



# Work Programme 2013

## COOPERATION Theme 6 Environment (including climate change)

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**FP7 - Cooperation – Environment**

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# COOPERATION Theme 6

## Environment (including climate change)

### Objective

Sustainable management of the environment and its resources through advancing our knowledge of the interactions between the climate, biosphere, ecosystems and human activities, and developing new technologies, tools and services, in order to address in an integrated way global environmental issues.

### Emphasis on:

- prediction of climate, ecological, earth and ocean systems changes,
- tools and on technologies for:
  - monitoring, prevention, mitigation of and adaptation to environmental pressures and risks including on health;
  - the sustainability of the natural and man-made environment.

# WP2013

## Main approach

### Key drivers:

- Europe 2020 Strategy and its Flagship Initiatives on Innovation Union and Resource Efficiency
- bridging to Horizon 2020

### Overarching theme:

***"Transformative and Responsible Innovation"***

### WP 2013 addresses 5 societal challenges:

- Coping with climate change
- Sustainable use and management of land and seas
- Improving resource efficiency
- Protecting citizens from environmental hazards
- Mobilising environmental knowledge for policy, industry and society

## Bridging to Horizon 2020

### Innovation:

- innovation measures in support of activities closer to market: support to market-uptake, generating knowledge to deliver new and more innovative products, processes and services (prototyping, testing, demonstrating, knowledge transfer, proof of concept...);
- support to broader aspects of innovation: fostering service, process, organisational or social innovation;
- innovation dimension of the proposals evaluated under 'Impact' evaluation criterion.

### SMEs:

- SME targeted topics and bottom-up approaches
- follow up research projects with demonstration or prototype production
- 14 topics with mandatory SME participation levels and ring-fenced SME budgets.

## Contribution to cross-thematic issues:

- Oceans of the future
- Water
- Raw materials
- Smart cities
- Secure, clean and efficient energy
- Bio-resource efficiency

## International cooperation:

- All topics open for participants from 3<sup>rd</sup> countries
- Participants from International Cooperation Partner Countries (ICPC) may be funded
- Regional networking for clustering of projects, uptake of research results and knowledge platforms for cooperation with third countries in:
  - Latin America
  - ASEAN
  - the Mediterranean and the Black Sea
  - the North Atlantic

## International components:

- climate change (Arctic, oceans, atmosphere)
- natural disasters (Japan and Asia)
- GEO capacity building

## Communication and dissemination

- allocate appropriate efforts and resources for dissemination, to promote the use and uptake of results;
- requirement to:
  - deposit peer-reviewed articles resulting from projects in institutional or subject-based repository
  - make best efforts to ensure readers have open access to these articles within six months of publication;
- list of topics with special focus on dissemination, knowledge transfer and public engagement in WP introduction.

## 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







## Challenge 6.1 Coping with climate change

### Rationale

- High trends in global greenhouse gas emissions, and the slow progress of international climate negotiations, make it more necessary than ever to support strategic knowledge development in this field.

### Specific objectives

- reduce key uncertainties linked to the functioning of the earth-climate system and quantification of climate change impacts (ocean and atmosphere processes,  $>2^{\circ}\text{C}$  scenarios);
- explore the potential of adequate mitigation and adaptation policies to contribute to the 'Roadmap for moving to a competitive low carbon economy in 2050' (land use change, consumption based emissions, economics of adaptation).



## Challenge 6.1 Coping with climate change

*Indicative budget: €80 million*

### Indicative Topics

1. Climate-related ocean processes and combined impacts of multiple stressors on the marine environment
2. Atmospheric processes, eco-systems and climate change
3. Impacts of higher-end scenarios (global average warming  $>2^{\circ}\text{C}$  with respect to pre-industrial level)
4. Land cover and land-use change and climate change mitigation
5. Quantification of consumption-based emissions of greenhouse gases and assessment of policy options
6. Economics of adaptation to climate change

## Challenge 6.2 Sustainable use and management of land and sea

### Overall aim

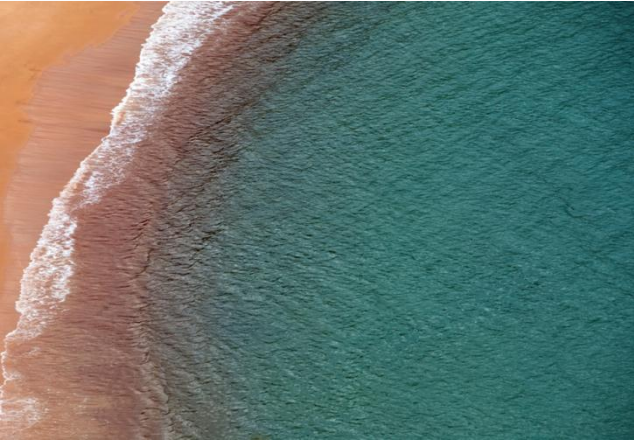
- to improve the knowledge base on how ecosystems react to pressures in order to underpin the transition to resilient, sustainable and resource efficient societies.



## Challenge 6.2 Sustainable use and management of land and sea

### Specific objectives

- provide knowledge-based options for policy makers for addressing the major challenge of moving towards sustainable use and management of land and sea;
- develop and strengthen European leadership in innovation in its broad concept;
- promote and facilitate knowledge transfer, assessment, uptake and exploitation of scientific data and results.

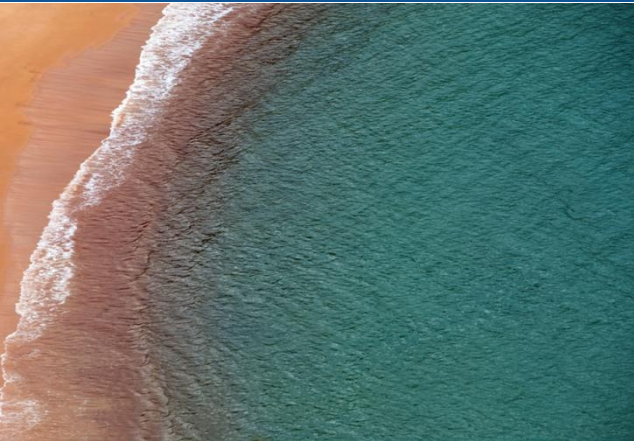


## Challenge 6.2 Sustainable use and management of land and sea

***Indicative budget: €88 million***  
*(of which €15 million for the cross-thematic call  
"The Ocean of tomorrow")*

### Indicative Topics

1. Water resources management under complex, multi-stressor conditions
2. Toxicants, environmental pollutants and land and water resources management
3. Transition to sustainable, low-carbon societies
4. Sustainable land care in Europe
5. Urban biodiversity and green infrastructure
6. Improved monitoring of the impact of cultivation on the environment using global Earth Observations
7. Development of advanced technologies and tools for mapping, diagnosing, protecting and managing cultural landscapes in rural areas
8. Sustainable management of Europe's deep sea and sub-sea floor resources



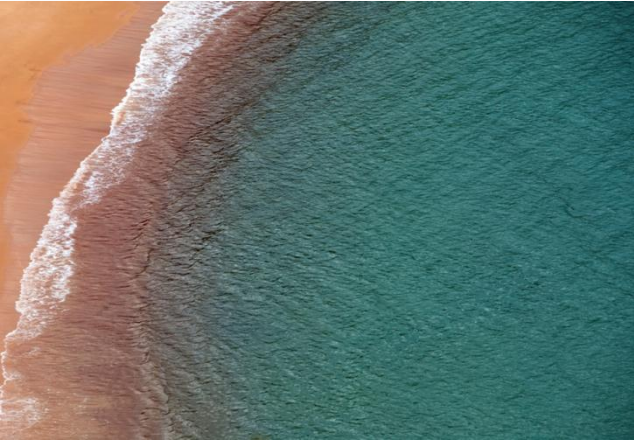
## Challenge 6.2 Sustainable use and management of land and sea

**Cross-thematic call "'The Ocean of Tomorrow':  
joining research forces to meet challenges in  
ocean management"**

***implemented jointly by Food, Agriculture and Fisheries, and  
Biotechnology, NMP, Energy, Environment (including Climate Change) and  
Transport Themes***

The EU Strategy for Marine and Maritime Research supports the objective of a thriving and sustainable maritime economy and is a key component in reconciling the growth of maritime activities with environmental sustainability. "The Ocean of Tomorrow" calls aim to foster multidisciplinary approaches and cross-fertilisation between various scientific disciplines and economic sectors on key cross-cutting marine and maritime challenges.

"The Ocean of Tomorrow" 2013 cross-thematic call will focus on marine technologies.



## Challenge 6.2 Sustainable use and management of land and sea

### Indicative Topics

1. Biosensors for real time monitoring of biohazard and manmade chemical contaminants in the marine environment
2. Innovative multifunctional sensors for in-situ monitoring of marine environment and related maritime activities
3. Innovative antifouling materials for maritime applications
4. Innovative transport and deployment systems for the offshore wind energy sector

## Improving Resource Efficiency



### Overall aim

- speed up 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
- enhance participation of private sector, especially SMEs, in research, with a view to strengthening innovation and increasing the potential for market uptake of project results.





## Challenge 6.3

# Improving resource efficiency

## Specific objectives

- promote the development and testing of highly eco-innovative technologies, processes and services to valorise urban wastes and recover raw materials from industrial wastes;
- support demonstration projects to improve the viability and market uptake of existing cutting-edge eco-innovative technologies, processes and services, including water innovative demonstration projects;
- improve the assessment of global water resources through advanced Earth Observation systems;
- improve resource efficiency and energy use of existing buildings.



## Challenge 6.3 Improving Resource Efficiency

**Indicative budget: €95 million**  
(€40 million for the call ENV.2013.WATER-INNO-DEMO and  
€6 million for the PPP 'Energy Efficient Buildings Initiative')

### Indicative Topics

1. Turning waste into a resource through innovative technologies, processes and services
2. Eco-innovative demonstration projects
3. Contribution to the assessment of global water resources through the use of new Earth Observation datasets and techniques
4. Water innovation demonstration projects
5. Ensuring the integration of water and innovation demonstration projects and support to trans-national networks of procurers



## Challenge 6.3 Improving Resource Efficiency

### Indicative Topics

6. Support to "Energy Efficient Buildings Initiative" Public Private Partnership

*implemented in cooperation with NMP Theme*

Energy efficient retrofitting and renewal of existing buildings for sustainable urban districts

**Please Note: Info Day dedicated to PPPs to be held on 9-10 July 2012 in Brussels**  
[http://ec.europa.eu/research/industrial\\_technologies/ppp-in-research\\_en.html](http://ec.europa.eu/research/industrial_technologies/ppp-in-research_en.html)

## 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

## Challenge 6.4 Protecting citizens from environmental hazards



### Rationale

- Natural and anthropogenic hazards affect the human and natural capital of the planet. Strategies to minimise the risks have to be put in place at all scales.

### Specific objectives

- the comprehensive understanding of population exposures to environmental health determinants in Europe (exposome and EMFs);
- improved knowledge of how to prepare, prevent, monitor, forecast, warn, defend and react with respect to natural hazards (coastal threats and stress tests).



## **Challenge 6.4** **Protecting citizens from** **environmental hazards**

***Indicative budget: €36 million***

### **Indicative Topics**

1. Assessing individual exposure to environmental stressors and predicting health outcomes: paving the way for a EU-wide assessment
2. Closing gaps of knowledge and reducing exposure to electromagnetic fields (EMF)
3. Coasts at threat in Europe: tsunamis and climate-related risks
4. Towards stress tests for critical infrastructures against natural hazards



# WP2013

## Challenge 6.5

### Mobilising environmental knowledge for policy, industry and society

## Overall aim

- to stimulate innovative approaches and tools to facilitate knowledge transfer, as well as uptake and exploitation of research data and results by policy makers, enterprises and society at large.

## Challenge 6.5

# Mobilising environmental knowledge for policy, industry and society

### Specific objectives:

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- to harness environmental knowledge to support EU policies in selected areas of societal interest
  - to promote sustainable economic development through sharing and exploiting knowledge
  - to support the European Research Area, notably in the area of cultural heritage
  - to accelerate progress towards the Green Economy in the post Rio+20 context
  - to promote international cooperation with selected regions through networking activities and project clustering
  - to provide trends and prospects of research and innovation, policy and market potential in the areas of climate, resource efficiency and raw materials



## Challenge 6.5

# Mobilising environmental knowledge for policy, industry and society

**Indicative budget: €31 million** (€4 million for the FP7-ERANET-2013 call)

## Indicative Topics



### 1. Accelerating progress towards the Green Economy

- a) Measuring progress: stocktaking
- b) Best practices and lessons learnt in the field of eco-innovation
- c) Business practices for promoting 'Green Economy' and sustainable production and consumption post Rio +20

### 2. Mobilising environmental knowledge for policy & society

- a) Policy and economic implications of the post-2012 climate agreements
- b) Improved science-based policy decision making in disaster risk reduction
- c) Empowering international economic development through the use of environmental Earth Observations
- d) Raising societal awareness and tackling skills shortages on raw materials
- e) Implications of socio-economic research on air pollution policy
- f) Designing environmental research and innovation for solutions and uptake of results in the Danube macro region
- g) Research partnerships to sustainably manage the biodiversity in EU Outermost Regions (OR) and Overseas Countries and Territories (OCT)

## Challenge 6.5

# Mobilising environmental knowledge for policy, industry and society

## Indicative Topics

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- Image: digitalart / FreeDigitalPhotos.net
3. Exploiting the European Open Data Strategy to mobilise the use of environmental data and information
  4. Knowledge platforms, networking and uptake of research results for more strategic international R&I cooperation
    - a) Latin America
    - b) ASEAN
    - c) the Mediterranean and the Black Sea
    - d) the North Atlantic
  5. Network of forward looking activities and assessment of research and innovation prospects
  6. ERA-NET Plus action: Development of new methodologies, technologies and products for the assessment, protection and management of historical and modern artefacts, buildings and sites

## WP 2013

# Simplification of structure of calls

- **all Collaborative Projects: 2-stage evaluation**
- **all Coordination and Support Actions: 1-stage evaluation**
- **separate call for Water Innovation and Demonstration projects (Collaborative Projects & Coordination Action): 1-stage evaluation**

**also...**

- **participation in cross-thematic Call 'The Ocean of Tomorrow'**
- **participation in call 'Energy Efficient Buildings (PPP)'**
- **1 Environment topic in the ERANET call**

## WP 2013 Call details

Call name	identifier	Deadline	Total budget	Environment contribution
Environment two-stage	FP7-ENV-2013-two-stage	<i>Stage 1:</i> 16 October 2012 <i>Stage 2:</i> 28 February 2013	€248 million	€248 million
Environment one-stage	FP7-ENV-2013-one-stage	16 October 2012	€17 million	€17 million
Water innovation & demonstration	FP7-ENV-2013-WATER-INNO-DEMO	4 April 2013	€40 million	€40 million
The Ocean of tomorrow	FP7-OCEAN-2013	7 February 2013	€55 million	€15 million
Energy efficient buildings (PPP)	FP7-2013-NMP-ENV-EeB	4 December 2012	€116 million	€6 million
ERA-NET	ERANET-2013-RTD	28 February 2013	€61.1 million	€4 million

# Thank you for your attention!

**Find out more:**

[http://ec.europa.eu/research/environment/index\\_en.cfm](http://ec.europa.eu/research/environment/index_en.cfm)