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EMODNet Bathymetry - building and providing 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 data infrastructure is developed through a stepwise approach in three major phases. Currently EMODNet is entering its 3rd phase with operational portals providing access to marine data for bathymetry, geology, physics, chemistry, biology, seabed habitats and human activities, complemented by checkpoint projects, analyzing the fitness for purpose of data provision.

The EMODNet Bathymetry project develops and publishes Digital Terrain Models (DTM) for the European seas. These are produced from survey and aggregated data sets that are indexed with metadata by adopting from SeaDataNet the Common Data Index (CDI) data discovery and access service and the Sextant data products catalogue service. SeaDataNet is a network of major oceanographic data centers around the European seas that manage, operate and further develop a pan-European infrastructure for marine and ocean data management. SeaDataNet is also setting and governing marine data standards, and exploring and establishing interoperability solutions to connect to other e-infrastructures on the basis of standards such as ISO and OGC. The SeaDataNet portal provides users a number of interrelated meta directories, an extensive range of controlled vocabularies, and the various SeaDataNet standards and tools. SeaDataNet at present gives overview and access to more than 1.8 million data sets for physical oceanography, chemistry, geology, geophysics, bathymetry and biology from more than 100 connected data centers from 34 countries riparian to European seas.

The latest EMODNet Bathymetry DTM has a resolution of 1/8 arc minute * 1/8 arc minute and covers all European sea regions. Use is made of available and gathered surveys and already more than 13.000 surveys have been indexed by 27 European data providers from 15 countries and originating from more than 120 organizations. Also use is made of composite DTMs as generated and maintained by several data providers for their areas of interest. Already 44 composite DTMs are included in the Sextant data products catalogue. For areas without coverage use is made of the latest global DTM of GEBCO who is partner in the EMODNet Bathymetry project. In return GEBCO integrates the EMODNet DTM to achieve an enriched and better result. The catalogue services and the generated EMODNet can be queried and browsed at the dedicated EMODNet Bathymetry portal which also provides a versatile DTM viewing service with many relevant map layers and functions for retrieving. Activities are underway for further refinement following user feedback. The EMODnet DTM is publicly available for downloading in various formats.

The presentation will highlight key details of EMODNet Bathymetry project, the recently released EMODNet Digital Bathymetry for all European seas, its portal and its versatile viewer.