

EMODnet: *the gateway to marine data in Europe*

What is EMODnet?

The European Marine Observation and Data Network (EMODnet) is comprised of more than 160 organisations which gather marine data, metadata and data products and work together to make them more easily accessible for a wider range of users: not only scientists, but also public authorities, private companies, civil society and the wider public. The global objective of EMODnet is to increase productivity



View of the North Sea coast at Ostend (Belgium), headquarters of the EMODnet Secretariat.

in all activities that require the use of marine data whilst ensuring the protection and conservation of our valuable marine resources. Further, making data freely available to multiple users will promote opportunities for innovation and improve our understanding of the sea's behaviour. This should lessen the risks associated with investments in the blue economy while ensuring that this enhanced productivity proceeds in a sustainable way.

Why was EMODnet created?

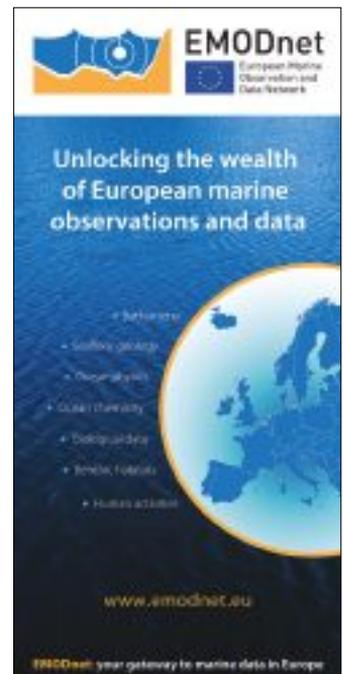
Marine data are needed for many purposes: to understand the state of the ocean, its variability and trends, to more efficiently manage our coasts and oceans and develop fit-for-purpose policies and legislation, to better respond to hazards such as storms or oil spills, to protect vulnerable ecosystems and sustain fisheries... Clearly these needs are reliant on access to high quality data, but it becomes increasingly important that these data can be accessed in a timely manner. Despite the demonstrable need for rapid access to reliable and accurate data, in practice this has often been a challenging process. This is because traditionally Europe's marine data have been collected by various local, national and regional entities and are stored in scattered, unconnected databases and repositories with poor visibility and/or access. Even when data are available, often they are not compatible, making the sharing of the information and the aggregation of different data sources impossible. To address this problem, in 2007 the European Commission through its Directorate General for Maritime Affairs and Fisheries (DG MARE) initiated the development of EMODnet in the framework of the EU's Integrated Maritime Policy. EMODnet has a core set of guiding principles, which were already presented in the European Commission

document: "Building a European marine knowledge infrastructure: Roadmap for a European Marine Observation and Data Network"¹

- Collect data once and use it many times;
- Develop data standards across disciplines as well as within them;
- Process and validate data at different scales: regional, basin and pan-European;
- Build on existing efforts where data communities have already organised themselves;
- Put the user first when developing priorities and taking decisions;
- Accompany data with clear statements on ownership, accuracy and precision;
- Achieve sustainable funding at a European level to maximise benefits from efforts of individual Member States.

How does it operate?

The EMODnet community is organised around seven thematic areas namely: bathymetry, marine geology, ocean physics, ocean chemistry, biology, seabed habitats and human activities, the so-called "thematic lots". Each thematic lot maintains a portal that provides access to the relevant marine data, metadata and data products of each discipline, as well as providing information on the activities of that thematic lot. EMODnet also organises some of its activities at a regional level, with a focus on the data availability and fitness for purpose in six sea basins: the Mediterranean, the North Sea, the Arctic, the Baltic, the Black Sea and the Atlantic. Finally, in order to provide a common point of access to the outputs of the thematic and sea-basin projects, an EMODnet Central Portal has been established improving the functionality and coherence of EMODnet as a whole.



EMODnet: an overview.

How good are the data for our needs?: The sea-basin checkpoints concept

The EMODnet sea-basin checkpoints are an exciting new approach to assessing the usefulness of marine data for our needs. There is general concern about the lack of support for sustained ocean monitoring activities at a national level. In the context of limited funding,

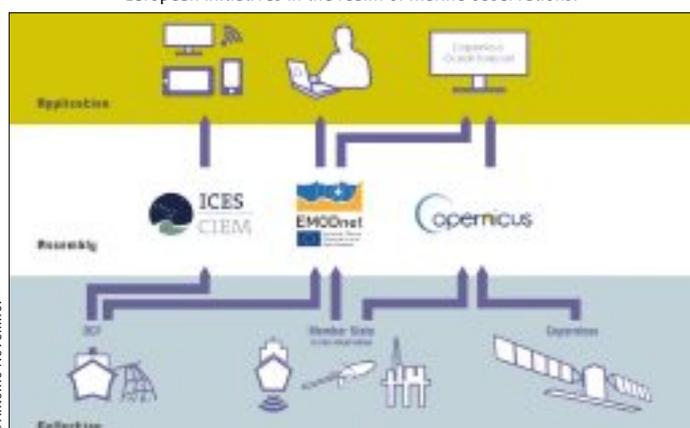
¹ Commission staff working document SEC(2009) 499 final

there is a change of model where not only those who traditionally collect data (the scientists) actually take advantage of them, but instead the focus is on maximising the potential of data to be used by multiple users for multiple reasons in keeping with the core EMODnet principle “collect data once and use it many times.”. The observation systems currently collecting data must be analysed so that priorities for enhancement can be established in order to meet increasing user needs while limiting the costs. The classic approach of sitting experts around a table to undertake such an analysis proves inadequate. Instead, a total of six sea-basin checkpoints have been put in place in the Mediterranean, North Sea, Arctic, Baltic, Atlantic and Black Sea, to assess the adequacy of the systems by tackling a number of concrete challenges (e.g. oil spill response, off-shore windfarm siting, climate change and coastal protection, fisheries management). This is an innovative approach, where observation capacity is assessed on the basis of actual societal needs and real use aiming at providing clear recommendations for future developments.

How does it relate to other European initiatives?

EMODnet shares many common objectives with other European initiatives and interacts with them in various ways. For instance, EMODnet data portals are already implementing INSPIRE² principles and cooperation with INSPIRE technical teams on marine data is stimulated via workshops. To avoid duplication of efforts, a close relationship has been established with representatives of the Marine component of the European Earth Observation Programme Copernicus³. Likewise, many of the thematic portals have developed specific products to meet the requirements of the Marine Strategy Framework Directive⁴. Finally, connections with the Regional Sea Conventions and the International Council of the Sea (ICES), as well as with other relevant Directorates

Diagram showing the interaction between EMODnet and other European initiatives in the realm of marine observations.



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General such as DG Environment or DG Research are particularly important and an open and regular dialogue is maintained between EMODnet and these actors.

The way forward: the first EMODnet Open Conference

On 20 October 2015, more than 350 marine experts gathered in Oostende, Belgium, for the EMODnet Open Conference “*Consolidating the Foundations, Building the Future*”. The conference marked the first occasion where the entire EMODnet community gathered since the inception of EMODnet. It provided a unique opportunity to discuss the many challenges and opportunities that lie ahead, both for EMODnet and for the wider European marine observation and data community. The Conference also included the participation of

stakeholders from the private and public sector and their views were instrumental towards refining the development of a more user-oriented, pan-European marine data infrastructure.



EMODnet Open Conference.

The EMODnet Open Conference was organised around a series of high-level presentations and plenary discussions which benefited from interventions from the public, as well as brain-storming sessions. Participants in the brain-storming sessions were encouraged to consider topics such as the improvement of EMODnet visibility, the interactions with other similar initiatives in Europe, the type of governance and financing model that should be adopted, or how to better engage with data providers and industry. The topics of discussion had been carefully selected basing on a

pre-conference survey and the sessions were steered by a group of professional facilitators. One of the most recurrent messages stemming from these sessions was the recognition of the multidisciplinary nature of EMODnet and the added value that this inferred which must be further developed. On a political level, participants felt that EMODnet sits in a complex marine data and information landscape and there is a degree of confusion and overlapping between initiatives supported by the different European Commission Directorate Generals. From a more technical perspective, the need to assess the confidence levels of data and to ensure their traceability was also repeatedly stressed. It was also recognized that some prioritization may be needed, and that providing data to support the implementation of the Marine Strategy Framework Directive could be one of the preferential activities. This was very much in line with one of the conclusions which could be drawn from the open conference which was that access to accurate and adequate data is essential to achieve a balance between growth in the blue economy and the protection and preservation of our marine resources.



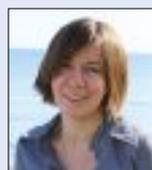
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² Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community

³ <http://www.copernicus.eu>

⁴ Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive)

