

EMODNet

Physical Parameters

Antonio Novellino, ETT s.r.l., antonio.novellino@ettsolutions.com (Italy)

Giuseppe Manzella, ENEA, giuseppe.manzella@enea.it

Dick Schaap, MARIS, dick@maris.nl

Patrick Gorrings, EuroGOOS, Patrick.Gorrings@smhi.se

Lesley Rickards, NERC BODC, ljr@bodc.ac.uk

Sylvie Pouliquen, Ifremer, sylvie.pouliquen@ifremer.fr

European Marine Observation and Data Network (EMODnet) has been created to improve the usefulness to European users for scientific, regulatory and commercial purposes of observations and the resulting marine data collected and held by European public and private bodies, wherever that data has been collected from. European Commission, represented by the Directorate-General for Maritime Affairs and Fisheries (DG MARE), is running several service contracts for creating pilot components of the ur-EMODNET and it is assisted by a Marine Observation and Data Expert Group (MODEG) .

The Emodnet Physical Parameters Portal (<http://www.emodnet-physics.eu/>) is one of the EMODnet portals and it is aimed at providing access to archived and real time data catalog on the physical condition in Europe's seas and oceans. The overall objectives of the EMODNet Physics preparatory action is to provide access to archived and near real-time data on physical conditions in Europe's seas and oceans by means of a dedicated portal and to determine how well the data meet the needs of users from industry, public authorities and scientists. The objectives are achieved through:

- A portal that allows
 - Access to marine data from measurement stations and ferryboxes. Both near real-time and archived data of time series are to be made available.
 - Metadata for these data sets using EMODNet/INSPIRE standards
 - Metadata maps and overviews for whole seabasins showing the availability of data and monitoring intensity of that basin.
- Monitoring and reporting of the effectiveness of the portal in meeting the needs of users in terms of ease of use, quality of information and fitness for purpose of the product delivered.

EMODnet Physics aims to contribute to the broader initiative 'Marine Knowledge 2020', and in particular to the implementation of the European marine monitoring programme and marine services (GMES). It is based on a strong collaboration between EuroGOOS associates and its regional operational systems (ROOSs), MyOcean and SeaDataNet consortia. The portal also respects INSPIRE standards for discovery and access and it is operational 24 hours a day, 7

days a week, and provides information and tools to potential users (managers, policy makers, researchers, specialized users) in fact it:

- Gives access to thematic monitoring data that can be queried/selected
- Gives access to monitoring observations
- Provides data to GMES, researchers and specialised users

The EMODNet PP is providing access to the following types of measurements:

- wave height and period;
- temperature of the water column;
- wind speed and direction;
- salinity of the water column;
- horizontal velocity of the water column ;
- light attenuation;
- sea level.

The geographical coverage includes all the maritime regions with the following expected input providers:

- the Western Mediterranean Sea (ROOS Med and SeaDataNet);
- the Adriatic Sea (ROOS Med and SeaDataNet);
- the Ionian Sea and the Central Mediterranean Sea (ROOS Med and SeaDataNet);
- the Aegean-Levantine Sea (ROOS Med and SeaDataNet);
- the Greater North Sea, including the Kattegat, and the English Channel (ROOS NWS (North West Shelf) and SeaDataNet);
- the Celtic Seas (ROOS IBI and SeaDataNet);
- the Bay of Biscay and the Iberian Coast (ROOS IBI and SeaDataNet);
- the Atlantic Ocean, the Macronesian bio-geographic region, being the waters surrounding the Azores, Madeira and the Canary Islands (Coriolis and SeaDataNet), and Cape Verde (E subtropical Atlantic)

Parameters Group	Number of Stations
Currents	22
Light attenuation	2
Sea levels	267
Sea water salinity	45
Sea water temperature	132
Waves and winds	165

Tab. 1 - Number of stations and available parameters

	Currents	Light attenuation	Sea levels	Sea water salinity	Sea water temperature	Waves and winds	Number of Stations
Arctic/Barrents/Greenland/Norwegian Sea			3				3
Atlantic/Bay of Biscay/Celtic Sea	11	1	103	30	60	53	258
Baltic Sea			74	1	28	8	111
Black Sea					1		1
Mediterranean Sea	6	1	26	5	29	38	105
North Sea	5		61	9	14	66	155
Number of stations	22	2	267	45	132	165	

Tab. 2 - Number of stations and available near real time data per sea basin

- North Atlantic (including Porcupine Abyssal Plain, Central Irminger Basin, Norwegian Sea) (ROOS Arctic and SeaDataNet)
- the Baltic Sea (ROOS BOOS and SeaDataNet)
- the Black Sea (ROOS Black Sea and SeaDataNet)

In two years of activity, by means of joint activities with its pillars EuroGOOS, SeaDataNet and MyOcean, EMODnet Physical Parameters was able to connect about 400 stations that provides: