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EMODnet Bathymetry – further developing a high resolution digital bathymetry for European seas

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Access to marine data is a key issue for the **EU Marine Strategy Framework Directive** and the **EU Marine Knowledge 2020 agenda** and includes the **European Marine Observation and Data Network (EMODnet)** initiative. EMODnet aims at assembling European marine data, data products and metadata from diverse sources in a uniform way.

The EMODnet Bathymetry project is active since 2008 and has developed Digital Terrain Models (DTM) for the European seas, which are published at a regular interval, each time improving quality and precision, and expanding functionalities for viewing, using, and downloading. The DTMs are produced from survey and aggregated data sets that are referenced with metadata adopting the SeaDataNet Catalogue services. SeaDataNet is a network of major oceanographic data centres around the European seas that manage, operate and further develop a pan-European infrastructure for marine and ocean data management. The latest EMODnet Bathymetry DTM release also includes Satellite Derived Bathymetry and has a grid resolution of 1/16 arcminute (circa 125 meters), covering all European sea regions. Use has been made of circa 9400 gathered survey datasets, composite DTMs and SDB bathymetry. Catalogues and the EMODnet DTM are published at the dedicated EMODnet Bathymetry portal including a versatile DTM viewing and downloading service.

As part of the expansion and innovation, more focus has been directed towards bathymetry for near coastal waters and coastal zones. And Satellite Derived Bathymetry data have been produced and included to fill gaps in coverage of the coastal zones. The Bathymetry Viewing and Download service has been upgraded to provide a multi-resolution map and including versatile 3D viewing. Moreover, best-estimates have been determined of the European coastline for a range of tidal levels (HAT, MHW, MSL, Chart Datum, LAT), thereby making use of a tidal model for Europe. In addition, a Quality Index layer has been formulated with indicators derived from the source data and which can be queried in the The Bathymetry Viewing and Download service. Finally, extra functonality has been added to the mechanism for downloading DTM tiles in various formats and special high-resolution DTMs for interesting areas.

This results in many users visiting the portal, browsing the DTM Viewer, downloading the DTM tiles and making use of the OGC Web services for using the EMODnet Bathymetry in their applications.

The presentation will highlight key details of the EMODnet Bathymetry DTM production process and the Bathymetry portal with its extensive functionality.