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EU Research policy on ICZM

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- **Part 1 – Policy Context**
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PART 1

Policy Context





Environmental Research to contribute to EU policies such as:

- 6th Environmental Action Plan and associated Thematic Strategies (air, waste, **marine protection**, biodiversity, soil, pesticides, urban environment)
- Action Plans on Environmental Technologies, and Environment and Health
- European directives – Water Framework, REACH (chemicals), CAFÉ (air quality), INSPIRE (environmental data), ICZM Recommendations, etc.
- EU policies (**Common Fisheries Policy**, Agriculture, ...)
- Green Paper «**Towards a future Maritime Policy for the Union: A European vision for the oceans and seas**»
- **7th Framework Programme for Research and Technological Development (2007-2013)**



Framework Programmes for RTD

The European Union has played a major role in supporting marine and coastal research:

- initially through the Marine Science and Technology programmes, (the MAST programmes), launched in 1989,
- and subsequently within the context of the Fifth, Sixth and now the Seventh Research Framework Programme for research, technological development and demonstration activities (2007-2013).



- Since 1996, the EC has been working to identify and promote measures to remedy deterioration and to improve the overall situation in our coastal zones.
- From 1996 to 1999, the EC operated a Demonstration Programme on Integrated Coastal Zone Management (ICZM) designed around a series of 35 demonstration projects and 6 thematic studies. This programme was aimed to:
 - Provide technical information about sustainable coastal zone management, and
 - Stimulate a broad debate among the various actors involved in the planning, management or use of European coastal zones.
 - The programme was intended to lead to a consensus regarding the measures necessary in order to stimulate ICZM in Europe



- In 2000, based on the experiences and outputs of the Demonstration Programme, the Commission adopted two documents:
 - An EC **Communication** "Integrated Coastal Zone Management: A Strategy for Europe" (COM/00/547 of 17 Sept. 2000). Explains how the EC will be promote ICZM through the use of Community instruments & programmes.
 - A **Recommendation** concerning the implementation of ICZM (COM/00/545 of 8 Sept. 2000) adopted by Council and Parliament on 30 May 2002. It outlines steps which the Member States should take to develop **national strategies** for ICZM, due in **Spring 2006**, and should have involved all coastal stakeholders.
- In 2006-2007 the EC **reviewed** the experience with the implementation of the EU ICZM Recommendation, based on Member States national reports, the EEA state-of-the coast assessment and an external evaluation report.
- the EC **Communication** of 7 June 2007, COM(2007)308 final, which presents the conclusions of this evaluation exercise et sets out the main policy directions for further promotion on ICZM in Europe.



Towards a Future Maritime Policy for the Union: A European Vision for the Oceans and Seas - EurOCEAN 2007: The **Aberdeen Declaration** of 22nd June 2007:

- Support the development of integrated cross-Directorate initiatives linking sectoral policies (fisheries and aquaculture, renewable energy, transport, space, etc.), research and enterprise policies and the environment **to support an holistic and coherent approach** when addressing marine and maritime issues on the global, regional, national and local scales.
- Identify and prioritise the scientific challenges and opportunities, in terms of **both basic and applied research including a multi-disciplinary and inter-disciplinary** approach, and embracing engineering, legal and social and economic sciences, to support a dynamic maritime economy.
- The preparation of a **European Atlas of the Seas**, as an initiative **for marine and coastal spatial planning**, business and nature conservation purposes, as an educational and promotional tool and as a mechanism for outreach to reinforce public awareness of our shared maritime heritage.



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EU Maritime Policy





Maritime Policy Green paper¹

Research and development Issues

- «In view of the environmental and economic value of the oceans and the seas, there is a particular **need for an all-embracing maritime policy** aimed at developing a thriving maritime economy and the full potential of sea-based activity in an environmentally sustainable manner. Such a policy should be supported by excellence in marine scientific research, technology and innovation.» (EC's strategic objectives 2005-2009, march 2005)
- Same wording found in the Green Paper "Towards a future Maritime Policy for the Union: A European Vision for the Seas and Oceans" (May 2006)



Maritime Policy Green paper²

Conclusions of the Consultation Process outlined the need for:

- a holistic European Maritime Policy, to be based on high quality RTD & innovation.
- to develop an integrated **Maritime and Marine Science, Research, Technology & Innovation Strategy**.
- improved collection, archiving, analysis, interpretation of, and access to, **spatial and time series data**
- **balanced** social, economic and environmental priorities
- building of **partnerships** between all stakeholders from the marine and maritime sectors
- **Strengthening** links and levels of co-operation between EU research initiatives and Member State research programmes, the research community, industry and others.
- Reducing **unnecessary duplication** and fragmentation (ie: via ERA-NETs, Technology Platforms and Article 169)



Maritime Policy Green Paper³

- support creation of a Network of Networks with a co-ordinating role able to encourage and enhance the rapid exchange of information across the European research community, using as its base, and strengthening, existing Networks and other research structures
- European Monitoring and Observation Data Network [EMODNet] supported by the research community
- Reinforce cooperation with neighbouring countries bordering seas such as the Baltic, the Black Sea and the Mediterranean.
- Wide range of responses received from 487 marine & maritime stakeholders (14% science organisations)

The consultation report concludes: "The window of opportunity afforded by the political debate on the development of an EU Maritime Policy offered the best opportunity in my lifetime for the global and local significance of the oceans and the outputs of marine research and innovation to be appreciated by society" – Dr Peter Heffernan, Chief Executive, Irish Marine Institute



Maritime Policy Blue Paper¹

An Integrated Maritime Policy for the European Union (10 Oct 2007)*

Research and Development Issues:

The Blue package includes a **Vision** & an **Action Plan** to be carried out by the Commission in cooperation with MS and the different stakeholders

- Will concretise the vision of a European Maritime Policy, based on an **EU research strategy** delivering excellence in marine research, science and technology, in a spirit of **partnership** between scientific community, the industry and policy makers.
- Launching in 2008 of a **Communication** of the Commission on "Marine and maritime related research strategy" will certainly make these orientations concrete with a view of boosting a research sector which can bring a lot to Europe.

*Blue paper package on: http://ec.europa.eu/maritimeaffairs/index_en.htm



Maritime Policy Blue Paper²

Some political priorities of the Blue Paper:

- Marine spatial planning / integrated management of sea space
- Predicting and mitigating impact of climate change, particularly on coastal regions
- More sustainable maritime transport
- Sustainable exploitation of marine resources Networking maritime surveillance
- Maritime / Marine clusters
- International cooperation
- Importance of Mediterranean, Black sea and potential of outermost regions

The ecosystem based approach of sea based activities is a central principle



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PART 2

FP7 Development & General Rules



- **Former FP6 STREPs & IPs - now called FP7 Collaborative projects**
 - Consortia with participants from different countries;
 - New knowledge, technology, products or common resources for research;
 - Size, scope and internal organisation of projects can vary.
- **Networks of Excellence**
 - Joint programmes by organisations integrating activities in a given field;
 - Longer term co-operation;
 - Formal commitment to integrate resources.
- **Coordination and support actions**
 - Networking, exchanges, trans-national access to research infrastructures, studies, conferences, etc.



FP7 First Calls for Proposals

1st Call (2007) – ENVIRONMENT Theme

- Published: 22 December 2006
- Closing date: 2 May 2007
- Budget: 200 million Euro

No ICZM this round!

2nd Call (2008) – ENVIRONMENT Theme

- Publication: anticipated in November 2007
- Closing date: expected to be early 2008
- Budget: approx. 210 million Euro

Some ICZM relevant topics!



Workprogramme Development

A collective effort based on a widespread consultation with all interested parties:

- Commission Directorates General
- Programme Committee (Member States)
- Advisory Group
- Scientific Community
- Marine actors: e.g. IOC, ESF Marine Board, ICES, etc.



“Cooperation” Specific Programme

1	Health	6100
2	Food, Agriculture, Fisheries and Biotechnology	1935
3	Information and Communication Technologies	9050
4	Nanosciences, nanotechnologies, materials and new production technologies	3475
5	Energy	2350
6	Environment (including Climate Change)	1890
7	Transport (including Aeronautics)	4160
8	Socio-economic Sciences and the Humanities	623
9	Security (1400 M€)	2830
10	Space (1430 M€)	
	TOTAL	32413

- ✓ Environment has links with all the other themes
- ✓ Attention to cross-thematic subjects (e.g. marine science and technology)

Budget in M€





The “Environment” Theme^{1*}

Activities and sub-activities

1. Climate change, pollution and risks

1. Pressures on environment and climate
2. Environment and health
3. Natural hazards

2. Sustainable Management of Resources

1. Conservation and sustainable management of natural and man-made resources and biodiversity
2. Management of marine environments



* Environment (including climate change)



The “Environment” Theme 2*

3. Environmental Technologies

1. Environmental technologies for observation, simulation, prevention, mitigation, adaptation, remediation and restoration of the natural and man-made environment
2. Protection, conservation and enhancement of cultural heritage including human habitat
3. Technology assessment, verification and testing

4. Earth observation and assessment tools

1. Earth and ocean observation systems and monitoring methods for the environment and sustainable development
2. Forecasting methods and assessment tools for sustainable development, taking into account differing scales of observation

* Environment (including climate change)



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PART 3

Upcoming funding opportunities in the field of marine and coastal research

WORK PROGRAMME 2008*



Management of Marine Environments

Sub-activity 6.2.2 - Call for Proposals 2008*

WORK PROGRAMME 2008*

Three topics open in 2008:

- Monitoring & evaluation of Spatially Managed Areas (SMA)
 - Deep-sea ecosystems
 - Ecosystem approach to marine environment & resources
-
- Indicative Budget : 20.5 M€
 - Call for 3 “Large-scale” integrating projects
 - Collaborative projects
 - “Large”: from 4 to 7 M €
 - Small or medium: <3.5 M €



Management of Marine Environments

*WORK PROGRAMME 2008**

Sub-activity 6.2.2 (overall approach):

- The management of marine environments sub-activity intends to contribute to designing and implementing the **Common Fisheries Policy**, the future **EU Maritime Policy**, and others.
- The **ecosystem approach** is a central principle to reconcile the short-term objective of the sustainable use of marine resources with the long-term objective of marine ecosystem protection. This is why the ecosystem approach is central to this programme.



Monitoring & Evaluation of Spatially Managed Areas^{1*}

Access to information about the distribution and quality of seabed habitats is essential for effective sustainable management. Research under this topic should develop special science-based guidelines, criteria, concepts and models to **implement, follow-up, monitor and evaluate spatially managed areas for the integrated uses of the ocean and its resources.**

This should include the **identification and classification of essential marine habitats** in order to help end users to better understand the ecological status of the species and the impacts of anthropogenic activities.

It should also support the spatial component of the management of resources in the marine environment and be used to develop **management zoning schemes within Marine Protected Areas (MPAs).**

* ENV.2008.2.2.1.1.



Monitoring & Evaluation of Spatially Managed Areas²

Expected impact:

The research under this topic should contribute to **marine spatial management** and in this way foster the sustainable development of European seas and coastal areas.

The research work should provide inputs to the several actors and bodies at all levels of governance **to develop innovative and integrated marine spatial management strategies and tools**, taking into account the regional and local specificity, reflecting the diversity of Europe's seas and coasts and the socio-economics associated to marine spatial management.

The research should also **generate improved interfacing mechanisms among science, policy and decision makers and the public in general in the management process.**



Deep-Sea ecosystems

WORK PROGRAMME 2008*

Topics may include:

- Natural change in deep-water ecosystems especially related to **anthropogenic impact** and **climatic change**.
- The importance of episodic, large-scale events, in driving ecosystem change in the various **ecosystem hotspots**.
- **Distribution and interconnection of ecosystems on a broad scale**, e.g. along margins, between canyons or between coral colonies.
- Understanding the **biological capacities of marine organisms** that underlie the ecology of deep-oceanic ecosystems. Approaches can include the **genomic analysis** of natural communities to understand how biodiversity supports ecosystem function.
- Integrated understanding of the **ecological, societal and economic implications** of the human interactions with deep-sea ecosystems and options for the **conservation of deep sea biodiversity and the governance of the deep sea**.

*ENV.2008.2.2.1.2.



Ecosystem approach to marine environment & resources

*WORK PROGRAMME 2008**

Research under this topic will require a **trans-disciplinary and integrative ecosystem approach**, combining an improved understanding of the functioning of Europe's marginal seas and the direct and indirect impacts from their uses (e.g. by aquaculture, fisheries, etc.), on the water quality and ecology, in order to contribute to the **development of sustainable use patterns through an ecosystem-based management**.

It should include assessment of the **combined impacts** from aquaculture, fisheries within the EEZ (Exclusive Economic Zone) of the Member States, extractions of minerals, oil and gas, eutrophication, shipping, release of land-based pollutants into the coastal zone, tourism, etc. on the marine ecosystems.

***ENV.2008.2.2.1.3.**



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PART 4

Ongoing Research in the field of ICZM





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Project Show Case

There are four ongoing projects dealing with ICZM,
for a total EC contribution of over 19 million €

SPICOSA
ENCORA
THRESHOLDS
CONSCIENCE



Science and Policy Integration for Coastal System Assessment

Type: IP EC Contribution: €10.000.000,00
Months:48 Start date: 1/02/2007 End Date: 31/01/2011
Partners:54 Coordinator: IFREMER, FR
Website: <http://www.spicosa.org/>

Objective:

To develop a self-evolving, holistic research approach for integrated assessment of Coastal Systems so that the best available scientific knowledge can be mobilized to support deliberative and decision-making processes aimed at improving the sustainability of Coastal Systems by implementing Integrated Coastal Zone Management (ICZM) policies. Based on a system approach, a multidisciplinary assessment framework will be developed with a balanced consideration of the Ecological, Social and Economic sectors (ESE) of Coastal Systems. This System Approach Framework (SAF) will be used to explore the dynamics of Coastal-Zone Systems and potential consequences of alternative policy scenarios. SPICOSA will be applied to 18 Test Sites.



SPICOSA Study Site Applications

- 1 Gulf of Riga
- 2 Gulf of Gdansk
- 3 Oder Estuary
- 4 Himmerfjorden
- 5 Limfjorden
- 6 Sonderled
- 7 Clyde Sea
- 8 Cork Harbour
- 9 Scheldt Delta
- 10 Pertuis Charentais
- 11 Guadiana Estuary
- 12 Barcelona Coast
- 13 Thau Lagoon
- 14 Taranto Mare Piccolo
- 15 Venice Lagoon
- 16 Thermaikos Gulf
- 17 Izmit Bay
- 18 Danube Delta





European Network on Coastal Research

Months: 36 Start Date: 1/02/2006 End Date: 31/01/2009
Type: CA EC Funding: €3.427.058,00
Partners: 50 Coordinator: Rikswaterstaat, NL
Website: <http://www.encora.org>

Objective:

To overcome existing fragmentation in the field of ICZM by developing a range of mechanisms to share knowledge and experience within and between the communities of coastal science, policy and practice. These mechanisms will be implemented by Coordination Offices, established in 18 European countries, which rely on National Networks, Thematic Networks and Affiliated Networks. ENCORA has developed several networking services: a contact Database, the Coastal Directory, a Contact Search Mechanism, a Forum, Coastal Web Search, YPEP and an E-News



Concepts and Science for Coastal Erosion Management

Type: STREP EC Funding: €610.000,00
Months: 36 Start Date: 1/03/2007 End Date: 28/12/2010
Partners: 9 Coordinator: WL | Delft Hydraulics, NL

Objective:

To develop and test concepts, guidelines and tools for the sustainable management of erosion along the European coastline, based on best available scientific knowledge and on existing practical experience. The projects build upon the results of the former EUROSION project, for the development of measurable standards, which will be linked to ongoing European initiatives as GEO/GMES, the European Soil Strategy in preparation, The European Maritime Strategy and the Recommendation on Integrated Coastal Zone Management. The project will also produce guidelines and tools to enable an effective implementation in European coastal management. The practical applicability and effectiveness of the guidelines and tools will be evaluated in selected test sites.



Thresholds of Environmental Sustainability

Months: 48 Start Date: 1/01/2005 End Date: 31/12/2008
Type: IP EC Funding: €4.998.288,00
Partners: 23 Coordinator: CSIC, Madrid, Spain
Website: <http://www.thresholds-eu.org>

Objective:

To develop an innovative target-setting procedure, encompassing both the environmental and the socio-economic dimensions required to formulate robust policies ensuring sustainable development. THRESHOLDS will provide theoretical framework and operational definitions to the concepts of Threshold and Point of No Return, together with scientific evidence to critically examine complex behaviour of ecosystems and non-linearities. The benefits of the innovative integrated scientific approach will be tangible through a wide array of case studies in coastal areas at scales ranging from local to pan-European.



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PART 5

Helping us defining the future





FP7 Workprogramme 2009 & beyond

Potential Research Topics:

1. Improve Communication and further exploitation of scientific results
2. International cooperation
3. Address emerging needs e.g. Marine genomics
4. Infrastructure
5. Major challenges: climate change, biodiversity
6. Further structuring the research community by strengthening the partnerships with Era-Nets, NoE, etc.
7. Sea observation systems – GEO (to be linked with the EMONET of the blue paper)
8. Deep sea observatory
9. Integration of urban, coastal, rural, land & sea use planning
10. Marine ecosystems & aquaculture, marine ecosystems modelling
11. ICZM and disaster prevention/mitigation



Exploring future research needs

- Why is your input important? It's part of wide consultation exercise with relevant scientific and user communities
- In view of our desire to explore the possibility to focus on relevant regional issues, in particular, related to **international cooperation** (ie: Mediterranean & Black Seas, etc.) in the context of ICZM:
 - Are there issues specific to these seas that should be addressed?
 - Are there issues specific to cooperation with the relevant third countries bordering these, or other seas?
 - How to solicit more involvement of these Third countries (from a scientific and end-user perspective, alike)
- How can scientific results become more 'operational' – bridging the gap between science and real take up.
- How best to communicate science and federate knowledge?



Exploring future research needs²

- How to link ICZM with other relevant policies, like SEA, Urban Thematic strategy, future maritime policy, etc...
- Please avoid a shopping list – need to prioritise!
- How do you intend on « delivering » the outcome of your discussion?
- How to widen the debate inside and outside of the ENCORA community?



ICZM Policy: http://ec.europa.eu/environment/iczm/home.htm#com_308

Maritime Policy: http://ec.europa.eu/maritimeaffairs/index_en.html

Research Policy: <http://ec.europa.eu/research/index.cfm>

FP7 on CORDIS: http://cordis.europa.eu/fp7/home_en.html

RTD Info Magazine: http://ec.europa.eu/research/rtdinfo/index_en.html

To Register as an « expert » to evaluate/review proposals & projects:

<https://cordis.europa.eu/emmp7/index.cfm?fuseaction=wel.welcome>



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Thank you very much for your attention!



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