

The Joint Research Centre in the 7th Framework Programme



Dr. Roland Schenkel
Director General

European Commission
Joint Research Centre
www.jrc.ec.europa.eu

... 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.



7 Institutes in 5 Member States

≅ 2650 staff + 250 competitive ≅ 320 M€/y budget + 50 M €/y competitive



IE - Petten The Netherlands
- *Institute for Energy*



IRMM - Geel Belgium
- *Institute for Reference Materials and Measurements*



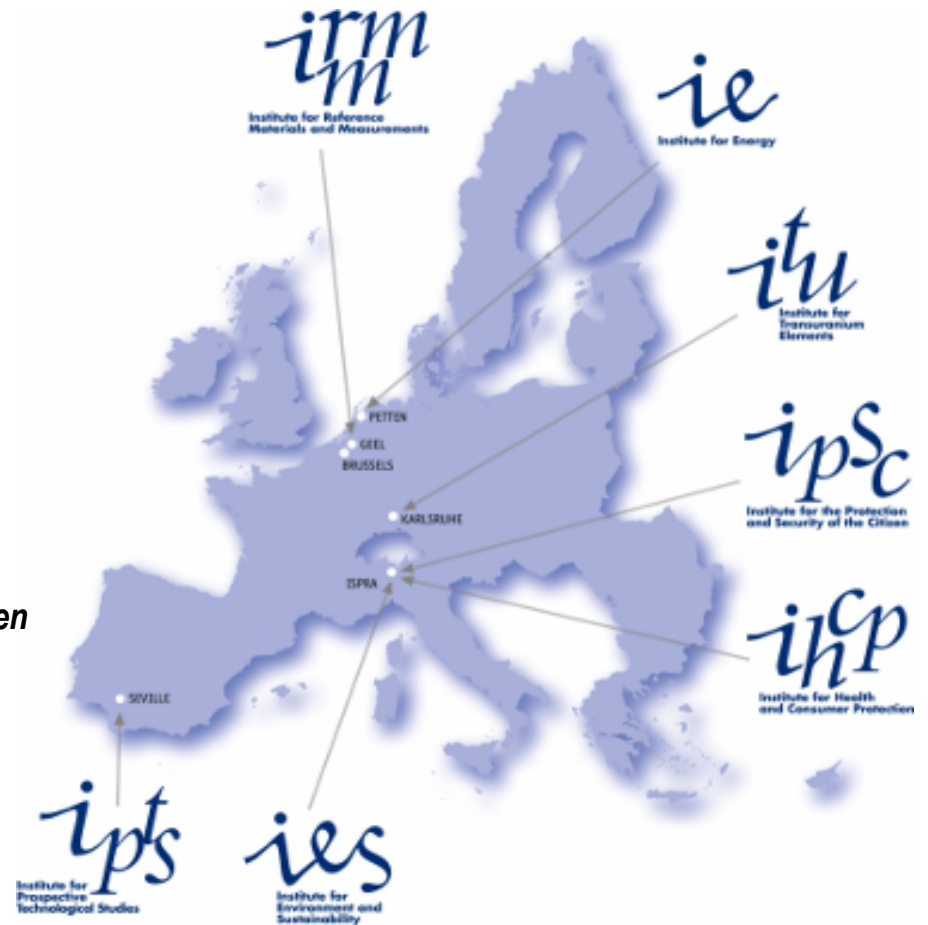
ITU - Karlsruhe Germany
- *Institute for Transuranium Elements*

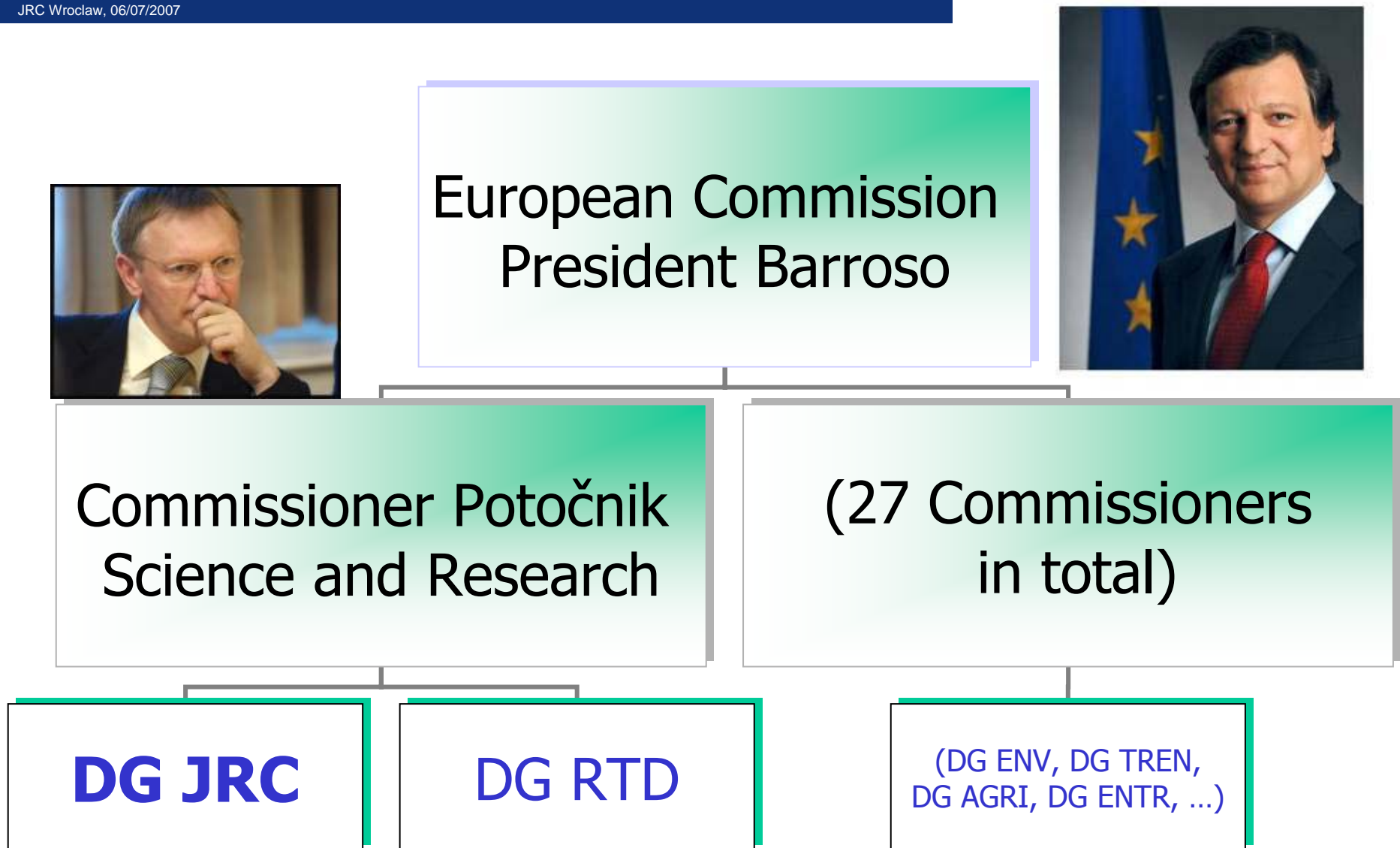


IPSC - IHCP - IES - Ispra Italy
- *Institute for the Protection and Security of the Citizen*
- *Institute for Health and Consumer Protection*
- *Institute for Environment and Sustainability*

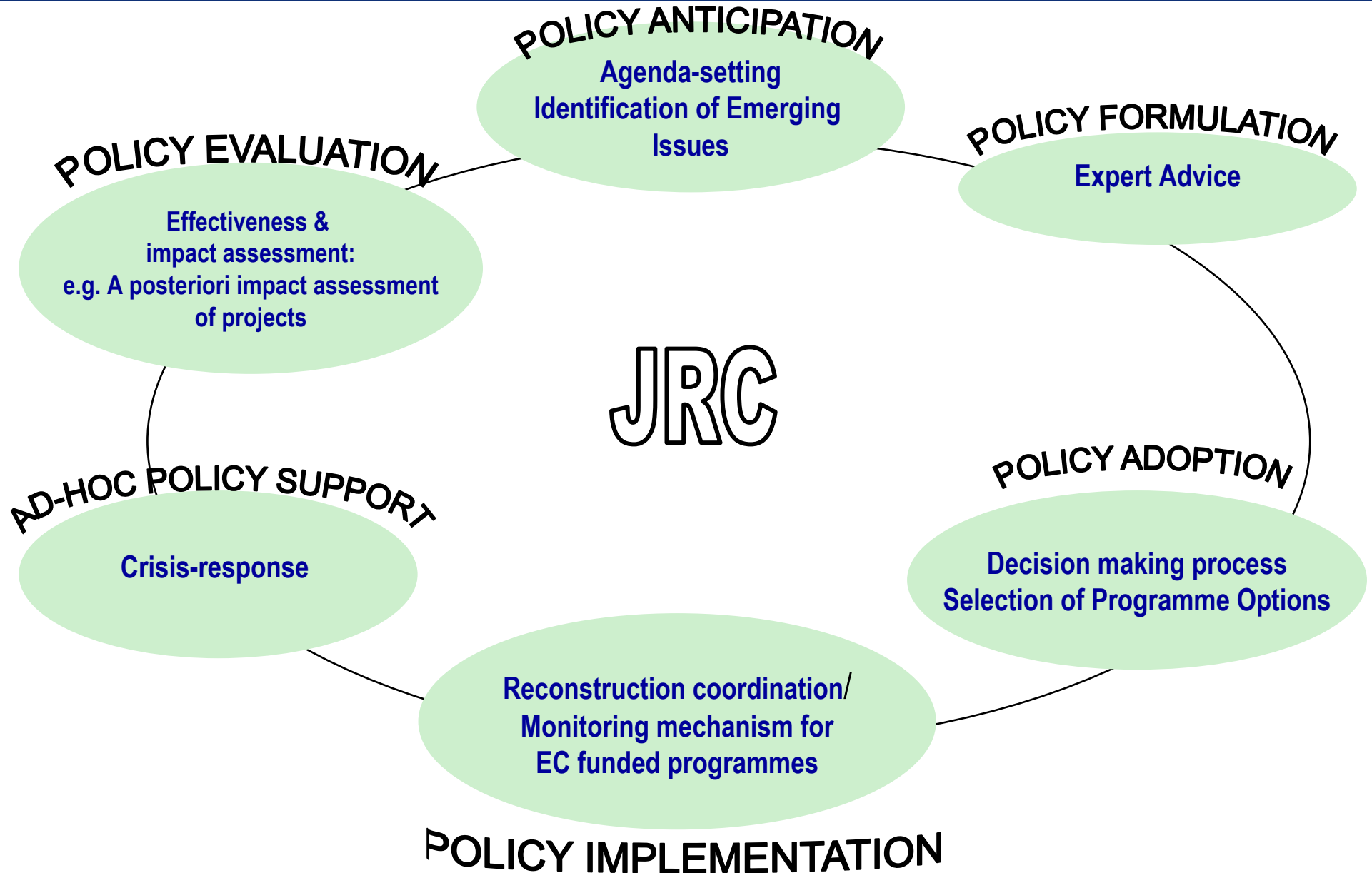


IPTS - Seville Spain
- *Institute for Prospective Technological Studies*





- **EU Policy Support:** intensive interaction with policy DG's and relevant stakeholders: direct scientific/technical input into legislative process; operational support: alert/anticipation, quick response functions and monitoring of compliance (e.g., crop declarations under Common Agricultural Policy)
- **Scientific-Technical Reference Systems:** establish standardised methodologies and measurement protocols (GMO, BSE/TSE, environmental quality, nuclear safety etc); test & evaluation of metal detectors and UWB systems
- **Research Partnerships:** European Research Area, user laboratories, access to large facilities, networks, training and mobility, co-operations
- **Specific Actions towards New Member States and Candidate Countries**



JRC in FP7

**Specific programme
“JRC direct actions”**

**2007-2013
1,751 M€**

**EURATOM programme
“JRC direct actions”**

**2007-2011
517 M€**

FP7 indirect actions

Collaboration with national
public and private research
institutes, academia, industry
and international bodies

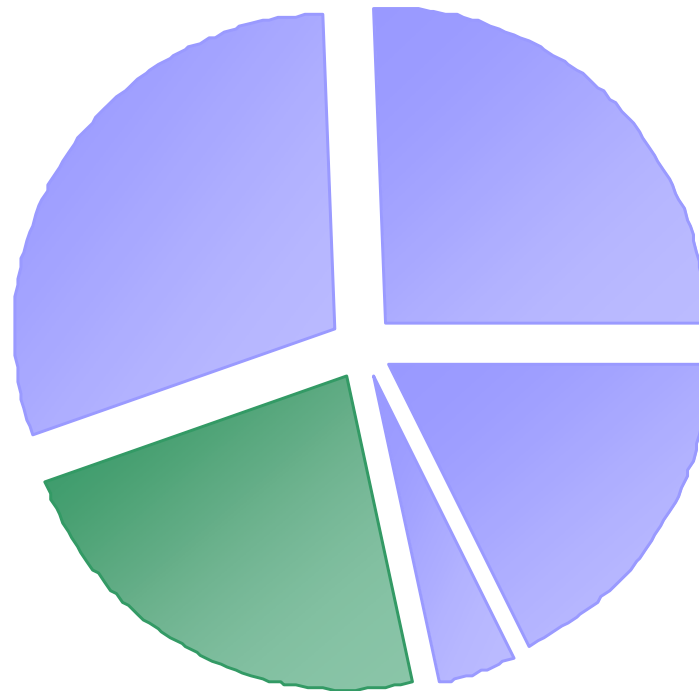
TOTAL JRC = 2,268 M€

683M€ ('Prosperity')

- Chemicals
- Biotechnology
- Energy & Transport
- Information Society
- ERA

578M€ ('Solidarity')

- Environment
- Health
- Climate Change
- Rural Development
- Agriculture



403M€ ('Security')

- Disasters
- Internal Security
- Food Chain

517M€*('Nuclear')

- Nuclear Energy, Safety & Security



88M€ ('Global Partner')

- Global Security
- Development
- Co-operation

- **Support to Lisbon Process**
Digital divide, econometric tools, interplay between innovation & regulation, standards and references in support of growth...
- **Increase Internal & External Security**
Addressing terrorist threats, combating proliferation of CBRN, support border control...
- **Understand relationship between Environment & Health**
Exposure to harmful agents, epidemiological studies, public health studies, enviro- and toxico-genomics, chemical stressors...
- **Sustainable Agriculture**
Integrated use of agricultural resources, protection of agri-environment and of landscape, social issues...

Realising objectives and delivering **high-quality results** via **strong partnerships** with public and private organisations in **Member States** and **Candidate Countries**

- ✓ Common scientific reference systems
- ✓ Networking
- ✓ Training and mobility of researchers
- ✓ Broadening access to infrastructures



Example (IES)- Emergency Management: Floods

Meteo

data

Rainfall
Temperature



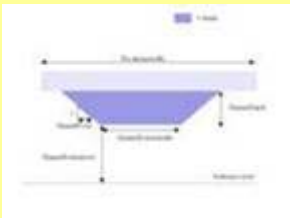
JRC European Data

Soils, Land-use,
Elevation, rivers



Member States data

- River
dimensions,
Alert levels
...



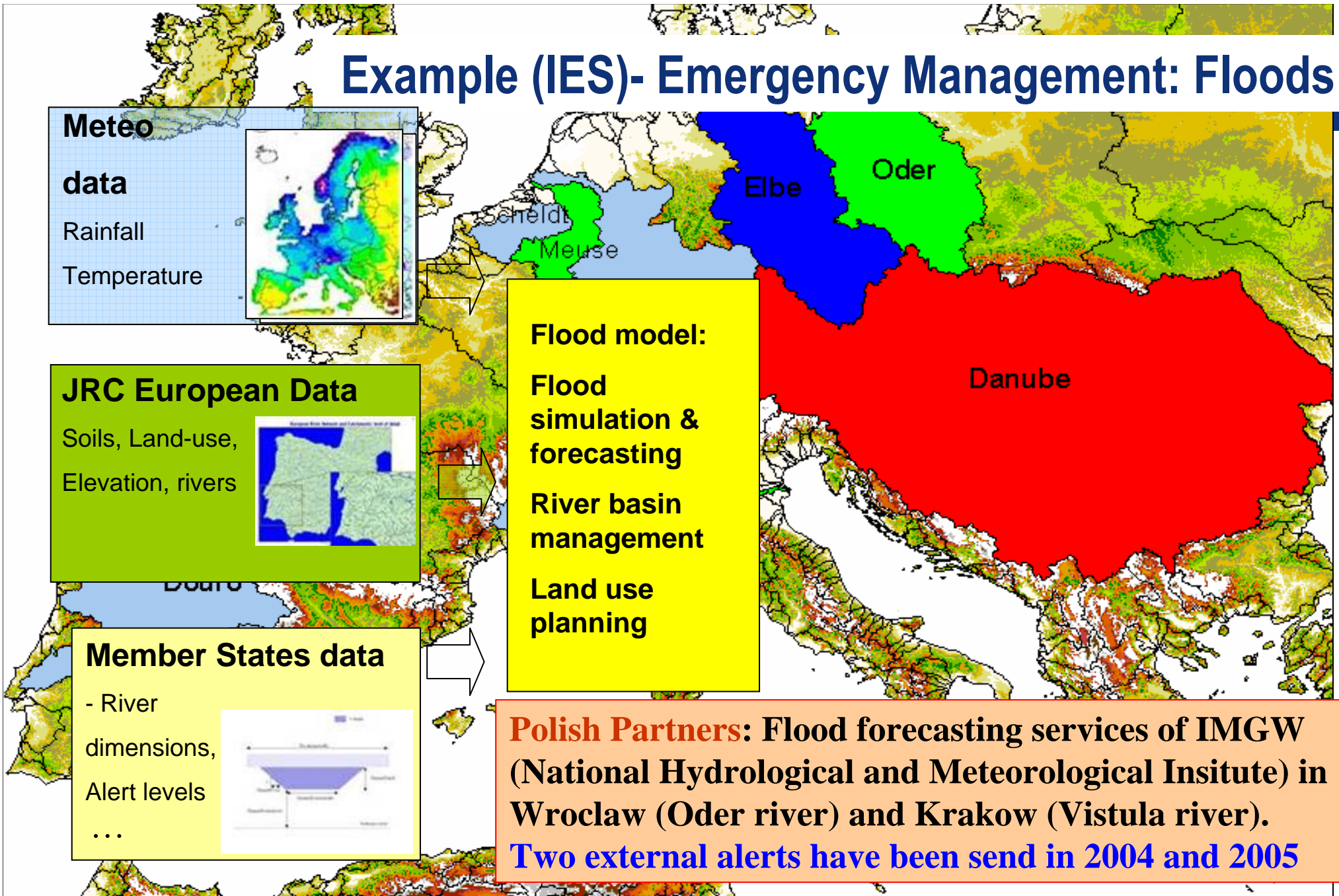
Flood model:

Flood
simulation &
forecasting

River basin
management

Land use
planning

Polish Partners: Flood forecasting services of IMGW (National Hydrological and Meteorological Institute) in Wroclaw (Oder river) and Krakow (Vistula river).
Two external alerts have been send in 2004 and 2005





Fuel Cell Systems Performance Testing and Standardisation

Development of harmonised testing procedures (forerunners to codes & standards) applicable to fuel cells stacks & systems. Comparisons of competing fuel cell technologies in terms of efficiency, safety, reliability and environmental friendliness

High Pressure Storage

Testing of tanks and safety sensors. Development of test procedures for performance testing. Support to pre-normative research & standardization. Development & validation of risk assessment methodologies

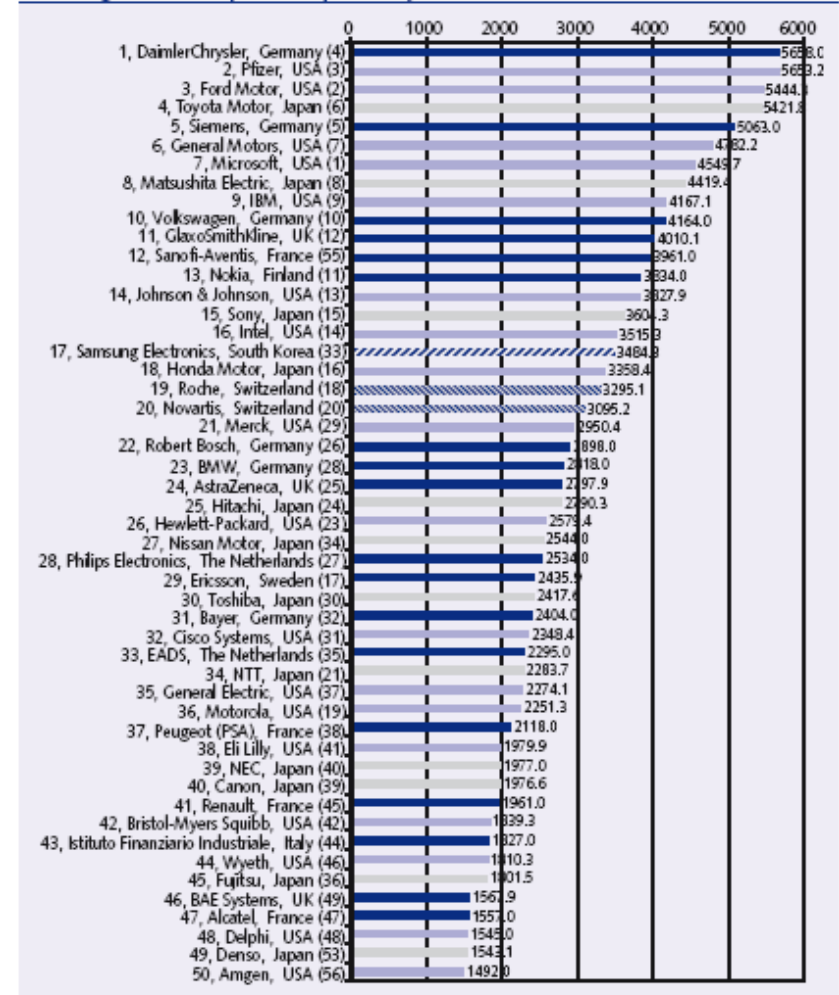


OPENED 07 July, 2005

Example (IPTS) 2006 Industrial R&D Investment Scoreboard

- Ranks top 1000 EU + 1000 non-EU corporate R&D investors (80% of global private expenditure on R&D)
- In 2006 Corporate investment in R&D grew 7% worldwide (over 2005) as compared to 5.3% in the EU
- Of the top 50 companies worldwide, 18 are from EU and 18 are from US
- EU invests in less R&D-intensive sectors, e.g. automobile & parts

Ranking of world top 50 companies by R&D investment (million €) in 2004



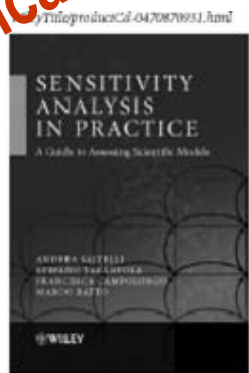


Fighting proliferation and illicit trafficking of nuclear materials

JRC Activities: Nuclear forensics (determine the nature and origin of seized illicitly trafficked nuclear material), training of nuclear inspectors, maintenance and upgrading of sealing systems, provision of nuclear reference materials

JRC results: Investigation of several serious illicit trafficking or diversion cases since 1994 (e.g., fuel pellets, Germany, 2007)

Publications



Putting pharmacogenetics into practice

Michael M Hopkins¹, Dolores Ibarreta², Sibylle Gnaiser³, Christen M Enzing⁴, Jim Ryan⁵, Paul A Martin⁶, Graham Lewis⁷, Symone Detmar⁸, M Elske van den Akker-van Marle⁹, Adam M Hodgcock⁸, Paul Nightingale¹, Marieke Dreiling³, K Juliane Hartig³, Wieneke Vallings⁸ & Tony Forde³

NATURE BIOTECHNOLOGY VOLUME 24 NUMBER 4 APRIL 2006



Dolly for dinner? Assessing commercial and regulatory trends in cloned livestock

J Suk¹, A Bruce^{2,3}, R Gertz⁴, C Warkup⁵, C B A Whitelaw⁵, A Braun³, C Oram⁵, E Rodriguez-Cerezo⁷ & I Papatyfon⁷

As cloning technologies become more widely established, will products enter the food chain sooner than regulatory agencies and the public might be prepared for?

NATURE BIOTECHNOLOGY VOLUME 25 NUMBER 1 JANUARY 2007

Formation of a New Dynamical Mode in -Uranium Observed by Inelastic X-Ray and Neutron Scattering

M. E. Manley, M. Yethiraj, H. Sinn, H. M. Volz, A. Alatas, J. C. Lashley, W. L. Hults, G. H. Lander, and J. L. Smith

Physical Review Letters 96(12), 125501



A High-Pressure Structure in Curium Linked to Magnetism

S. Heathman,^{1*} R. G. Haire,² T. Le Bihan,^{3†} A. Lindbaum,⁴ M. Idiri,¹ P. Normile,¹ S. Li,^{5,6} R. Ahuja,^{5,6} B. Johansson,^{5,6} G. H. Lander¹

1 JULY 2005 VOL 309 SCIENCE



AOAC AWARDS



At the 118th AOAC (Association of Official Analytical Chemists) International Meeting, held in Saint Louis, Missouri (USA) from 19-23 September, Jean Patwek, former Head of the Reference Materials Unit, received the 2004 Reference Material Achievement Award of the Technical Division for Re-

Awards

Ecology: Human role in Russian wild fires

Danilo Mollicone, Hugh D. Eva and Frédéric Achard
Nature 440, 436-437 (23 March 2006)



- JRC is presently collaborating with **67 Polish scientific and technical organisations** in the frame of its networks and projects
- In 2006, **364 Polish experts participated in JRC Enlargement and Integration Action specialised workshops** dealing with complex S&T aspects of the EU legislation
- **48 Polish researchers** are currently working at the JRC
- **8 collaboration agreements** signed between JRC institutes and Polish research organisations

JRC- Robust Science for Policy Making

Thank you for your attention !