



JRC Newsletter

EUROPEAN COMMISSION

September 2009



Editorial



I was very pleased to hear President Barroso’s announcement at the European Parliament on 15 September 2009 of a fundamental review of the way European institutions access and use scientific advice. In particular, I welcome his plans to set up a “chief scientific adviser who has the power to deliver proactive,

scientific advice throughout all stages of policy development and delivery.”

The decision by President Obama to appoint eminent scientific advisers to the President’s Council of Advisors on Science and Technology is a clear statement of the growing political currency of science advice. Led by John Holdren (Professor of Environmental Policy, Harvard University and Obama’s personal science advisor), these champions for science advice are at the very centre of the US administration. The appointment of Nobel Laureate Steven Chu as Secretary of Energy underlines the deepening relationship between the US government and its science advisors, a relationship mirrored by a sharpening of the linkages between science and economic policy. For example, the multi-billion dollar science stimulus, a vehicle to promote innovation as a means to weather the economic downturn, is being monitored in terms of jobs created from research outcomes.

The potential for investment in future technologies to stimulate economic growth is undoubtedly recognised in the EU. June’s ‘Brussels’ debate identified support for innovative green technologies as key to both securing future growth and jobs in Europe and responding to the challenge of global climate change. However, it is in developing the European response to today’s ‘perfect storm’ of Grand Challenges that I am concerned the EU might fail to maximise the impact of its research capabilities.

The Lund declaration highlights the cross-cutting research approach needed to meet global Grand Challenges, and the EU accepts the need to better

strengthen the knowledge triangle – interactions between research, education and innovation. Yet there is no office or institution in the Commission that takes an over-arching view of the science work of the Directorates-General and proactively offers strategic cross-cutting science advice to the Commission at the very highest level. The excellent Joint Research Centre does provide evidence-based advice to the Commission, but on request, rather than challenging decision-makers or initiating debate.

As the UK Government Chief Scientific Adviser, I lead a network of scientific advisers each embedded in a government department. This community works to shape scientific debate and advise policy-makers across Whitehall. I make no attempt to suggest the UK model should, or could, be imported into the Commission, but propose the benefits of a high-level science advisory structure to be as relevant to the Commission as to an individual Member State. The appointment of European Chief Scientist, on hand to advise the President of the Commission and its Commissioners, would not only valuably complement, rather than compete with, the work of the JRC, but also provide strategic oversight of, and input to, an increasingly complex policy arena.

I warmly welcome President Barroso’s statement and hope to help, by working where I can with the JRC and our European partners, in delivering his vision.

PROFESSOR JOHN BEDDINGTON
Chief Scientific Adviser to the UK Government

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Solar panel production worldwide almost doubled in 2008

The JRC's Institute for Energy (IE) published its eighth *Annual Photovoltaics Status Report* on 21 September. The report notes that global production of photovoltaic (PV) solar modules and panels increased to about 7.3 gigawatts (GW) in 2008, representing an 80% increase on the previous year.



Production and use of photovoltaic modules continues to increase dramatically

Europe's production of solar cells rose from 1.1 GW to 1.9 GW, while the installed capacity increased threefold to 4.8 GW, mainly led by Spain, where figures multiplied almost five times from 560MW in 2007 to 2.5–2.7 GW (peak). Cumulative installed PV electricity generation capacity in the world was around 15 GW, with Europe accounting for more than 60% of this (9.5 GW).

Global investment in renewable energies and energy efficiency was hit by the financial crisis in late 2008 and early 2009, but is now showing signs of a strong recovery. The report notes a significant slowdown in investment in the second half of 2008 (-10% in the third quarter and -23% in the fourth), that continued in the first quarter of 2009 (-47% compared with the fourth quarter of 2008), but started to reverse in the second quarter (+83% compared with the first quarter of 2009).

The report gives an overview of current activities in research, manufacturing and market implementation in this sector. It shows that European PV production has grown on average by 50% per annum since 1999 and its market share has increased to 26% in 2008. In terms of electricity generation, photovoltaics provided for approximately 0.35% of Europe's final electricity consumption in 2008.

The report also points out that in 2008 China became the leading producer of solar cells with an annual production of about 2.4 GW, followed by Europe with 1.9 GW, Japan with 1.2 GW and Taiwan with 0.8 GW. If this trend continues, China might have about 32% of the world-wide production capacity by 2012.

<http://re.jrc.ec.europa.eu/refsys/>

Growing number of GM crops worldwide could disrupt trade

The number of commercialised genetically modified (GM) crops in the world is expected to multiply by four from about 30 today to over 120 in 2015. This is the forecast presented in a new report from the JRC entitled "The global pipeline of new GM crops: implications of asynchronous approval for international trade". It features a list of new GM crops expected to be commercialised ("in the pipeline") in various parts of the world and analyses their possible impact on international trade. The report notes that their increasing number may cause trade disruptions due to asynchronous approval.



The likelihood of crop shipments being rejected at the EU's frontier due to the presence of unapproved GMOs is set to rise

The report presents the results of an international workshop organised by the JRC's Institute for Prospective Technological Studies (IPTS) and summarises the different views expressed by national regulators, industry representatives, research

institutes and participants from the agri-food supply chain who attended the conference.

<http://agrilife.jrc.ec.europa.eu/pipeline.htm>

ICT companies lead the way in R&D investment

The Information and Communication Technology (ICT) sector accounts for 26% of all industrial Research and Development (R&D)

expenditure in the EU and employs 32% of business sector researchers, according to the 2009 Report on R&D in ICT in the European Union (PREDICT) recently published by the JRC's Institute for Prospective Technological Studies.

Although the European ICT sector only represents about 3% of total employment in the EU and 4.9% of GDP, it is by far the largest R&D investing sector of the economy. Furthermore, the new JRC report shows that ICT sector businesses in

countries such as the US, Japan and Korea are also leading the way in their respective economies in terms of R&D expenditure.

The research, which provides a comprehensive overview of ICT R&D investment in the EU (2001-2005) combining national statistics, company data and technology

indicators, also reveals that additional ICT R&D is carried out in Europe within non-ICT designated sectors such as the automotive industry.

The EU's main competitors are nonetheless shown to be investing significantly more in ICT R&D than the EU in terms of investment as a proportion of GDP.

The report contains a host of information on economic trends in the ICT sector, examining the input-output relationship of ICT R&D and offering an analysis of EU ICT patents.

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

JRC - East Africa agreement on land monitoring

On 7 September 2009 the European Commission, represented by the JRC, and the African Regional Centre for Mapping of Resources for Development (RCMRD) signed a Collaboration Agreement on scientific issues relating to land-cover dynamics.

The two organisations aim to collaborate in the field of agriculture and land-cover monitoring to support food security and the management of natural resources in East Africa. European Commissioner for Science and Research, Janez Potočnik, and Uganda's Minister for Lands, Housing and Urban Development, Daniel Omara Atubo, witnessed the signature in Nairobi (Kenya).

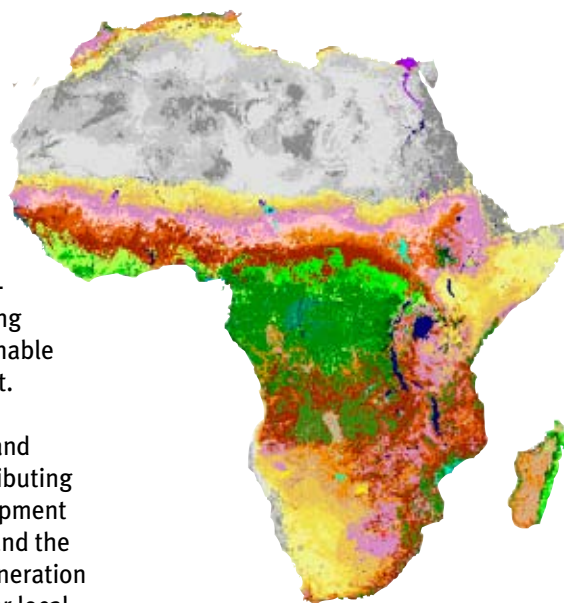
The RCMRD is an intergovernmental research and advisory institution, based in Nairobi and covering 15 African countries. The agreement

has an initial duration of four years, which can be extended.

The agreement is part of a cooperative framework between the JRC and regional organisations participating in the African Monitoring of the Environment for Sustainable Development (AMESD) project.

JRC environment-monitoring and assessment experts are contributing to AMESD through the development of a data-processing system and the provision of training in the generation of environmental indicators for local partners in the 53 African countries involved.

AMESD is being implemented by the African Union Commission on behalf of five African Regional Economic Communities (RECs) with the financial support of the European Development Fund.



*Land cover of Africa
(Global Land Cover 2000 Database)*

During his African trip, Commissioner Potočnik also visited AMESD project headquarters at the African Union Commission in Addis Ababa, Ethiopia.

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

Finance for climate policy: JRC research on road to Copenhagen deal

The JRC lent its scientific expertise and contributed economic analysis and scenarios to the European Commission's new Communication "Stepping up international climate finance: A European blueprint for the Copenhagen deal" and its corresponding Staff Working Paper published in September by the Commission's Environment Directorate-General.

The research, carried out by JRC-IPTS, builds on the contributions made to



the January 2009 Communication "Towards a comprehensive climate change agreement in Copenhagen" and paves the way for the forthcoming UN COP-15 Climate Change Conference to be held in December in Denmark.

The JRC paper, which seeks to unlock the current impasse in the negotiations, says that finance requirements for adaptation and mitigation actions in developing countries could reach roughly €100 billion per year by 2020.

http://ec.europa.eu/environment/climat/future_action.htm

Forest fire damage in 2009 greater than in 2008

Estimates from the European Forest Fire Information System (EFFIS) show that by the beginning of September,

over 300,000 hectares of land in the EU had already burnt in 2009, compared to a total of 180,000 hectares in 2008. EFFIS, which is run by JRC-IES, continuously monitors the risk of forest fires, and recently

published the “Forest Fires in Europe 2008” report providing a comprehensive overview of forest fire conditions and the impact of forest fires in Europe.



Tenerife (Spain), July 2009: Maximum efforts by the air unit

The system uses satellite images to produce daily updated maps of areas where forest fires are burning and processes weather forecast data in order to map current and forecasted fire danger levels in Europe. It has recently been improved with the addition of a new module supporting the Monitoring and Information Centre of EU’s Mechanism for Civil Protection. The new software, developed together with scientists from JRC-IPSC, allows a rapid analysis of critical fire situations by providing information on fire danger forecasts for the next six days. Information on local populations and infrastructures at risk in the vicinity of the fires is also included.

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

Do we have enough electricity for electric cars? JRC case study on Milan

JRC-IES scientists Adolfo Perujo and Biagio Ciuffo published a report (EUR 23975 EN) analysing the impact that recharging electric vehicles would have on the electricity supply system for the Province of Milan with a 2030 time horizon. The study “Potential Impact of Electric Vehicles on the Electric Supply System: A case study for the Province of Milan, Italy”, looks at the potential impact of electric vehicles both in terms of total electric energy consumption and in power requested from electricity grids.

The study’s results indicate that while impact on annual energy consumption would be manageable, without appropriate regulation such as the intelligent integration of such vehicles into existing power grids (as a form of decentralised and flexible energy storage) they could impact heavily upon daily peak demand for electric power.

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

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ERAWATCH: a new European perspective on research

ERAWATCH, the European Commission’s on-line information platform on research systems and policies in Europe and beyond, has expanded its service with a new section entitled “European Perspective”, offering an overview of research policies and systems at a European level.

New content includes analytical summaries and comparisons of EU Member States in terms of research policies and systems. The section also has information on intergovernmental and supranational R&D cooperation programmes and organisations with relevance to the European Research Area (ERA).

The ERAWATCH digital platform was launched in 2006 by the JRC-IPTS and

has been providing comprehensive information from a national perspective, covering all EU Member States and several non member countries. The new service further enhances the picture of research related activities in Europe.



ERAWATCH - on-line information platform on research systems and policies in Europe and beyond

The ERAWATCH information platform is a long term cooperative undertaking between JRC-IPTS and the European Commission’s Research Directorate General.

<http://cordis.europa.eu/erawatch/>

A digital map of the world's soils

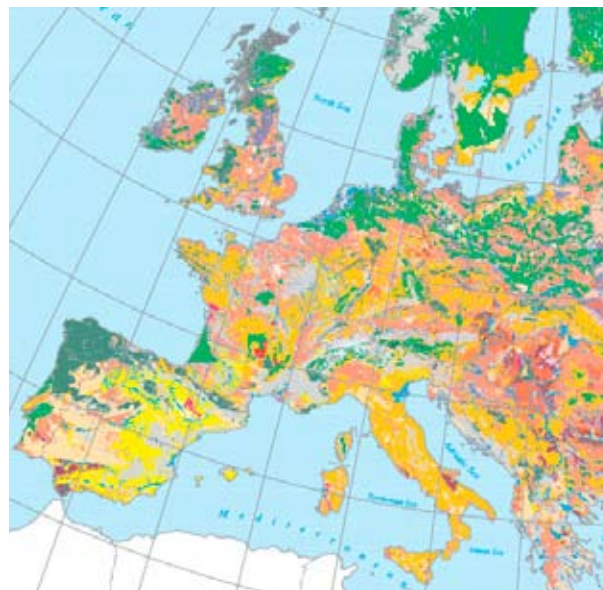
A group of international scientists including Luca Montanarella and Florence Carré from JRC-IES co-authored a paper published in the August edition of *Science* magazine on their work to develop a framework methodology for creating a new “digital soil map of the world” using state-of-the-art technologies.

The methodology outlined aims to map the majority of the Earth's ice-free land surface over the next five years and to provide a soil-related information system featuring primary functional soil properties. The system should assist in improved governance and better decision making on a range of environmental and societal issues.

Soils are recognised to be major contributors to ecosystem services such as food production and

climate regulation, pointing to the need for up-to-date and relevant soil information. However, the spatial resolutions of soil maps for most parts of the world are currently too low to help with practical land management and these maps do not adequately express the complexity of soils across a landscape in an easily understandable way.

The digital map envisaged by the soil scientists would be based upon a fine-resolution (90x90m), three-dimensional grid of the functional properties of soils. It would be web-based and freely accessible, making geo-referenced soil



Soil map of Europe

information readily available for land-users, scientists, and policy-makers.

<http://www.sciencemag.org/cgi/content/short/325/5941/680>

A 'bumpy road' to climate stabilisation ahead

The swift deployment of new clean and low-carbon energy technologies is essential in order to ensure climate stability in the long term (50-100 years from now) and this should also bring about immediate benefits in terms of improved air quality, energy security and in the creation of new jobs. It might also have the unexpected consequence of faster global warming in the short term (over the next 20 to 30 years) before the climate stabilises. This side-effect is the focus of a recent study co-authored by scientists from the JRC's Institute for Environment and Sustainability (IES).

The study, carried out in collaboration with major research institutes in and outside the EU, reinforces suspicions that the expected reduction of air pollution worldwide may have the side-effect of actually

accelerating the rate of global mean temperature increase in the immediate future.

Heavy air pollution since the 1940s, from aerosols and particularly from sulphur dioxide (SO₂), has limited the full warming effect of increasing greenhouse gases, by shielding the globe from sunlight, to a certain degree. Since the 1980s, the success of air pollution abatement policies in the developed world has reduced such particulate matter in the atmosphere and thereby lifted this 'masking' effect.

This unmasking has contributed to today's increased rate of global warming, which is now at 0.2 °C per decade. The JRC study shows that the expected further reduction of global air pollution (through the use of 'end-of-pipe technologies' such as filters, scrubbers and catalytic converters) could double that rate to 0.3-0.4 °C per decade. Regionally,

the rate could increase to as much as 0.7-0.8 °C per decade.

The further expansion of clean energies in place of fossil fuels will reduce the emissions of carbon dioxide, but this will also reduce emissions of sun-masking aerosols, leading to a temporary increase in the rate of global warming, with an eventual stabilisation of the climate coming 50-100 years from now.

The report warns that the accelerated warming over next few decades could well lead to a greater urgency for climate change adaptation measures, with sensitive eco-systems such as forests possibly facing difficulties in adapting to increased temperatures.

<http://www.springerlink.com/content/9105x25m5m728r27/fulltext.html>

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

Turning hydrocarbons into other useful chemicals

The JRC Institute for Transuranium Elements (ITU), together with a number of international partners, is to carry out research into the possibilities of using catalysts based on



Work in the actinide research laboratory at ITU

actinide elements such as uranium, neptunium and plutonium to convert hydrocarbons (such as methane) from biomass or fossil fuels into high-value chemicals. This could lead to new ways of reducing the release of greenhouse gases into the atmosphere while at the same time offering economic benefits.

The work will be carried out jointly by researchers at JRC-ITU and the University of Edinburgh (UK), the Los Alamos National Laboratory (USA), Sasol Technology Research Laboratory (South Africa) and University Paul Sabatier in Toulouse, France, under a grant awarded in July by the Engineering and Physical Sciences Research Council (EPSRC). The EPSRC is the UK's leading

public funding agency for research and training in engineering and the physical sciences.

The strength of the hydro-carbon bond, coupled with difficulties associated with selectively accessing a specific site on a particular molecule, means that highly reactive metal compounds are needed for the intended catalysis. Recent advances in actinide chemistry as well as the desire to find C-H activation catalysts not based on the rare and expensive platinum group metals, is now pushing actinide metals back to the forefront in this field.

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

Measuring ammonia from space

Over the past century there has been a steady increase in the global emission of ammonia (NH_3) entailing a host of environmental problems such as eutrophication of ecosystems, acidification of soils, and the formation of aerosols. There are large uncertainties in the scientific community's understanding ammonia emissions and its levels on both temporal and spatial scales. Part of this is due to a dearth of ground-based observations, their limited representativeness on larger scales, and the absence of space-based measurements.

Scientists from JRC-IES together with colleagues from the Université Libre, Brussels, co-authored a peer-reviewed paper in *Nature Geoscience* that presents the first local and global daily ammonia concentrations measured from the space-based thermal infrared spectrometer "IASI/MetOp". IASI (Infrared Atmospheric Sounding Interferometer) is an element of the MetOp series of European meteorological polar-orbit satellites.

From the 2008 yearly average, a number of high ammonia 'hot-spots' were identified over the world's agri-



From MetOp's polar orbit, the IASI instrument observes a swath of about 2 000 square kilometres of the Earth (artist's impression)

cultural and biomass-burning regions. While the authors found that often levels of ammonia measured were lower than those used in models, they attributed this to satellite-based measurements' limited sensitivity in atmospheric boundary layers where much NH_3 resides. However, in ammonia hot-spots they found levels to be significantly higher than previously thought. Hot-spot regions typically contained valleys featuring major agricultural production and

where meteorological conditions aided accurate determination of the ammonia. The new satellite observations should help to improve both emission inventories and atmospheric models for these regions.

Clarisse L, Clerbaux C, Dentener F, Hurtmans D, Coheur P. "Global Ammonia Distribution Derived from Infrared Satellite Observations", *Nature Geoscience* 2 (7); 2009. pp. 479-483.

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

New JRC information systems to promote dialogue in EU Water Initiative

At the 2009 World Water Week (16-22 August) event in Stockholm, organised as part of the EU Water Initiative (EUWI), the JRC



JRC researchers Celine Dondeynaz and Cesar Carmona-Moreno, who developed the new information systems

introduced two new information tools for effective knowledge management in the international water policy community. The tools are designed to promote dialogue between stakeholders on water issues all over the world, and keep the public up-to-date with current activities in the water sector.

The two new and updated information systems, www.euwi.net (EUWI) and www.aquaknow.net (Aquaknow), represent an important part of the EU Water Initiative's efforts to improve access to water and sanitation in developing countries. The information systems are expected to facilitate the harmonisation of EUWI related policies.

Throughout the week's event, the need for all actors in the water sector to work together to achieve economically and environmentally sustainable development was underlined. A third of the world's population does not have access to safe drinking water and has poor or non-existent sanitation.

As a partner in EUWI, the JRC provides technical and scientific support to EuropeAid and the European Commission's Directorate-General for Development in preparing and monitoring policies in the water sector.

<http://www.euwi.net/>

Health check for Italian soil: conclusion of the Pavia Project

The Pavia Project, launched by JRC-IES in 2004 with the aim of evaluating the quality and health of soil in the Pavia Province of Lombardy, Northern Italy, has concluded with the release of two scientific publications. The area under investigation covered 3 000 km² and the project took into account the different uses of its soils.

JRC-IES researcher Roberto Cenci and R.J.A. Jones of Cranfield University (UK) published a report in July 2009 on a "Holistic Approach to Biodiversity and Bioindication in Soil", summarising the results of a multidisciplinary study of biodiversity and bio-indication, conducted within the Pavia Project.

In the framework of the same project, Roberto Cenci and Fabrizio Sena authored a JRC Scientific and Technical Report entitled "Dioxin, Trace elements, Bioindicators and Biodiversity in Soils", based on the analysis of soils taken from 116 sampling points in six primarily industrial areas of the region. Bio-physical-chemical analyses of all the soil samples found a vast array

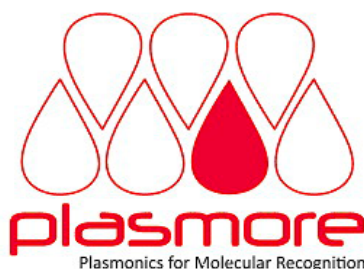
of chemical elements, macro-elements, dioxins and bacteria.

The results of both studies demonstrate the extreme complexity of soils in physical, chemical and biological terms.

http://eu soils.jrc.ec.europa.eu/library/jrc_soil/index.html

PLASMORE: a new JRC spin-off

Created in spring 2009 by a former JRC scientist, *Plasmore* is a spin-off company and a product of research at the JRC and the University of Pavia, Italy.



The new company is to use molecular recognition technology

patented by JRC's nano-biosciences laboratories at the Institute for Health and Consumer Protection (IHCP) and the University of Pavia.

The technology will be used to develop a fully portable *multi-plexing* (multi-message signal) *label-free biosensor*. The target market for such a product includes medical applications of Point-of Care (POC) technologies (fast blood analysis, early diagnosis of diseases, etc.), security, drug screening and basic research in proteomics and genomics.

Plasmore's founders benefited from the support of JRC's Intellectual Property team throughout the realisation of their business plan, having participated in the JRC annual entrepreneurship training course in 2008 and winning an Innovation Grant (IPC 2008) to further develop the innovative technology and a business concept.

After *Lisalab* and *Osvision*, *Plasmore* is the third spin-off company created by former JRC scientists.

<http://www.plasmore.com>

Energy efficiency in motor-driven systems
Nantes, France, 14-17 September

The 6th International Conference on Energy Efficiency in Motor Driven Systems (EEMODS) was held in Nantes, France, from 14-17 September. The aim of the event

was to provide a forum to discuss developments in the field of electrical motor systems and their impact on energy and the environment, policies and programmes adopted or planned, as well as technical and commercial advances made in the dissemination and penetration of energy-efficient

motor system. Particular attention was dedicated this year to energy management, international harmonisation and standards, policies and innovative financial schemes for motor systems.

The JRC organised the conference in collaboration with the French Centre technique des industries mécaniques (CETIM) and Agence de l'Environnement et de la Maîtrise de l'Energie (ADEME).

Improving the efficiency with which energy is consumed by end-users is a central theme of EU energy policy. Renewable energy specialists at the JRC Institute for Energy (IE) provide technical and scientific advice to policy makers including the Commission's Directorates-General for Energy and Transport and the Environment on the conception, implementation and monitoring of EU energy efficiency policies and programmes.

<http://re.jrc.ec.europa.eu/energyefficiency/>



The EEMODS conference looked at energy efficiency in motor-driven systems

24th European Photovoltaic Solar Energy Conference
Hamburg, DE, 21 – 25 September

The 24th European Photovoltaic Solar Energy Conference and Exhibition (EU PVSEC 2009) was attended by some 4,000 participants from 73 countries. The accompanying industry exhibition listed over 900 exhibitors presenting new ideas and technical solutions in the field of photovoltaics and attracted more than 40,000 visitors.

The event also brought together research and development experts, industry and utilities representatives, political actors, architects and consumers. A highlight of the conference was the PV policy debate on the second day, which allowed stakeholders to establish a picture of the international political opinion about PV solar energy in the future energy mix.

International collaboration facilitated by EU PVSEC is essential in fostering a sustainable future for PV technology in the global energy system. The JRC has played a major role in the conference since 1994, and this year is once again responsible for the scientific programme featuring over 1580 scientific papers.

JRC Institute for Energy (IE) Director Giovanni De Santi was one of the speakers in the high level event: "There are huge opportunities for photovoltaics in the future, but the constant effort and support of all stakeholders are required to implement the envisaged change to a sustainable energy supply, with photovoltaics delivering a significant part of electricity supply. The current national framework and support action has to be updated, as well as the existing transmission

and distribution systems. Policy-makers can help by removing these barriers."

<http://www.photovoltaic-conference.com/>

First training session in nuclear security
Ispra, Italy, 21 – 25 September

The JRC hosted the trial (pilot) edition of a training course on nuclear security and detection for 'frontline' European security personnel such as customs officers, police and border guards.

The first pilot session, organised by the JRC Institute for the Protection and Security of the Citizen (IPSC) in Ispra, Italy, was attended by a delegation of airport



Security training facility at JRC-IPSC

police from Shannon Airport in Ireland, where the US Second Line of Defence programme has just completed deployment of detection equipment.

A second pilot session dedicated to nuclear forensic awareness and the development and implementation of national response plans will be held from 14-16 October at the JRC Institute for Transuranium Elements (ITU) in Karlsruhe, with the participation of representatives from several EU Member States.

The pilot sessions have been organised at the request of the European Commission's Directorate-General for Justice, Liberty and Security, with a view to establishing a European Nuclear Security Training Centre (SeTraC) for frontline security officers, their trainers and management.

Illicit trafficking of nuclear and radioactive materials remains a serious cause for concern and a threat to European security. The SeTraC initiative offers a response to the need for security training identified in a recent survey on radiological vulnerability in the EU.

The pilot training course and the related infrastructures have been financed by the European Commission with the support of the Second Line of Defence programme and the International Atomic Energy Agency (IAEA), both

of whom have stated their interest in using this new European facility for training purposes.

<http://ec.europa.eu/dgs/jrc/index.cfm?id=1710&>



X-Ray Optics and Microanalysis: ICXOM20
Karlsruhe, DE, 14-18 September

The 20th International Congress on X-Ray Optics and Microanalysis, co-organised by the JRC Institute for Transuranium Elements (ITU), the University of Karlsruhe and a number of partners from the *Forschungszentrum Karlsruhe*, was held in Karlsruhe (Germany) from 14-18 September.

The ICXOM series of conferences is dedicated to the fields of X-ray optics and micro (nano) analysis by means of X-ray beams (with an emphasis this year on synchrotron sources), electrons or other energetic particles. The conferences serve as a platform for discussion and information exchange for users and experts involved in these fields, as well as newcomers. The ICXOM20 meeting highlighted recent progress in fundamental and applied research in X-ray optics and micro- and nano-analysis, including application examples and both methodological and instrumental developments.

<http://icxom20.fzk.de/>

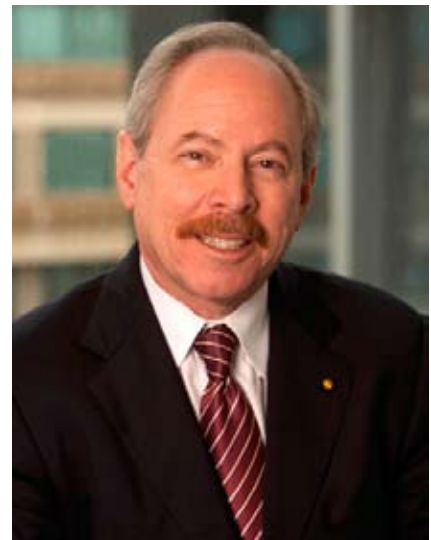
UPCOMING

First Annual JRC Lecture
Brussels, Belgium, 28 October

To mark the 50th anniversary of the inauguration of the European Commission's first research site in Ispra, Italy, European Commissioner for Science and Research Janez Potočnik and JRC Director-General Roland Schenkel will launch a new initiative on 28 October that is to become a centrepiece of the JRC's annual calendar.

Each year, a guest speaker will be invited to give a keynote public address on a scientific issue of global importance.

The JRC is delighted to announce that Dr Alan Leshner, Chief Executive Officer of the American Association for the Advancement of Science (AAAS) and Executive Publisher of Science Magazine, has accepted an invitation to give the inaugural address and has chosen to speak on the subject of "Europe and the United States: A crucial moment for science cooperation".



Alan Leshner, CEO of AAAS, will give the inaugural JRC annual lecture

The lecture will be given at the Renaissance Hotel in Brussels. Persons interested to attend are cordially invited to register on-line.

<http://www.jrc.ec.europa.eu/lecture>

Increased global cooperation of reference material producers

The JRC has come together with metrology institutes from the USA, South Korea, Canada, Australia, China, South Africa, Japan, Germany and the United Kingdom to foster global cooperation of chemical reference materials producers.

Representatives from various institutes producing chemical reference materials (CRM) met at the JRC's Institute for Reference Materials and Measurements (IRMM) in Geel, Belgium, on 2 and 3 September and agreed to forge a network for exchanging early-stage information on their development programmes. Participants also laid the groundwork for further scientific and technological cooperation. The meeting was organised by

JRC-IRMM and was the first such global encounter. Institute representatives responsible for programmes related to the development and production of complex chemical and

biological reference materials took the opportunity to discuss common challenges in the field.

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



Certified reference materials produced by JRC-IRMM

Ongoing collaboration with China on disaster management

The JRC's Institute for the Protection and Security of the Citizen (IPSC) participated in the 2009 International Disaster and Risk Conference (IDRC) held in Chengdu, China, in July to commemorate the 2008 Wenchuan earthquake, which was also the main topic of the conference.

JRC staff gave a presentation of their findings from a November 2008 field trip to the chemical industry in the earthquake-affected areas and an analysis of the technological accidents that had been triggered there.

The Disaster Management Session was chaired by members of JRC-IPSC's Isferea (Geo-Spatial Information Analysis for Global Security and Stability) team.

A photo exhibition was also organised with pictures from two 2008 JRC field trips to China,

showing examples of earthquake damage to residential buildings and to chemical industry infrastructures. The exhibition was considered one of the key contributions to the conference. The next IDRC conference will take place in Davos from May 31 to June 3, 2010.

Collaboration between the Chinese National Earthquake Response Support Service (NERSS) and JRC-IPSC also resulted in mutual improvement of earthquake alert systems in July. JRC's Global Disaster Alert and Coordination System (GDACS) now supports Chinese language alerts, and the Chinese Global Earthquake Disaster Alert System (modelled on GDACS) is to be launched in September, providing information to GDACS.

<http://isferea.jrc.ec.europa.eu>
<http://www.gdacs.org/>



Situation assessment in remote areas is often only possible through Earth observation. This image shows an example of a landslide (top) and flooding (bottom) caused by the Wenchuan earthquake of 2008

JRC becomes official observer of European Forum of Deposit Insurers

The JRC has become an official observer of the European Forum of Deposit Insurers (EFDI) following an invitation from the Forum’s Board of Directors. The result of long-standing collaboration between the two organisations, this step is recognition of the important advisory role played by the JRC

with a view to improving deposit protection in Europe. The EFDI statutes grant official observers the right to attend and contribute to its meetings.

Deposit insurance is a safety net protecting investors, including small bank account holders, in case of bank default. EFDI and JRC-IPSC act jointly as a liaison between representatives of EU Member States and European Commission services, thus facilitat-

ing the policy-making process. The JRC and EFDI have jointly contributed to the review process of the Directive 19/94/EC on Deposit Guarantee Schemes, designed to improve depositor protection and to maintain the confidence of depositors. In 2008, the JRC hosted the EU subgroup meeting of EFDI, attended by representatives of twenty European Countries.

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

**“Europe and the United States
A crucial moment for science cooperation”**

Brussels, Belgium - 28 October 2009

<http://www.jrc.ec.europa.eu/lecture>

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The mission of the JRC is to provide customer-driven scientific and technical support for the conception, development, implementation and monitoring of EU policies. As a service of the European Commission, the JRC functions as a reference centre of science and technology for the Union. Close to the policy-making process, it serves the common interest of the Member States, while being independent of special interests, whether private or national.