

EuroMarine

Integration of
European Marine
Research Networks
of Excellence

CSA MarineBiotech 1st Works
Faro, 26-27 April 2012



Background

2004-2008: FP6 Networks of Excellences

- EUR-OCEANS (Building Scenarios for marine ecosystems under anthropogenic and Natural forcings/ Biogeochemical cycles)
- MarBEF (Marine Biodiversity and Ecosystem Functioning)
- MGE (« Omics » resources and tools for marine organisms and marine ecosystems)

2005: Common priorities identified

- Identifying the new scientific challenges for marine science
- Establishing a European doctoral school
- Sharing of scientific facilities
- Mobility of personnel

2009: submission of EuroMarine proposal

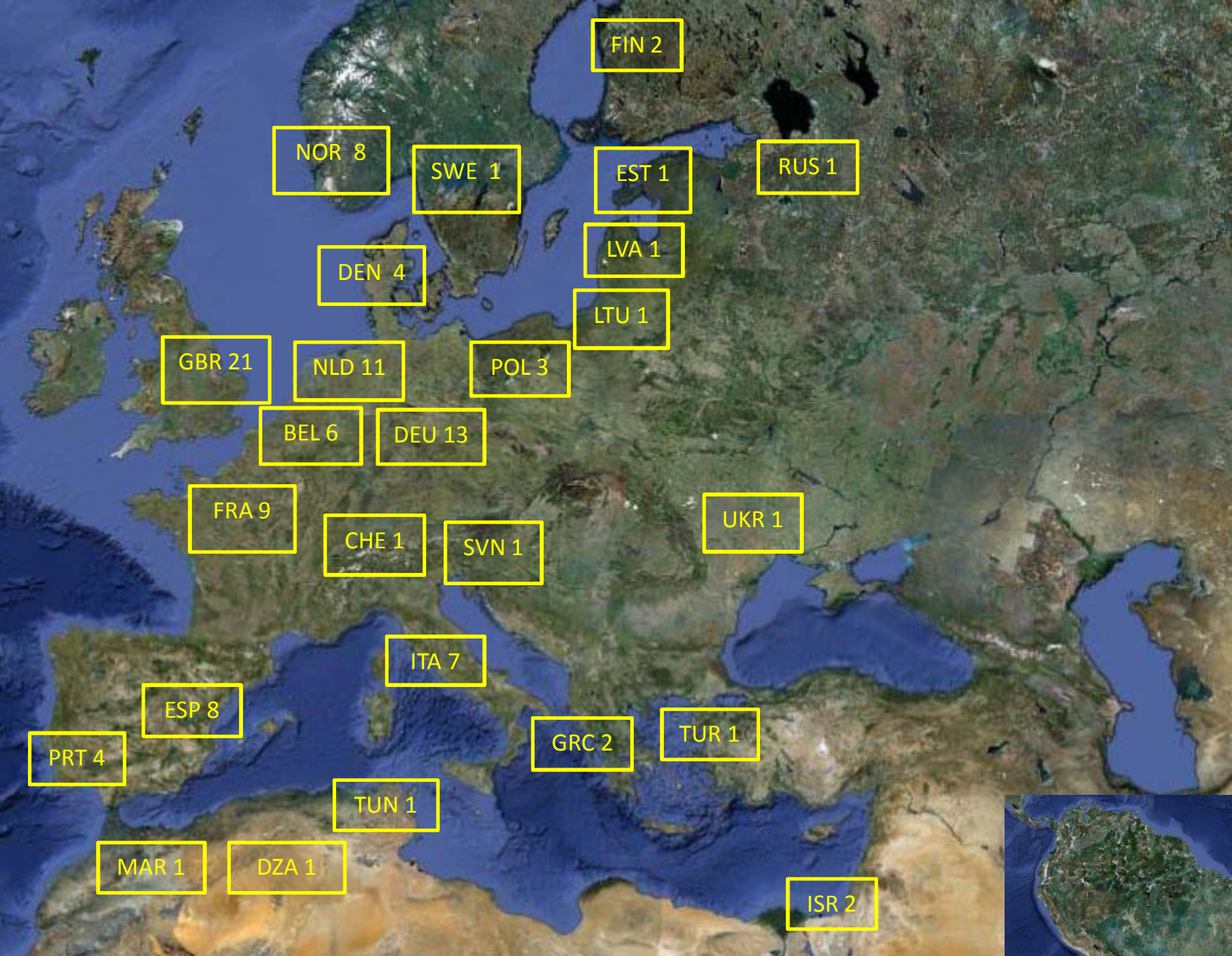
Support Action Project

- 17 partners representing and linking to all former members of the three NoEs; = 116 institutes and organizations from 29 countries; 1/3 were members in more than one of the NoEs
- A 2 year project (Feb 1, 2011-Jan 31, 2013) aiming at a long-term EuroMarine Consortium

GOI), coordinator		
Centre of Marine and Environmental Research (CIMAR)	Centro de Ciencias do Mar do Algarve (CCMAR), Faro	Portugal
Centre of Marine and Environmental Research (CIMAR)	Centro Interdisciplinar de Investigaçao Marinha e Ambiental (CIIMAR), Porto	Portugal
Centre National de la Recherche scientifique (CNRS)	Station Biologique de Roscoff (SBR)	France
Technical University of Denmark (DTU)	National Institute of Aquatic Resources (DTU-Aqua)	Denmark
French Research Institute for Exploitation of the Sea (Ifremer)	French Research Institute for Exploitation of the Sea (IFREMER)	France
Institut de Recherche pour le Développement (IRD)	Centre de recherche halieutique, Sète	France
Royal Netherlands Institute for Sea Research (NIOZ)	Royal Netherlands Institute for Sea Research (NIOZ)	Netherlands
The Marine Biological Association (MBA)	Plymouth Marine Sciences Partnership (PMSP)	United Kingdom
Ministero dell'Università e della Ricerca (MIUR)	Stazione Zoologica Anton Dohrn (SZN), Napoli	Italy
Max-Planck-Gesellschaft (MPG)	Max Planck Institute for Marine Microbiology, Microbial Genomics/Bioinformatics Group (MPIMM)	Germany
University of Groningen (RUG)	Marine Benthic Ecology & Evolution (MarBEE)	Netherlands
University of Gent (UGENT)	Department of Marine Biology	Belgium
Flanders Marine Institute (VLIZ)	Vlaams Instituut voor de Zee (VIMM)	Belgium
University of Bremen (UniHB)	The Centre for Marine Environmental Sciences (MARUM)	Germany
Environmental & Marine Project	EMPA, Bremen	Germany

Objectives

- To integrate (former) EUR-OCEANS, MarBEF and Marine Genomics Europe into one organization, “*EuroMarine Consortium*”
- To create a roadmap for common programming research activities,
- To create synergies between different scientific fields moving towards an integrated research strategy and a shared vision for the oceans of tomorrow.
- To bring together leading European marine research organizations and their scientists to create a major



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The Challenge

"From genes to ecosystems"

Many marine research questions can only be answered using a multidisciplinary methodology; genomics and other new emerging technologies integrated with ecological, physical and biogeochemical ecosystem level approaches.

Improve the transfer of information

- From model organisms to environment
- From experimental systems to a dynamic natural

Methodology, project phase

To integrate the three marine scientific communities focusing on activities dealing with

- An Integrated Research, Training & Education vision
- An Integrated strategy for EuroMarine common services (Data, Infrastructure, Mobility)
- The structure & position of EuroMarine in the European Academic Scientific Landscape

Set up as 7 work packages

Work Packages

	WP title	Lead partner
WP1	Project management and coordination	UGOT
WP2	Legal work and Business plan	Ifremer
WP3	Marine Research Strategy	CNRS
WP4	Data Integration	UniHB
WP5	Research infrastructure - Sites	NIOO-K
WP6	Capacity Building (people), Training & Mobility	RUG
WP7	Knowledge dissemination and Outreach	CIIMAR

OBJECTIVES

establish the various tasks needed to ensure that all aspects of the project management are covered

implement a management structure able to react efficiently to any kind of administrative or coordinating problem

promote the integration of research within and between the FP6 marine NoEs through efficient communication and collaboration between partners with the ambition to establish a new group and consortium of NoEs

the setting-up and construction of a durable structure for an integrated work of marine research, especially marine biological research

regular assemblies, Coordinating team meetings, ExCom meetings, reporting

TIVES

defining the concepts and demonstrating the tractability of the most suitable governance structure in order to coordinate the activities of the Research Performing Organizations (RPOs, i.e. research institutes and universities)

ensuring the **long term sustainability** of the structure under this governance. This includes opportunities for expanding consortium membership during the course of project and after its completion.

developing **a business plan** to facilitate operation and management of the integrative measures and plan for its long-lasting financial viability

A SWOT analyses was developed for identify a scenario that best fits with vision and challenges of EuroMarine.

A mixed model seems the most appropriate.

P3 - Marine Research Strategy

OBJECTIVES

Analyse and synthesize the legacy of the three NoEs.

Develop a common goal for research strategy and priorities based on a shared vision for the oceans, regional seas and coasts of tomorrow

Adopt recommendations and endorse priorities for joint programming and propose a road map for implementing this vision

**EXPLORING MARINE DIVERSITY FOR PROVIDING NEW CONCEPTS AND
DRIVING INNOVATION**

UNDERSTANDING MARINE ECOSYSTEM FOR HEALTHY OCEANS

**BUILDING SCENARIOS FOR MARINE ECOSYSTEMS UNDER CHANGING
CIRCUMSTANCES**

Identification of 6
emerging fields in the
converging zone



tion, plasticity, evolution and forecasting the future of marine resources. Evolutionary selection in ecological decadal time frames

g points and regime shifts. Shifting assemblages. How to deal with complex systems. Non-linear interactions, food web disturbance.

of global warming, acidification, sea level rise, hypoxia, biodiversity change (e.g. keystone species) on ecosystems. Biotic impacts of anthropogenic changes in ocean chemistry (e.g. acidification)

the rhythms of life and their alterations. Chronobiology, Tidal, diurnal, seasonal, and circadian (studied in marine organisms). From molecule to ecosystem function

valuation of goods and services delivered by Marine ecosystems (link with Social Scientists)

Conservation and Mitigation of Sustainable marine ecosystems (Conservation biology, M

P4 – Scientific data integration

OBJECTIVES

Engage the European marine data management and scientific communities in shaping the long-term integration of data

Lead conceptual and technological developments that integrate data and knowledge within and among the fields encompassed in EuroM

Inventory and report on the use of existing Data Systems in Marine S

www.euromarineconsortium.eu/datasystems

P5 – Research infrastructures/sites

OBJECTIVES

to promote the integration and update of available information on marine research infrastructures and sites that can be made available to the marine science community

to stimulate the further development of the network of European research and observatory sites including sensors.

to improve user access to infrastructures and sites

A survey of research infrastructures/sites

IVES

bridges in **the educational landscape** of marine biological sciences in the context of the “new 21st century” marine scientist within and, especially, across disciplines by creating international educational networks.

Develop and **plan for advanced multi-level training, including a mandatory mobility** scheme for doctoral candidates and post-docs.

Demonstrate proof of principle for a fully cross-disciplinary approach to marine sciences education through a cross-discipline seminar series available on web (**Webinars**)

Inventory of degree programmes in marine sciences in Europe. More than 200 programmes were identified. A database has been created (Euromarine website)

Exchange programme. Euromarine has established 10 exchange fellowships of 1-3 months targetting all academic levels (though principally PhD and post-docs)

OBJECTIVES

shape the integration process of the three NoEs through the production of specifications for the integration of existing communication, dissemination and outreach capabilities

develop a communication strategy for the future Euromarine Consortium

learning by doing - demonstrators

workshops on integration and development of communication tools
production of a communication strategy document for the website"

development of the EuroMarine website hosted by VLIZ

exploring new ways of communication, using new channels. Workshop on: "Digital media in marine science education"

The EuroMarine Consortium Vision

Bottom-up project

voice for basic (blue sky) marine sciences

platform for cross/multi-disciplinary research and education

Aiming operating research programmes & PhD programmes

lobbying structure

Providing strategic advice and recommendations, lobbying
for specific calls

host for integrated services

Providing for and linking to outreach

The EuroMarine Consortium Vision

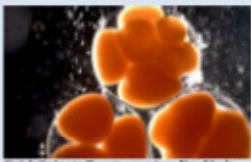
4/2012

EURO MARINE
INTEGRATION OF
EUROPEAN MARINE
RESEARCH NETWORKS
OF EXCELLENCE

Integrate research from
to better understand
marine ecosystems
sustainable use of the
marine resources of society.

Education and support activities
from the 7th marine networks of
EURO-OCEANS, MARIE
to bring us EuroMarine will
one of the best expertise and
scientific research, that can
with, environmental demands,

Earth our seas and oceans are
but are being increasingly
used and biological resources
exploitation of the marine
challenges that require new
science together with good
of its social, economic and
science to marine research can
interdisciplinary methodologies,
its scientific and other can
together with an
interdisciplinary expertise
to address novel questions
to new and more integrated
the way human activities
of EuroMarine will be to
interdisciplinary perspective
to scientific. Some of
"ecosystems" reflects this
on the management of systems
optimal and conflicting goals,
and better integration of the
EuroMarine consortium will
of marine scientists from
institutes and
the academic foundation for
the innovation.



Very small copepod (Copepod) eggs (from 3 weeks)

The EuroMarine Consortium will be a flexible, responsive organization able to assemble teams of dedicated marine scientists from across Europe (and beyond) to engage and develop expertise. These teams will be able to address current and emerging issues and challenges in the marine domain. The EuroMarine Consortium anticipates working closely with ERM bodies based since this organization has a strong track record in providing assessments, identifying challenges and producing excellent white documents that identify key areas for attention. EuroMarine also expects to work closely with the new Joint Programming Initiative "Healthy and Productive Seas and Oceans", as well as leading National and International funding agencies taking into consideration the need for avoiding duplication and reducing competition. In this way, EuroMarine will play a key role in ensuring and driving forward marine scientific research and technical development in Europe and globally.

The EuroMarine Vision, March 2012

Such a dynamic consortium that includes world-class scientists from fields as diverse as genetics and physical oceanography will provide unique and innovative teams to ensure the sustainable development and exploitation of our fragile marine ecosystems, as well as expert advice for environmental managers and policy makers.

Methodology

The EuroMarine Consortium will be based on a memorandum of understanding signed by the partner institutions. Among the integration priorities EuroMarine aims at facilitating the process by providing frameworks, scientific conferences and strategic workshops for the involved parties as well as the major education objective of establishing a common European PhD programme in Marine Sciences. Moreover, EuroMarine intends to create a long lasting and dynamic Science & Policy Advisory Board that will hold meetings annually with stakeholders to embed EuroMarine into the wider community.

To achieve this, EuroMarine needs to consolidate the partners' commitment using a simple, flexible and transparent consortium agreement to be adopted by all partners and institutions in order to launch the establishment of the "EuroMarine Consortium".



C. Hymenocera production measurements (Photo: P. Linder)

The EuroMarine vision for the operational phase includes:

1. **Research and research infrastructure:** to create an integrated yet flexible common strategic framework for identification of marine research and research infrastructure priorities, development and funding streams, particularly at the level of RPOs (Research Performing Organisations) and their funding partners.
2. **Access to infrastructure and mobility:** to enable cross fertilisation and the best fit for purpose experimental protocols together with the development and application of state of the art technologies.
3. **Transfer of knowledge:** to develop new interdisciplinary education programs to train the next generation of marine scientists, a mobility scheme for

doctoral candidates and post-docs. EuroMarine will transfer knowledge through cross-disciplinary web-based seminar series (Webinars), including for colleagues in developing countries. EuroMarine will also endorse summer schools and workshops including high-level training programmes for technicians and support staff essential for smooth operations and access to infrastructure services.

4. **Policy advice:** provides a much better proactive representation of the academic scientific community in policy and decision making at national and international levels will be generated by creating and contributing to efficient Science-Policy interfaces.
5. **Information:** provides to maintain our website (<http://www.euro-marine.org>) with features that include data acquisition, project information, job opportunities, an events calendar, a database of contacts, and a news and jobs section.

Deliverables

The impact of "The EuroMarine Consortium" will be the improved utilization, development and management of European marine scientific research potential (above all Europe's scientists in academia), including increased shared use of expensive infrastructures at the European level (ships, experimental facilities, resources, high tech instrumentation etc), availability of data and the potential for creating integrated but flexible (responding to needs) centres of learning, research and education at the highest international level taking into account mobility schemes. These kind of developments and their generation of added value will ensure Europe remains competitive and at the leading edge in marine sciences worldwide. By bringing together the partners of the three major marine RPOs into a common consortium, as well as providing a common shared platform for steering core activities of the three RPOs, EuroMarine will also facilitate many exciting and new opportunities at the highest level. It will also bring added value by promoting the development of new and innovative activities in the "emerging areas" between these three former RPOs. In this respect EuroMarine will take a leading role in contributing to the IPERIS (Interoperational Science-Policy Platform on Biodiversity and Ecosystem Services) initiative to build scenarios for marine ecosystems in the context of Global Change and will contribute to current initiatives to build European and global observation systems (e.g. GEOSS).

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Thank you!

