEC(2007) 213.

## *2.2 Objectives and scope*

The objective of the panel will be to carry out a thematic evaluation of the research and associated policy-support activities of the JRC in the field of *Safety of food and consumer products* that establishes fact-based answers to the evaluation questions set out in section 2.3.

The thematic evaluation takes place out in the context of the interim evaluation of EC Seventh Framework Programme for research and training activities (2007 to 2013). Together with the other thematic evaluations this evaluation will be subject to a meta-evaluation that will allow the European Commission to assess the continued relevance of the framework programme's objectives, and to review initial outputs and the early effects of the programme.

## *2.3 Evaluation questions*

This interim evaluation covers JRC activities carried out under the Seventh Framework Programme EC (2007-2013) in the thematic area of *Safety of food and consumer products.* It should provide substantive answers to the evaluation questions listed hereafter:

*Rationale/Relevance*

i) To what extent are the objectives and the approach of the activities in this thematic area pertinent to the needs and problems European of policy makers?

ii) To what extent is the policy support work based on relevant, sound and innovative science results?

iii) To what extent do the JRC activities in this area provide (Community) added value

iv) How does this added value compare to the baseline options (i.e. no EU-policy/no change from FP6 to FP7)?

*Implementation*

v) To what extent does the JRC has the competences required for achieving its objectives in this thematic area set in the context of the EC FP7?

vi) Is the balance between the different activities in this area appropriate and is the level of funding adequate to achieve the objective set in the context of the EC FP7?

vii) Are the facilities of the JRC appropriate for achieving its objectives in this thematic area set in the context of the EC FP7?

viii) To what extent does the JRC run its activities in this thematic area in a cost-effective manner?

ix) Are the arrangements for planning, monitoring, reporting and evaluation appropriate and effective? Are they transparent?

x) To what extent does the JRC give a follow-up to the recommendations of the JRC FP6 Ex-post evaluation ("King-report")**Error! Bookmark not defined.**?

*Achievements and performance level*

xi) What are the indications in the early outcomes of the activities that the overall and specific objectives of the EC FP7 can be met?

xii) Referring to the considerance of the Council Decisions ("whereas" clauses) to what extent do the JRC's FP7 direct actions in this area:

a) Provide customer driven support to European policy makers?

b) Engage in international cooperation activities for the purpose of implementing the JRC programme?

c) Promote the integration of New Member States' /Candidate Countries' organisations and researchers in its activities in particular on the implementation of the S&T components of the *acquis communautaire*?

xiii) To what degree do the JRC activities in this thematic area support the creation of the European Research Area, e.g. through provision of access to JRC's facilities and contribution to the mobility and training of (young) researchers?

xiv) To what degree did the JRC participate in networking activities under the indirect actions of FP7 and what is the level of the network partners?

xv) From an expert point of view, how does the work in this thematic area compare to similar work done at top organisations in the relevant fields?

*Forward looking*

xvi) What options should be explored for the future orientation of the thematic areas and the overall non-nuclear activities of the JRC in view of the EU 2020 strategy[8]?

### *2.4 Milestones and deliverables*

The panel will start the thematic evaluation with a kick-off meeting to agree on the detailed workings of the panel.

The panel will make an advanced draft final report available for the interim evaluation of the JRC direct actions in FP7 on 15 September 2010 at the latest. The draft report will contain the main findings and recommendations of the thematic evaluation.

The panel delivers a final evaluation report to the JRC on the "thematic evaluation of the Safety of food and consumer products activities of the JRC in the EC FP7 programme" in October 2010. The report will count 20 to 30 pages, excluding annexes, with an analysis of findings, a set of conclusions and recommendations based on evidence. It should be prefaced by an executive summary, not exceeding 5 pages.

The JRC will make the findings of the report publicly available.

**Meetings**

The panel will meet up to a maximum of three times between May and September 2010.

## 3 Operation of the Panel of Experts

### *3.1 Composition, identification and selection of experts*

The JRC Director General, in close consultation with the Board of Governors, will select five acknowledged experts in the areas of *Safety of food and consumer products* and compose a panel that will carry out an independent and objective analysis of the pertinent parts of the JRC Work Programme. The panel will include a highly qualified rapporteur.

[8] EUROPE 2020, A strategy for smart, sustainable and inclusive growth, COM(2010) 2020 final

The experts will be appointed on the basis of the criterion that they have a high level of expertise in the fields of research and technological development in particular, as attested by higher education qualifications of at least doctoral level and/or proven by having won prizes and awards at national, European and/or international level and/or as evidenced by experience and skills which are widely recognised.

For the composition of the panel attention will also be paid to a balanced representation which ensures expertise in the JRC's *Safety of food and consumer products* related activities, affiliation to the academic, public service non-governmental organizations and industry community, a certain geographical spread and gender balance. In addition, it will be an asset if some experts have a proven ability to assess the societal dimension and strategic relevance of the framework programme and the specific programmes.

### *3.2 Working method*

The evaluation theme *Safety of food and consumer products* comprises the scientific actions indicated in Table 1 given at the end of these terms of reference.

The panel of experts will base their findings on a desk analysis of achievements during the first part of FP7, presentations of selected activities, interviews with selected JRC managers, staff, clients and stakeholders and visits of selected JRC sites. Section 3.3 specifies the full “evidence base” that will be made available to the experts in electronic form (through access to a dedicated web-site) in the course of May 2010. Upon request the JRC will provide hard copies of the general information documents.

At the kick-off meeting the chair decides on the detailed working method for the thematic evaluation. The chair will see to it that the panel members and the supporting expertise are best exploited in the area of the evaluation theme Safety of food and consumer products. The panel will hold up to three meetings to come to conclusions and formulate their recommendations.

The chair, in consultation with the JRC, will establish the rapporteur, who takes responsibility for preparing (compiling and editing) the final report, based on all members’ written contributions and of relevant material and events identified by the panel members and/or the JRC. The rapporteur will highlight and exploit main points of reports presented by experts, create a PowerPoint presentation where necessary and draft summaries of the discussions held at meetings.

The JRC will make staff available to help organising and support the work of the panel. The staff will also provide input for the production of the report, notably through the collection and distribution of the material for the desk analysis. They will be in regular liaison with the members of the panel and notably the chairperson and the rapporteur to ensure the smooth running of the work of the panel. They will attend the meetings to provide appropriate information and orientations. The evaluation will be designed and carried out in line with the relevant Commission standards for evaluation[7] and subject to the quality assessment criteria.

An indicative time table of the evaluation can be found in the annex.

### *3.3 Expert support and evidence-base*

The panel will carry out its activities through an independent, robust, evidence-based process. At the discretion of the chairperson, appropriate independent experts can be invited to participate in discussing specific issues, including participation to meetings as required.

As evidence base the JRC will provide the panel with all necessary information, in particular:

*General information concerning*

- The baseline against which the assessment will be made (Framework Programme, Specific Programmes, Multi-Annual Work Programme)
- General reports on progress (e.g. Annual Reports, Annual Activity Reports, results of Customer Surveys)
- Reports of previous FP Evaluations and Commission replies;
- Relevant figures on human resources and budget implementation
- EUROPE 2020, A strategy for smart, sustainable and inclusive growth

*Specific information*

- Action reports with achievements of each "Safety of food and consumer products" action in the JRC work programme during the reporting period
- Statistical information on the implementation of the research activities (i.e. publications, patents, etc.)
- Detailed publication data from the JRC's corporate publication repository (PUBSY)
- Synthesis Report on the JRC Infrastructures, JRC internal report
- JRC Strategy 2010-2020

The panel may want to have the possibility to interview selected representatives of the clients and stakeholders (e.g. European policy makers, beneficiaries of third party work)

### *3.4 Credits*

The physical and intellectual works generated by the expert's assignment will remain the property of the Commission. The experts of this panel undertake not to use these works outside this assignment without the previous written agreement of the Joint Research Centre.

The published report will acknowledge the contributions of the members of the panel.

### *3.5 Administrative and financial aspects*

The JRC will reimburse travel costs according to the division of labour and travel obligations amongst the panel members and according to the standard rules applied by the Commission. The total budget for the members of the panel (expert fees) and the costs of travel and daily/accommodation allowance are provided in the JRC's institutional budget for 2010.