

## ...The Solution

The European Marine Observation and Data Network (EMODnet) is a network of organisations supported by the EU's integrated maritime policy. These organisations work together to observe the sea, process the data according to international standards and make that information freely available as interoperable data layers and data products.

This 'collect once and use many times' philosophy benefits all marine data users, including policy makers, scientists, private industry and the public. It has been estimated that such an integrated marine data policy will save at least one billion Euros per year, as well as opening up new opportunities for innovation and growth.

## The Challenge...

Data from the marine environment are a valuable asset. Rapid access to reliable and accurate information is vital in addressing threats to the marine environment, in the development of policies and legislation to protect vulnerable areas of our coasts and oceans, in understanding trends and in forecasting future changes. Likewise, better quality and more easily accessible marine data is a prerequisite for further sustainable economic development, so-called 'blue growth'.

Unfortunately, marine data collection, storage and access in Europe has been carried out in a fragmented way for many years. Most data collection has focused on meeting the needs of a single purpose by a wide range of private and public organisations, often in isolation from each other.

# Your gateway to marine data in Europe

The European Marine Observation and Data Network (EMODnet) is financed by the European Commission under Regulation (EU) No. 1255/2011 of the European Parliament and of the Council of 30 November 2011 establishing a Programme to support the further development of an Integrated Maritime Policy.

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# EMODnet



European Marine  
Observation and  
Data Network

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Gorgonians (*Paragorgia* and *Primnoa*) and sponges (*Mycale*) on a healthy live coral reef in the LoppHAVET area off Northern Norway. Image: Institute of Marine Research, Norway.

Cover image: Phytoplankton bloom in the Barents Sea in August 2010, imaged by the Aqua-MODIS satellite. Image: Norman Kuring, NASA Ocean Color Group, [earthobservatory.nasa.gov](http://earthobservatory.nasa.gov).

## How does EMODnet work?

EMODnet provides access to European marine data across seven discipline-based themes:

- Bathymetry
- Geology
- Physics
- Chemistry
- Biology
- Seabed habitats
- Human activities

For each of these themes, EMODnet has created a gateway to a range of data archives managed by local, national, regional and international organisations.

Through these gateways, users have access to standardised observations, data quality indicators and processed data products, such as basin-scale maps. These data products are free to access and use.



Alpha Ventus  
DOTI 2009

## What is available?

EMODnet is a long term marine data initiative developed through a step-wise approach. Currently, available data are being used to create medium-resolution maps of all Europe's seas and oceans, spanning all seven disciplinary themes - these are expected to be complete in 2014. The next phase of EMODnet will involve the development of multi-resolution sea basin maps, commencing in 2015.

More than 100 organisations are involved in the EMODnet programme; new contributors are welcome. EMODnet will strengthen its coordination with other marine knowledge providers, including fisheries, the marine component of the EU's Copernicus programme and the private sector, to create a common platform for marine data.

User requirements are a priority in EMODnet, so a series of seabasin 'checkpoints' are envisaged, starting with the Mediterranean and North Sea in 2013. These mechanisms will identify whether the present observation infrastructure is the most effective possible, and whether it meets the needs of public or private users.

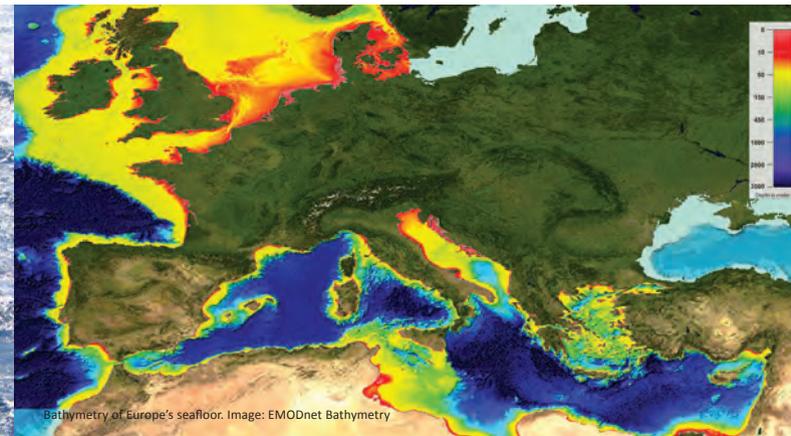


Measuring temperature and salinity in the Atlantic. Image: NOC

## Principles

EMODnet has a core set of principles that underpin the development of its services:

- 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;
- Sustainable funding at a European level to maximise benefit from the efforts of individual Member States;
- 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.



Bathymetry of Europe's seafloor. Image: EMODnet Bathymetry

## Benefits

Access to marine data is of vital importance for marine industries, decision-making bodies and scientific research. An effective pan-European marine data infrastructure will:

- Enable effective and efficient marine spatial planning and legislation for environment, fisheries, transport, border control, customs and defence;
- Reduce uncertainty in our knowledge and ability to forecast the behaviour of the sea;
- Improve offshore operators' efficiency and costs in gathering and processing marine data for operational and planning purposes;
- Stimulate competition and innovation in established and emerging maritime sectors.

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The seagrass *Posidonia oceanica*. Image: David Balata/WoRMS