

Work Programme 2012

COOPERATION Theme 6 Environment (including climate change)



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WP 2012 Main elements and approach

WP 2012 takes into account the European Research Area (ERA) objectives and recent major EU policy initiatives such as the Flagship Initiatives on Innovation Union and Resource Efficiency.

Novelties:

- Challenge-driven approach
- More focused priorities and fewer and less prescriptive topics
- More flexibility and simplified Work Programme
- New approaches to research and innovation
- Wider participation of European industry and SMES

**One overarching theme:
“Transformative and responsible innovation”**

**Three objectives
Five priorities**

05/07/2011



2

As I already noted in my introduction, here are the main elements of the « new » approach for the remaining two years of the FP7.

This will be implemented with one overarching theme and three objectives for the next two years and five main priorities selected for WP2012.

This new structure of the Work Programme was inspired by the 2010 AG report. In our 2012 Work Programme, we are using a challenge-driven approach which will be implemented in a way that is similar to the some of the thematic parts of the AG report. In line with the AG report suggestions, we are breaking boundaries of the sub-activities and moving away from narrowly prescriptive topics to broader strategic topics. As your report suggests, these broader topics will be designed to promote high impact projects involving a broad range of stakeholders.

The overarching theme -- « Transformative and responsible innovation » -- was also chosen based on the suggestions you provided in the 2010 AG report.

WP2012 Objectives (1)

(1) To provide knowledge-based options for addressing major societal challenges

- addressing global priorities encouraging international collaboration
- strategic focus on fewer, but broader priorities with high EU added value
- strong linkages with other sectors (e.g. energy, transport, agriculture, health etc.)

05/07/2011



The first objective is to provide knowledge-based options for addressing major societal challenges

This objective is designed in the spirit of your suggestions, particularly your general advice on taking into account cross-sectoral challenges and the international dimensions of European environmental research.

-our approach combines social challenges, the economy and the environment both at the EU level and at the international level

-it provides more strategic focus on fewer and broader priorities with high EU added value (moving away from shopping list approach)

-this objective encourages strong linkages with other sectors.

WP2012 Objectives (2)

(2) To develop and strengthen European leadership in innovation

- supporting Innovation Partnerships (water)
- boosting breakthrough (eco)-innovation by more bottom-up topics
- encouraging wider stakeholder participation
- adopting broad definition of innovation (technological and social)

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The second objective is **to develop and strengthen European leadership in innovation**

- Innovation Partnership on water is foreseen
- Bottom-up topics on technological innovation to improve resource efficiency (building on the good experience of 2011 eco-innovation call)
- Major efforts foreseen to encourage broad stakeholder participation including SMEs
- Enhancing social innovation such as innovation in policy, governance, tools for management, and increase societal resilience in case of environmental hazards

WP2012 Objectives (3)

(3) To promote and facilitate knowledge transfer, assessment, uptake and exploitation of scientific data and results

- encouraging science-policy interactions
- supporting demonstration activities including prototypes, new designs, management tools etc.
- better alignment of Work Programme priorities and communication strategy

05/07/2011



The third objective is to promote and facilitate knowledge transfer, assessment, uptake and exploitation of scientific data and results

This objective is also linked to ideas expressed in the AG report.

•In this respect specific activities will be foreseen to support dissemination and exploitation of results including for innovation

-Also bottom-up topic on demonstration activities including prototypes, new designs etc derived from previously EU funded projects is foreseen

-Better alignment of the work programme priorities and our communication strategy is also foreseen

'Transformative and Responsible Innovation' addressing 5 societal challenges (265M€):

- Coping with climate change (55M€)
- Sustainable use and management of land and seas (45M€)
- Improving resource efficiency (62M€)
- Protecting citizens from environmental hazards (42M€)
- Mobilising environmental knowledge for policy, industry and society (41M€)

Cross-cutting activities (20M€): PPPs and EU-India initiative

Contribution to other cross-cutting activities

- Art. 185: 10.3M€ (Bonus, Metrology)
- JTI Hydrogen: 5M€

05/07/2011



6

Five challenge-driven priorities have been identified for WP2012:

Coping with climate change

Example: large-scale experiments to integrate climate change information and knowledge in support of adaptation and mitigation measures (high added value and policy relevance)

Example: Support for the Joint programming on climate change

As suggested in the AG report, this priority will also address both the drivers and processes determining climate change in order to detect and attribute its causes and impacts.

Sustainable use and management of land and seas

The priority takes into account the need for research on valuation of ecosystem services, which was also noted in the AG report.

Example: large topic on innovative solutions to integrate ecosystem services in sustainable land management

Improving Resource Efficiency

Example: a bottom-up topic on technological solutions to drastically improve resource efficiency; decreasing material inputs, recovering by-products, minimising waste (high industrial and SME dimension)

Example: support Joint programming initiative on water

Protecting citizens from environmental hazards

Example: large-scale cross-disciplinary approaches for detection, forecast of hazards to improve societal resilience and population safety and health (high EU added value and strong international dimension)

Mobilizing environmental knowledge for policy, industry and society

This priority is closely linked to the AG suggestion to include the issue of mobilizing the science-policy interface in environmental governance in the Work Programme

Example: GEO initiative on citizens' observatory; example: feasibility study on open access to environmental data and results (in line with your suggestion on data storage, availability and management)

We are currently developing topic descriptions that will correspond to these priorities, and we

6.1 Coping with climate change	Sub-activity 6.1.1 Pressures on environment and climate Sub-activity 6.1.2 Environment and health Sub-activity 6.3.1 Environmental technologies Sub-activity 6.4.1 Earth and ocean observation systems and monitoring methods
6.2 Sustainable use and management of land and seas	Sub-activity 6.2.1 Conservation and sustainable management of natural and man-made resources and biodiversity Sub-activity 6.2.2 Management of marine environments Sub-activity 6.3.2 protection, conservation and enhancement of cultural heritage, including human habitat Sub-activity 6.4.1 Earth and ocean observation systems and monitoring methods
6.3 Improving resource efficiency	Sub-activity 6.3.1 Environmental technologies Sub-activity 6.3.3 Technology assessment, verification and testing Sub-activity 6.4.2 Forecasting methods and assessment tools for SD
6.4 Protecting citizens from environmental hazards	Sub-activity 6.1.3 Natural hazards Sub-activity 6.1.2 Environment and health Sub-activity 6.3.1 Environmental technologies Sub-activity 6.4.1 Earth and ocean observation systems and monitoring methods
6.5 Mobilizing environmental knowledge for policy, industry and society	Sub-activity 6.1.1 Pressures on environment and climate Sub-activity 6.1.2 Environment and health Sub-activity 6.4.1 Earth and ocean observation systems and monitoring methods Sub-activity 6.4.2 Forecasting methods and assessment tools for SD Sub-activity 6.5.1 Dissemination and horizontal activities

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Challenge 6.1 Coping with climate change

Overall aim

- To create a more effective interface between climate change knowledge, social and economic systems and the policy-making process

In particular, the call will explore:

- *The key knowledge gaps in climate science that may allow reliable **seasonal-to-decadal predictions**, paving the way to the future development of **climate services***
- *The economic opportunities the costs and the impacts associated to the development of a low carbon, resource efficient and climate resilient society and economy, by:*
 - ▶ *Improving the **energy-economy-climate modelling** tools for assessing costs and impacts of mitigation pathways*
 - ▶ *Improving our capability of assessing the **full costs and benefits of adaptation strategies***
 - ▶ *Exploring the best **mix of economic and non-economic instruments** that may complement the EU Emission Trading System in order to reach the 2050 GHG reduction targets*
- *The opportunities, risks, feasibility and policy implications of **geo-engineering***

Indicative budget: 55 M€



Challenge 6.2 Sustainable use and management of land and sea

Overall aim

- To engage in a more sustainable use and management of the natural capital that supports economies, societies and individual well-being.

In particular, the call will explore:

- *The operational potential of the concepts of **ecosystem services and natural capital** to systematically inform sustainable management*
- *How to further develop the European contribution to the **Global Earth Observation Biodiversity Observation Network (GEO BON)***
- *Ways and means to support the implementation of the **Marine Strategy Framework Directive (MSFD)***
 - ▶ *Improving integrated assessment of **Good Environmental Status (GES)** of Marine Biodiversity*
 - ▶ *Investigating management and potential impacts of **litter** in the marine and coastal environment*
 - ▶ *Improving the scientific knowledge base to support the implementation of the **MSFD***
- *Advanced technologies and tools for mapping, diagnosing, excavating, and securing **underwater and coastal archaeological sites***

Indicative budget: 45 M€



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Challenge 6.3 Improving Resource Efficiency

Overall aim

- Fasten the transition towards a Green Economy and a 'culture of saving reuse and recycling' by improving resource efficiency within and across all sectors and build up more sustainable patterns for consumption and production .

In particular, the call will explore:

- *Innovative ideas and new market opportunities for eco-efficient technologies, processes and services – **resource efficiency** and new opportunities for SMEs*
- *Adequate **decision support tools (indicators and models)** to enable policy makers and other stakeholders to choose the best mix of **policy options**, as well as to analyse and monitor the progress towards **resource-efficiency***
- ***Standardisation** requirements in the field of environment*

Indicative budget: 62 M€

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Challenge 6.4 Protecting citizens from environmental hazards

Overall aim

- To develop innovative knowledge and applicable tools aiming at risk reduction from environmental hazards, including extreme and sudden large catastrophic events, as well as noxious elements present in the environment that may affect human health

In particular, the call will explore:

- *How to improve the **resilience** of societies to **major catastrophic events** through new **risk-management partnerships***
- *The establishment of **long-term** monitoring experiments in geologically active zones, as European contribution to the international "**Supersite**" initiative*
- *How to integrate large amounts of **environmental exposure** and **human health data** – the concept of "**exposome**"*

Indicative budget: 42 M€

05/07/2011



11

Challenge 6.5 Mobilising environmental knowledge for policy, industry and society

Overall aim

- To stimulate innovative approaches and tools to handle complexity, interactions and interfaces, and to facilitate knowledge transfer, assessment, valuation, uptake and exploitation of scientific data and results for policy, industry and society at large.

In particular, the call will explore:

- *How to design and exploit “**citizen’s observatories**”, using innovative distributed monitoring technologies and new information systems for **earth observation** purposes.*
- *The demonstration and exploitation of **most promising prototypes** derived from European research activities, with focus on water and waste technologies.*
- *How to best promote **open access to primary environmental data** produced by EU research projects*
- *An assessment of research results on **air quality** to support the revision process of EU policies*

Indicative budget: 41 M€

05/07/2011



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6.6 Horizontal and cross-thematic activities

ENV.2012.6.6-1 EU-India cooperation in water technology: research and innovation –FP7-ENV-2012-one-stage

- The topic will address water purification, as well as reclamation and reuse.
- SMEs targeted Collaborative Project, EC contribution < 3 M€, 30% to SMEs
- Similar topic to be published by India - EU and India projects to be closely coordinated

EeB.ENV.2012.6.6-2 PPP Energy Efficient Buildings Initiative Concepts and solutions for improving energy efficiency historic buildings, in particular at urban district scale

- focus to groups of old houses and historical buildings . On-site technical demonstrations and testing required as well as participation of local authorities, agencies and citizens
- SMEs targeted Collaborative Project, EC contribution < 5 M€, 35% to SMEs

GC.ENV.2012.6.6-3 PPP 'European Green Cars Initiative' Innovative advanced lightweight materials for the next generation of environmentally-friendly electric vehicles

- Large-scale integrating collaborative projects
- EC contribution between 4 & 10 M€

05/07/2011



13

WP 2012 One stage – two stage

- **Most topic areas are evaluated through a two-stage process:**
 - ▶ Outline proposals of max 10 pages by 20 October 2011
 - ▶ Selected outlines to prepare full proposals by 15/2/2012 (indicative date to be specified in the invitation letter)
 - ▶ In most cases, more than one proposals can be selected; the call text is less prescriptive, leaving more choice to the applicants on what to focus the proposal

- **Less topic areas are evaluated through a one-stage process:**
 - ▶ Applied for Coordination and support actions and for some small size collaborative projects
 - ▶ Full proposals to be prepared by 20 October 2011

05/07/2011



14

WP 2012 Introducing innovation

Innovation actions proposed

- bottom-up topic on technologies for resource efficiency (50M€)
- bottom-up topic on demonstration/prototypes/proof of concept in the area of water and waste technologies (20M€)
- support action to identify standardisation needs (1M€)
- SME/industry relevant topics on technological innovation for improved monitoring and observation e.g biodiversity GEO BON, supersite demonstrators for natural hazards, and community based 'citizens observatories' (about 40M€)
- topics on social innovation for policy, governance and consumption behaviours e.g. increased societal resilience to natural disasters (30M€)

2012 WP Actions to ensure SME participation

SME targeted actions *(about 18% of the budget)*

- 5 SME targeted topics (with min. 30% target) on technologies, processes and services for water and waste, resource efficiency, marine environments, environmental monitoring and observation
- SME relevant topics (with min. 15% target) on e.g. biodiversity, natural disasters observatories (supersite concept)
- SME relevant topics for PPPs (Green Cars, Energy efficient Buildings)
- Several SME friendly topics (no eligibility targets) on ecosystem services linked to land, water and urban areas, monitoring systems for marine and coastal waters, climate predictions towards climate services

International cooperation and ERA aspects

■ **International cooperation priorities**

- EU-India cooperation on water technologies (SFIC priority, aimed at boosting European competitiveness and promoting synergy with similar national initiatives)
- general opening encouraged throughout the WP to respond to global environmental challenges

■ **ERA related aspects**

- possible future inclusion of CSAs for the 2 second wave JPIs on water and climate change as an amendment to the Work Programme 2012
- support to 2 Art. 185 initiatives (BONUS, METROLOGY)
- support to 'open access' (GEO and dedicated CSA)

WP2012 Dissemination actions

- Addressed throughout the work programme
- Open access in FP7: requirement to deposit peer-reviewed articles resulting from projects, and to make best effort to ensure open access to such articles within six months of publication.
- Appropriate efforts and resources should be allocated to dissemination to promote the use and uptake of results.
- Specific dissemination topics introduced to strengthen science-policy interface in the area of geo-engineering, air quality and marine research.
- A feasibility study to explore opportunities to extend open access to data in order to enhance transparency, credibility and efficiency of research and further promote the use of data and results for policy and/or business purposes.

Further information

- **On the web site of the Information Day on the Environment (including climate change) theme, that will be held in Brussels on 17 June 2011**

http://ec.europa.eu/research/environment/index_en.cfm?pg=events

- **General information on environmental research**

http://ec.europa.eu/research/environment/index_en.htm

- **CORDIS**

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

- **Participants portal**

<http://ec.europa.eu/research/participants/portal/page/home>