



European
Commission



**Collaborative
Doctoral
Partnerships**

*Joint
Research
Centre*

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Introduction

The Joint Research Centre at the science-policy interface

The Joint Research Centre (JRC) is the science and knowledge service of the European Commission and supports EU policies with independent evidence. Strategically placed between the scientific and policy spheres, the JRC has a specific mission in reinforcing evidence-based approaches in policymaking. It is providing data, facts and evidences to EU policy makers who are increasingly recognising the importance of science-based evidence for sound and robust policy-making. EU policies ensure that every citizen in Europe can benefit from similar standards of a healthy and safe environment, secure energy supplies, sustainable mobility and consumer health and safety.

By working together with the EU policy makers, JRC scientists are able to identify problems, study them, elaborate solutions, perform impact assessments on policy options and monitor progress when policies are finally implemented. The policy cycle is made up of roughly

six stages and science can be incorporated into every step. The understanding of when and how to intervene with scientific results in the policy making process is fundamental for an effective uptake of science in policy-making. Clarity and timeliness of the communication from scientists to policy makers and vice versa are equally key for a successful interaction.

Since the JRC serves multiple policy DGs, its research cuts across different thematic areas such as environment, health, safety and security, energy, transport and economy. The JRC premises are split across five different sites with headquarters in Brussels. The biggest site is located in Ispra, in the North of Italy, with more than 2000 staff members. The other sites are located in Karlsruhe (DE), Geel (BE), Petten (NL) and Seville (Spain). Furthermore, the JRC is home to more than 60 specialised laboratories and unique research facilities.

Since 2017, JRC is hosting the Collaborative Doctoral Partnership (CDP) pro-

gramme, which consists of establishing strategic collaborations with Higher Education Institutions (HEIs) to co-mentor a new generation of doctoral students in science and technology with a specific focus on the science-policy interface.

For more info see:

<https://ec.europa.eu/jrc/en>

<https://ec.europa.eu/jrc/en/working-with-us/collaborative-doctoral-partnerships>

Collaborative

Developing talents - The Collaborative Doctoral Partnership

The importance of science in policymaking finds resonance also in academia. In order to enhance the science-policy link, the JRC is offering the CDP to HEIs that grant PhD degrees. Collaborating HEIs are located in EU Member States or countries associated to the EU Research Programme Horizon 2020.

The JRC launched the CDP as a novel initiative for capacity building, opening up to external expertise and sharing research excellency. In the framework of the CDP, highly motivated doctoral students spend part of their PhD studies at the JRC for hands-on experience at the science-policy interface. PhD students can spend up to 24 months in one of the 5 JRC sites.

The initiative allows both students and the institutions to gain a better understanding of research needs throughout the policy cycle while at the same time providing the JRC with innovative ideas.

Education and training activities are an integral part of the JRCs work that builds on the organisation's robust, broad and multi-disciplinary research capacity.

“
It is fantastic to experience the enthusiasm and energy that young minds bring to the wider exploratory research community and their impact on the organisation.

*Jutta Thielen-del Pozo,
Head of Scientific Development*

”

“
 Every Research organisation needs young minds who bring new and fresh ideas into the organisation and who challenge established ways of thinking. With our CDP programme we enlarge our exploratory research community while at the same time give hands-on-training to the students on how to render their research more effectively for policy makers
 ”

*Stephen Quest,
 Director-General JRC*

CDP Objectives

- To strengthen the collaboration between the JRC and higher education institutions by promoting mutual enhancement of related skills and competences, combining existing knowledge and capacities, and enhancing networking in key scientific areas.
- To train a new generation of doctoral graduates in science and technology with a focus on the science-policy interface, in order for them to understand the research needs at different stages of the policy cycle, provide scientific support to policy and use transferable skills in science communication and knowledge management.
- To co-develop, co-host and co-supervise doctoral studies between higher education institutions and the JRC.

Thematic areas of collaboration:

Since the first call opened in 2016, 19 (6+13) thematic areas have been selected for collaboration:

First call 2016

- Energy and transport modelling
- Soil and land use change
- Bio-economy and forests
- Machine learning
- Genomics and bioinformatics
- Nuclear decommissioning and waste management

Second call 2020

- Digital Governance
- Smart, connected and clean mobility
- EU Energy Transition
- Development of methods to monitor progresses, design transformations and identify solutions to achieve SDGs

- Secure and sustainable supply of raw materials for strategic value chains
- Artificial intelligence for earth observation
- Graphic causal models for hybrid threats
- Resilience of built infrastructure to natural and man-made hazards
- Health promotion and prevention of non-communicable diseases (NCDs)
- Non-power nuclear and radiological technologies to achieve the SDGs 2030 Agenda
- Synergies of qualitative and quantitative methods for anticipation activities
- Behavioural insights applied to policy-making
- Robustness in complex data analysis and statistical modelling

Doctoral

Facts and Figures

The calls for expression of interests for CDP resonated in Academia. In total, more than 250 applications from 25 EU Member States and 4 Horizon 2020 associated countries have been received.

Following a competitive evaluation, 32 applications from 26 HEI from the first call and 33 applications from 21 HEI from the second call were invited to conclude the collaboration agreements. The evaluation considers the research profile, reputation, existing PhD programmes and networking and collaboration capacity of the applicants.

Typically, students start their PhD at the universities and then come to the JRC for their research before returning to university for the completion of their thesis.

Implementation

Following the successful negotiation and signature of a CDP collaboration agreement, topics for PhD students are agreed between the supervisors at the Higher Education Institution and the JRC. Calls for the PhD positions are published by the HEI and the JRC. The doctoral students are co-selected, co-hosted and co-supervised between the respective HEI and the JRC.

Doctoral students have the opportunity to carry out part of their doctoral studies at the JRC for a minimum of 1 year to a maximum of 2 years. For the period they spend at the JRC, doctoral students are offered [Grantholder category 20 contracts](#).

A good collaboration between the HEI and JRC is essential. In order to ensure the best possible supervision for the students, the JRC is promoting best practices for supervisors on co-supervision between different organisations during workshops.



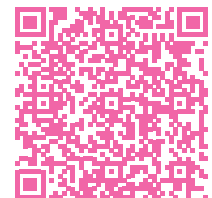
Partnerships

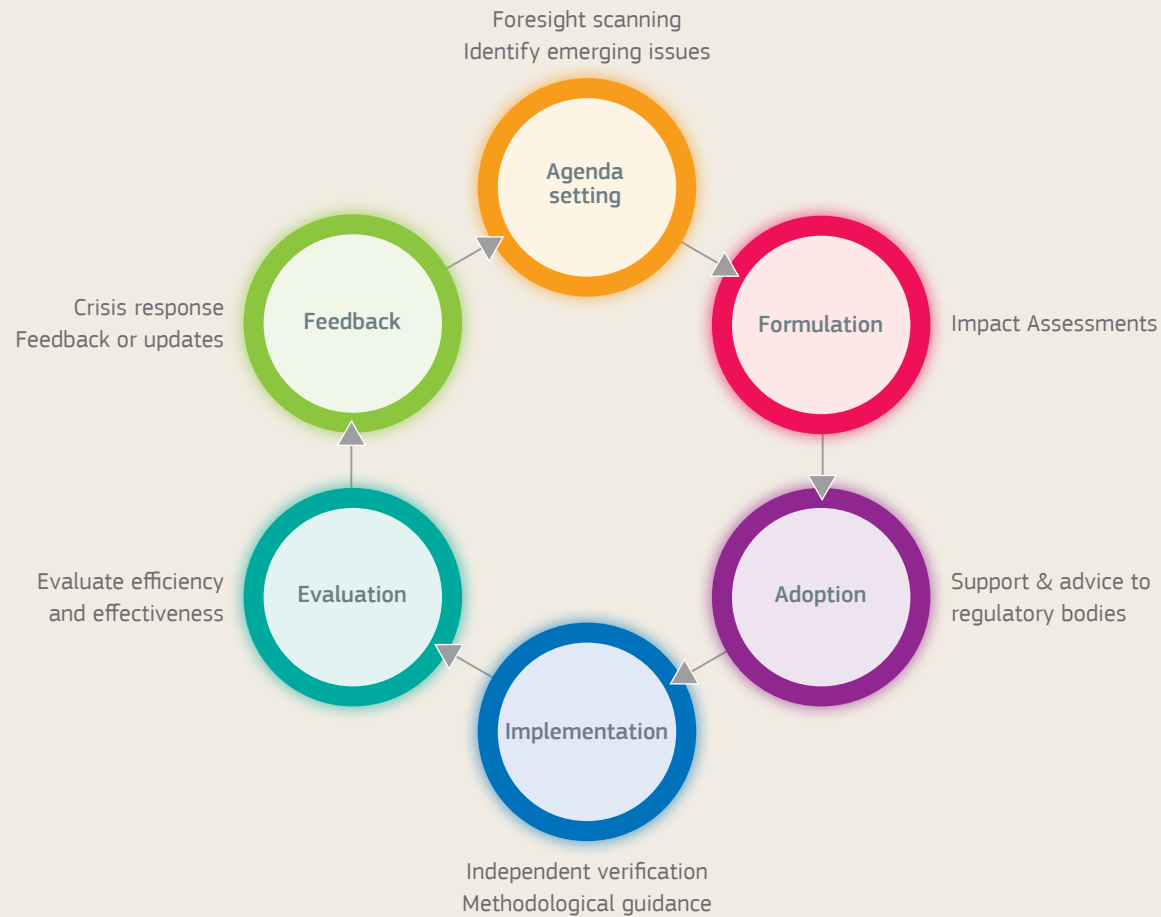
Collaborating universities in CDP (Status June 2021)

The following HEIs/universities have signed CDP collaborative agreements so far:

- University of Ljubljana, SLO, Faculty of Computer Sciences, in the field of Machine Learning
- University KU Leuven, B, in the fields of Soil and Land Use Change, Bio-economy and Forests, Machine Learning and Genomics and Bioinformatics
- University College Dublin, IRL, in the fields of Machine Learning and Genomics and Bioinformatics
- Universidad Pontificia Comillas, E, in the field of Energy and Transport Modelling
- University Zilina, SK, in the field of Energy and Transport Modelling
- University of Zvolen, SK, in the field of Bio-economy and Forests
- Université de Versailles, F, LSCE, in the field of Soil and Land use
- Utrecht University, NL, Faculty of Geosciences, in the field of Energy and Transport Modelling
- Universidad Politecnica de Madrid, E, Centro de investigacion del transporte TRANSYT, in the field of Energy and Transport Modelling
- University of Padua, I, Dipartimento Territorio e Sistemi Agro-forestali, in the field of Bio-economy and Forests
- University Cantabria, E, Santander, in the field of Energy and Transport Modelling
- University of Bari, I, Aldo Moro, Bari, in the field of Machine Learning
- University Hasselt, B, in the field of Nuclear Decommissioning and Waste Management
- University ETH Zurich, CH, in the fields of Soil and Land Use and Bio-economy and Forests
- Politecnico di Milano, I, in the field of Nuclear Decommissioning and Waste Management
- University Wageningen, NL, in the field of Bio-economy and Forests
- University Vigo, E, in the field of Soil and Land Use
- University Polytechnica, Valencia, E, in the field of Machine Learning
- Radboud University Nijmegen, NL, in the field of Bio-economy and Forests
- University Zurich, CH, in the fields of Soil and Land use and Bio-economy and Forests
- Università degli studi di Milano, I, in the field of Genomics and Bio-informatics
- University of Seville, E, in the field of Nuclear Decommissioning and Waste Management
- University Kaunas, LT, in the field of Nuclear Decommissioning and Waste Management
- University of Aarhus, DK, in the field of Soil and Land use Change
- University Medicine Greifswald, D, in the field of Health Promotion and Prevention of Non-communicable Diseases (NCDs)
- Alma Mater Studiorum - Università di Bologna, I, in the field of sustainable development goals and statistical science

The list of HEIs is evolving and therefore the actual list is published on <https://ec.europa.eu/jrc/en/working-with-us/collaborative-doctoral-partnerships>





win-win-win

Universities

gain a better understanding of research needs throughout the policy cycle.

JRC

obtains innovative research input and exchange of information with leading academic institutions in the field.

PhD Students

have the unique opportunity of gaining experience in higher education, research institutions and policy making.

My Experience



While doing my Master thesis on integration of renewable energy through underground hydrogen storage at Utrecht University, I got really interested in research. That is why I started considering doing a PhD in modelling of energy systems and so, I applied for “Power and Heat sector coupling and modelling” as a collaborative doctoral partnership between the Joint research centre in Petten and the Utrecht University. In fact, I was very enthusiastic to develop my energy system modelling skills while diving into a very hot topic for the transition of our energy system, and to experience research dynamics outside of the academic environment, since I could see how research is applied practically.

Annika Boldrini, Utrecht University

With this PhD programme, I hope to deep dive into the topic and acquire an understanding that allows me to shape policy. So far, I really appreciate the combination of academic freedom and support and guidance from my supervisors.

Julia Koninger, Universidade de Vigo



I am starting my CDP experience in Ispra in December, but I already spent five months there as a trainee. I can say that everything I was told was true. Impressive facilities that offer an amazing work environment, and even more importantly I found the people I was working with to be extremely helpful, kind and relaxed. Furthermore the

coordination between the JRC and my home university was effortless. Therefore I think this programme presents a great opportunity for people that would like to produce a high quality doctorate degree in a stimulating and fun environment.

Andraz Krasovec, University of Ljubljana



I see the CDP programme as a unique opportunity for combining the expertise of two institutions of excellence towards the provision of high-quality information about natural resources for the population. I hope the results we find during the PhD research have a positive impact for science and policy-making.

Arthur Fendric, Université de Versailles

Joining the JRC collaborative doctoral programme is an excellent opportunity to learn from the best scientists and add value to society through research-driven evidence.

The JRC offers a wide range of tools, materials and research options to have the best investigation experience.

Juan Raman Lopez Soler, UPM Madrid



Working for a sustainable and democratic future, by supporting the European Commission's decision-making with hard science was a dream. For that, I could hardly imagine a better place than the JRC. And since I started my high expectations have only been exceeded.

David Ziegler, Universidad Pontificia Comillas

As an Earth Scientist my motivation to join the CDP came from the desire to gain experience in my PhD of doing research at the science-policy interface, where science is tightly linked a more sustainable outer society. Alongside the development of an individual PhD project, the first year has provided good opportunity to engage in outer activities in both the university and JRC settings, allowing invaluable experience to be gained in both environments.

Francis Matthews, KU Leuven



I decided to join the CDP programme since it encompasses my passion for natural resources management and seeing its implementation through policy. I hope that this research will contribute to reinforce the bond between policy and Science.

Nicola Bozzolan, Wageningen University



As Albert Einstein said: "Strive not to be a success, but rather to be of value". When I decided to start a Ph.D., my final goal was to use this experience as a valuable tool to develop my career within international organizations. I have always been fascinated by the idea of working in a multicultural environment, using my expertise to help a community flourish and ultimately to leave the world a better place than I found it. So when the possibility to work for the European Commission came across, I couldn't help but take it.

Viola Di Cori, Università di Padova



I applied to the CDP between the UPM and the JRC in Sevilla because I have always been passionate about how research in technical areas can be applied to public policy making. Having the opportunity to elaborate this interest

within an institution of the importance of the European Commission is a very enriching opportunity, both from an academic and a personal perspective.

Maria Vega, UPM Madrid



I opted for the CDP programme to work on cutting-edge research lines comprising the application and development of Artificial Intelligence methods to biological data with the goal to push forward precision medicine and to support the political decision-making in this field.

I am happy to be in the CDP program where I can follow doctoral courses to improve my skills and work with an amazing team on complex and interesting research topics.

Jessica Gliozzo, Università degli studi di Milano



The Joint Research Center is a fantastic place to work for young researchers who would like to have an impact on the future of European policymaking. The mixture of responsibilities connected to research work and EC policy support, the possibility to work and learn from experts in interdisciplinary teams, and a breathtaking location by Lago Maggiore in the North of Italy make the PhD experience all the more enriching!

Ada Garus, University of Cantabria

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More information on CDP can be found on the EU Science Hub at: <https://ec.europa.eu/jrc/en/working-with-us/collaborative-doctoral-partnerships>

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GETTING IN TOUCH WITH THE CDP TEAM

By electronic mail via: JRC-CDP@ec.europa.eu

The calls for PhD students are published on:

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The European Commission's science and knowledge service

Joint Research Centre

JRC Mission

As the science and knowledge service of the European Commission, the Joint Research Centre's mission is to support EU policies with independent evidence throughout the whole policy cycle.



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