

EMODnet Physics: past, present and future

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Access to marine data is of vital importance for marine research and a key issue for various studies, from climate change prediction to off shore engineering. Giving access to and harmonising marine data from different sources will help industry, public authorities and researchers find the data and make more effective use of them to develop new products, services and improve our understanding of how the seas behave.

EMODnet Physics provides a combined array of services and functionalities (facility for viewing and downloading, dashboard reporting and machine-to-machine communication services) to obtain, free of charge data, meta-data and data products on the physical conditions of European sea basins and oceans. Moreover, the system provides Web Services and Web catalogues in order to exchange data and products according to the most recent standards. EMODnet Physics is built on and is working in collaboration with EuroGOOS and its 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 Physics is undergoing significant improvements and expansion.

The portal is providing access to data and products of: wave height and period; temperature and salinity of the water column; wind speed and direction; horizontal velocity of the water column; light attenuation; sea ice coverage and sea level trends.

EMODnet Physics is continuously increasing the number and type of platforms in the system by unlocking and providing high quality data from a growing network. Nowadays the system integrates information from more than 11.000 platforms, among which 2915 moorings, 2728 drifting buoys and around 1200 ARGO floats.

EMODnet Physics has also been 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).

EMODnet Physics actively collaborates with EU wide projects and initiatives such as H2020 Jerico-NEXT, AtlantOS, INSTAC and SeaDataNet in order to explore synergies and build strong links to foster data collection, integration and dissemination, building on existing infrastructures and by this avoiding duplication of efforts.

EMODnet Physics will continue to further extend the number and type of data and platforms feeding the system; improve the capability of the system producing data and products that could match the market needs of the current and potential new end and intermediate users; to connect with other initiatives at European and global scale as to stimulate international exchange of oceanographic data and products and by this encourage the development of a coordinated network.