

EMODnet Physics: One-stop Portal to access Multiplatform Observing Systems

Antonio Novellino (1), Giacomo Benedetti (1), Paolo D'Angelo (1), Patrick Gorringer (2), Peter Thjisse (3), Dick Schaap (3), Sylvie Pouliquen (4), and Giuseppe Manzella (1)

(1) ETT, Genova, Italy (antonio.novellino@ettsolutions.com), (2) EuroGOOS, Brussels, Belgium, (3) MARIS, Voorburg, The Netherlands, (4) IFREMER, Plouzane, France

The EMODnet Physics is being developed through a stepwise approach in three major stages and is currently in its second phase of development (2013 - 2016). It is a one-stop portal to access to near real time and historical achieved data sets. It provides a combined array of services and functionalities (such as dynamic map facility for viewing and downloading, dashboard reporting and machine-to-machine communication services) to users for obtaining free of charge data, meta-data and data products on the physical conditions of European sea basins and oceans.

Moreover, the system provides full interoperability with third-party software through WMS service, Web Service and Web catalogues in order to exchange data and products according to the most recent standards. In particular, interoperability is assured with the IODE Ocean Data Portal with which EMODnet Physics is collaborating.

EMODnet Physics is built on and it is working in coordination and cooperation EuroGOOS-ROOSs, CMEMS and the SeaDataNet network of NODCs. By means of joint activities with its three pillars and with the most relevant Organizations and associations within the sector, EMODnet is undergoing significant improvements and expansion.

In the last year, EMODnet Physics has steadily enhanced the number and type of platforms covered providing high quality data integrating sources from a growing network. In particular, a major step forward sees the integration of emerging measuring systems such as HF radars, which are able to provide the resolution of surface current speeds and directions covering large regions of the coastal oceans, and that now do populate the EMODnet Platform.

Nowadays the system does integrate information by more than 7.300 stations, among which 2915 moorings, 2728 drifting buoys and around 1200 ARGO floats.

EMODnet Physics was also updated with two ready-to-use data products: the Ice (Copernicus CMEMS - SEAICE_GLO_SEAICE_L4_NRT_OBSERVATIONS_011_001) and Sea Level Trends (produced through the Permanent Service for Mean Sea Level - PSMSL).

Looking forward, the threefold objective of EMODnet Physics is to further extend the number and type of data platforms feeding the system (especially as far as gliders, radars and ferry boxes are concerned, which pulled together constitute less than 1% of the stations within the network); improve the capability of the system of producing data and products that could match the market needs of the current and potential end and intermediate users; to connect with other initiatives at European and global level as to stimulate international exchange of modern oceanographic data and products encourage the development of a thorough network.

EMODnet Physics already actively collaborates with EU wide initiatives (e.g. H2020 Jerico NEXT, AtlantOS, to name a few) in order to constantly explore synergies and build strong links to foster data collection, integration and dissemination, building on existing infrastructures and avoiding duplication of efforts. Additionally, further envisaged improvements are to provide better access to additional data not yet in the current system, fill in gaps in certain time series, streamline and optimise the data flows, facilitate integration and interoperability with further systems, fully exploit opportunities to obtain additional parameters from existing data sites and surely attract new data and new data provider, as well as new users and stakeholders.