

# COAST RELATED TOPICS IN FP7 ENVIRONMENT PROGRAMME (FIRST CALL) OF INTEREST FOR ENCOREA

**Excerpt of the workprogramme ENVIRONMENT-COOPERATION:**

[http://cordis.europa.eu/fp7/dc/index.cfm?fuseaction=UserSite.CooperationDetailsCallPage&c\\_all\\_id=6](http://cordis.europa.eu/fp7/dc/index.cfm?fuseaction=UserSite.CooperationDetailsCallPage&c_all_id=6)

The following topic offers an excellent opportunity to involve other FP6 projects (Marbef, Floodsite, Spicosa, ..) in the development of Coastal Wiki, as a means to disseminate and provide easy access to all information of potential interest to the marine stakeholder community (public and private)

## **ENV.2007.2.2.1.7. Promoting access to information across marine themes**

Widely disseminate and provide easy access to all FP information of potential interest to the marine stakeholder community (public and private), in particular from FP6 and FP7. 1) promote communication between all marine actors involved in on-going FP projects and compile information on FP projects as required by the decision-makers; 2) give added value to the marine FP projects by the dissemination of information on their results; 3) enhance public outreach and education activities in the marine research domain.

### **Funding scheme: coordination and support actions (supporting type)**

***Expected impact:** This project should contribute to one of the primary recommendations of the recent Commission Green Paper "Towards a future Maritime Policy for the Union: A European vision for the oceans and seas" i.e.: "the EU could consider setting up a European Marine Observation and Data Network which would provide a sustainable focus for improving systematic observation (in situ and from space), interoperability and increasing access to data". This action will contribute to this objective by putting dispersed information sources, with emphasis on research results, from various actors into a publicly accessible and analysable format, connect these actors with the public and private domain, including the educational sectors and reduce transaction costs for doing innovative research by building more effectively on existing (but often inaccessible) information.*

The following topic is related to ENCORA Theme 6 Effect of Development and Use on Eco-morphology and Coastal Habitats

#### **ENV.2007.2.2.1.4. Dynamic of marine ecosystem in a changing environment**

Investigate how marine ecosystems respond to and evolve with a changing environment. The scenarios to be considered should address in an integrated manner the main driving factors, essentially changes in climate patterns, ocean circulation, pollution, invasive alien species and ocean acidification (a particularly important process), as well as the impact of fisheries. The project will investigate the response of marine ecosystems to the combined effects of the many changing parameters and anthropogenic action e.g. acidification, eutrophication, temperature, light and nutrients, overfishing, invasive alien species. The focus should be on the consequences for marine organisms and population dynamics, the likely impacts on resource management, products and services.

#### **Funding scheme: collaborative projects (large-scale integrating projects)**

***Expected impact:** The research should improve the knowledge base on marine ecosystems and the way they are impacted by the many driving forces, either anthropogenic or natural. This should provide input to governmental and non-governmental actors in the development of innovative tools and strategies for the rebuilding degraded marine ecosystems, protection and the sustainable use of the sea and its resources, in the perspective of the ecosystem approach. It should also improve the knowledge base for protection and management scenarios aimed at reconciling the interests of the many economic groups benefiting from the marine resource (including coastal). The topic is in support to EU Marine Strategy and should consider the long-term ecological objectives. It is also relevant to the EU Maritime Policy and the EU Common Fisheries Policy.*

The following is a selection of topics that may be interesting for ENCORA partners or for members of the national networks, thematic networks and affiliated networks.

ENCORA may offer assistance to find partners for the establishment of consortia.

#### **ENV.2007.1.1.6.4. Exploitation and dissemination of climate change research results and public perception**

This action mainly organised as a large Conference should promote the exploitation of EU research results in the area of climate change, to discuss public knowledge and perception of research, and responses regarding the risks associated with climate change. This action will address adaptation to climate change, in particular concerning the possible and expected social impacts, the awareness of citizens to research results and society's preparedness. The conference will bring together actors from different disciplines.

##### **Funding scheme: coordination and support actions (supporting type)**

***Expected impact:*** An in depth discussion on the exploitation and dissemination of research results related to climate change, the public knowledge and perception of the research results and suggestions for necessary related actions. The proposals should be able to demonstrate that they will be able to obtain the widest audience to the Conference through registered participants from different disciplines and through the media, and that they will be able to obtain a wide and balanced participation for all European countries and beyond.

#### **ENV.2007.1.3.1.1. European storm risk**

Storms trigger, on different spatial and temporal scales, natural hazards related to heavy wind, water, snow and ice precipitation, storm surges and landslides. Research is needed to: analyse past European storm events based on a homogeneous database of occurrence and related socio-economic damages, study key circulation structures and changes in dangerous storm occurrence with size and time and their connection to climatological proxy indicators. Analyse and map storm related risks in sensitive European regions (including, when applicable, the outmost regions) taking into account intensity, spatial extent, duration, hazard interaction effects. Consider regional climate change impacts using output from related research activities. Contribute to the development of a probabilistic mapping and early warning and information system for the multiple risks triggered by storms, supporting long-term disaster reduction as well as timely relief operations.

##### **Funding scheme: collaborative projects (small or medium-scale focused research projects)**

***Expected impact:*** Capitalisation and integration of knowledge and know-how; enhanced capacity for disaster anticipation. Better identification, in interaction with key stakeholders, of the sensitive regions of Europe in order to enable preparedness.

### **ENV.2007.1.3.2.1. Frame for better vulnerability assessment**

For natural hazards and disasters, vulnerability related concepts are not yet well documented and quantitatively understood. A conceptual framework and appropriate methods are required to better assess vulnerability to hazards of society, and of built and natural environments. Capacity to assess social, economic and ecological damages has to be improved and key variables for the determination of vulnerability for the various elements at risk must be identified. Risk scenarios, with emerging indicators and indices, should be established, using a probabilistic approach where appropriate, accounting for uncertainties, depending both on the temporal and the spatial scale. Testing of the applicability of the vulnerability assessment scheme should also be explored.

No specific hazard is suggested, proposers should justify the choice(s) made.

**Funding scheme: collaborative projects (small or medium-scale focused research projects)**

***Expected impact:** Achieve a standard approach for a better estimation and measure of vulnerability related to natural hazards; improved risk estimation and better promotion of disaster resilience.*

### **ENV.2007.1.3.4. 1. European (multi) hazard database analysis**

Analyse the different European/regional/national natural hazard databases. Provide information on the temporal period covered by each database on their information content and on data policy/access rights. Assess the compatibility of different databases. Identify weaknesses of current databases and provide suggestions for development of an EU-wide multi hazard database keeping in mind minimum accuracy, coverage and completeness standards. Identify and analyse relevant case studies and projects dealing with quantitative multi-hazard assessment enabling the analysis and development of best practices in this field.

**Funding scheme: coordination and support actions (supporting type)**

***Expected impact:** Enable an exhaustive analysis of all existing and missing datasets and information necessary for disaster assessment; establishment of a conceptual structure that will help the natural hazards communities in their research efforts and in a long term perspective. Stimulate synergy and exchange with existing national efforts.*

#### **ENV.2007.2.1.2.1. Assessing the ecological status of water bodies**

Development of *methodologies, models, integrated indicators and multi-species metrics to be used in integrated assessment of the ecological status* of water bodies to evaluate and quantify the combined effects of pressures due to global change (land use, pollution, climate change) and catchment management measures. All surface water categories should be addressed, however, new data collection should focus on lakes, transitional and coastal waters.

Inter-calibration of methodologies used for biological quality assessment, definition of reference conditions and thresholds for ecological quality classes to promote EU-wide harmonisation in the area and to underpin the characterisation and status classification of the water bodies. Specific attention must be paid to uncertainties, their quantification and inclusion in the assessment of the current state of the water body and in the predicted outcomes of management measures including their cost-effectiveness. **(Policy relevant topic)**  
**Funding scheme: collaborative projects (large-scale integrating projects)**

***Expected impact:** The research should contribute in a concrete way to the implementation of the Water Framework Directive and assist the member states to establish the programme of measures as foreseen by WFD and the subsequent assessment of these measures. Intercomparison of methodologies is expected in view of identifying the most relevant one(s) for a coherent implementation by all member states.*

#### **ENV.2007.2.1.2.2. River basin twinning initiatives as a tool to implement EU water initiatives**

Integrated water resources management research activities carried out on twinned catchments/river basins from Europe and catchments from international cooperation partners to underpin the implementation of Integrated Water Resources Management (IWRM) in these countries in compliance with EU Water Initiative objectives and Millennium Development Goals targets. **(Specific International co-operation action)**

**Funding scheme: collaborative projects (small or medium-scale focused research projects)**

***Expected impact:** Support to EU Water Initiative in the context of international cooperation. Such collaborations will have to pay particular attention to constructive engagement with the entire spectrum of societal actors. Accrued emphasis has to be placed on communicating the research process and its results to all societal actors to make the research policy relevant and enhance its impact. Target areas for the 2007 call: Africa and South America.*

#### **ENV.2007.2.1.4.1. Contribution of biodiversity to ecosystem services**

Understanding how biological diversity terrestrial, inland waters and marine - at European and international levels - contributes to ecosystem goods and services and to livelihoods. Based on major trends in biodiversity and patterns of species interactions, work should contribute to better understanding of the values of and human dependence on biodiversity, the implications of change, and an initial evaluation of the costs and social and environmental consequences of not halting biodiversity loss. In addition, it should be considered how these values can be realised through payments for ecosystem services (PES) such as habitats banking. Institutional contexts, cost and benefits of strategies to preserve, restore and use biodiversity in a more sustainable way should also be assessed. The topic is important in the context of European competitiveness and sustainable development in Europe and elsewhere because the loss of biodiversity will impact upon the provision of goods and services. Major economic sectors depending/impacting on biodiversity have to be considered (agriculture, forestry, fisheries, transport, trade, tourism, industry).

**Funding scheme: collaborative projects (small or medium-scale focused research projects)**

***Expected impact:** Better quantification of the cost of losing biodiversity, e.g. in terms of products and services, use and non-use values, and ultimately in terms of reduced productivity and welfare. Increased understanding by researchers, regional planners and political and economic actors, including civil society organisations active in the economic sectors under consideration through public access to information should make it possible to develop inclusive management strategies that will protect or restore ecosystems and help maintain the provisions of the ecosystem services upon which economic competitiveness and welfare depend. Communicating research process and results in a constructively engaged way to the full spectrum of societal actors is of utmost importance to maximise its policy relevance and impact.*

#### **ENV.2007.2.1.4.2. Use of natural resources: the impact on biodiversity, ecosystem goods and services**

Improve understanding of how the use of and trade in natural resources at European and international levels affects biodiversity (marine, inland waters and terrestrial), ecosystem goods and services and the resilience and resistance of ecological-economic systems, and develop or improve methods to measure and value biodiversity and ecosystem resilience and detect when ecosystems are approaching the limits of their natural functioning or productive capacity. Establish and improve mechanisms and methods to determine the sustainability of various intensities of use of components of biodiversity and of ecosystems. This topic complements the preceding one. It relates to competitiveness, which depends on the state of biodiversity and ecosystem. Results will be shared effectively with citizens and other societal actors in ways that facilitate general understanding and impact on social, economic and environmental planning and decision making. Participation of International Cooperation Partner Countries (ICPC) is encouraged.

**Funding scheme: collaborative projects (small or medium-scale focused research projects)**

***Expected impact:** Assessment of the impact of the use and abuse of natural resources on biodiversity, the ways in which systems (ecosystem services) may respond and how resource use could be made more ecologically sustainable. The results should allow governmental and non-governmental actors to discuss and develop viable policy options and should support their implementation. Results will have to be communicated effectively to citizens and other societal actors in Europe and in other parts of the world in ways that facilitate general understanding and impact on social, economic and environmental planning and decision making.*

#### **ENV.2007.2.1.4.3. Biodiversity values, sustainable use and livelihoods**

Increase knowledge of the cultural, social, spiritual, economic and other values of biodiversity. Improve understanding of public beliefs, perceptions, attitudes and preferences regarding biodiversity and the drivers of biodiversity change, and how they influence human behaviour and public policy. Improve and assess value-based strategies to promote sustainable livelihoods and lifestyles, and to reduce the vulnerability of livelihoods, while conserving and husbanding biodiversity and securing income to rural marginal areas. Improve understanding of and capacity to deal with conflict over the multifunctional uses and preservation of ecosystems and components of biological diversity, and contribute to the development of policy instruments and tools for conflict reconciliation. Understanding the link between loss of biological and cultural diversity at global and local levels. **(Specific International co-operation action)**

**Funding scheme: collaborative projects (small or medium-scale focused research projects)**

***Expected impact:** Constructive engagement with a broad selection of social groups and their governmental and non-governmental representatives in order to enable serious consideration and uptake of information generated from this work to improve their capacity to design policies that take into account the true social (economic and non-economic) value of biodiversity.*

#### **ENV.2007.2.2.1.1. Development of advanced ecosystem models and methodologies for the management and the sustainable use of resources**

Develop methodologies based on existing data and knowledge about ecosystem functioning, processes and patterns, aiming at conservation, sustainable management and exploitation of marine resources and their environment (ecosystem management approach). Data from different sources should be integrated, including oceanographic, geophysical, geological, sedimentary, hydrological, ecological, biological, microbiological, social and economic data. Synthesizing methodologies comprise dynamic models, indicator frameworks, inter-operable data management systems and public information systems. The project should also include synthesis of knowledge about social and economic impacts of different management strategies. The methodologies should serve as tools to support conservation, management and sustainable use of resources, including fish and their environment (ecosystem management approach). The knowledge synthesis should therefore include development of communication modalities which could operationalise knowledge on marine ecosystems in the public debate and in policy decision making. Participation of International Co-operation Partner Countries is encouraged.

**Funding scheme: collaborative projects (large-scale integrating projects)**

***Expected impact:** An improved knowledge base for the conservation and sustainable use of marine ecosystems and their resources. Engagement with key governmental and*

*non-governmental actors which lead to the development of innovative approaches and modern participatory management tools for the restoring and sustainable use of marine ecosystems and their consideration for practical implementation. This work should contribute to EU orientations in the field of marine Protection Strategy, the proposed Marine Policy, the Common Fisheries Policy and the international agenda for the rebuilding of degraded marine ecosystems by 2015 (Johannesburg Plan of Implementation) and more generally the protection of the Sea and the sustainable use of the Oceans.*

#### **ENV.2007.2.2.1.8. Fostering improved co-operation between marine science and the private sector**

It is clear that co-operation between marine scientists, the oil & gas industry and the telecommunication sector is growing. Such developments open up a new perspective for cooperation between the commercial sector and environmental R&D. The marine science community and the private sector should be encouraged to find areas of synergy where common initiatives can be developed, e.g. oceanography, underwater observatories, gas hydrates, data management and information services, etc.

##### **Funding scheme: coordination and support actions (supporting type)**

***Expected impact:** Improved knowledge transfer (dissemination and exploitation) in order to implement innovative approaches aimed at protecting, restoring and/or using marine systems and resource in a more sustainable way. Direct involvement of the main stakeholders in the public and private sectors. An effective interface to the public and private sectors to enable widespread understanding and acceptance of marine science and private sector activities.*

#### **ENV.2007.2.2.1.9. Access to and recovery of marine data from previous FP projects**

To investigate whether data from previously funded EC projects has been properly archived and maintained and whether this data is freely available. To identify the reasons why datasets may not have been maintained and whether any barriers to data access exist. Wherever possible, this project should recover and make available data that has not been made accessible or is no longer accessible.

##### **Funding scheme: coordination and support actions (supporting type)**

***Expected impact:** The proposal for this activity is motivated by the recent Commission Green Paper "Towards a future Maritime Policy for the Union: A European vision for the oceans and seas". One of the primary recommendations of this Green Paper is that "the EU could consider setting up a European Marine Observation and Data Network which would provide a sustainable focus for improving systematic observation (in situ and from space), interoperability and increasing access to data". This action will contribute to this objective by providing increased free and easy data access in a stable long-term institutional context.*

### **ENV.2007.3.1.1.2. Technologies for measuring and monitoring networks**

Technologies to assess the chemical and ecological status of water bodies for cost-effective monitoring campaigns need to be developed. Priority will be given to miniaturised sensing systems and wireless network technology for the deployment of essentially self-sustaining wireless sensor networks aimed at spatial and temporal water quality assessment. Emphasis should be put on the development of stable chemo- and bio-sensors with low maintenance requirements. Hardware components comprising smart (bio)materials and microchip technologies for sensing a wide range of parameters - including those required for the Water Framework Directive reporting- are to be developed with supporting software applications. A relevant participation of industrial partners as well as of SMEs is requested. (SME-relevant topic)

**Funding scheme: collaborative projects (small or medium-scale focused research projects)**

***Expected impact:** Substantial reduction of labour-intensive field sampling and measuring campaigns as well as fewer errors during data collection and transcription of results. The temporally and spatially dense data provided by these technologies is expected to reveal previously unobservable phenomena. The action should lead to strengthening the European industrial competitiveness in this field.*

### **ENV.2007.4.1.2.3. Dissemination and broadcasting of scientific observation data and information**

The project should enable identifying FP6/ FP7 initiatives willing to broadcast and disseminate research data. The goal of the action would be to operate through the project the dissemination and the broadcasting of the environmental data produced by various FP projects and to explore and develop a scheme through which the broadcasting and dissemination becomes sustainable. The project should rely on and network existing initiatives in the different sectors of environment dealing with data exchange and dissemination. The project should develop an approach which should be compatible with the one developed within GEO (Group on Earth Observation), focussing on relevant GEO Societal Benefit Areas.

**Funding scheme: coordination and support actions (supporting type)**

***Expected impact:** Better availability and access to earth observation data and products made available through FP6/FP7 research projects.*

#### **ENV.2007.4.1.1.2. Contribution to a global biodiversity observation system**

Facilitate the European contribution to the development of a global biodiversity observation system that is spatially and topically prioritized, based on analysis of existing information, identifying unique or highly diverse ecosystems and those supporting migratory, endemic or globally threatened species, those whose biodiversity is of socio-economic importance, and which can support the strategy adopted for monitoring biodiversity trends in the UN Convention on Biological Diversity. The project should facilitate the development of the multi-institutional biodiversity observation network in collaboration with Global Biodiversity Information Facility and ensure that it links to data sets of ecological and other related observation systems in particular the LTER and LTSER networks. International Co-operation is encouraged.

**Funding scheme: collaborative projects (small or medium-scale focused research projects)**

***Expected impact:** Significant progress towards a Global Biodiversity Observation System through collaboration between the European Earth Observation research initiatives relevant to ecosystems and species of merit with complementary initiatives in other continents/in as a contribution to GEO.*