



EMODnet Physics: a horizontal platform serving blue growth

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EMODnet - the European Marine Observation and Data network – is a long term marine data initiative from the European Commission Directorate-General for Maritime Affairs and Fisheries (DG MARE) involving and networking more than 150 organizations for assembling marine data, products, and metadata. The data infrastructure has been developed through a stepwise approach in 3 major phases by running 7 thematic portals, 6 regional check points and a Data Ingestion facility.

EMODnet Physics (www.emodnet-physics.eu) is a domain specific portal of portals aggregating data and metadata from several data sources. The concept of the portal is a federation, intended as ‘alliance’ (federation from latin foedus = alliance). This means that there is a mutual agreement between EMODnet Physics and the data providers, each contribution being visible in the portal. Interoperability is a key issue of the federated system: common vocabularies, compliance with ISO, OGC standards and adherence to INSPIRE Directive build coherent services for users, although individual components are technically different and managed by different organizations.

EMODnet Physics is developing a combined array of services and functionalities such as 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 the ocean from many different distributed data sets (www.emodnet-physics.eu/map).

EMODnet Physics is providing Regional stakeholders and international networks with tools to serve their users and communities. As an example Physics is powering and hosting the South Ocean Observing System (SOOS) data portal (<http://www.soos.aq/data/soosmap>) and SOOS is helping Physics to unlock and make available more valuable data. By this a great data sharing momentum has started in the area with new datasets added on a regular basis.

EMODnet Physics has recently set up a similar portal (in pre-mode) for the Arctic region with the same goal as SOOSMap to enable additional data from the Arctic to be made available, visible and used by a wider community.

The acquisition of physical parameters is largely an automated process that allows the dissemination of near real time information. In particular EMODnet Physics is a stock-share portal strongly federated to the Copernicus Marine Environment Monitoring Service In Situ Thematic Assembly Center. Historical validated datasets are organized in collaboration with SeaDataNet and its network of National Oceanographic Data Centers. The EMODnet Physics portal is currently providing easy 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 (relative and absolute).

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. Lately EMODnet Physics started working on river runoff data, total suspended matter and underwater noise (acoustic pollution).