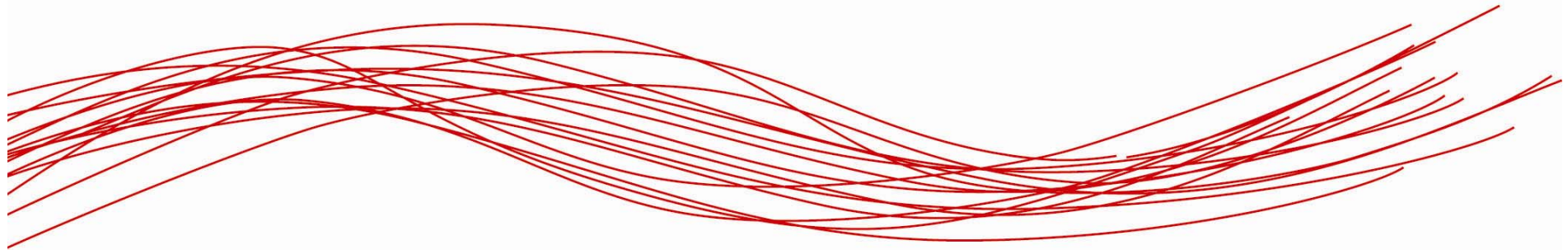




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Introduction to the EC Research effort in the field of Natural Hazards and disasters



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Research Directorate General
European Commission



THE DISASTER RISK MANAGEMENT CYCLE



DISASTER RISK MANAGEMENT CYCLE (DRMC) DIAGRAM

Definitions:

Mitigation/Prevention:

Activities which eliminate or reduce the chance of occurrence or the effects of a disaster.

Preparedness:

Planning on how to respond to disasters should they occur. This includes the provision of legislation, trained personnel and resources.

3 stages of DRMC

PRE-DISASTER

- Risk Assessment
- Mitigation/Prevention
- Preparedness

DISASTER RESPONSE

- Warning/Evacuation
- Saving People
- Providing Immediate Assistance
- Assessing Damage

POST-DISASTER

- Ongoing Assistance
- Restoration of Infrastructural Services
- Reconstruction (Resettlement /Relocation)
- Economic & Social Recovery
- Ongoing Development Activities
- Risk Assessment Mitigation/Prevention

DMCV8 - ©FORQAD 2008

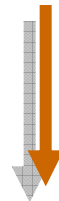


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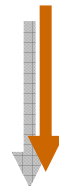
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EC RESEARCH STRUCTURE

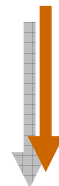
The Framework Programme FP7 (Council and EP)



Specific Programmes (Council + opinion EP)



Work Programmes (Commission)



Yearly calls (EC-specific topics, choice of instruments,...)





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Who can participate in FP7?

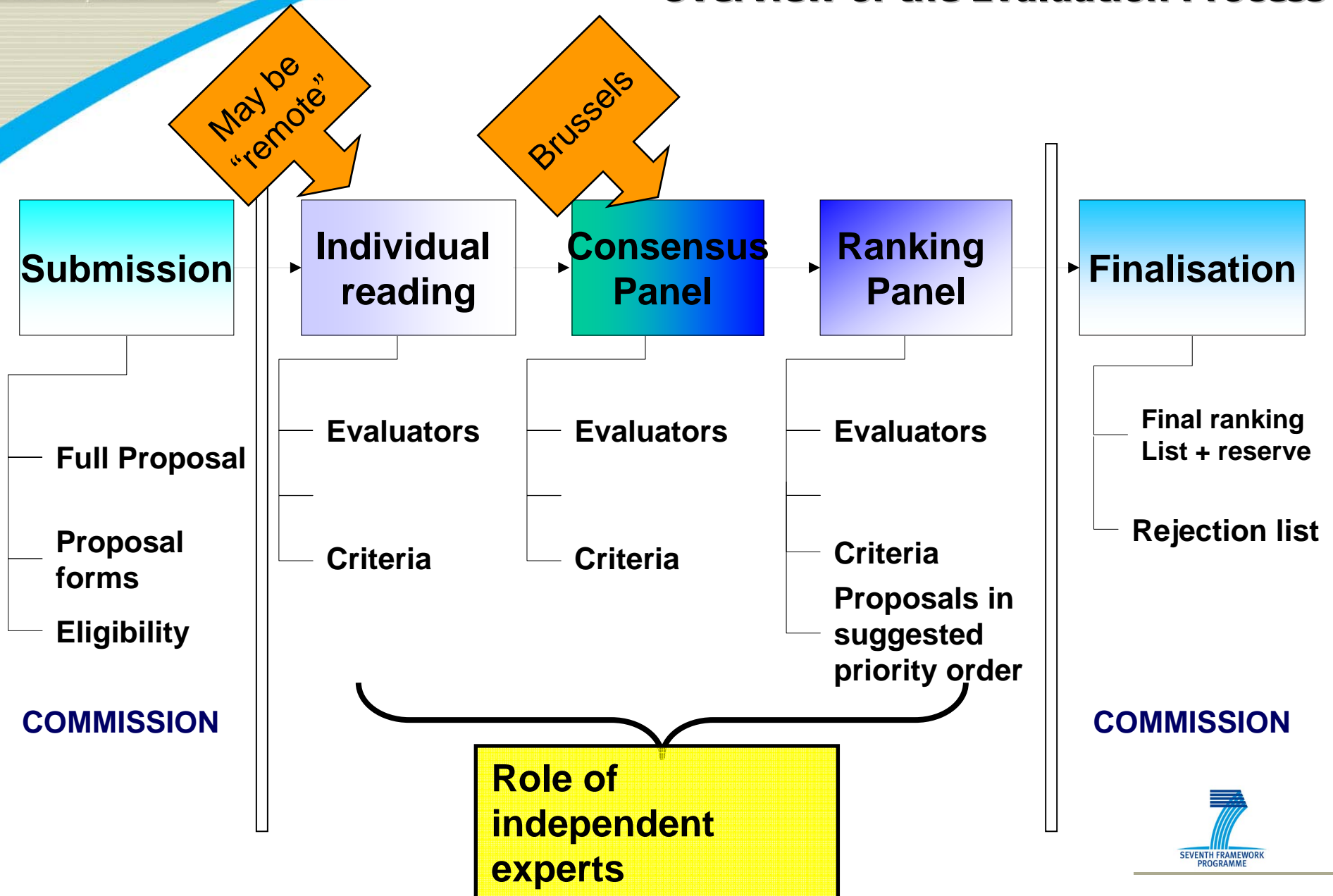
- **In principle:**
 - Any legal entity
 - From EU or Associated States
 - From the International Cooperation Partner Country list (ICPC)
- **Some provision are foreseen in relation to funding for:**
 - International organisations, other non-EU countries
- **Minimum conditions**
 - Number of legal entities, type of instruments, ..
 - programmes may lay down specific conditions (see call fiche)
- **More information:** Rules for participation
Regulation EC 1906/2006
(OJ L 391 /30.12.06)



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Overview of the Evaluation Process



SEVENTH FRAMEWORK
PROGRAMME



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Specific programmes in FP7 (2007 – 2013)

Cooperation – Collaborative research (€32.4 billion*)

Ideas – Frontier Research (€7.4 billion*)

People – Human Potential (€4.7 billion*)

Capacities – Research Capacity (€4.2 billion*)

+

JRC (non-nuclear)

JRC (nuclear)

Euratom

*Draft figures



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Cooperation

Collaborative research (€32.4 billion*)

Ten core themes that will generate annual work programmes

1. Health
2. Food, agriculture and biotechnology
- 3. Information and communication technologies**
- 4. Nanosciences, nanotechnologies, materials and new production technologies**
5. Energy
- 6. Environment (including climate change)**
7. Transport (including aeronautics)
8. Socio-economic sciences and the humanities
- 9. Space**
10. Security

themes with relevance to natural hazards, risks and disasters



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Cooperation

Collaborative research with relevance to natural hazards/disasters

Information and communication technologies -ICT for sustainable growth

- ICT-enabled systems for improving preparedness and capacity to respond to natural and man-made disasters
- ICT solutions for prevention, alert and rescue to minimise impacts of climate change
- ICT for Trust and security (critical infrastructures and communication)



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Cooperation

Collaborative research with relevance to natural hazards/disasters

Nanosciences, nanotechnologies, materials, and new production technologies

Strong collaboration with:

- the **European Technology Construction Platform** - Improve safety and security in the construction sector (strategic agenda: www.ectp.org)
 - the **European Technology Platform on Industrial safety** → Improve Occupational Health and Safety of the workers in industry and Environmental Safety through prevention of major accidents with off-site consequences and protection of the environment and the society (strategic agenda : www.industrialsafety-tp.org)
1. New advanced materials: research on existing buildings or new ones in area prone to e.g. earthquakes or extreme weather conditions (early design phase)
 2. Emerging risks related to new materials and technologies
 3. Integration of new multi-sectorial knowledge-based safety concepts for risk reduction
 4. Research on improved protective equipment for civil protection and rescue operations



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Cooperation

Collaborative research with relevance to natural hazards/disasters

Environment (including Climate change)

1. Climate change, pollution and risks

sub-activity Natural hazards:

- Hazards assessment, triggering factors and forecasting
- Vulnerability assessment and societal impacts
- Risk assessment and management
- Multi-risk evaluation and management



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Cooperation

Collaborative research with relevance to natural hazards/disasters

Environment (including Climate change)

2. Sustainable management of Resources

- Urban development
- Integrated forest research

3. Environmental Technologies

- Environmental technologies in scope of preventing risks of and preparedness to natural and man-made hazards;
- Technologies for the protection, conservation and enhancement of cultural heritage



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Cooperation

Collaborative research with relevance to natural hazards/disasters

Environment (including Climate change)

4. Earth observation and assessment tools

- Global earth and ocean observation systems and monitoring systems in support to GEOSS (global earth observation systems of systems)
- In support to the GEOSS 10-Year implementation plan, priority one "Reducing loss of life and property from natural and human-induced disasters"



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Cooperation

Collaborative research with relevance to natural hazards/disasters

Space

1. Space-based applications at the service of the European society (Global monitoring for environment and security-GMES)
 - Information services to support early warning systems
 - Emergency response service in support to civil protection, humanitarian aid in particular crisis management support services and information for surveillance and risk management
2. Downstream activities supporting the user uptake



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Environment (including Climate change) **New call for proposals-deadline 5 January 2010**

FP7 Activity Climate change, Pollution and Risks **Sub Activity Natural Hazards**

Hazard assessment, triggering factors and forecasting:

- 2010: no call

Vulnerability assessment and Societal impacts

- 2010: **Building a culture of risk prevention in Europe**



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Environment (including Climate change) **New call for proposals-deadline 5 January 2010**

FP7 Activity 6.1 Climate change, Pollution and Risks **Sub Activity Natural Hazards**

Risks assessment and management

- 2010: Early warning and drought risks in Africa

Multi-risk evaluation and mitigation

- 2010:-New methods for multi-hazard and multi-risk assessments
 - Social science, natural hazards and decision making process



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Environment (including Climate change) **New call for proposals**-deadline 5 January 2010

FP7 Activity Sustainable management of resources
Sub Activity -Conservation and sustainable management

Urban development

2010: -Assessing vulnerability of urban systems,
populations and goods in relation to climate
induced natural disasters in Africa

Integrated forest research

2010-no call



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Specific programmes in FP7 (2007 – 2013)

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*Draft figures



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IDEAS

Research related to natural hazards
within the ERC programme

Ideas

Frontier research
actions,
implemented
through the
European
Research
Council

ERC

<http://erc.europa.eu>

Europe-wide competitive funding
structure for *investigator-driven*
'frontier research':

1. Starting Independent Research
Grants
2. Advanced Investigator Grants

fields of life sciences, physical sciences,
engineering and social sciences and
humanities

See : "PE10 **Earth system science**":
physical geography, geology, geophysics,
meteorology, oceanography, climatology,
ecology, global environmental change, etc.



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IDEAS

New call for proposals 2009/2010

- Call for proposals for *ERC Advanced Investigators Grant*
- **Date of publication:** 29 October 2009
- **Panels: Physical Sciences & Engineering**, deadline DL: 24 February 2010,
- **Panels: Life Sciences**, DL:17 March 2010,
- **Panels: Social Sciences & Humanities**, DL:07 April 2010
- **Indicative budget: EUR 590 052 000** from 2010 budget



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PEOPLE - Human potential

Training and Career development of researchers

- **Initial training of researchers/
Marie Curie Networks**
- **Life-long training for
experienced researchers**
- **Industry-Academia Partnerships
and Pathways**
- **International outgoing and
incoming fellowship**
- **Specific actions**



Capacities

Research related to natural hazards within the research for Infrastructures programme

Capacities

Optimise Research capacities

- **Research infrastructures**

- Research for the benefit of SMEs
- Regions of ...

Aim: The Research Infrastructure Programme
aims at supporting a joint development of
Research Infrastructures -RI- of European
dimension by:
*Optimising the use of the best **existing RI** in
Europe (Integrating Activity Projects)

*Helping to create in all fields of S&T **new RI**:
for this the input of ESFRI (European Strategy
Forum on Research Infrastructures) a forum of
Member States and Associated States with one
member of the EC) is taken into account.



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Capacities

New call for proposals

- Currently call FP7_INFRASTRUCTURES-2010-1, deadline 3/12/09
- 2 topics of interest:
- INFRA-2010-1-27: RI for Earthquake Hazard; Integrating Activity for existing RI (1 comprehensive project, max. EC contribution 10M€)
- INFRA-2010-2.2.2: EPOS (Infrastructure for the study of tectonics and Earth surface mechanics); Preparatory Phase for new RI, defined in the ESFRI Roadmap 2008



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Applied Research in relation to natural hazards/disasters and the role of **JRC**

JRC : Joint Research Centres

- Direct non-nuclear research under FP7 (€ 1.751 billion)
- JRC plays a central role in using and/or translating research results into knowledge that underpins EU policies, which include EC policy needs in relation to the full crisis management cycle including a broad range of topics on natural hazards.



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More Information:

Find a call for research :

http://cordis.europa.eu/fp7/home_en.html

FP7 information

http://ec.europa.eu/research/fp7/index_en.cfm





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Thank you for your attention

