

7th Framework Programme Theme 6 “Environment (including climate change)”

**Journée d’information du 21 novembre 2006
« Environnement » et « Énergie » Programme**

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Cooperation – Collaborative Research

Ten themes

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. Security
10. Space

Environment has links with all the other themes

Budget for FP7 (non-Nuclear part)

- Total budget: 50.521 million €* (current prices)
- Indicative breakdown:

2006	2007	2008	2009	2010	2011	2012	2013
5.044	5.082	5.579	6.119	6.932	7.968	8.925	9.913

- In 2013 expenditure 75% higher than in 2006
- 60% increase compared to FP6
- **For Environment:** from ~225 M€ in 2006 to about 350 M€ in 2013; sharp increase only from 2011

* Commission modified proposal (May 24, 2006)

Cooperation (current prices)*

Health	5984
Food, Agriculture and Biotechnology	1935
Information and Communication Technologies	9110
Nanosciences, Nanotechnologies, Materials ...	3467
Energy	2265
Environment (including Climate Change)	1886
Transport (including Aeronautics)	4180
Socio-economic Sciences and the Humanities	607
Security and Space	2858
TOTAL	32292

* Commission modified proposal (May 24, 2006)

Support from Environmental Research

- ✓ ***Environmental Research to support International commitments such as:***
 - UN FCCC and Kyoto Protocol and Montreal Protocols
 - UN Convention on Biological Diversity
 - UN Strategy for Disaster Reduction
 - World Summit on Sustainable Development
 - Intergovernmental panel for Climate Change (IPCC)
 - Group on Earth Observations (GEO)

Support from Environmental Research

- ✓ ***Environmental Research to contribute to EU environmental policies such as:***
 - European Climate Change Programme II
 - 6th Environmental Action Plan and associated Thematic Strategies (*air, waste, marine, soil, pesticides, urban*)
 - Action Plans on *Environmental Technologies* and *Environment and Health*
 - European directives – Water Framework, REACH (chemicals), CAFE (air quality), INSPIRE (env. data)

- ✓ ***Environmental Research to contribute to EU policies such as:***
 - Sustainable Development Strategy, International cooperation, Space, Innovation, Health, Regional Development

FP7 Areas and Topics

FP 7 activities should integrate within the research activity itself, when relevant:

- ✓ Support to Policy / Unforeseen policy needs
- ✓ Dissemination activities (research-policy, science-society)
- ✓ International cooperation in particular with INCO countries
- ✓ Socio-economic dimension
- ✓ SME participation
- ✓ Cross thematic topics

Coordination of national programmes ERA-NET, Art. 169 can be part of the activities

FP7 Rules for participation

Funding schemes (formerly 'instruments')

- ✓ Collaborative projects (range from small focused actions to large integrating projects)
- ✓ Networks of excellence (~same scope and objectives as in FP6)
- ✓ Coordination actions and Support actions (~same scope and objectives as in FP6)
- ✓ Research in support of specific groups (new focus)
- ✓ Actions to promote and develop human resources and mobility of researchers

Theme Environment (including Climate Change)

Activities

- ✓ **Climate change, pollution and risks**
- ✓ **Sustainable Management of Resources**
- ✓ **Environmental Technologies**
- ✓ **Earth observation and assessment tools**

FP7 activities – Theme “Environment” (including Climate Change)

Activity “Climate change, pollution and risks”

✓ **Sub-activity “Pressures on environment and climate” – 6 areas including regional impacts**

1. The Earth System and Climate: Functioning and abrupt changes
 - **ENV.2007.1.1.1.1. Stability of the ThermoHaline Circulation**
2. Emissions and Pressures: Natural and anthropogenic
 - **ENV.2007.1.1.2.1. Megacities, air quality and climate**
3. The Global Carbon cycle - Greenhouse gas budget
 - **ENV.2007.1.1.3.1. Ocean acidification and its consequences**
4. Future Climate

5. Climate Change, Natural and Socio-economic Impacts
 - ***ENV.2007.1.1.5.1. Climate change impacts and adaptation strategies in water policies***
 - ***ENV.2007.1.1.5.2. Climate change impacts on vulnerable mountain regions***
 - ***ENV.2007.1.1.5.3. Past and future climate change impacts in the Parana-Plata river basin of South America***

6. Response Strategies: Adaptation, Mitigation and Policies
 - ***ENV.2007.1.1.6.1. Full costs of climate change***
 - ***ENV.2007.1.1.6.2. Effectiveness of adaptation and mitigation measures related to changes of the hydrological cycle and its extremes***
 - ***ENV.2007.1.1.6.3. Impact and feed-backs of climate policies on land use and ecosystems in Europe***
 - ***ENV.2007.1.1.6.4. Exploitation and dissemination of climate change research results and public perception***

FP7 activities – Theme “Environment” (including Climate Change)

Activity “Climate change, pollution and risks”

✓ **Sub-activity “Environment and health” – 3 areas**

1. Health Effects of Exposure to Environmental Stressors

- ***ENV.2007.1.2.1.1. Indoor air pollution in Europe: an emerging environmental issue***
- ***ENV.2007.1.2.1.2. Environmental factors and their impact on reproduction and development***

2. Integrated Approaches for Environment and Health Risk Assessment

- ***ENV.2007.1.2.2.1. European network on human biomonitoring***
- ***ENV.2007.1.2.2.2. European cohort on air pollution***
- ***ENV.2007.1.2.2.3. Health impacts of drought and desertification including socio-economic aspects***

3. Delivery of Methods and Decision Support Tools for Risk Analysis and Policy Development

- ***ENV.2007.1.2.3.1. ERA-NET for environment and health***

FP7 activities – Theme “Environment” (including Climate Change)

Activity “Climate change, pollution and risks”

✓ **Sub-activity “Natural hazards” – 4 areas**

1. Hazard Assessment, Triggering Factors and Forecasting
 - **ENV.2007.1.3.1.1. European storm risk**
2. Vulnerability Assessment and Societal Impact
 - **ENV.2007.1.3.2.1. Frame for better vulnerability assessment**
3. Risk Assessment and Management
 - **ENV.2007.1.3.3.1. Assessing and managing volcanic threat**
 - **ENV.2007.1.3.3.2. Harmonising avalanche forecasting, risk mapping and warning**
 - **ENV.2007.1.3.3.3. Investigating Europe's risk from droughts**
4. Multi-risk Evaluation and Mitigation Strategies
 - **ENV.2007.1.3.4.1. European (multi) hazard database analysis**

FP7 activities – Theme “Environment” (including Climate Change)

Activity “Sustainable management of resources”

- ✓ ***Sub-activity “Conservation and sustainable management of natural and man-made resources and biodiversity” – 6 areas***
 1. Integrated Resource Management
 2. Water Resources
 - ***ENV.2007.2.1.2.1. Assessing the ecological status of water bodies***
 - ***ENV.2007.2.1.2.2. River basin twinning initiatives as a tool to implement EU initiatives***
 - ***ENV.2007.2.1.2.3. Temporary water bodies management***
 - ***ENV.2007.2.1.2.4. Integrated resource management in international co-operation partner countries***
 3. Soil Research and Desertification
 - ***ENV.2007.2.1.3.1. Geographical transect approach to desertification***

4. Biodiversity

- ***ENV.2007.2.1.4.1. Contribution of biodiversity to ecosystem services***
- ***ENV.2007.2.1.4.2. Use of natural resources: the impact on biodiversity, ecosystem, goods and services***
- ***ENV.2007.2.1.4.3. Biodiversity values, sustainable use and livelihoods***

5. Urban Development

- ***ENV.2007.2.1.5.1. Urban metabolism and resource optimisation in the urban fabric***

6. Integrated Forest Research

FP7 activities – Theme “Environment” (including Climate Change)

Activity “Sustainable management of resources”

✓ **Sub-activity “Evolution of marine environments” - 1 area**

1. Marine Resources

- ***ENV.2007.2.2.1.1. Development of advanced ecosystem models methodologies for the management and sustainable use of resources***
- ***ENV.2007.2.2.1.2. Ecology of important marine species***
- ***ENV.2007.2.2.1.3. Habitat-marine species interactions in view of ecosystem based management in the deep-sea***
- ***ENV.2007.2.2.1.4. Dynamic of marine ecosystem in a changing environment***
- ***ENV.2007.2.2.1.5. Deep ocean geophysical and biological processes***
- ***ENV.2007.2.2.1.6. Investigating life in extreme environments***
- ***ENV.2007.2.2.1.7. Promoting access to information across marine themes***
- ***ENV.2007.2.2.1.8. Fostering improved co-operation between marine science and the private sector***
- ***ENV.2007.2.2.1.9. Access to and recovery of marine data from previous FP projects***

FP7 activities – Theme “Environment” (including Climate Change)

Activity “Environmental Technologies”

- ✓ **Sub-activity “Environmental technologies for the sustainable management of the natural and man-made environment” – 5 areas**
 1. Water
 - **ENV.2007.3.1.1.1. Innovative technologies and services for sustainable water use in industries**
 - **ENV.2007.3.1.1.2. Technologies for measuring and monitoring networks**
 2. Soil
 - **ENV.2007.3.1.2.1. Development and improvement of technologies for data collection in (digital) soil mapping**
 - **ENV.2007.3.1.2.2. Development of technologies and tools for soil contamination assessment and site characterisation, towards sustainable remediation**

3. Waste

- ***ENV.2007.3.1.3.1. Development of integrated waste management technologies for maximising material and energy recovery/ recycling of the organic (humid) fraction of municipal solid waste***
- ***ENV.2007.3.1.3.2. New technologies for waste sorting***
- ***ENV.2007.3.1.3.3. Networking and preparatory action in view of developing cost-effective, environmentally-safe waste treatment technologies and services adapted to the needs of developing countries, within a targeted life cycle approach***

4. Clean Technologies

- ***ENV.2007.3.1.4.1. Networking and preparatory action in view of control of mercury in industrial processes and products***

5. Built Environment

- ***ENV.2007.3.1.5.1. Low resource consumption buildings and infrastructure***
- ***ENV.2007.3.1.5.2. Performance indicators for health, comfort and safety of the indoor built environment***

FP7 activities – Theme “Environment” (including Climate Change)

Activity “Environmental Technologies”

- ✓ **Sub-activity “Protection, conservation and enhancement of cultural heritage, including human habitat – 4 areas**
 1. Assessment and conservation in cultural heritage
 - ***ENV.2007.3.2.1.1. Damage assessment, diagnosis and monitoring for the preventive conservation and maintenance of the cultural heritage***
 2. Networking, knowledge transfer and optimisation of results
 - ***ENV.2007.3.2.2.1. ERA-NET for the preservation of tangible cultural heritage***
 - ***ENV.2007.3.2.2.2. Consolidation and dissemination of results related to cultural heritage***
 3. Environment technologies for archaeology and landscapes
 4. Fostering the integration of cultural heritage in urban and rural settings

FP7 activities – Theme “Environment” (including Climate Change)

Activity “Environmental Technologies”

- ✓ **Sub-activity “Technology assessment, verification and testing” – 3 areas:**
 1. Risk Assessment of Chemicals and Alternative Strategies for Testing
 - ***ENV.2007.3.3.1.1. In-silico techniques for hazard-, safety-, and environmental risk-assessment***
 - ***ENV.2007.3.3.1.2. Defining of a long-term research strategy for the full replacement of animal tests for repeat dose systemic toxicity***
 2. Technology Assessment (Life Cycle Assessment, Life Cycle Thinking, etc)
 3. Environmental Technologies Verification and Testing

FP7 activities – Theme “Environment” (including Climate Change)

Activity “Earth observation and assessment tools”

- ✓ **Sub-activity “Earth observation” – 4 areas including in situ and space observation for 9 societal benefit areas**
- 1. Integration of European Earth Observation activities within GEO
 - **ENV.2007.4.1.1.1. Monitoring of the carbon cycle at global level**
 - **ENV.2007.4.1.1.2. Contribution to a global biodiversity observation system**
- 2. Cross-cutting Research Activities relevant to GEO
 - **ENV.2007.4.1.2.1. Coordination of national earth observation programmes in view of their long-term integration and sustainability**
 - **ENV.2007.4.1.2.2. Contributing to the development of a worldwide network of in-situ observatories for seismogenic hazards**
 - **ENV.2007.4.1.2.3. Dissemination and broadcasting of scientific data and information**

3. Earth Observation Activities in Emerging Areas

- ***ENV.2007.4.1.3.1. Application of Earth Observations to environmental and health issues***
- ***ENV.2007.4.1.3.2. Monitoring the ocean interior, seafloor, and subseafloor***
- ***ENV.2007.4.1.3.3. Development of a Global Soil Observing System***

4. Developing Capacity Building Activities in the Domain of Earth Observation in Developing Countries

- ***ENV.2007.4.1.4.1. Georesource information system for Africa***
- ***ENV.2007.4.1.4.2. Improving observing systems for water resource management***
- ***ENV.2007.4.1.4.3. GEOnetcast applications for developing countries***

FP7 activities – Theme “Environment” (including Climate Change)

Activity “Earth observation and assessment tools”

- ✓ **Sub-activity “Forecasting methods and assessment tools for sustainable development, taking into account differing scales of observation” – 3 areas**
 1. Tools for Impact Assessment
 - **ENV.2007.4.2.1.1. Methodologies for scaling down to the regional and local level the analysis of policy impacts on multifunctional land uses and the economic activity**
 - **ENV.2007.4.2.1.2. Improved tools to analyse the sustainable development implications of the EU financial perspective revision (2008-2009)**
 - **ENV.2007.4.2.1.3. Tools for impact assessment of sustainable development policies in international collaboration partner countries**
 2. Sustainable Development Indicators
 - **ENV.2007.4.2.2.1. Bridging mainstream indicators of economic performance with sustainable development objectives**

3. Interplay between social, economic and ecological systems

- ***ENV.2007.4.2.3.21. Policies to promote sustainable consumption patterns***
- ***ENV.2007.4.2.3.23. Engaging civil society in research on sustainable development***

FP7 Tentative Roadmap

2006

- ✓ June: EP – 1st reading on FP7.
- ✓ September: Council – Common position on FP7
- ✓ End of November: EP – Adoption of FP7 (2nd reading) and Rules for Participation (one single reading)
- ✓ Early December: Council – Adoption of the SPs
- ✓ December: Commission – Adoption of Work Programmes and necessary materials
- ✓ End of 2006: Commission – Publication of 1st calls

CONCLUSIONS

- ✓ The “Environment” priority is well articulated and promises to attract great interest
- ✓ Main innovations in content: Environmental Technologies, GEO, Environment & Health
- ✓ A budget similar to FP6 (slightly lower) for 2007 and 2008
- ✓ ERA-NETs, Art. 169, International Cooperation activities, and emerging policy needs integrated in the thematic priority
- ✓ A major challenge: how to exploit results for policy
- ✓ A new challenge: cross-thematic approaches related to Environmental research