



# EMODnet Bathymetry



<https://emodnet-bathymetry.eu/>

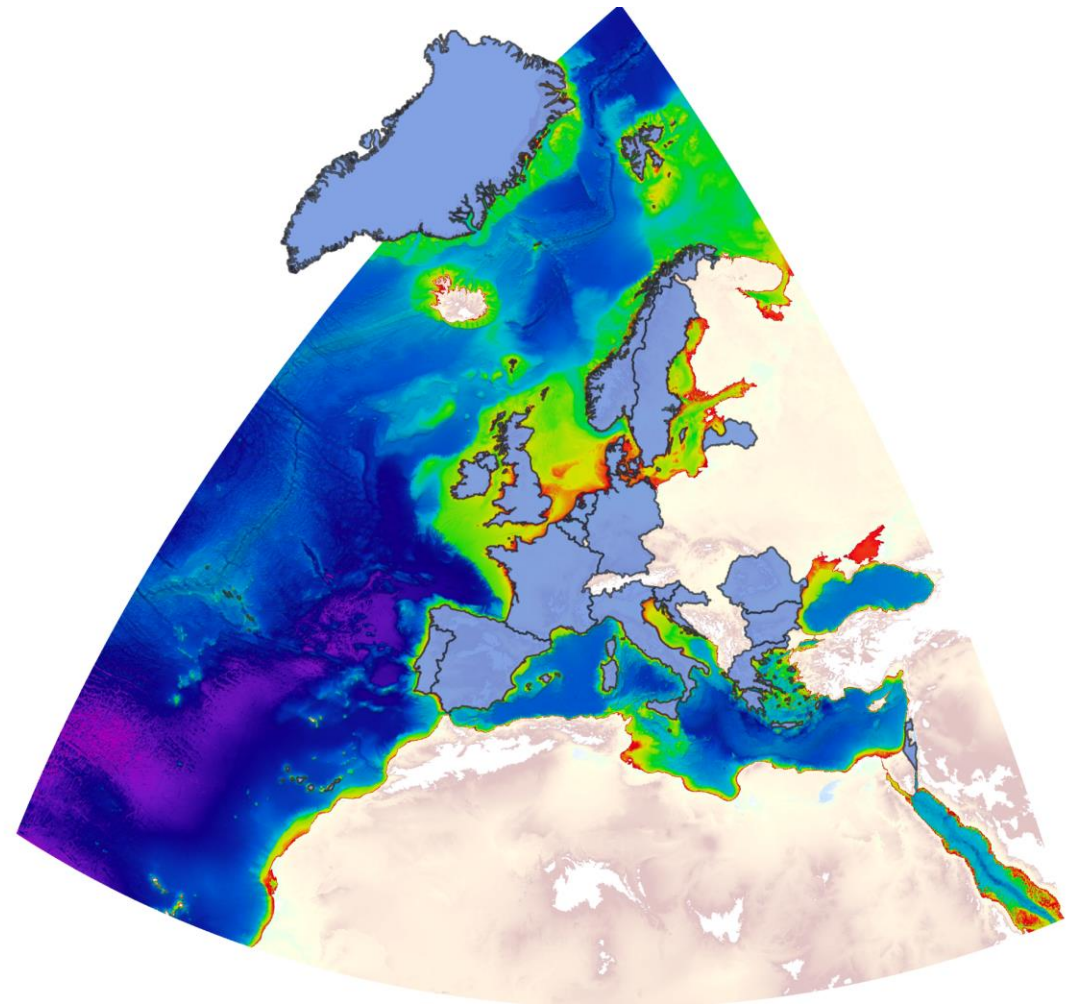
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## Who are we ?

- Hydrographic offices
- Research institutes
- Small and medium size enterprises

## EMODnet Bathymetry's philosophy

- Allow european member states to comply with INSPIRE's Directive and FAIR principles on the bathymetric theme
- Expose existing bathymetric data
- Generate synthetic products covering most of users' needs
- Preserve the data provider at the center of the process (with respect to national jurisdiction national security, data policy, ...) with a focus on filiation of the source of the information and its quality



# Bathymetric metadata

- Each polygon/poly-line shows the bathymetric coverage/location
- Associated Metadata (INSPIRE compatible, ISO 19115- based upon an unified and agreed thesaurus – BODC held )
- Source data held by the data provider, who decide how to provide its dataset to the final user

## WHAT?

Data set name	vaklodng NH-SK
Discipline	Marine geology Terrestrial
Parameter groups	Gravity, magnetics and bathymetry Terrestrial
Discovery parameters	Bathymetry and Elevation
GEMET-INSPIRE themes	Oceanographic geographical features
Abstract	Bathymetric data extract from bathymetric database
Data format	XYZ ASCII <b>Version 1.0</b>
Data size	0.1
Data set creation date	20140613

## WHERE?

Map



GML id

GML objects

Datum

Measuring area type

Water depth (m)

Depth reference

Minimum instrument depth (m)

Maximum instrument depth (m)

Sea regions

msD1

Name	Description
RA16522_6132	coverage
Datum	World Geodetic System 84
Measuring area type	surface
Water depth (m)	-9999
Depth reference	Normaal Amsterdams Peil
Minimum instrument depth (m)	-9999
Maximum instrument depth (m)	-9999
Sea regions	North Sea

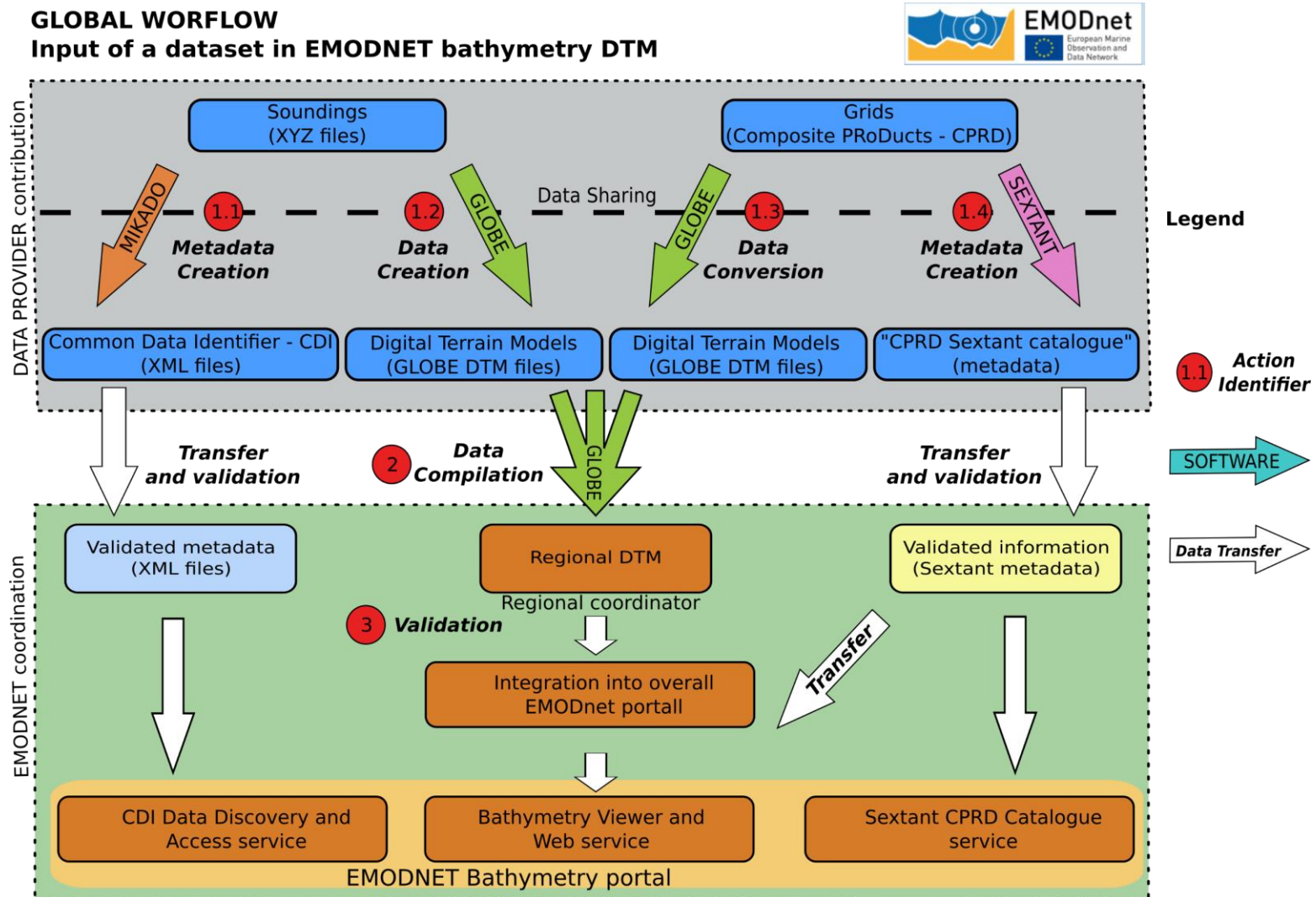
The screenshot shows the EMODnet Bathymetry Viewing and Download service interface. At the top, there is a logo for EMODnet and the text "BATHYMETRY Understanding the topography of the European seas Bathymetry Viewing and Download service". Below this is a navigation bar with options like "Survey tracks/polygons", "Retrieve metadata", "Order survey data", "Downloads", "Measure distance", and "Settings". The main area is a world map with red lines indicating bathymetric survey tracks. A "Feedback" button is visible on the left side. At the bottom left, there are coordinates (-3.07974, -4.66997) and a 2000 km scale bar.

# EMODnet Bathymetry DTM

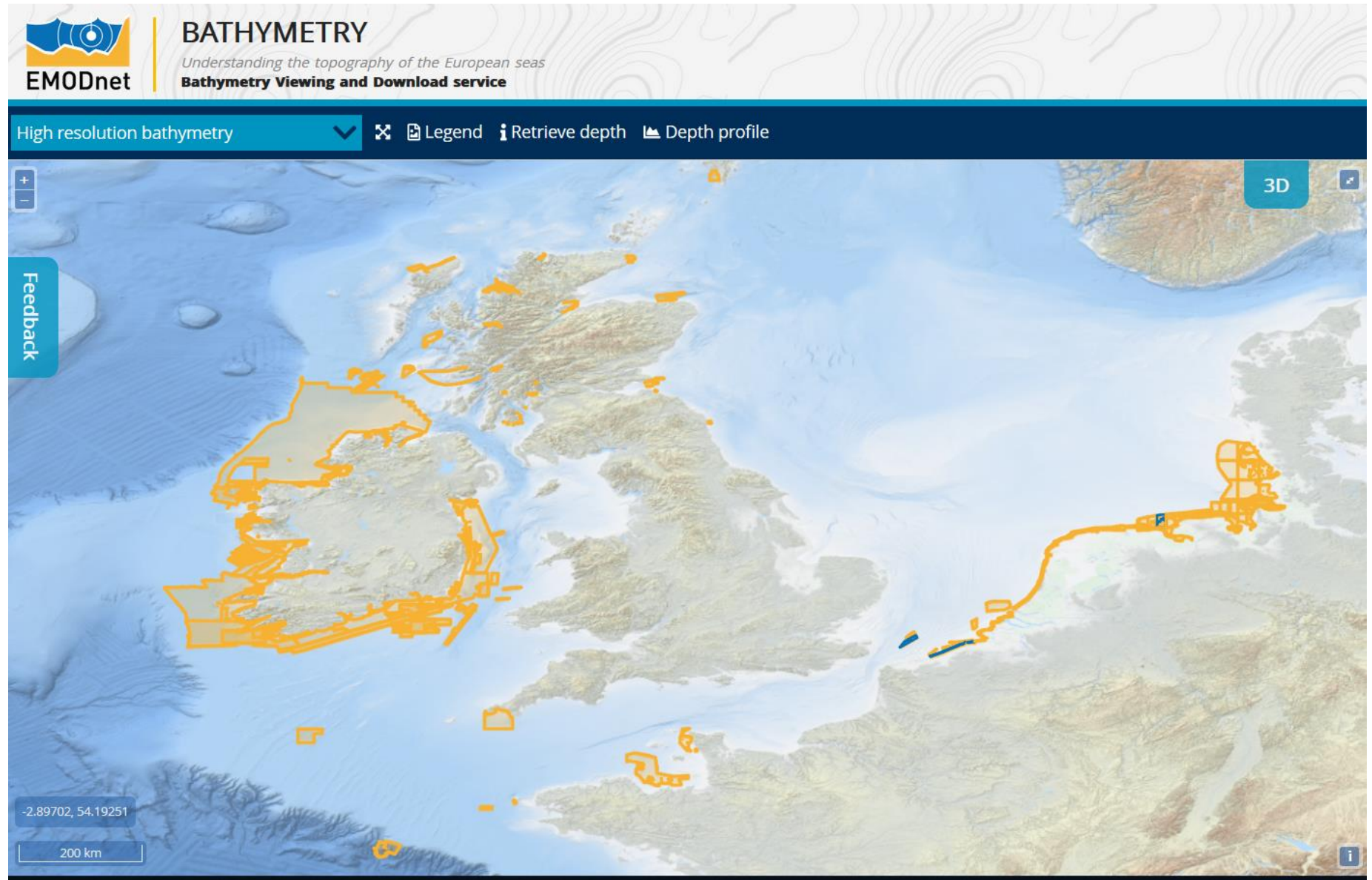
- 1/16 arc-minute (approx. 100m)
- Built from data from partners (HO, Oceanographic centers, private partners)
- DOI, free of charge, free to use
- Available at MSL and LAT

The screenshot displays the EMODnet Bathymetry DTM web application interface. At the top left, the EMODnet logo is shown next to the text "BATHYMETRY" and the tagline "Understanding the topography of the European seas". Below this, it says "Bathymetry Viewing and Download service". The main navigation bar includes a dropdown menu for "Mean depth full coverage", a legend icon, "Retrieve depth", and "Depth profile". On the right side of the navigation bar, there are links for "Downloads", "Measure distance", "Settings", and "Help". The central part of the interface is a world map showing bathymetry data with a grid overlay. A "3D" button is visible in the top right corner of the map area. On the left side of the map, there is a "Feedback" button. In the bottom left corner, the coordinates "0.20640, -4.94272" and a "5000 km" scale bar are displayed. On the right side, there is a "Dataset type" section with buttons for "DTM Tiles", "High resolution areas", and "Area of interest". Below this is a "DTM version" section with buttons for "2016", "2018", and "2020". A yellow button at the bottom of this section says "Select your area(s) on the map".

# A shared methodology



# HR DTM



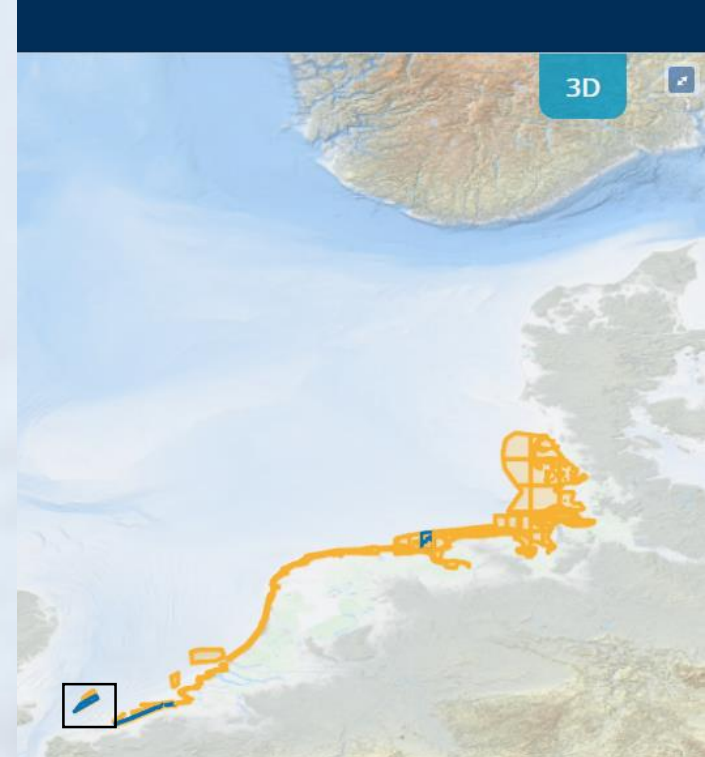
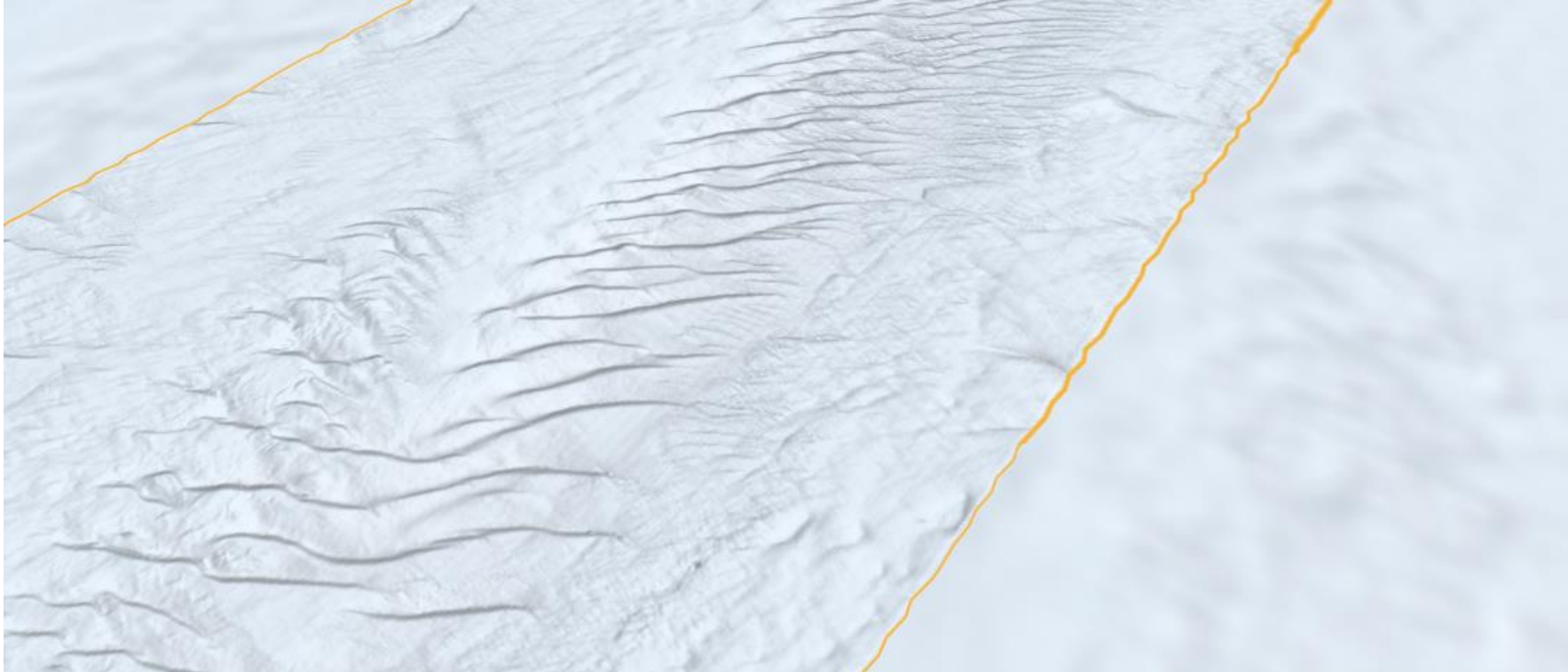
- > 200 High resolution DTM (resolution up to the m)

# HR DTM



## BATHYMETRY

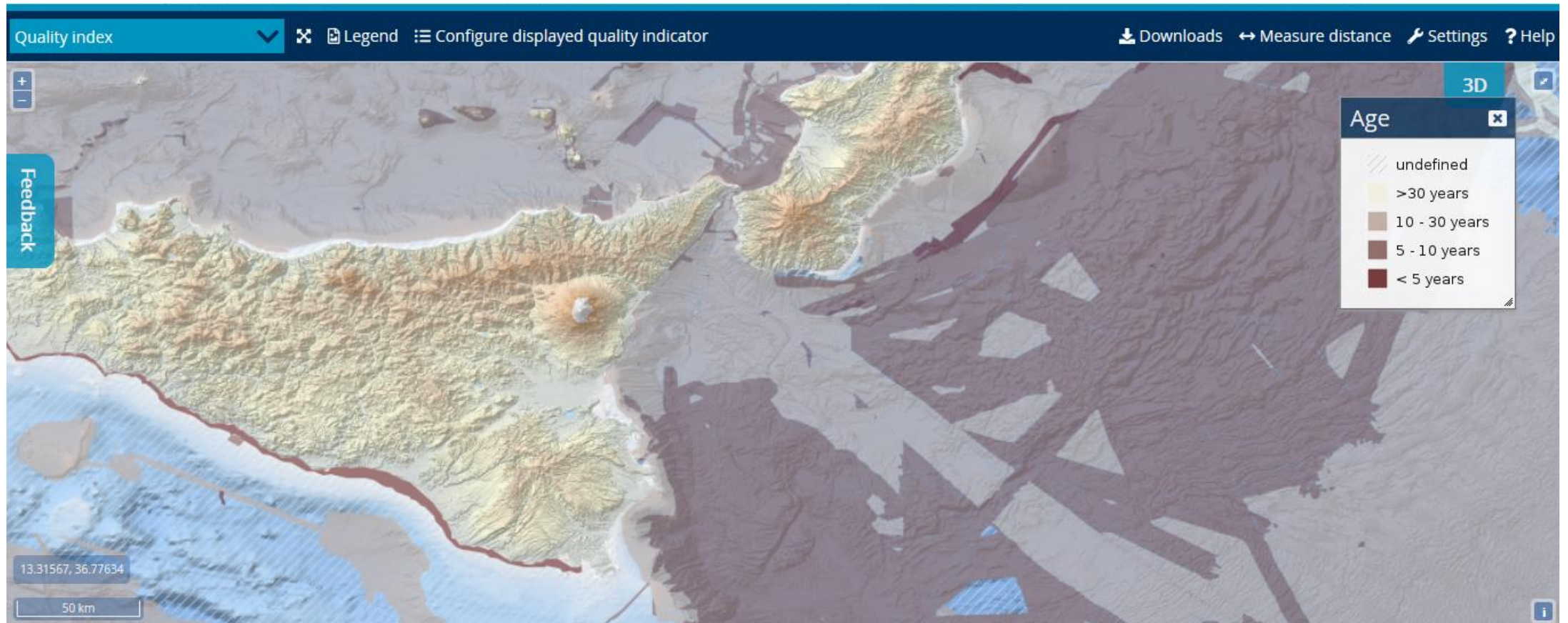
Understanding the topography of the European seas  
Bathymetry Viewing and Download service



- > 200 High resolution DTM (resolution up to the m)



# Use of the Quality layer





# Our collaboration with GEBCO Seabed 2030



## The Network of Centers

## Data Centre for Digital Bathymetry Viewer

**Layers**

- ▶ IHO DCDB/NOAA NCEI ?
- ▼ EMODnet
  - EMODnet Multibeam Surveys ?
  - MAREANO Multibeam Surveys ?
  - MAREANO Multibeam Shaded Relief ?
- EMODnet Single-Beam Surveys ?
- MAREANO Single-Beam Surveys ?
- EMODnet Digital Terrain Model (DTM) ?

▶ Australia

▶ Canada

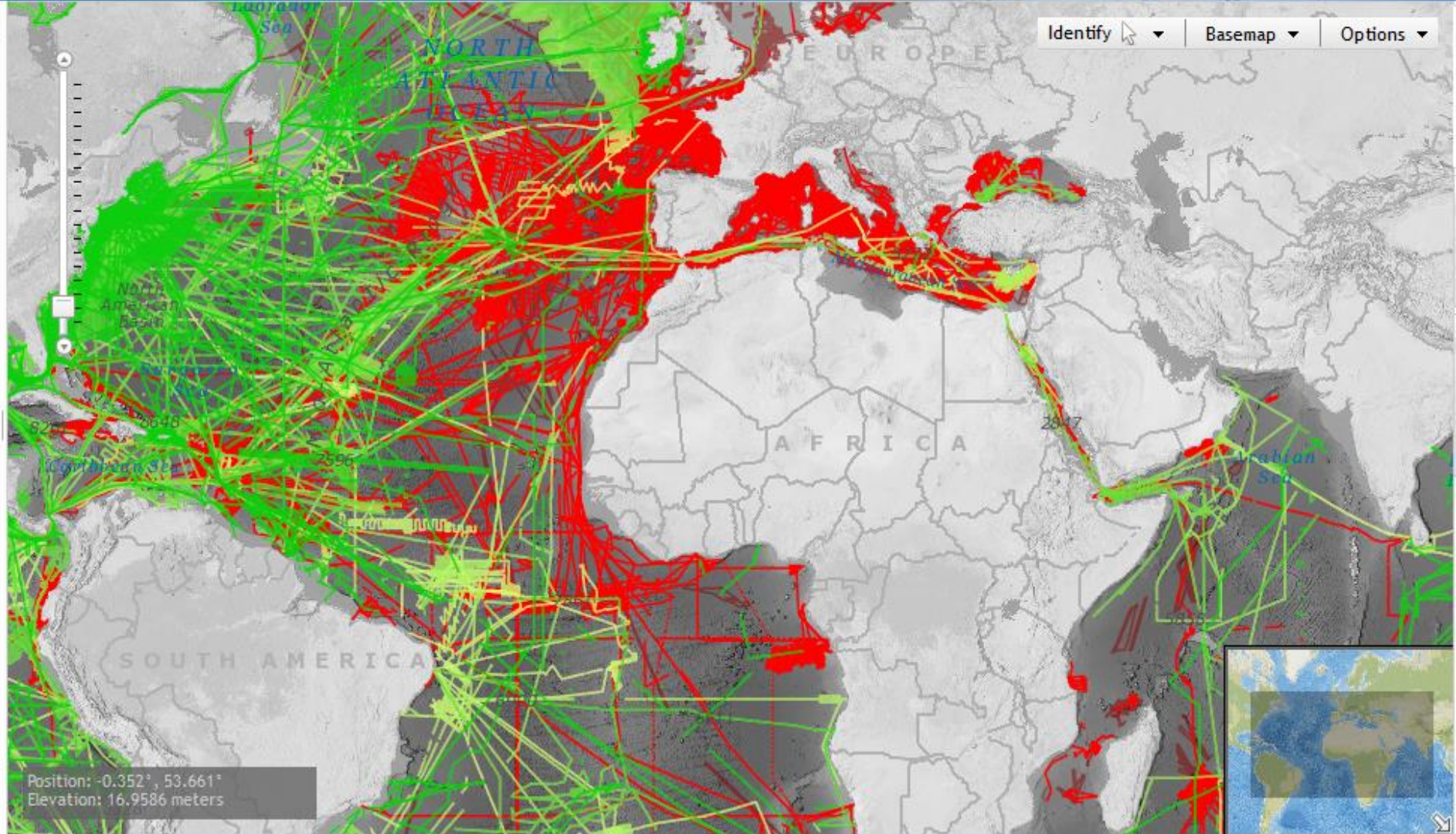
▶ France

▶ Japan

▶ Netherlands

▶ Known Non-Public Data ?

▶ Bathymetric Coverage Maps

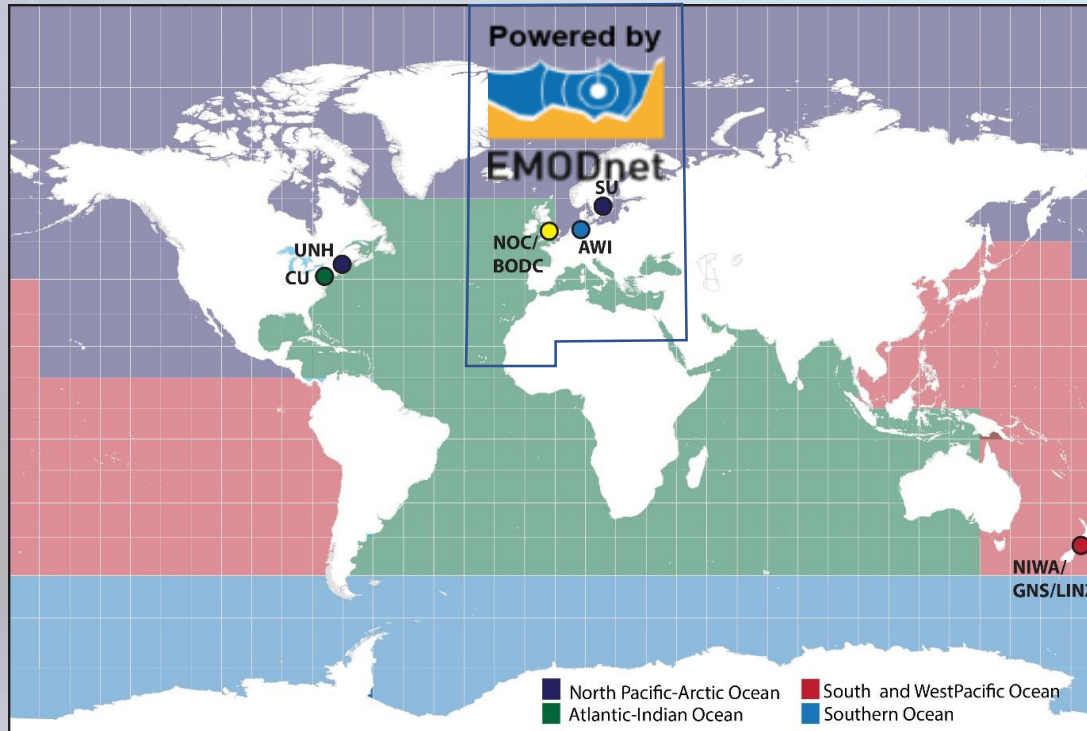


More Information

Help

# Our collaboration with GEBCO Seabed 2030

## The Network of Centers



### North Pacific –Arctic Ocean

Stockholm University & University of New Hampshire  
(SU & UNH)

### Southern Ocean

Alfred-Wegener-Institut (AWI)

### Atlantic-Indian Ocean

Lamont-Doherty Earth Observatory,  
Columbia University (CU)

### South-West Pacific Ocean

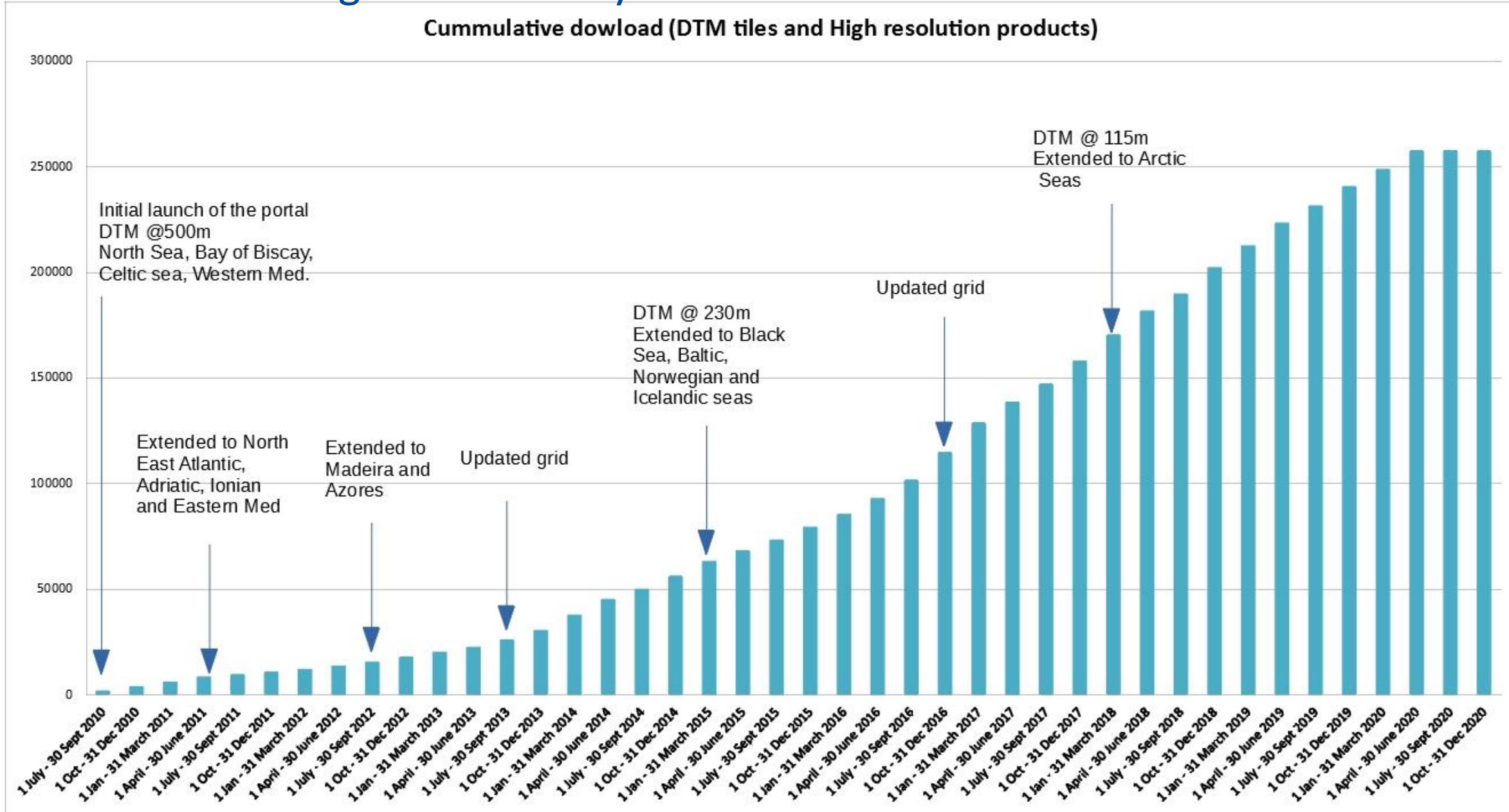
National Institute of Water & Atmospheric Research (NIWA)  
Land Information New Zealand (LINZ)  
GNS Science (GNS)

### Global Center

British Oceanographic Data Centre,  
National Oceanography Centre (NOC/BODC)



# Our driver: the usage of the bathymetric information



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# EMODnet Bathymetry's future

- **Update full DTM (end 2022)**
- Improve High-resolution DTMs
- Improve quality assessment of our DTM product
- **New area of interest: “European overseas territories” : Caribbean seas**
- Further facilitate the collaboration between all the actors through automation of services (e.g. integration of information from EMODnet Ingestion) and collaborative virtual environment for the analysis of our production (DTM).
- Efforts in tide modelling (LAT -> MSL shift)
- **Pursue effort in evaluating “new technologies” to fill data gaps / quality assessment (SDB, Altimetry, IceSat-2)**
- **Unifying all portals EMODnet thematic portals into a unique data portal. Foundation for the “Digital Twin of the Ocean”**
- Further collaborate at the international level (DCDB, GEBCO, Seabed 2030)