

“EUR-OCEANS”

A European network of excellence for ocean ecosystems analysis

There is growing recognition that Europe’s – and the world’s - future economic and physical wellbeing remains linked to the health of its oceans and seas. In this time of global environmental change and the challenges it poses, marine science and technology have a crucial role to play in improving our understanding of the oceanic environment. As we explore deeper waters, the sustainable management of resources found within marine ecosystems becomes ever more challenging, extending from the coastal zone into the deep oceans. A continuing European contribution to the broad field of maritime research and technological development (RTD), complementing the ongoing effort of EU Member States, is therefore clearly justified.

The EUR-OCEANS Network of Excellence aims to achieve lasting integration for European research organizations on global change and pelagic ecosystems and the relevant scientific disciplines. The overall scientific objective of EUR-OCEANS is to develop models for assessing and forecasting the impacts of climate and anthropogenic forcing on food-web dynamics (structure, functioning, diversity and stability) of pelagic ecosystems in the open ocean.



IMAGE COURTESY OF EUR-OCEANS.

Presently, the 160 EUR-OCEANS Principal Investigators are scattered in 61 Member Organisations, located in 25 countries. The PIs belong to three research communities working on: pelagic ecosystems, biogeochemistry and the ecosystem approach to marine resources. The final aim is to turn the network into a multi-site “Consortium for European Research on Ocean Ecosystems under Anthropogenic and Natural Forcings”.

To reach this goal, EUR-OCEANS will favour the progressive integration of research programmes and facilities of major research institutes in Europe. The Joint Programme of Activities of EUR-OCEANS comprises :

1. Integrating activities on: networking, data integration and model integration

To this end, the EUR-OCEANS members will share their rich and diverse suite of relevant research facilities. This will lead to a better use of capacities, better access to expensive or novel technologies, and an improved scientific co-operation within Europe. Networking, mobility and communication will be promoted through **Funding, Training, Database web portals and Communication and Outreach** products.

2. Jointly executed research, organised around three broad modelling tasks (together with observations and experiments) on:

- pelagic ecosystems end-to-end;
- biogeochemistry; and
- ecosystem approach to marine resources;

3. Activities to spread excellence, targeted at three different groups:

- Researchers: training and education ;



Project acronym:

EUR-OCEANS

Full title of Project:

EUROpean network of excellence for OCEan Ecosystems ANALysiS.

EU contract number:

511106

Web-site:

<http://www.eur-oceans.eu>

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- Socio-economic users of the knowledge resulting from the Network's research activities (these include the community of climate modellers involved in the Intergovernmental Panel on Climate Change, and the marine resources management community);
- European public: public outreach through the EUR-OCEANS public outreach team, lead by Océanopolis (Brest, France), which is a Member Organisation of the EUR-OCEANS Network.



INFORMING THE PUBLIC ON MARINE RESOURCES. IMAGE COURTESY OF EUR-OCEANS.

conditions, covering a gradient from low-production conditions (e.g. Mediterranean) to highly productive waters (e.g. North Atlantic Shelves). This gradient provides the range of trophic conditions necessary to develop and test the EUR-OCEANS models, especially where time-series have existed for decades (e.g. Arctic and Nordic Seas, North Atlantic Ocean and Shelves, Baltic and Mediterranean Seas), or are being developed (e.g. Southern Ocean).

The European Community stresses the critical need for Europe to support world-class excellence in marine RTD and identifies marine science and technology as a priority research area. By carrying out integrated multi-disciplinary marine RTD and then disseminating the results of this research to the widest possible array of stakeholders, it is the hope of Europe's marine research community that potential users, (for example: researchers, engineers, coastal bodies, governments authorities, policy makers), will be able to derive the maximum benefits from this work by applying the products of this research for the good of society at large.

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All activities are **organised both at a global scale and regionally, in 7 marine systems of interest to the EU**: Arctic and Nordic Seas, Baltic Sea, Mediterranean Sea, North Atlantic Ocean, North Atlantic Shelves, Southern Ocean, and Upwelling Systems. This suite of systems is of major relevance to the global change perspective (e.g. Arctic and Nordic Seas, North Atlantic and Southern Oceans) and fisheries (e.g. Arctic and Nordic Seas, Baltic Sea, North Atlantic Shelves and Upwelling Systems). It represents a wide range of environmental