



- **JRC at a glance**
- **JRC priorities and new trends**
- **Examples of JRC activities**
- **Opportunities for Moldova: Enlargement and Integration Action**



**President José Manuel Barroso**

**27 Commission Members**

... **DG Environment**

**DG Climate Action**

**DG Agriculture and Rural Affairs**

**DG Mobility and Transport**

**DG Energy** ...



**Commissioner Geoghegan-Quinn**  
*Research, Innovation and Science*

**Joint Research Centre (JRC)**

**DG Research and Innovation**

**JRC Director-General  
Dominique Ristori**



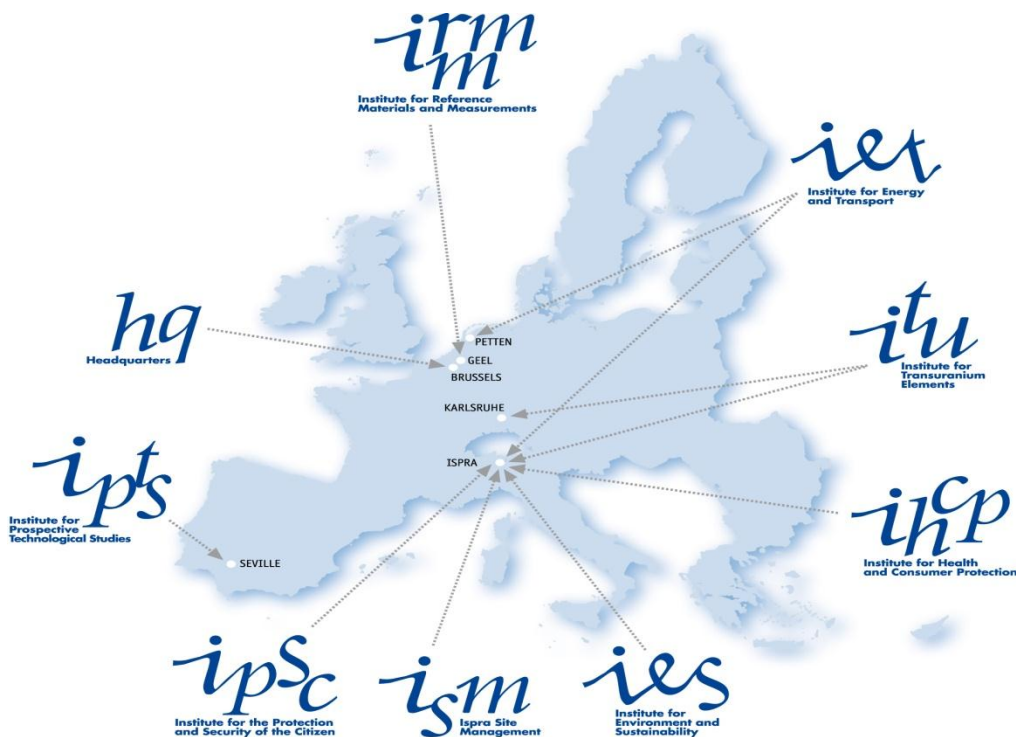
... is to provide customer-driven scientific and technical support for the conception, development, implementation and monitoring of EU policies.

JRC is the European Commission's in-house science service. It provides the science for policy decisions, with a view to ensuring that the EU achieves its Europe 2020 goals for a productive economy as well as a safe, secure and sustainable future.

The JRC plays a key role in the European Research Area and reinforces its multi-disciplinarity by networking extensively with leading scientific organisations in the Member States, Associated Countries and worldwide.



- Established 1957
- 7 institutes in 5 countries: Italy, Belgium, Germany, The Netherlands, Spain
- 1780 permanent staff and 1000 visiting staff
- 1584 scientific publications in 2010
- 125 key elements of support to the EU policy-maker in 2010
- Budget: €356 million annually, plus €62 million earned income



## JRC Institutes

**HQ** – *Brussels, Belgium*, **Headquarter JRC**

**IRMM** – *Geel, Belgium*  
**Institute for Reference Materials and Measurements**

**ITU** – *Karlsruhe, Germany*  
**Institute for Transuranium Elements**

**IET** – *Petten, The Netherlands and Ispra, Italy*  
**Institute for Energy and Transport**

**IPSC** – *Ispra, Italy*  
**Institute for the Protection and Security of the Citizen**

**IES** – *Ispra, Italy*  
**Institute for Environment and Sustainability**

**IHCP** – *Ispra, Italy*  
**Institute for Health and Consumer Protection**

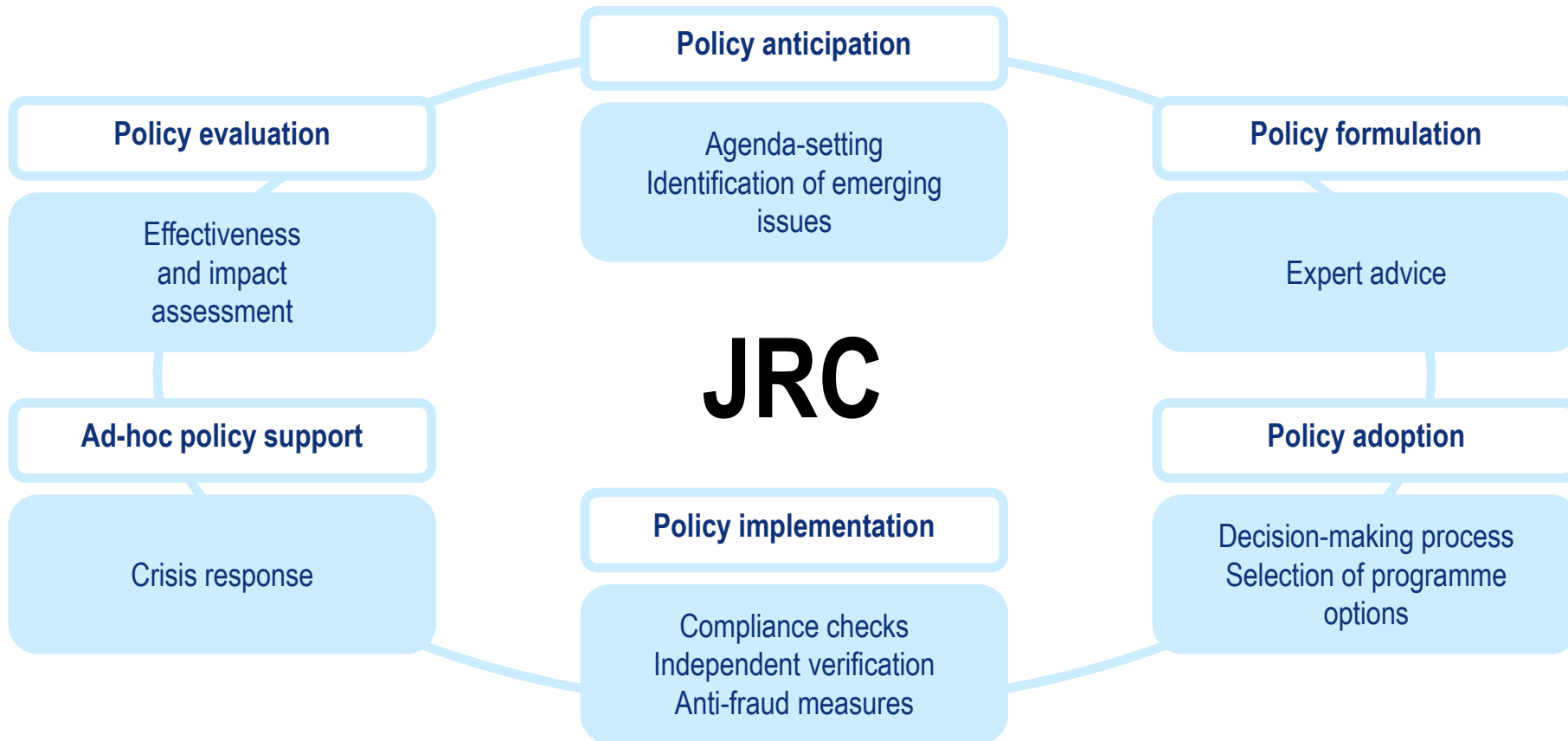
**IPTS** – *Seville, Spain*  
**Institute for Prospective Technological Studies**

**Composed of high level representatives from each Member State and the FP7 Associated Countries (40 countries)**



- Provides advice on strategic / management issues
- Its opinion is required on all EC decisions about JRC
- Members ensure a strategic link with their countries

**95<sup>th</sup> Meeting of the Board of Governors in Ispra on 24 November 2011**





- Energy and clean transport
- Environment & climate change
- Agriculture & food security
- Health & consumer protection
- Nuclear safety and security
- Information society and cyber security
- Crisis and hazard management





- **Providing the European Commission's in-house scientific input essential to the Europe 2020 Strategy, balancing the objectives of sustainability and economic competitiveness**
- **Strengthening anticipation, foresight and horizon scanning**
- **Expanding modelling capacity**
- **Expanding socio-economic research**
- **Providing evidence-based policy options with a cost-benefit analysis and impact assessment**
- **Strengthened science-based input to EU standardisation and legislative processes**
- **Integrating multi-disciplinary research teams across the JRC to give customers even better service**





## Making the EU's electricity grids smarter

The JRC has identified and analysed the vulnerabilities of Member States' electricity transmission systems for the implementation of a Directive on Critical European Infrastructures.

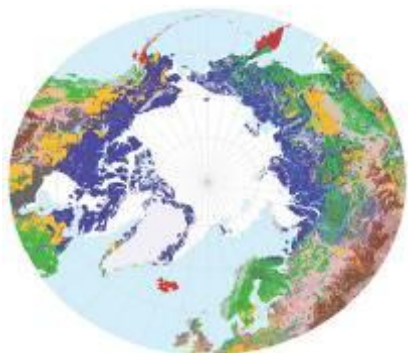
## Calculating greenhouse gas emissions from biofuel crops

The JRC developed a new methodology to estimate changes in global greenhouse gas (GHG) emissions due to biofuel crops. This work underpinned the Commission Report required for the implementation of the Renewable Energy Directive.



## Nuclear forensics support to Member States

The JRC supports safeguard authorities by providing environmental sampling and measurements techniques that are essential in the detection of non-declared nuclear activities. The JRC 'clean lab' is used for the measurement of uranium enrichment in particles founded in 'swipes' taken by IAEA or Euratom inspectors across the globe.



## Sustaining European Soil

The JRC has developed robust databases supporting the European Soil Thematic Strategy and as a result created three soil atlases, unique collections of maps illustrating the varying patterns of different soil types occurring across Europe. One of the resulting outputs is the first ever European Atlas of Soil Biodiversity.

## Responding to crises

GDACS (the Global Disaster Alert and Coordination System) provides near real-time alerts about natural disasters around the world. In addition, the JRC provided support to rescue operations by carrying out a rapid damage assessment based on the analysis of very high resolution satellite imagery.



## European Flood Alert System and European Forest Fire Information System (EFFIS)

JRC provides essential information to prepare for floods in Europe by complementing the information of national hydrological services with novel probabilistic flood forecasting information up to 10 days in advance. EFFIS comprehensively addresses forest fires in Europe providing EU level assessments from pre-fire to post-fire phases, thus supporting fire prevention, preparedness, fire fighting and post-fire evaluations.



## Detecting GMOs in food and feed

The JRC provided the "Compendium of Reference Methods for GMO analysis", a reference report listing 79 GMO detection methods validated according to international standards in support of the Regulation on official food and feed controls.

## New developments in nanotechnology

The JRC is working closely with policy makers providing science and research-based policy support for improving regulation of nanotechnology. It also hosts the largest repository of nano reference materials, has developed an internationally-available database containing test and measurement results used by the OECD, Member States and industry. In February 2011, the JRC released the world's first certified reference material for nanoparticles, based on industry-sourced materials.

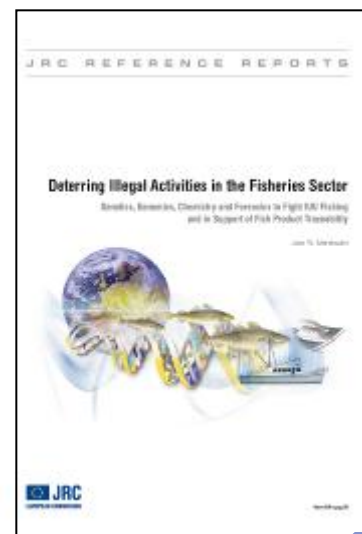
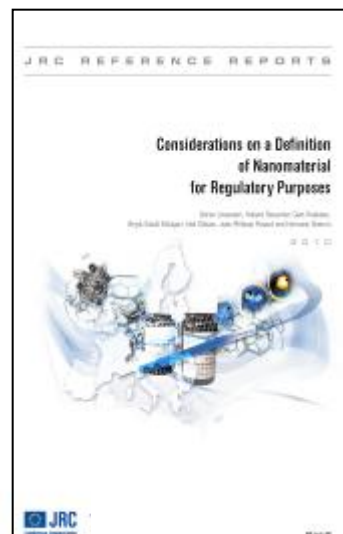
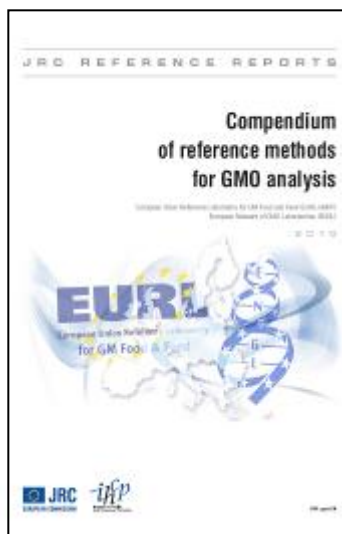
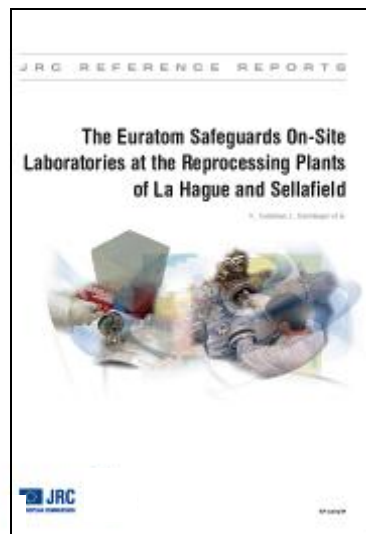


## INSPIRE: Harmonising environmental data worldwide

The JRC is the technical and scientific coordinator of INSPIRE, the Infrastructure for Spatial Information in Europe, which provides the knowledge needed for mitigating natural and man-made hazards to make more efficient use of natural resources, to better protect the environment and to adapt to climate change.

## Reference Reports

- Reference Reports are authoritative documents that represent a JRC-wide view on a subject for which the JRC is noted as expert.
- 5-10 released per annum, 3 so far in 2011
- 116 Scientific and Technical Reports publishes 1/1 – 30/6 2011



## Horizon scanning, Anticipation, Foresight

Three strands of activities take into account three distinct time frames:

- Regular identification of potentially significant research results and technological advances

**horizon scanning**

- Short term studies of emerging (scientific and technological) issues with societal and policy relevance

**anticipatory exercise**

- Long term in depth analysis of issues deemed important for society in a longer time horizon

**foresight**

**"Scientific support for Food Security and Global Governance"** conference, to examine the necessity to increase competitiveness while respecting sustainable development in the framework of global governance; on 28 September 2011, in Brussels. 400 attendees.



A JRC conference on **Space Weather Awareness** was held 25-26 Oct. 2011 in Brussels, with strong involvement of NOAA.



A joint JRC-AAAS-NIST Transatlantic Scientific Bridge event on 21 November 2011, was held.

**JRC collaborates extensively with over 1 000 public and private organisations, institutions and expert groups in more than 250 major networks worldwide:**

**Partners include:**

- Government departments
- Government laboratories
- Industry
- Universities and research institutes

**The JRC Provides:**

- Cooperation and partnerships with key organisations
- Support to enlargement
- Training and mobility of researchers
- Access to scientific infrastructures
- Support to European Research Area policies
- Support to standardisation





The Joint Research Centre (JRC) gives scientific and technical support to countries on the road towards EU membership, New Member States and Associated Countries. It supports the transfer of the EU legal framework (acquis communautaire) to national legislation and facilitates scientific and technical exchange.

## Job opportunities

The JRC offers temporary positions for Seconded National Experts and Grantholders. They are targeted at experts from research organisations, public administration bodies, national enforcement laboratories and scientists from the following countries:

Albania, Croatia, FYR of Macedonia, Israel, Montenegro, Switzerland, Bosnia and Herzegovina, Faroe Islands, Iceland, **Moldova**, Serbia, Turkey

## Activities (Workshops, training courses and projects)

In the frame of the Enlargement and Integration Action the JRC offers specialised workshops and advanced training courses, and small projects within its areas of competence.

The workshops are set up to allow competent organisations in the new Member States, Candidate Countries, Potential Candidate Countries, FP7 Associated Countries, and on an ad-hoc basis European Neighbourhood Policy Countries and Russia to study the scientific and technical methods and techniques underpinning EU policy implementation.

They also provide an opportunity for EU organisations to learn about the methods currently used in those countries and for both parties to discuss how the EU legislation should be implemented in the future.

Job opportunities:

<http://ec.europa.eu/dgs/jrc/index.cfm?id=3070>

Activities (Workshops, training courses and projects):

<http://ec.europa.eu/dgs/jrc/index.cfm?id=3080>

E&IA Contact: [jrc-enlargement@ec.europa.eu](mailto:jrc-enlargement@ec.europa.eu)

Reference	Full title	Position for	Action number	Duration
2012-IPSC-SNE-1EIA	<b>Implementation of European Standards for Construction (Eurocodes) in the Balkan countries</b>	<b>SNE</b>	32003	From 12 to 36 months

**Deadline: 15 May 2012**

## Calls through Permanent Representations/Diplomatic Missions

National or international civil servants



Duration  
6 months – 4 years  
(possible extension  
2 years)

National of an EU or EFTA Member State or a country undergoing accession negotiations that has a specific agreement with the Commission on staff secondments

Reference	Full title	Action number	Duration
2012-IES-30-1EIA	<b>Desertification and Land Degradation Assessment and Mapping</b>	22008	24 months
2012-IET-30-1EIA	<b>Assessment of Energy Efficiency Potential and Policies</b>	13107	36 months
2012-IRMM-30-1EIA	<b>Analysis of the economic impacts of training and research activities with respect to measurement requirements within EU legislation</b>	11104	Minimum 24 months
2012-ITU-30-1EIA	<b>Export Control Analyst</b>	53201	3 years

**Deadline: 15 March 2012**

Apply through



<http://recruitment.jrc.ec.europa.eu/>

**Contracts aimed at developing training, career development and mobility opportunities for researchers**



**Ph.D. students  
(max. 3 years)**



**Post-doctorate students  
(max. 3 years)**



**Senior scientists  
(max. 2 years)**

**Requirements:  
Submission of a  
proposal for a  
Ph.D.**

**Requirements:  
Ph.D. or 5 years  
of research  
experience**

**Requirements:  
Ph.D. and 10 years  
of research  
experience or 15 years  
of research experience  
post-degree**

Scenario above applies to Geel/Petten/Ispra  
For Seville, possibility to extend until project terminated, but Director-General approval required  
For Karlsruhe, for Ph.D. student a possibility to extend to 4 years in exceptional situations



Workshop Title	Reference & description	Date & duration	Place
Biomass and Biofuels Sustainability	2012-IET-A-01	September 2012	Turkey
Fundamentals of PEM Fuel Cells	2012-IET-A-02	5 days, July	Constanta or Izmir, Turkey
Training on methods for the implementation of the EC Reg. 994 "Security of Gas Supply"	2012-IET-A-03	6-7 October, 1 ½ days (1/2 day per module)	Dubrovnik, Croatia
Policies and Financing Schemes for Energy Efficiency in Buildings	2012-IET-A-04	26-28 June	Belgrade (Serbia) or St Petersburg (Russia)

Workshop Title	Reference & description	Date & duration	Place
Nuclear HR Development in the EU (potential) Candidate Countries	2012-IET-A-05	27-28 September	Istanbul (Turkey)
State of the art Techniques for Numerical and Experimental Assessment of Nuclear Materials and Components	2012-IET-A-06	1.5 days November /December	Petten, The Netherlands
Physics based modelling of material properties and degradation and experimental observations	2012-IET-A-07	September / October	Turkey. Location tbc
Shale Gas in Europe: a breakthrough in a scarce energy landscape or another environmental threat?	2012-IES-IET-A-01	2 days in October	Brussels or Sofia or Bucharest

Workshop Title	Reference & description	Date & duration	Place
<p>Training Workshop on EU Regulation of Chemical Substances under the Biocides Product Directive and Import-Export of Dangerous Chemicals</p>	<p>2012-IPTS-A-01</p>	<p>1 day, November</p>	<p>Seville, Spain</p>
<p>Workshop Market Outlook for Central and Eastern European countries</p>	<p>2012-IPTS-A-02</p>	<p>1,5 days in September</p>	<p>Brussels, Belgium</p>
<p>Novel approaches to tackling the spread of obesity using techniques from behavioural economics and social networking</p>	<p>2012-IHCP-IPTS-A-01</p>	<p>2-3 days, October</p>	<p>Ispra, Italy</p>

Workshop Title	Reference & description	Date & duration	Place
Guidance on Environmental Burden of Disease Estimation of exposure to environmental noise	2012-IHCP-A-01	3-4 days, May	Ispra, Italy
EU legislation and testing for the chemical safety of food contact materials	2012-IHCP-A-02	2 days, September/October	Ispra, Italy
Exposure and Effects Assessment Tools for the Risk Assessment of Biocidal Substances	2012-IHCP-A-03	2 days in June and 2 days in September	Ispra, Italy
Applied Genomics in the Clinic	2012-IHCP-A-04	2.5 days in October	Istanbul, Turkey

Workshop Title	Reference & description	Date & duration	Place
Enlargement Workshop on the applications of nanobiotechnologies	2012-IHCP-A-05	3 days in November	Ispra, Italy
Addressing the safety issues and regulatory challenges of nanomaterials	2012-IHCP-A-06	3-4 May, 2 days (exact date may be yet changed)	San Sebastian, Spain
Novel approaches to tackling the spread of obesity using techniques from behavioural economics and social networking	2012-IHCP-IPTS-A-01	2-3 days, October	Ispra, Italy

Workshop Title	Reference & description	Date & duration	Place
GNSS Workshop	2012-IES-A-01	2 days September/October	To be defined
Control Method Workshop	2012-IES-A-02	2 days, end of March	Ispra, Italy
LPIS Workshop	2012-IES-A-03	2 days in Spring 2012	To be defined
GAEC Workshop	2012-IES-A-04	2 days in September or October	(possibly) Czech Republic

Workshop Title	Reference & description	Date & duration	Place
18 <sup>th</sup> Annual GeoCAP conference	2012-IES-A-05	2 days, end of November	To be defined
Soil as World Heritage	2012-IES-A-06	22-25 May 2012	<b>Balti, Moldova</b>
INSPIRE and Environment	2012-IES-A-07	25-29 June 2012	Istanbul, Turkey
Shale Gas in Europe: a breakthrough in a scarce energy landscape or another environmental threat?	2012-IES-IET-A-01	2 days in October	Brussels or Sofia or Bucharest

Workshop Title	Reference & description	Date & duration	Place
Seminar on Nuclear Forensics Awareness and Development of a National Response Plan	2012-ITU-A-01	mid/end of October	Karlsruhe, Germany
Technical Issues and sharing of Best practices in the implementation of EU Dual Use export control list	2012-ITU-A-02	2 days in November	Ispra, Italy
Air concentration measurements in Europe: how can we improve their harmonisation and reporting	2012-ITU-A-03	4 days in September	Arona, Italy
42ièmes Journées des Actinides (JdA 2012)	2012-ITU-A-04	18-21 April	Bristol, UK
9 <sup>th</sup> School on the Physics and Chemistry of the Actinides (SPCA)	2012-ITU-A-05	16-18 April	Bristol, UK



Workshop Title	Reference & description	Date & duration	Place
<p>ESA-EUSC-JRC Image Information Mining conference: Knowledge Discovery from Earth Observation Data</p>	<p>2012-IPSC-A-01</p>	<p>24-26 October 2012</p>	<p>Oberpfaffenhofen, Germany</p>
<p>Multimodal transport safety data collection and analysis in the EU</p>	<p>2012-IPSC-A-02</p>	<p>2 days, October</p>	<p>Croatia (likely)</p>
<p>Science Communication for Public Engagement</p>	<p>2012-IPSC-A-05</p>	<p>3 days, July 2012</p>	<p>Ispra, Italy</p>

## Joint Research Centre (JRC)

Web: [www.jrc.ec.europa.eu](http://www.jrc.ec.europa.eu)

Contact: [jrc-info@ec.europa.eu](mailto:jrc-info@ec.europa.eu)

