



*Your gateway to marine data in Europe*

# EMODnet High Resolution Seabed Mapping

IENWG, Paris – France, 14 January 2020

Schmitt Thierry

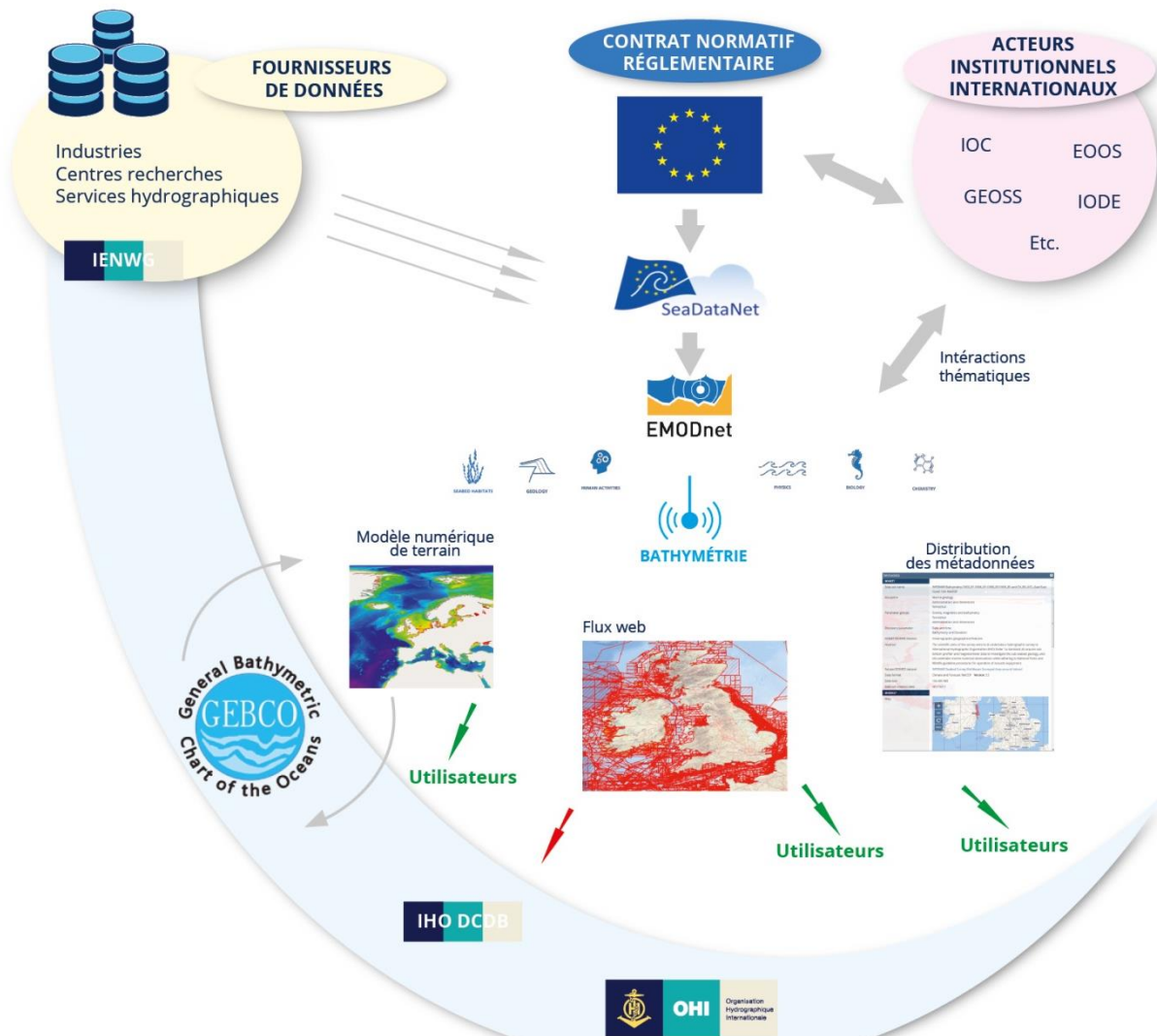
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# EMODnet

European Marine  
Observation and  
Data Network

# EMODnet Bathymetry Ecosystem





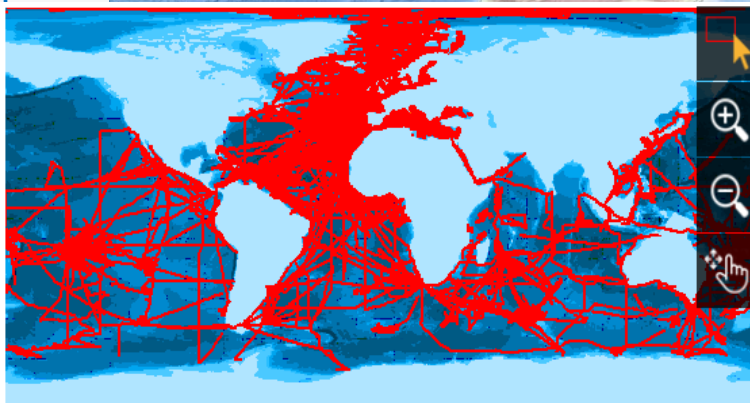
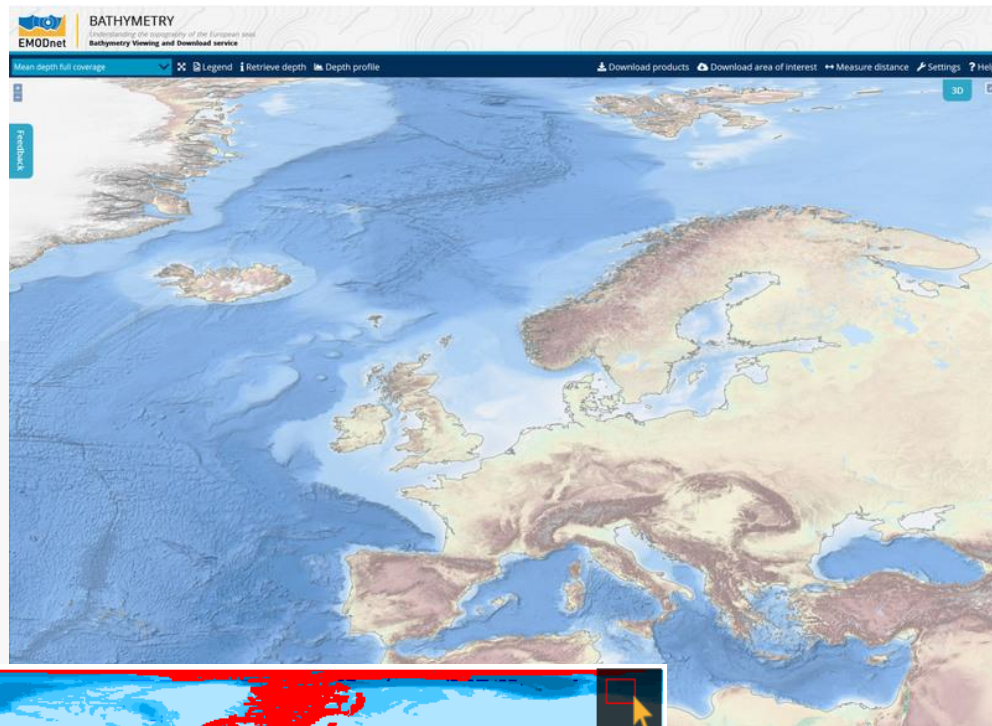
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# HRSM EU bathy dataset inventory and DTM release

- Resolution increased from  $1/8 * 1/8$  arc minutes to  $1/16 * 1/16$  arc minutes (circa  $115 * 115$  meters);
- The EMODnet DTM now contains  $113892 * 108132 =$  circa 12.3 billion data points;
- Expanded coverage including all European seas as well as the European part of the Arctic Ocean and Barents Sea;
- The inclusion of Satellite Derived Bathymetry data products, in particular for coastal stretches of Spain and Greece.
- <http://doi.org/10.12770/18ff0d48-b2034a65-94a9-5fd8b0ec35f6>



1/28/2020



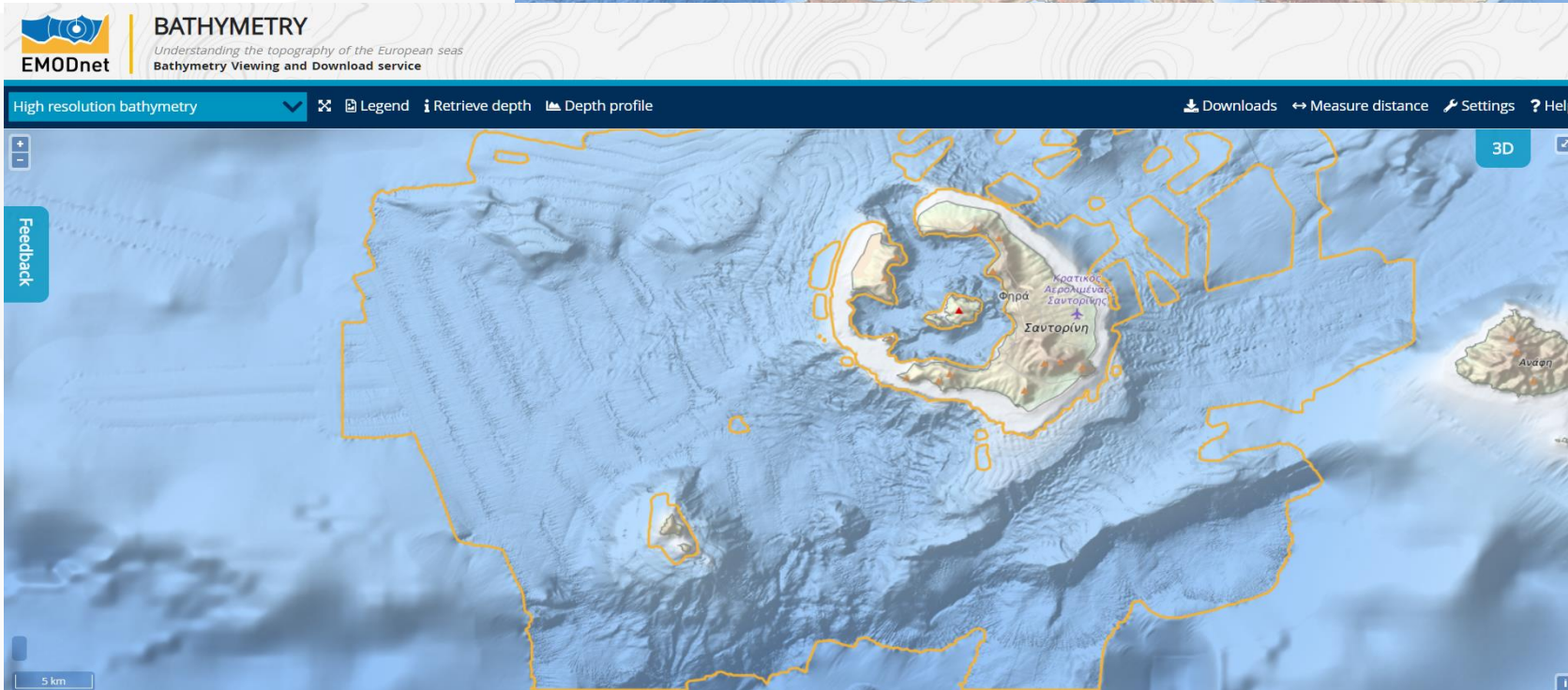
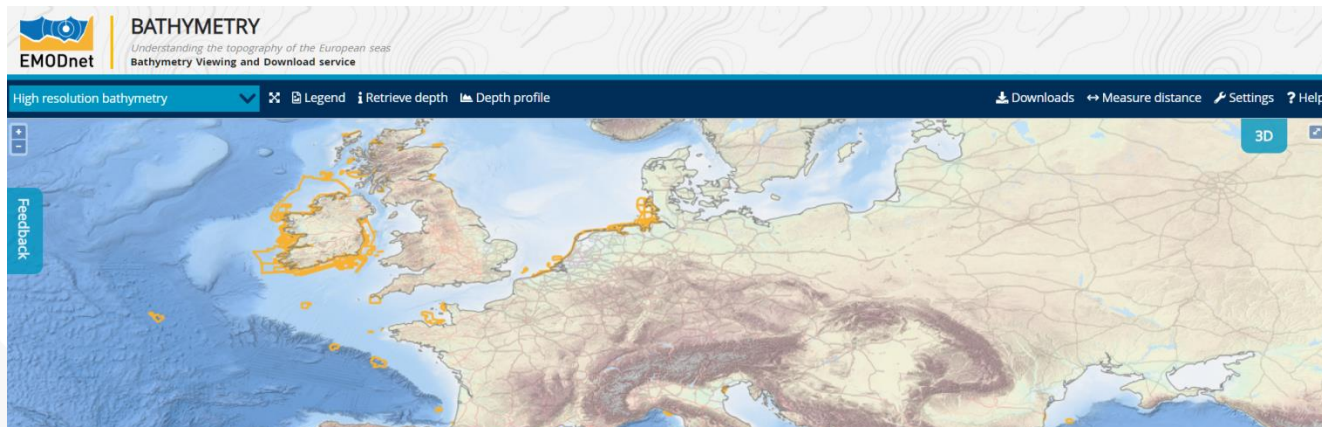


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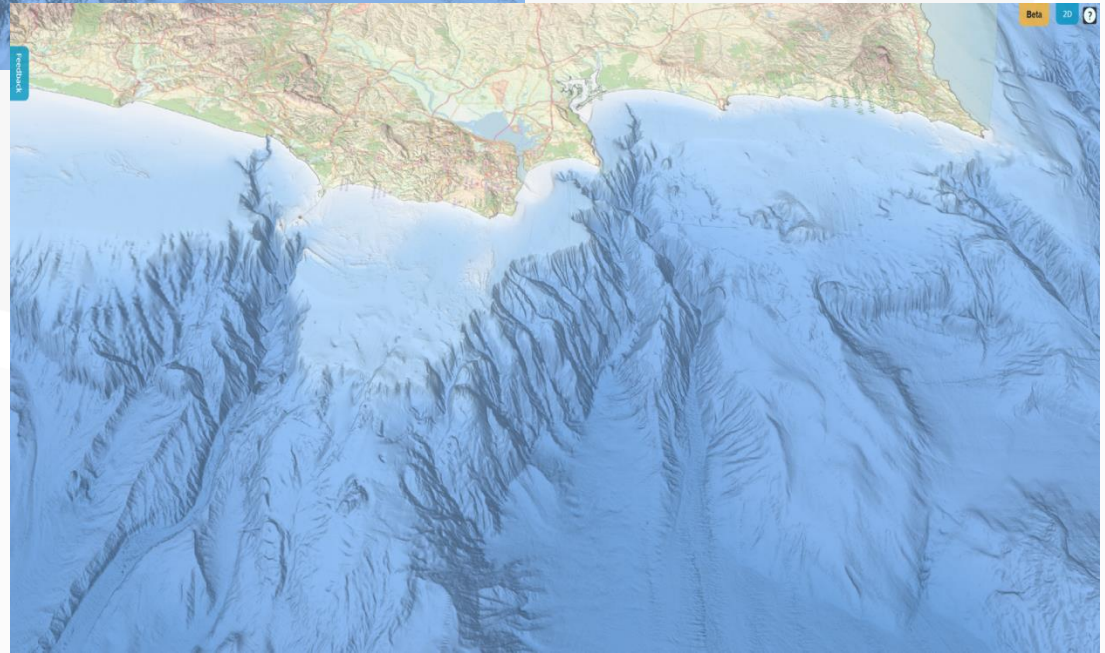
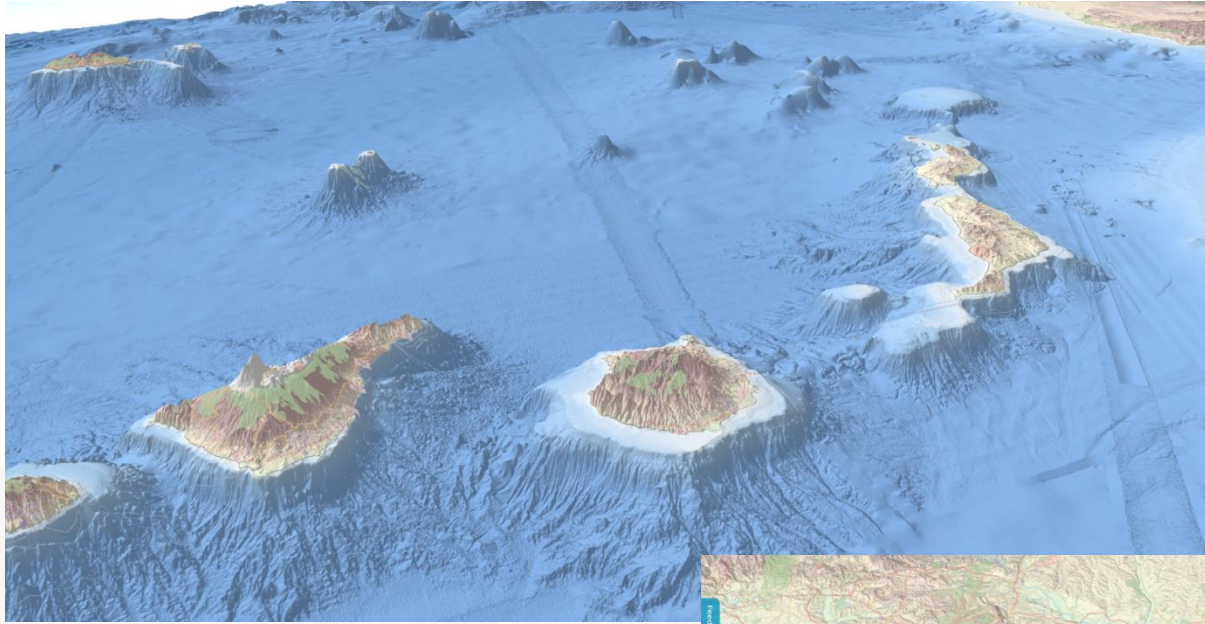
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## HRSM 2016-2018 Finalised HRDTM





# Facilitating user's experience





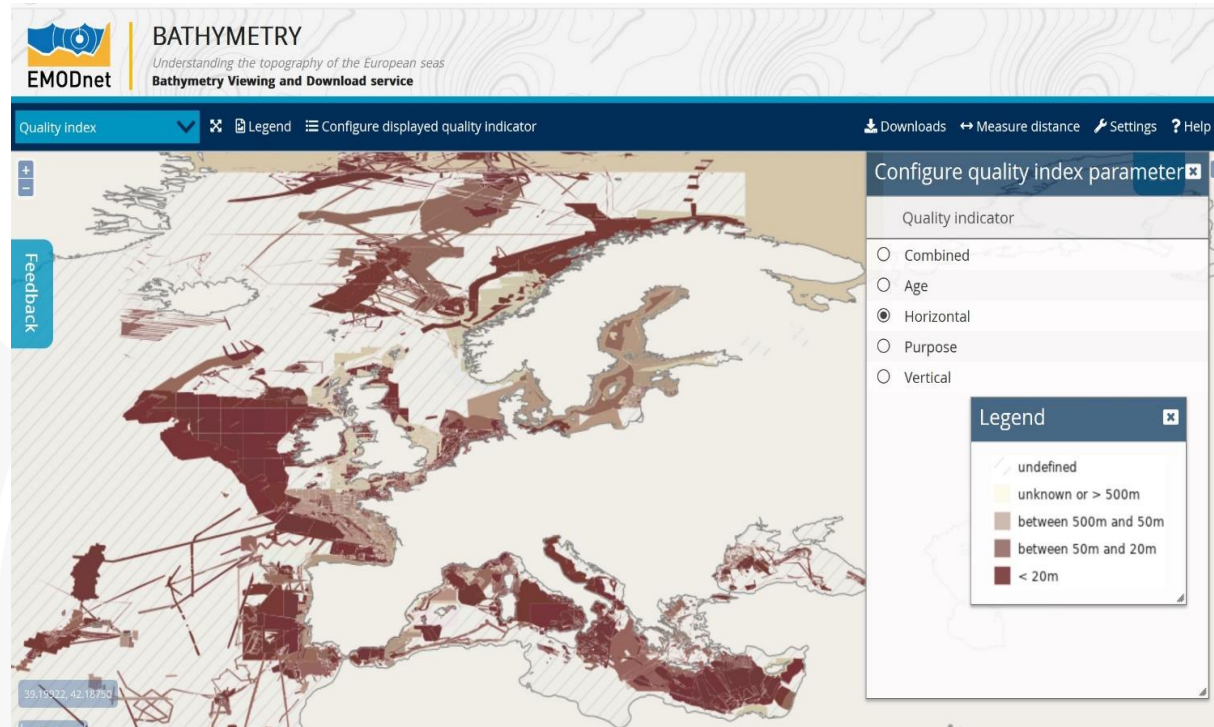


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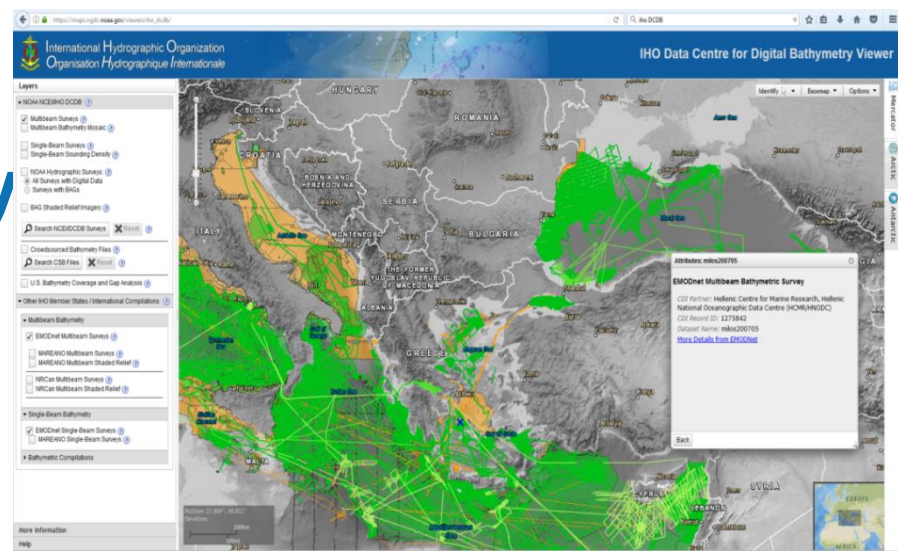
# HRSM 2016-2018 Quality index



## Other important results:

- DTM provided at both LAT and MSL
- Integration of Satellite Derived Bathymetry in the DTM product
- Coastline (legal/baseline) existing inventory from member state. Associated method to provide a best estimate of the intersection of various sea levels with topography
- Collaborative Virtual Environment

# Interoperability



- 📍 **Current availability** of data beyond European waters:  
 CDI and CPRD for data sources worldwide (INSPIRE compliant metadata)
- 📍 **Current interactions** with projects, initiatives, wider stakeholders beyond Europe  
 Globally by a tight connection with the General Bathymetric Chart of the Ocean (GEBCO) and the associated Seabed 2030 initiative
- 📍 **Current compatibility** of your EMODnet web services with other regions outside Europe and international initiatives.  
 Full Availability of WMS (DTM) and WFS (data sources). (e.g. IHO DCDB website)



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# Plans for next release

- ⦿ Awarded (12/2018), consortium agreement signed (07/2019)
- ⦿ Technical (04/2019, 10/2019) and kick off meeting in Brest (06/2019)
- ⦿ Main objectives:
  - ⦿ Update with new datasets (bathy full DTM and HR)
  - ⦿ Improvement/corrections of artefacts
  - ⦿ Improve production tools (both software and Collaborative Virtual Environment)
  - ⦿ Produce new shallow satellite derived areas
  - ⦿ Improve coastline detection algorithm (especially for high latitudes)
  - ⦿ Improve global tidal modelling
- ⦿ Pursue collaborations with Seabed Habitat. Strengthen collaboration with Geology
- ⦿ Pursue international collaboration with GEBCO/Seabed 2030





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# EMODNet PACE (Partnership for China and Europe)

## 🕒 Objectives:

- 🕒 Develop protocols to allow data from EU's European Marine Observation and Data Network (EMODnet) and the Chinese National Marine Data and Information Service to be seamlessly combined in order to provide a more precise, more complete and more coherent picture of these changes
  - 🕒 Compare approaches for the performance of models and indicators for circulation, seabed habitat and ecosystem vulnerability in European and Asian seas
  - 🕒 Assess how coastlines between Europe and Asia are changing in terms of sea-level-rise, coastal erosion and wetland degradation.
- 🕒 Duration : 30 months
- 🕒 Initial bi-lateral meeting: 30 March – 3 April 2020