

Press release 30 June 2020

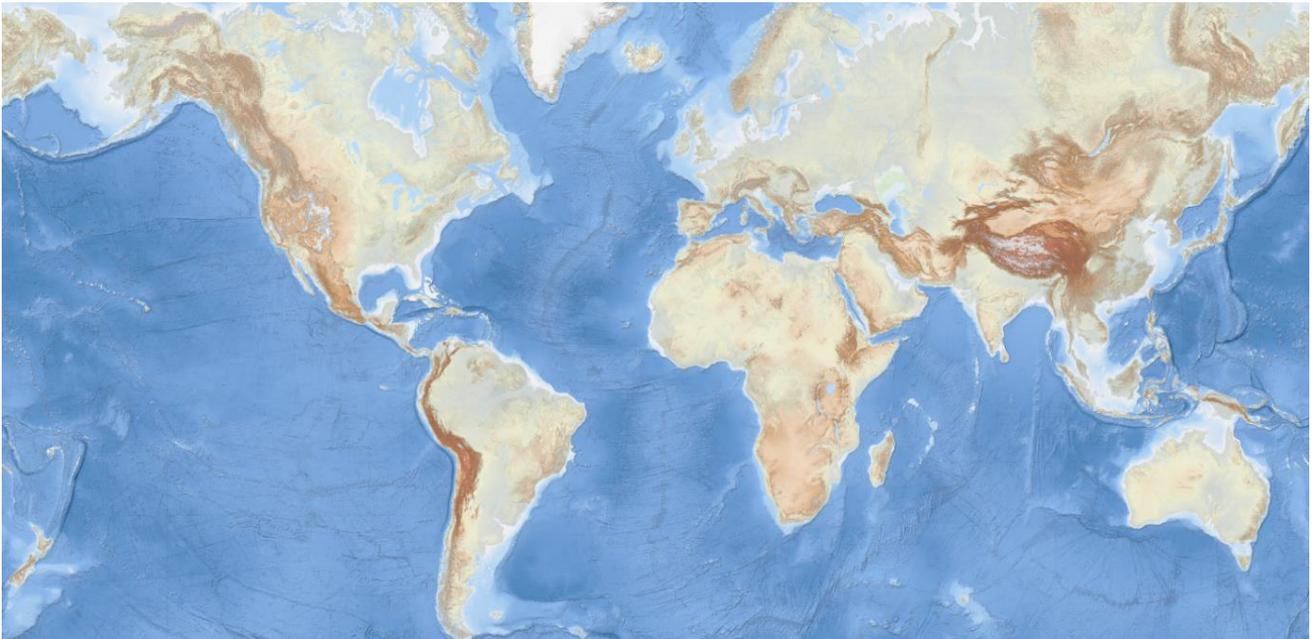
## **EMODnet Bathymetry now offers the highest resolved bathymetric worldwide layout**

Bathymetry, the topography of the seafloor, is a fundamental property of the ocean. Accurate bathymetric data is the foundation for much of ocean science and policy. For example, nautical charts are based on these data to ensure safe ship navigation and bathymetric maps allow scientists to develop more accurate models to investigate the effects of climate change on the environment.

EMODnet's new World Base Layer Service (EBWBL1) provides a fast and easy access to worldwide bathymetric information, enabling marine knowledge users including industry, scientists, coastal managers, students and the general public, to access high-resolution representations of seabed features from their own computer. EBWBL1 provides the highest resolved topographic and bathymetric worldwide layout currently available with land and sea integration matching the OpenStreetMap coastline representation.

This new service is freely accessible from the EMODnet Bathymetry portal (<https://tiles.emodnet-bathymetry.eu/>), for integrating into your favourite application, along with guidance documentation and a demo viewer to zoom in on every detail. It is available in various projections, e.g., non-projected coordinate system, Web Mercator, Inspire compliant projection and projections adapted to both poles.

*"The new EMODnet Bathymetry World Base Layer Service is a real breakthrough in the provision of open-access global ocean information for all types of users; from industry to the general public, and from scientists to marine spatial planners. It highlights EMODnet's contribution and leading role in the global ocean observation landscape",* Iain Shepherd, Senior Policy Officer, EC DG MARE.



*Image: The EMODnet World Base Layer Service offers the highest resolved bathymetric worldwide layout*

### **What is new?**

*It's global.* This first edition of the EBWBL1 has a global coverage and combines the General Bathymetric Chart of the Oceans (GEBCO) gridded data and the EMODnet Bathymetry Digital Terrain Model (EMODnet DTM) at the highest resolution as a Web Map Tiles Services (WMTS).

*It's fast.* WMTS is displaying pre-rendered images served from a web server, which means it is less computationally demanding and faster than rendering images in the browser, a benefit over technologies such as WFS.

*It's accurate.* EBWBL1 provides access to the pre-rendered tiles of the most reliable and publicly available bathymetric dataset. The service is planned to be maintained and updated on a regular basis. Lakes are nicely blended in with the landscape. The colour scheme is specifically chosen to display enough details in the different depth ranges. On land, the same fine details can also be discovered.

**To access the World Base Layer Service, visit the EMODnet Bathymetry Portal:**

[tiles.emodnet-bathymetry.eu](https://tiles.emodnet-bathymetry.eu)

### Technical background information

Based on a modern Web Map Tile Service (WMTS) schema, a standard protocol (OGC) for serving pre-rendered georeferenced map tiles over the Internet, the EBWBL1 is composed of the 2018 EMODnet bathymetric grid of Europe (approx. 100m resolution) and uses the GEBCO 2019 grid (approx. 500m resolution) elsewhere. The land coverage is based on a combination<sup>1</sup> of 30 arc second ASTER GDEM, SRTM3, EU-DEM, and Global 1 second worldwide water body map for the topographic part. This compilation of publicly available data sources has been merged and pre-tiled for rendering, at 10 levels of zoom starting from 75m resolution. The EBWBL1 service is available in various projection systems (EPSG 4326, EPSG 3857, EPSG 3035) including projections adapted to both poles (ESPG 3031 and 3996).



*Image: Visualisation of Norwegian's fjords with the new EMODnet bathymetric layout*

### About EMODnet Bathymetry

First launched in 2010, the EMODnet Bathymetry Digital Terrain Model (DTM) has now become a reference for government, science and industry. Regularly visited by over 10.000 persons per month, with over 3.000 downloads per month, it provides the most detailed publicly available gridded bathymetry model for all European marine waters. The EMODnet Bathymetry consortium is composed of European bathymetric data providers such as hydrographic services, research organisations and private companies.

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<sup>1</sup> The compilation and void filling of the land DEM is based on the work of ViewFinderPanoramas.org

### **About the European Marine Observation and Data Network (EMODnet)**

EMODnet is a long-term marine data initiative from the European Commission Directorate-General for Maritime Affairs and Fisheries (DG MARE). It is a gateway to marine data in Europe with free, open access to data, data products and metadata from more than 120 organisations. Explore data and maps of bathymetry, geology, physics, chemistry, biology, seabed habitats and human activities on <https://www.emodnet.eu>.

### **About the General Bathymetric Chart of the Ocean (GEBCO)**

GEBCO's aim is to provide the most authoritative publicly available bathymetry of the world's oceans. It operates under the joint auspices of the International Hydrographic Organization (IHO) and the Intergovernmental Oceanographic Commission (IOC) of UNESCO. GEBCO's grid is based on bathymetric data and resources made available from international research labs, industry, and academia.

### **About the Nippon Foundation – GEBCO Seabed2030 Project**

The Seabed2030 Project, launched at the United Nations Ocean Conference in 2017, is building a global community of ocean mappers, hydrographers, scientists, industry and the public to discover and publish all existing bathymetric data. The Seabed2030 Project also advocates for new mapping expeditions to 'map the gaps' in the global knowledge of the seafloor.

Since 2019, EMODnet Bathymetry and the Seabed2030 Project share a Memorandum of Understanding with the convergent aim of improving the bathymetric knowledge, while promoting the distribution of this knowledge to all potential users.

### **About the Nippon Foundation**

The Nippon Foundation is a private, non-profit foundation established in 1962, in Japan, for the purpose of carrying out philanthropic activities, using revenue from motorboat racing. The Foundation places an emphasis on social innovation, and implementing ideas to bring about change for a better society. Its activities encompass wide-ranging areas such as the fight against leprosy, peacebuilding in Myanmar and passing on the riches of the ocean to the next generation.

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