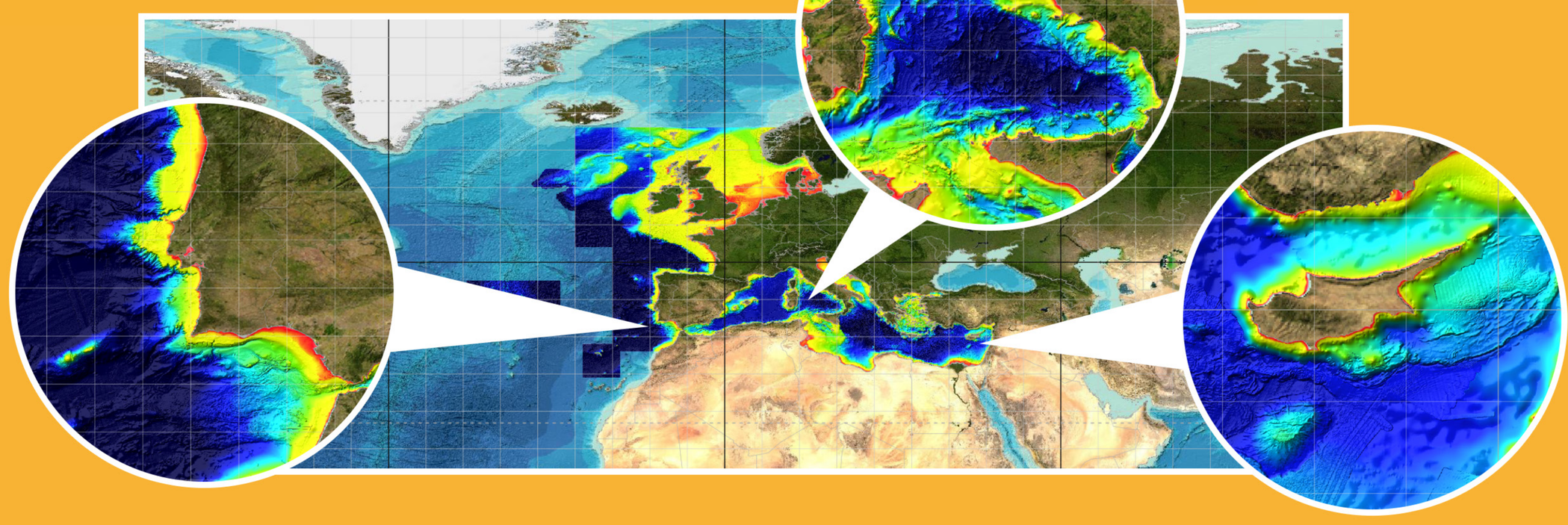
EMODnet

European Marine Observation and Data Network



EMODNet Hydrography - Seabed Mapping projects

Producing a high resolution digital bathymetry for European sea basins

In December 2007 the European Parliament and Council adopted the Marine Strategy Framework Directive (MSFD) which aims to achieve environmentally healthy marine waters by 2020. This Directive includes an initiative for an overarching European Marine Observation and Data Network (EMODNet).

The EMODNet Hydrography - Seabed Mapping projects made good progress in developing the EMODNet Hydrography portal to provide overview and access to available bathymetric survey datasets and to generate an harmonised digital bathymetry for Europe's sea basins. Up till August 2012 more than 8400 bathymetric survey datasets, managed by 14 data centres from 9 countries and originated from 118 institutes, have been gathered and populated in the EMODNet Hydrography Data Discovery and Access service, adopting SeaDataNet standards. These datasets have been used as input for analysing and generating the EMODNet digital terrain model (DTM), so far for the following sea basins:

- the Greater North Sea, including the Kattegat and stretches of water such as Fair Isle, Cromarty, Forth, Forties,Dover, Wight, and Portland
- the English Channel and Celtic Seas
- Western and Central Mediterranean Sea and Ionian Sea
- Bay of Biscay, Iberian coast and North-East Atlantic
- Adriatic Sea
- Aegean - Levantine Sea (Eastern Mediterranean)
- Azores - Madeira EEZ

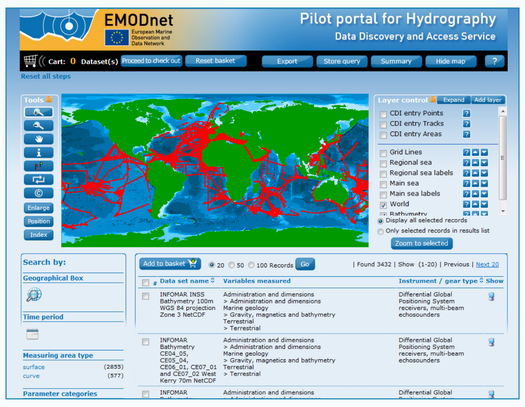


Figure 1: CDI Data Discovery and Access Service - overview of selected survey data sets

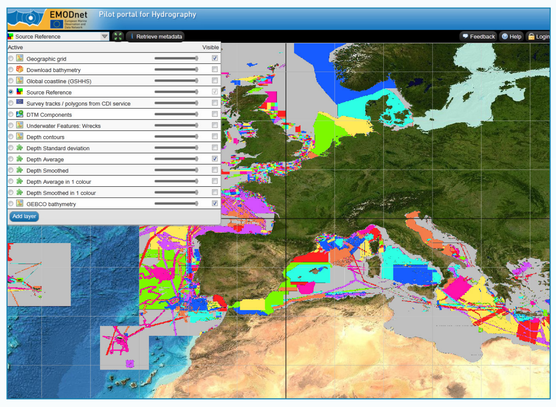


Figure 2: Hydrography Data Product Viewing Service - layers menu and layer indicating data sources used for the resulting DTM

The Hydrography Viewing service gives users wide functionality for viewing and downloading the EMODNet digital bathymetry:

- water depth in gridded form on a DTM grid of a quarter a minute of longitude and latitude
- option to view QC parameters of individual DTM cells and references to source data
- option to download DTM tiles in different formats: ESRI ASCII, XYZ, CSV, NetCDF (CF), GeoTiff and SD for Fledermaus 3D viewer software
- option for users to create their Personal Layer and to upload multibeam survey ASCII datasets for automatic processing into personal DTMs following the EMODNet standards

The NetCDF (CF) DTM files are fit for use in a special 3D Viewer software package which is based on the existing open source NASA World Wind JSK application. It has been developed in the frame of the EU Geo-Seas project (another sibling of SeaDataNet for marine geological and geophysical data) and is freely available. The 3D viewer also supports the ingestion of WMS overlay maps.

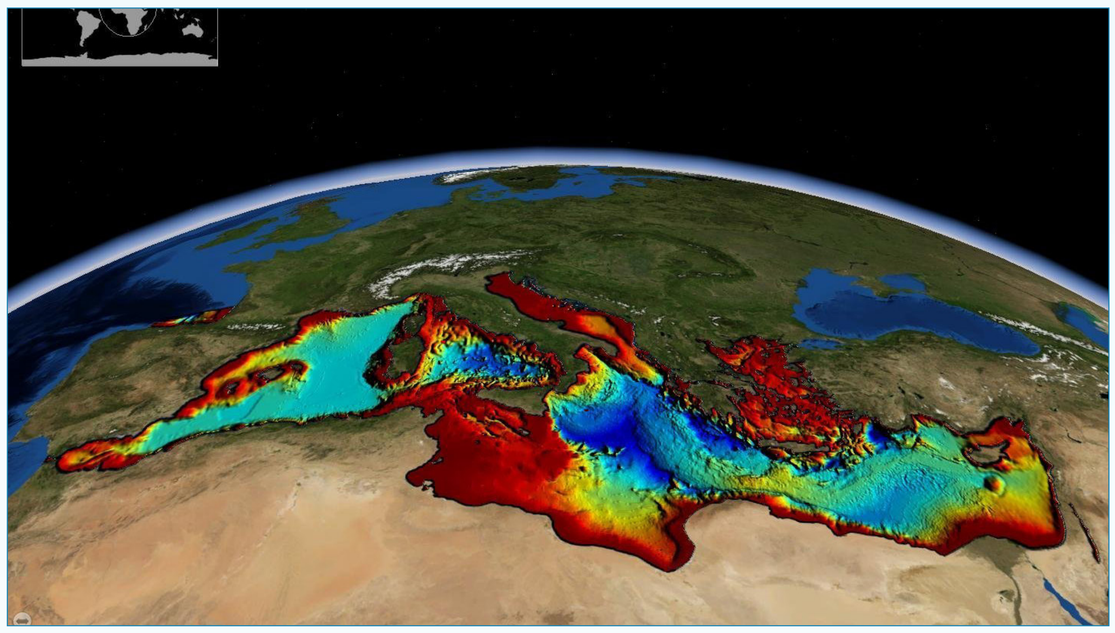


Figure 3: 3D Viewer - example view for the Mediterranean Sea

The EMODNet consortium is actively seeking cooperation with Hydrographic Offices, research institutes, authorities and private organisations for additional data sets (single and multibeam surveys, sounding tracks, composite products) to contribute to an even better geographical coverage. These datasets will be used for upgrading and extending the EMODNet regional Digital Terrain Models (DTM). The datasets themselves are not distributed but described in the metadata service, giving clear information about the background survey data used for the DTM, their access restrictions, originators and distributors and facilitating requests by users to originators. This way the portal provides originators of bathymetric data sets an attractive shop window for promoting their data sets to potential users, without losing control.

Partners

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SeaDataNet

www.emodnet-hydrography.eu