



Update on EMODnet Bathymetry

NSHC34 – 27, 28 April 2021

Thierry Schmitt (FR, Shom)
On behalf of the EMODnet Bathymetry consortium

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

Members of the consortium

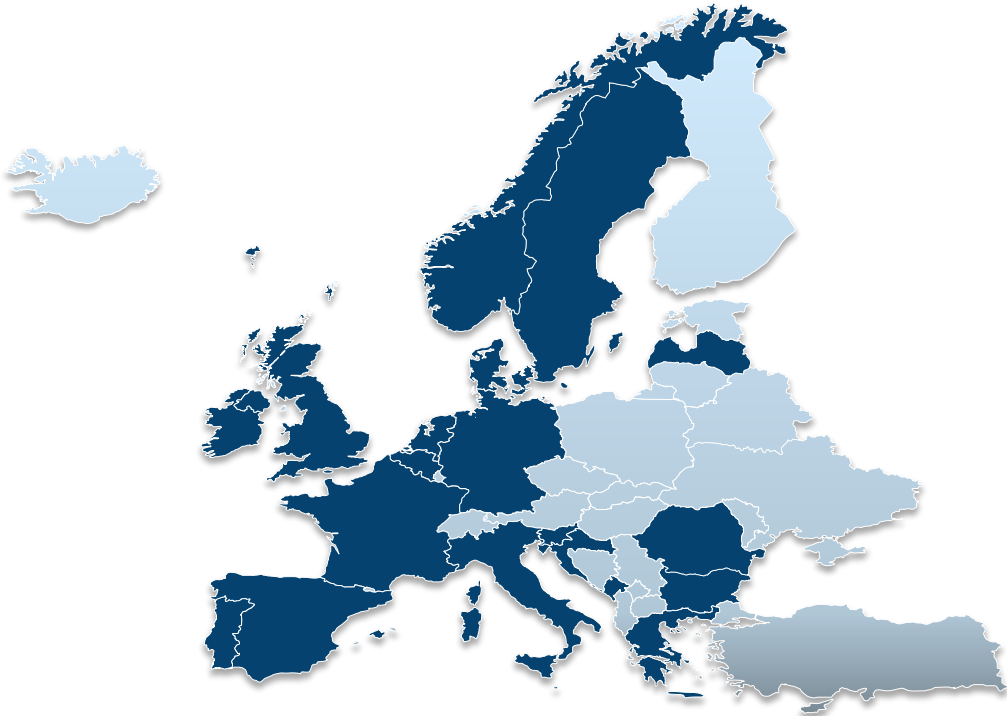
➤ Hydrographic Offices




➤ Research Institutes



➤ Small and medium-sized enterprises



CDI and CPRD catalogues



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


Survey tracks/polygons

Retrieve metadata

Order survey data

Downloads

Measure distance



Feedback

-3.07974, -4.66997

2000 km

WHAT?

Data set name

Discipline

Parameter groups

Discovery parameters

GENET-INSPIRE themes

Abstract

Data format

Data size

Data set creation date

WHERE?

Map

vakloding NH-SK

Marine geology

Terrestrial

Gravity, magnetics and bathymetry

Terrestrial

Bathymetry and Elevation


Oceanographic geographical features

Bathymetric data extract from bathymetric database

XYZ ASCII **Version 1.0**

0.1

20140613



GML id

GML objects

Datum

Measuring area type

Water depth (m)

Depth reference

Minimum instrument depth (m)

Maximum instrument depth (m)

Sea regions

ms01

| Name | Description |
|--------------|-------------|
| RA16522_6132 | coverage |

World Geodetic System 84

surface

-9999

Normaal Amsterdams Peil

-9999

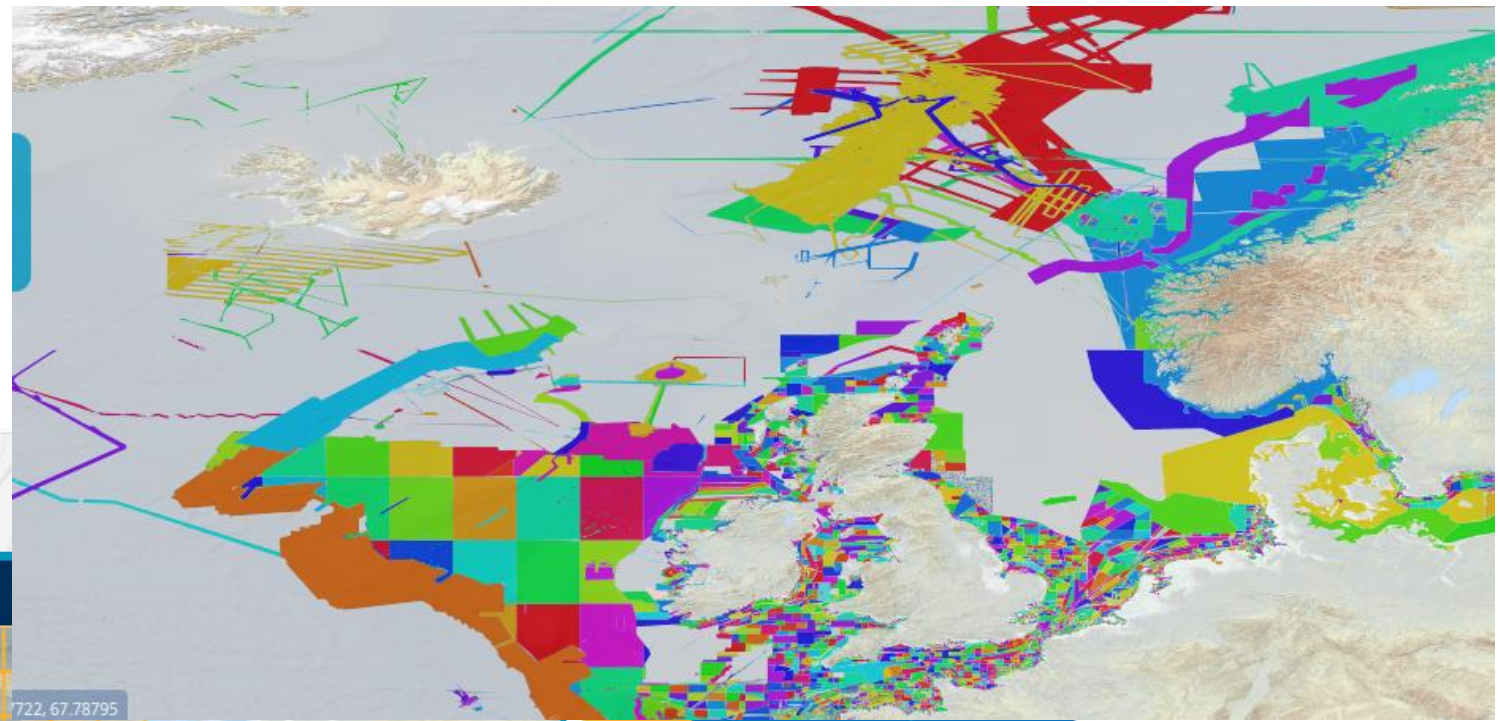
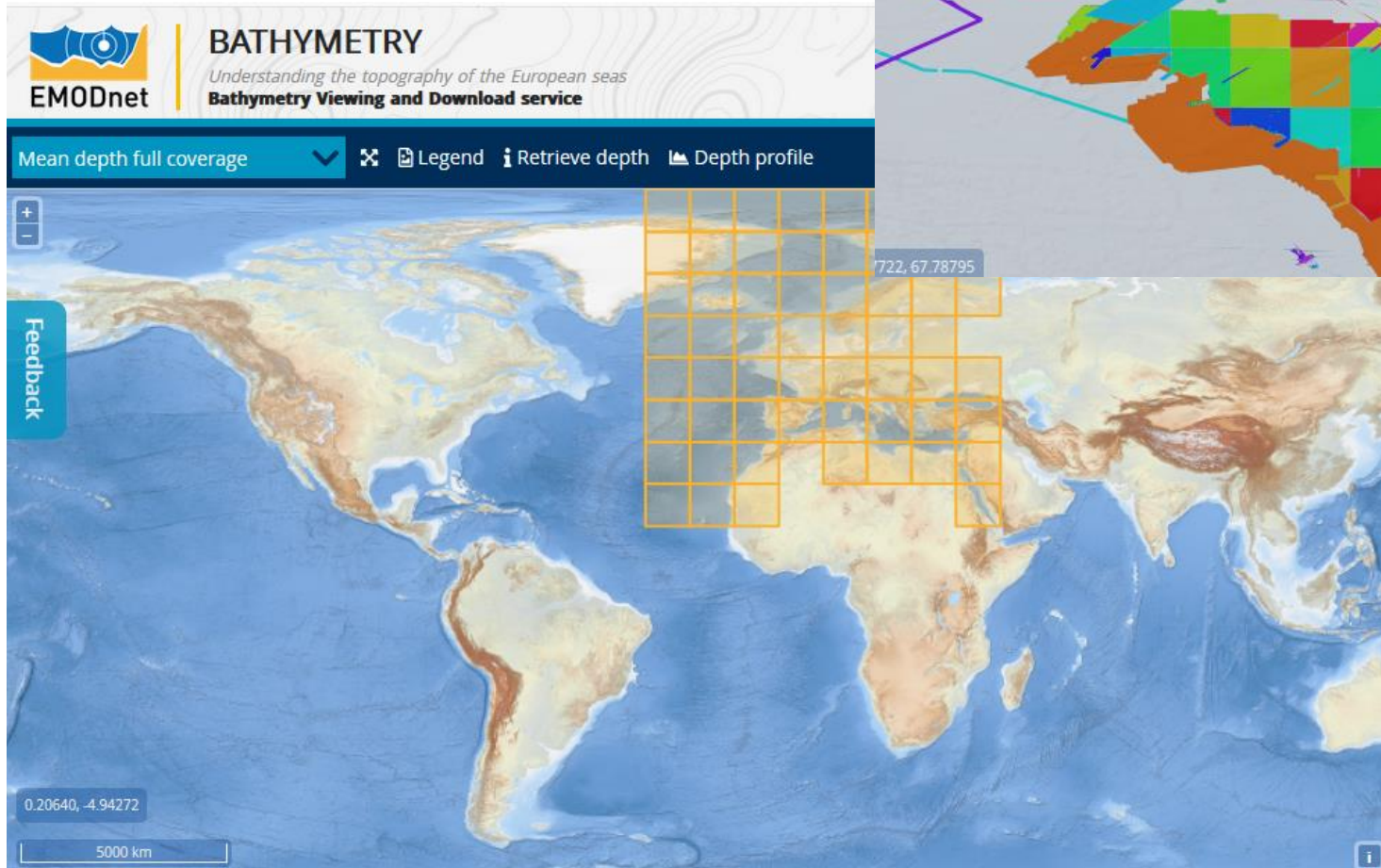
-9999

North Sea

- Circa 30.000 surveys entries (CDI – leadline, singlebeam, multibeam, Lidar)
- Circa 200 Composite DTM (CPRD – eg MAREANO, Israel NBS, IBCAO, Satellite Derived Bathymetry, ...)
- 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

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



DTM version

2016 2018 2020

Select your area(s) on the map

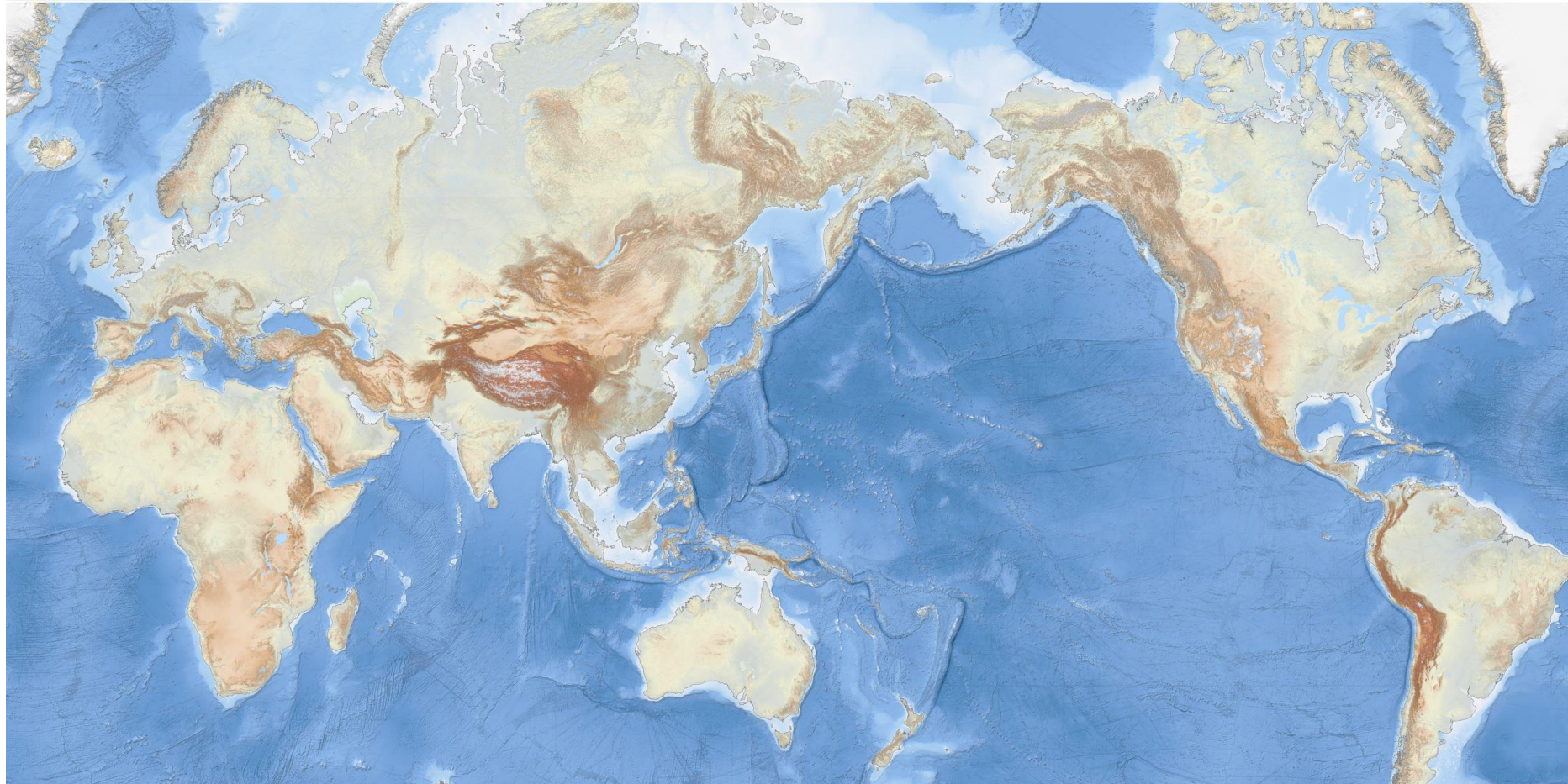
HR DTM



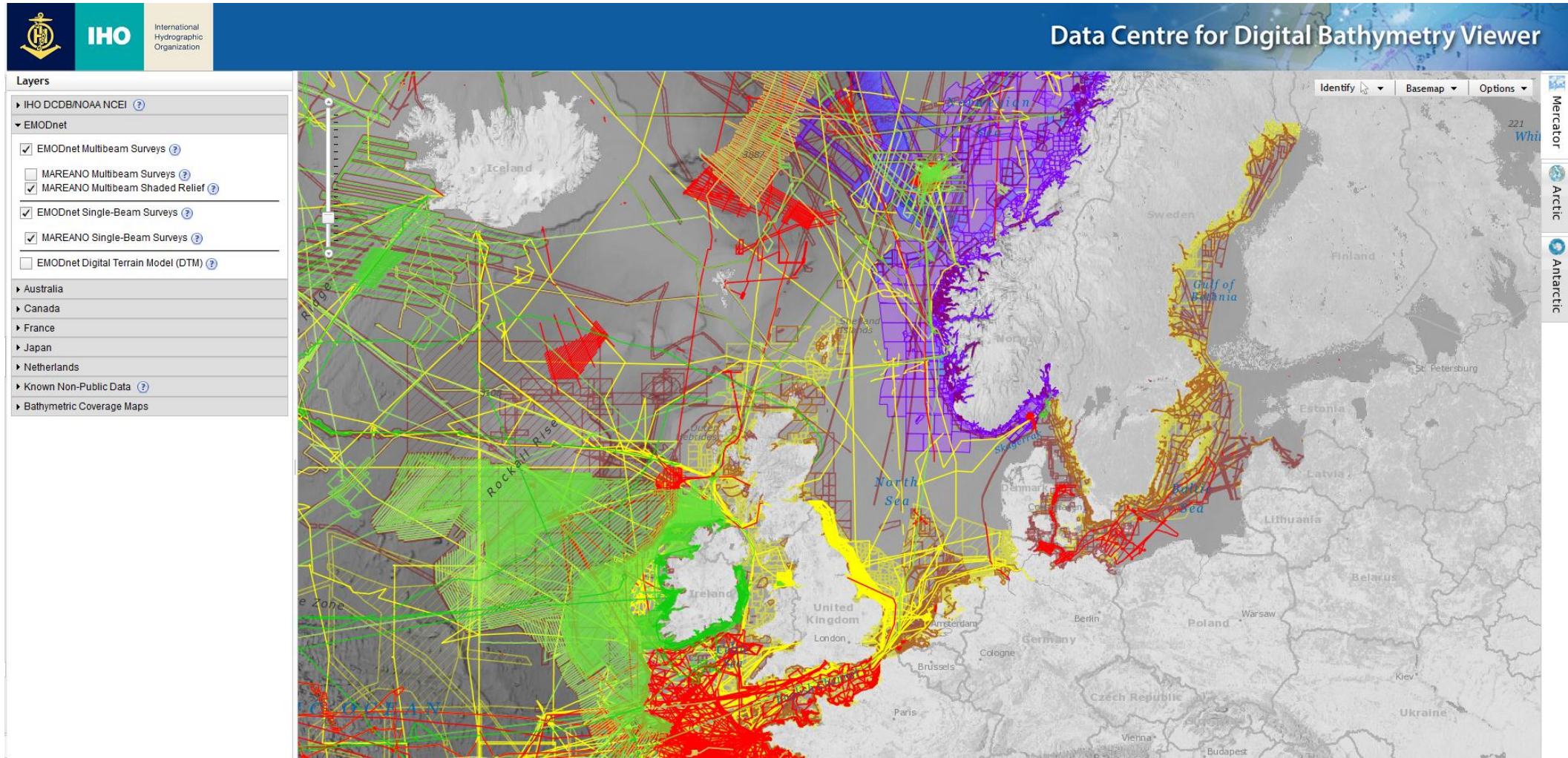
- > 200 High resolution DTM (resolution up to the m)

EMODnet Bathymetry World Base layer service

- OGC WMTS service
- Details at: <https://tiles.emodnet-bathymetry.eu/>
- Based upon EMODnet DTM + GEBCO + ViewFinderPanoramas.org (ASTER GDEM, SRTM3, EU-DEM)

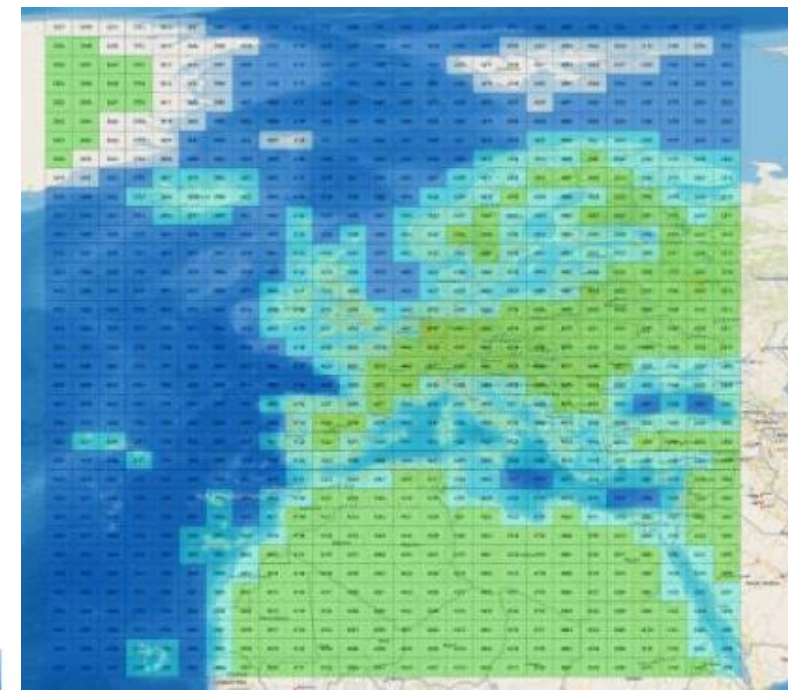
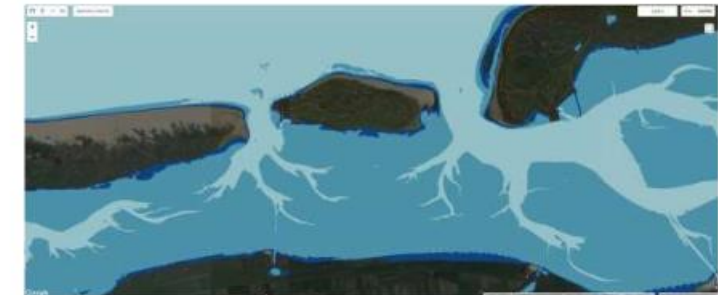
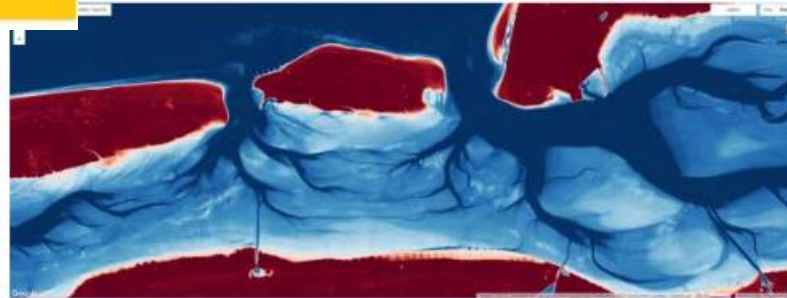
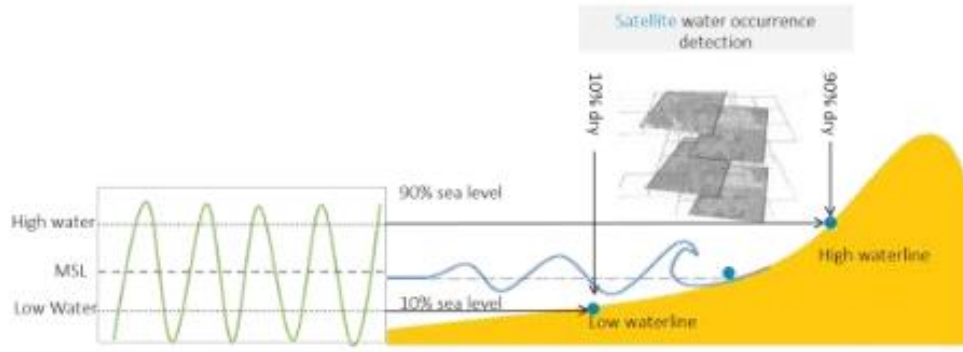


International collaboration: IHO, GEBCO and EMODnet



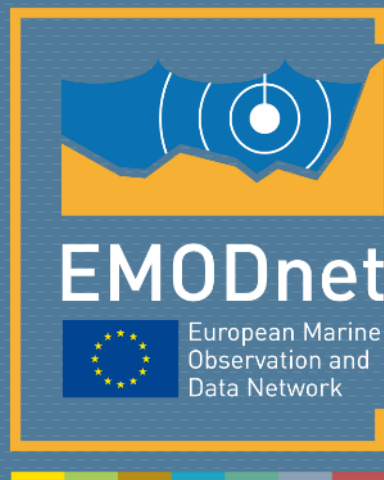
Full EMODnet Bathymetry DTM (@ approx 100m) is the European component of the GEBCO grid (since 2014)

Estimation of coastline at MSL, LAT, HAT



EMODnet Bathymetry 2020-2022

- Contract signed between Consortium leader (Shom) and EC (12/2020)
- Consortium agreement being signed as we speak.
- New data providers : VLIZ (Belgium), Teledyne/RESON (formerly Marum)
- Data providers (in discussion): Island, Spain Hos
- Improve the global coverage and quality of the global DTM and HRDTM
- New area of interest: “European overseas territories” : Caribbean seas
- Pursue effort in evaluating “new technologies” to fill data gaps (SDB, Altimetry, IceSat-2, collaborative tools)
- Unifying all portals EMODnet thematic portals into a unique data portal. Foundation for the “Digital Twin of the Ocean”

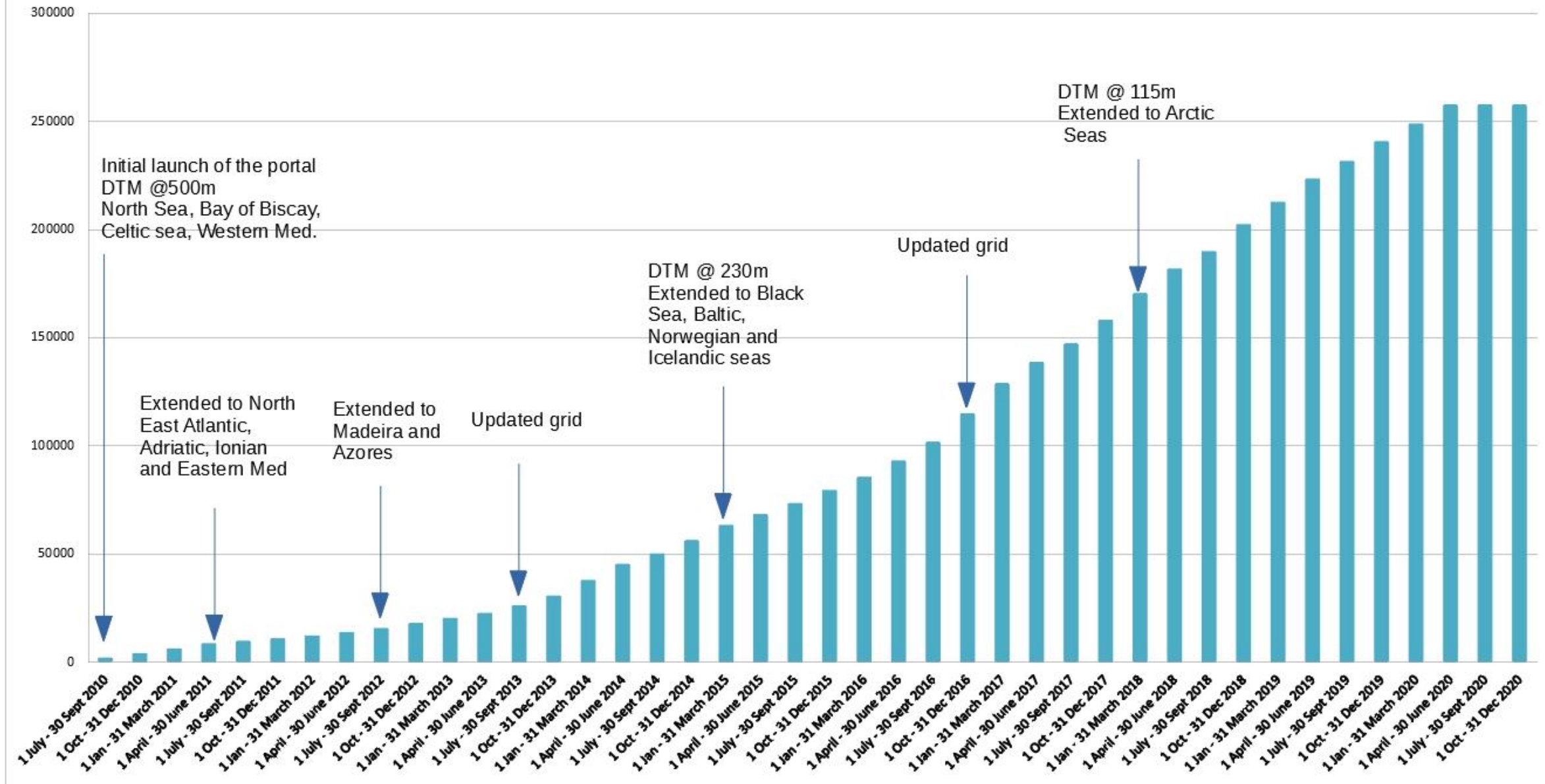


@EMODnet
www.emodnet.eu

Your gateway to marine data in Europe



Cummulative dowload (DTM tiles and High resolution products)



| Work Package No. | Work Package title | Covering tasks | WP leader |
|------------------|---|---|-----------------------------------|
| WP1 | Project Management | Task 5: Contributing content to dedicated spaces in Central Portal Task 9: Maintain the existing thematic web portal for a maximum of six months from the start of the projects | Shom + MARIS |
| WP2 | Bathymetric data collection and metadata compilation for all maritime basins and arranging common access | Task 1: Maintain and improve a common method of access to data held in repositories | MARIS + IFREMER |
| WP3 | QA-QC, data processing and producing Digital Terrain Models for the basins, the integrated EMODnet DTM, best-estimate coastlines, overview of legal baselines and vertical reference levels | Task 2: Construct products from one or more data sources that provide users with information about the distribution and quality of parameters in time and space | IFREMER + Shom + GGSGC + Deltares |
| WP4 | Technical Development & Operation of services and tools | Task 3: Develop procedures for machine-to-machine connections to data and data products Task 4: Contribute data, data products and content to a central portal that allows users to find, view and download data and data products | MARIS with TWG |
| WP5 | Uptake, cooperation, helpdesk and outreach | Task 6: Ensure the involvement of regional sea conventions Task 7: Contribute to the implementation of EU legislation and broader initiatives for open data Task 8: Monitor quality / performance and deal with user feedback | Shom + CNR-ISMAR |

DTM and HRDTM production agenda

- CDI / CPRD preparation -> Summer 2021
- New Globe version -> Summer 2021
- Globe Training -> September 2021
- DTM preparation by all data providers -> End 2021
- Basin coordinator to generate their grid -> June 2022 (preferably before)
- HR-DTM production -> June 2022

- Review the 2018 DTM version using the WPS tools -> early 2022

Quality layer

