



EuroMarine scientific strategy

1 Background: EuroMarine and its objectives

EuroMarine is a European, marine science network launched in 2014. It represents the merger of the scientific communities of three former European Networks of Excellence: EUR-OCEANS, Marine Genomics Europe, and MarBEF. It was designed by the EuroMarine FP7 preparatory project (2011-13) as a bottom-up organization and meant to be a voice for the European marine scientific community. It is intended as a durable structure and was established as a consortium for an initial duration of 10 years. A Legal Entity will be established in 2015 as a support structure (under the strict control of the consortium). EuroMarine counts 66 member organisations¹ (MOs), 56 of which are 'full voting' members contributing to the 2015 budget.

The primary goals of EuroMarine are to support the identification and initial development of important emerging scientific topics or issues and associated methodologies in marine sciences, as well as to foster new services relevant to the marine scientific community.

EuroMarine will achieve these goals through internal competitive calls for proposals, funded from the EuroMarine budget. It is expected that support for these activities and their outcomes will help to leverage larger projects under European, national or joint research funding programmes.

EuroMarine also intends to advocate for marine science and to contribute improving the science-governance interface, providing expertise and transferring knowledge.

2 Scientific strategy

The **EuroMarine preparatory project** has identified three grand scientific Challenges² for the EuroMarine network:

1. *Understanding marine ecosystems for healthy oceans under global / climate change* [basic science]
2. *Building scenarios for marine socio-ecological systems under changing oceans* [governance]
3. *Marine science as a provider of new concepts for innovation and technology* [novel ideas and innovation]

It has also identified six 'emerging fields'³ that require interactions among the three former NoE communities:

¹ 2015 membership, provisional (does not include 4 candidate members whose entry has not yet been formally approved by the General Assembly).

² Such challenges are to be broadly construed. Their wording has been slightly revised after EuroMarine 2015 General Assembly meeting. Corresponding text additions are shown in underlined fonts.

³ Links to the preparatory project Research Strategy Report (where challenges and emerging fields are described) and Business Plan (where tools to implement the research strategy are proposed) are provided at the end of the present document.

1. Intra- and inter-generational evolution and forecasting of living marine resources
2. Complex interactions including tipping points, regime shifts and shifting assemblages in marine ecosystems
3. Effects of global warming, ocean acidification, sea level rise and hypoxia on biodiversity and ecosystem function
4. Marine rhythms of life and their alterations
5. Valuation of goods and services delivered by marine ecosystems
6. Restoration and conservation of sustainable marine ecosystems.

Lastly, it has recommended that EuroMarine initially focus on transdisciplinary approaches and such emerging fields in order to foster integration and benefit from joint approaches.

The **EuroMarine Network** has additionally adopted a few 'hot topics' when launching its first yearly call for proposals:

1. Rapid changes in polar oceans
2. High resolution oceanography and productivity
3. Convergent approaches between biogeochemistry and genomics to better understand and model biogeochemical cycles.

In line its bottom-up ethos and in order to favour the emergence of new ideas and approaches, the EuroMarine Network has also recognized that its yearly calls should in general be widely open in terms of topics (provided that such topics do not duplicate existing initiatives and that single organisations could not tackle them alone).

Consequently, the transdisciplinarity criteria and the above lists of emerging fields and hot topics are in no way exclusive. EuroMarine will support other 'hot topics' that require transdisciplinary approaches, as well as topics or issues that are key for the progress of specific disciplines.

The definition of EuroMarine scientific strategy is a dynamic process placed under the control of EuroMarine General Assembly.

For the development and implementation of its scientific strategy (as for the development and provision of services) EuroMarine will primarily rely on competitive calls for proposals. Such calls will encompass a number of categories of activities (which may vary from year to year), notably including Foresight Workshops ('horizon scanning'), Working Groups, Capacity Building and Training, Conferences, Flagship Programmes. The definition and implementation of the calls are placed under the control of EuroMarine Steering Committee.

3 Contact and links

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Preparatory Project Research Strategy Report:

http://www.euromarinenetwork.eu/keydocs/euromarine_strategy_research_report_def_lr.pdf

Preparatory Project Business Plan:

<http://www.euromarinenetwork.eu/keydocs/EuroMarine+ Business Plan Deliverable 2.4.pdf>