



***The EuroMarine Vision – to integrate research from genes to marine ecosystems; to better understand how marine organisms and marine ecosystems function; and to support the sustainable use of the seas and oceans for the increasing needs of society.***

EuroMarine is a FP7 coordination and support action designed to bring together the three FP6 marine Networks of Excellence (NoE) communities; EUR-OCEANS, MarBEF and Marine Genomics Europe. In doing so, EuroMarine will provide a rich and diverse source of the best expertise and innovation available in European Marine Research, that can respond rapidly to societal needs, environmental demands, well-being and sustainability.

### **The Challenge**

As the last frontier on planet Earth our seas and oceans are still relatively unexplored, but are being increasingly exploited for their oil, gas, mineral and biological resources. Exploration and sustainable exploitation of the marine environment are enormous challenges that require new knowledge from the natural sciences together with good management approaches based on social, economic and political sciences. Many questions in marine research can only be answered using multidisciplinary methodologies, from the molecular level with genomics and other new emerging technologies integrated together with an ecological, physical and biogeochemical ecosystem approach. This will allow us to address novel questions in marine research, paving the way to new and more integrated knowledge systems that impact the way human society deals with the oceans. The challenge of EuroMarine will be to bring marine sciences into the multidisciplinary perspectives of the 21<sup>st</sup> century. The scientific theme of EuroMarine “*From Genes to Ecosystems*” reflects this dynamic development based on the emergence of systems biology, new observational, analytical and modelling tools, new learning environments and better integration of the natural and social sciences. The EuroMarine consortium will build and strengthen a community of marine scientists from several hundred marine laboratories at institutes and universities in Europe, building the academic foundation for marine research that is the base for innovation.

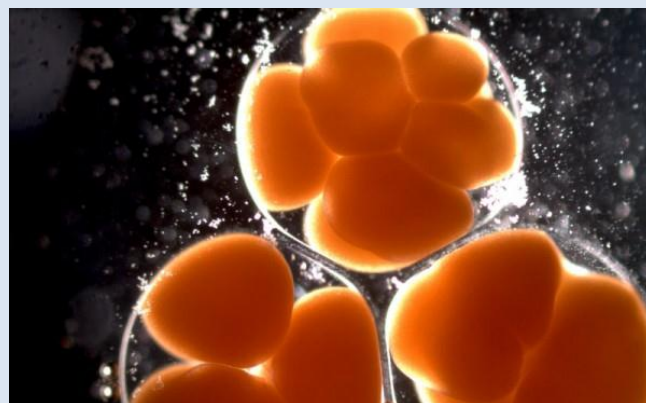
In the European context this can only be achieved by collaborations between other marine and maritime initiatives currently under development, including ESFRI projects, and relevant ERA-Nets such as Seas-era and MarineBiotech.

### **Project Objectives**

The EuroMarine Consortium will:

- develop a roadmap for common programming of research activities;
- create synergies between different scientific fields;
- move towards an integrated research strategy and shared vision for the oceans of tomorrow;
- facilitate the long-term integration of data, historical, present and future.

Our goal is to exploit the knowledge created within the consortium to address questions related to the function and sustainability of marine ecosystems and organisms and the needs of society. EuroMarine aims to create 21<sup>st</sup> century marine scientists, with deep knowledge in one discipline and a basic “fluency” in several others, as well as a natural ability and desire to work as part of a team.



Newly fertilized sunstar (*Crossaster papposus*) eggs. Photo: B Lundve

The EuroMarine Consortium will be a flexible, responsive organization able to assemble teams of dedicated marine scientists from around Europe (and beyond in emergent and developing countries). These teams will be able to address current and emerging issues and challenges in the marine domain. The EuroMarine Consortium anticipates working closely with ESF Marine Board since this organization has a strong track record in providing assessments, identifying challenges and producing excellent vision 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 inducing competition. In this way, EuroMarine will play a key role in structuring and driving forward marine scientific research and technical development in Europe and globally.

Such a dynamic consortium that includes world-class scientists from fields as diverse as genomics 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 institutes. 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 stakeholders in order to launch the establishment of the "EuroMarine Consortium".



*C-14 primary production measurements. Photo: B Lundve*

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 Organizations) and their funding partners.
2. **Access to infrastructure and mobility:** to enable cross fertilization 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-disciplined 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 priorities:** a much better proactive representation of the academic scientific community in policy and decision making at national and international levels will be promoted by creating and contributing to efficient Science-Policy Interfaces.
5. **Information priorities:** to maintain our website ([www.euromarineconsortium.eu](http://www.euromarineconsortium.eu)) 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, mesocosms, high tech instrumentation etc), availability of data and the potential for creating integrated but flexible (responding to needs) centers 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 FP6 NoEs into a common consortium, as well as providing a common shared platform for existing core activities of the three NoEs, 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 "trading zones" between these three former NoEs. In this respect EuroMarine will take a leading role in contributing to the IPBES (Intergovernmental 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., GEOBON).

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