



INFORMATIONAL BRIEFING ON GEBCO

(GENERAL BATHYMETRIC CHART OF THE OCEANS)

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What is GEBCO?



The General Bathymetric Chart of the Oceans (GEBCO):

- Aims to provide the most authoritative, publicly-available bathymetric datasets (grids) for the world's oceans
- Maintains and makes available a gazetteer of undersea feature names

GEBCO operates under the joint auspices of the International Hydrographic Organization (IHO) and Intergovernmental Oceanographic Commission (IOC) of UNESCO

www.gebco.net

GEBCO's organisational structure



GEBCO is led by a Guiding Committee consisting of 5 IHO-appointed members; 5 IOC-appointed members; Sub-committee Chairs and the Director of the IHO-DCDB

It has 3 sub-committees and a number of working groups:

- Sub-Committee on Undersea Feature Names (SCUFN)
- Technical Sub-Committee on Ocean Mapping (TSCOM)
- Sub-Committee on Regional Undersea Mapping (SCRUM)
- Working groups on Outreach, Metadata and the IHO-IOC GEBCO Cook Book

www.gebco.net/about_us/committees_and_groups/

Capacity-building initiative: postgraduate training course



The Postgraduate Certificate in Ocean Bathymetry

*Designed to train a new generation of scientists and
hydrographers in ocean bathymetry*

is funded by:



The Nippon Foundation of Japan

and taught at:

**The Center for Coastal and Ocean Mapping /
Joint Hydrographic Center; University of New Hampshire, USA**

www.gebco.net/training/

GEBCO's products



Bathymetric data sets and products:

- Global gridded bathymetric data set (30 arc-second interval)
- GEBCO Gazetteer of Undersea Feature Names
- GEBCO Digital Atlas
- Grid viewing software
- GEBCO world map
- Web Map Service (WMS)
- IHO-IOC GEBCO Cook Book

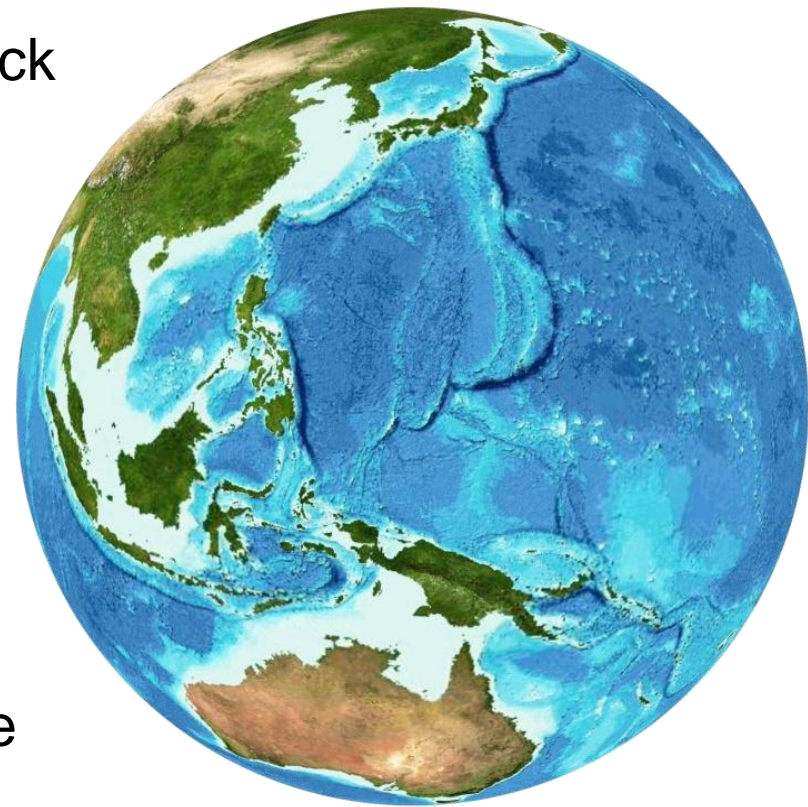
www.gebco.net/data_and_products/

GEBCO's products: global bathymetric grid



The GEBCO Grid is a global terrain model at 30 arc-second intervals:

- Largely based on a database of ship-track soundings with interpolation between soundings guided by satellite-derived gravity data
- Includes regional grids which may be based on different interpolation models
- Accompanied by a Source Identifier Grid showing which cells are based on soundings or existing grids and which are interpolated



GEBCO's grids are made available for non-navigational purposes

Regional mapping work



Recognising the importance of the contributions of regional experts in improving its global bathymetric models, GEBCO has setup the Sub-Committee on Regional Undersea Mapping (SCRUM) to:

- Build a closer collaboration with regional mapping efforts and coordinate, as well as encourage, the incorporation of their compilations into GEBCO.

The Global GEBCO grid is continuously updated in part from these regional grids, benefiting greatly from their local knowledge and expertise.

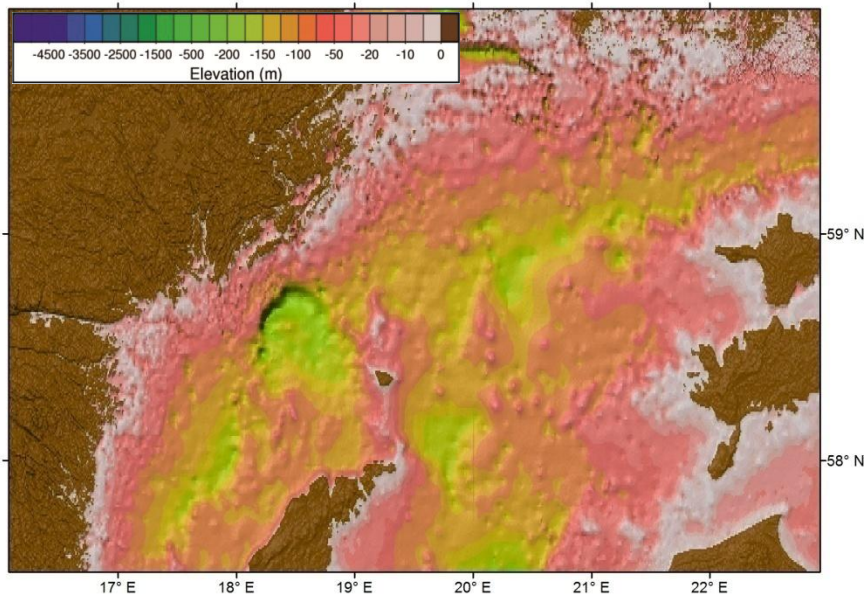
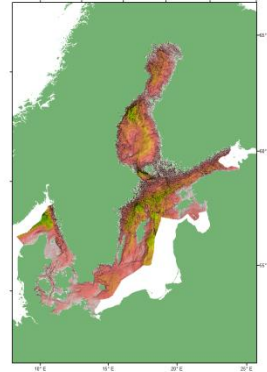
www.gebco.net/regional_mapping/mapping_projects/

Regional mapping work: improving GEBCO's global grid

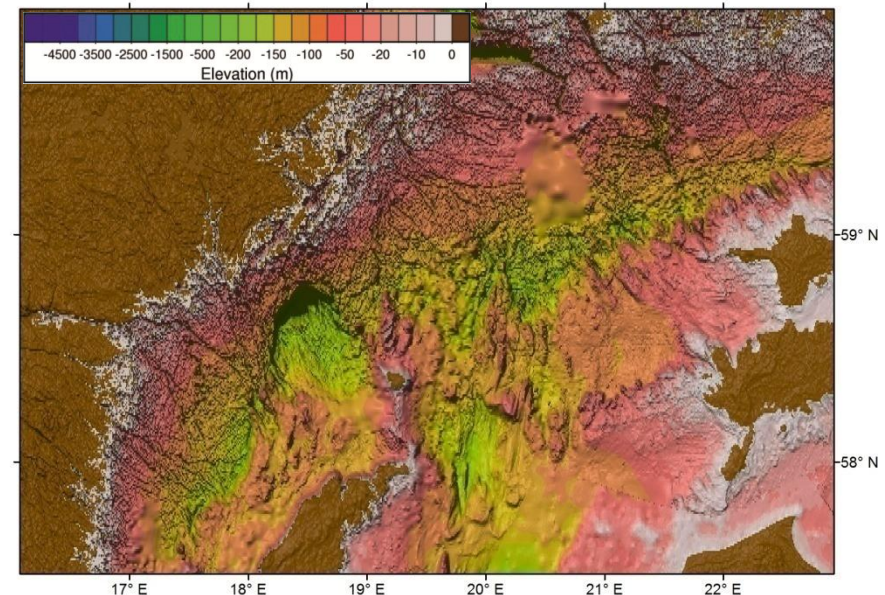


Examples of regional mapping contributions to GEBCO:

Contribution of a grid from the Baltic Sea Bathymetry Database (BSBD) <http://data.bshc.pro/> - based on data sets from Baltic Sea Hydrographic Commission (BSHC) organisations



Existing GEBCO grid



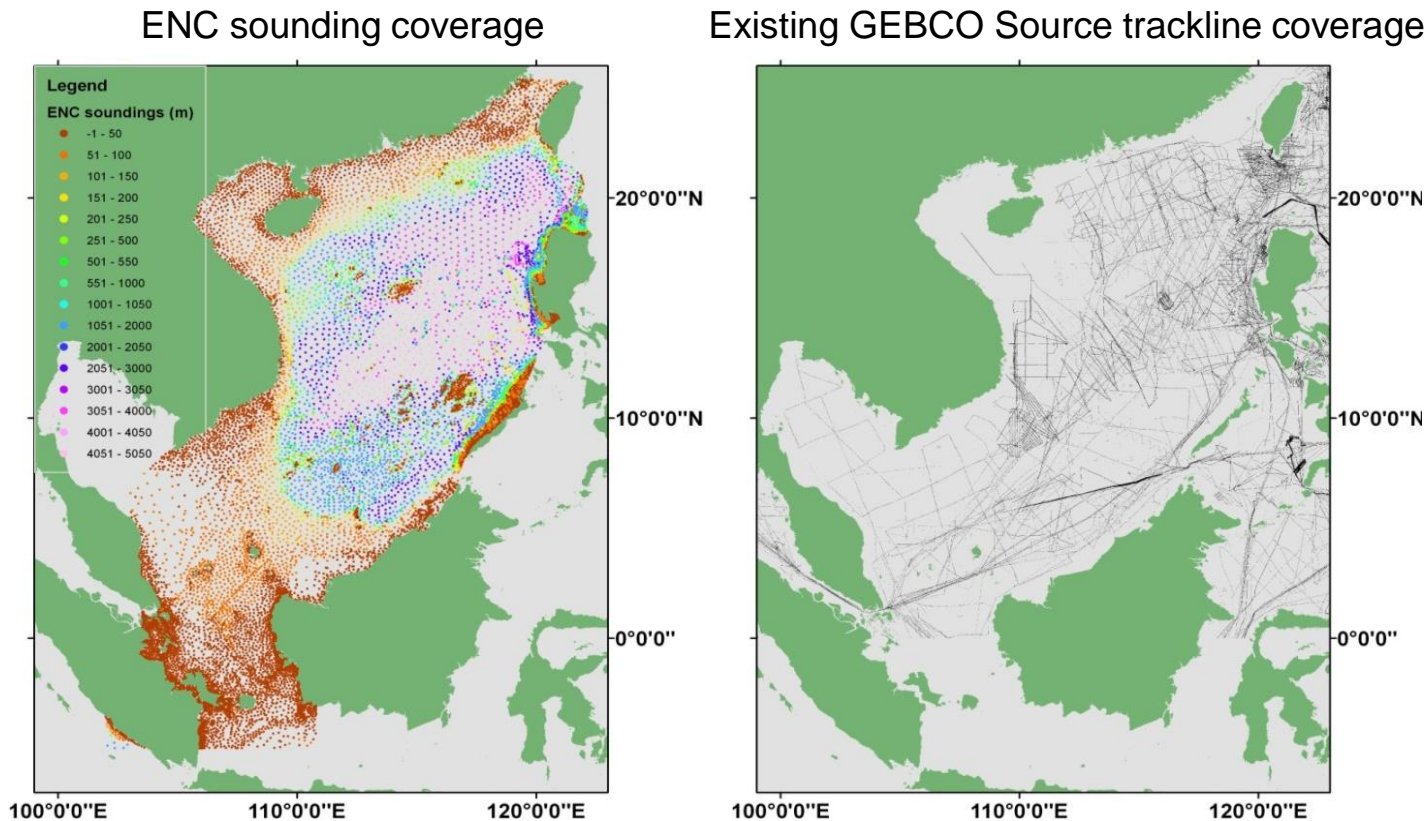
GEBCO grid updated with BSBD grid

Regional mapping work: improving GEBCO's global grid



Examples of regional mapping contributions to GEBCO:

Bathymetric sounding data extracted from ENC's, contributed by the East Asia Hydrographic Commission for part of the South China Sea region



Regional mapping work: improving GEBCO's global grid



Examples of other regional mapping contributions to GEBCO:

For polar regions, GEBCO has benefited from contributions from

- International Bathymetric Chart of the Arctic Ocean (IBCAO)
- International Bathymetric Chart of the Southern Ocean (IBCSO)

For European waters, GEBCO is collaborating with the EMODnet Bathymetry project: <http://www.emodnet-hydrography.eu/>

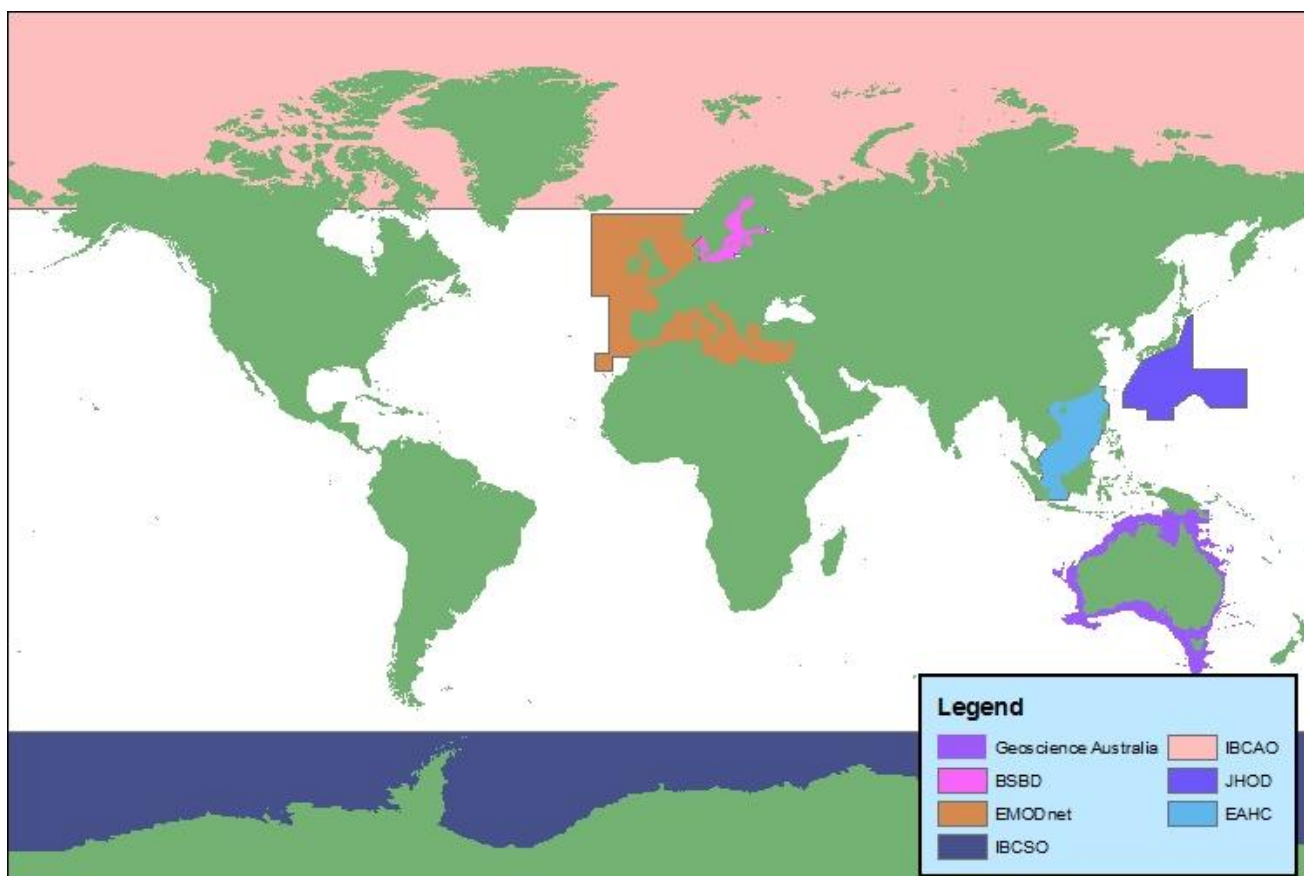
GEBCO has initiated The Indian Ocean Bathymetric Compilation (IOBC) project to map the Indian Ocean region

www.gebco.net/regional_mapping/mapping_projects/

Regional mapping work



Some of the regional compilations which will be included in the next release of the GEBCO global grid



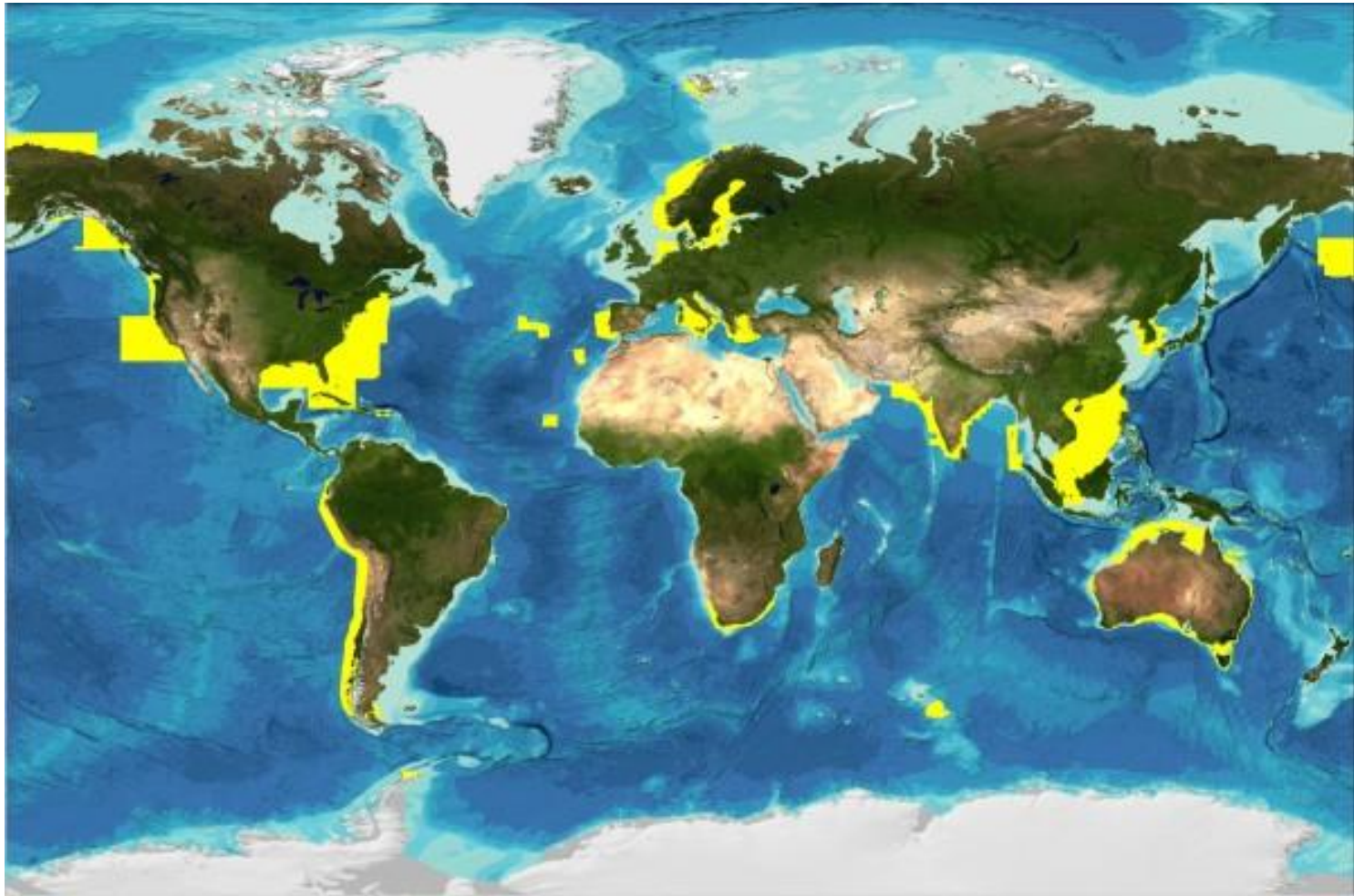
Shallow-water bathymetry initiative



Example: Working to improve GEBCO's grid in shallow-water areas:

- GEBCO's datasets and maps have traditionally concentrated on the bathymetry of the deeper water regions of the world's oceans – i.e. at depths of 200 m and deeper
- To more accurately model the shape of the ocean floor in all areas and serve a wider user community, GEBCO is striving to improve its gridded bathymetric datasets in shallower waters
- In 2006 a request was made to IHO Member States to provide ENC data (usage bands 2 and 3) to GEBCO to help update its global model
www.gebco.net/data_and_products/gridded_bathymetry_data/shallow_water_bathymetry/

Shallow-water bathymetry initiative



ENC data coverage (usage bands 2 & 3) provided, to date, by IHO Member States and organizations to GEBCO for grid updating work

GEBCO's current grid development work



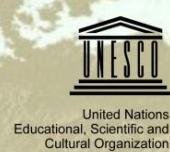
GEBCO is working on creating a new global bathymetric grid – aimed for release in September 2014

Part of this new release will include an update for parts of the North-west Atlantic Ocean region and Arctic Ocean.

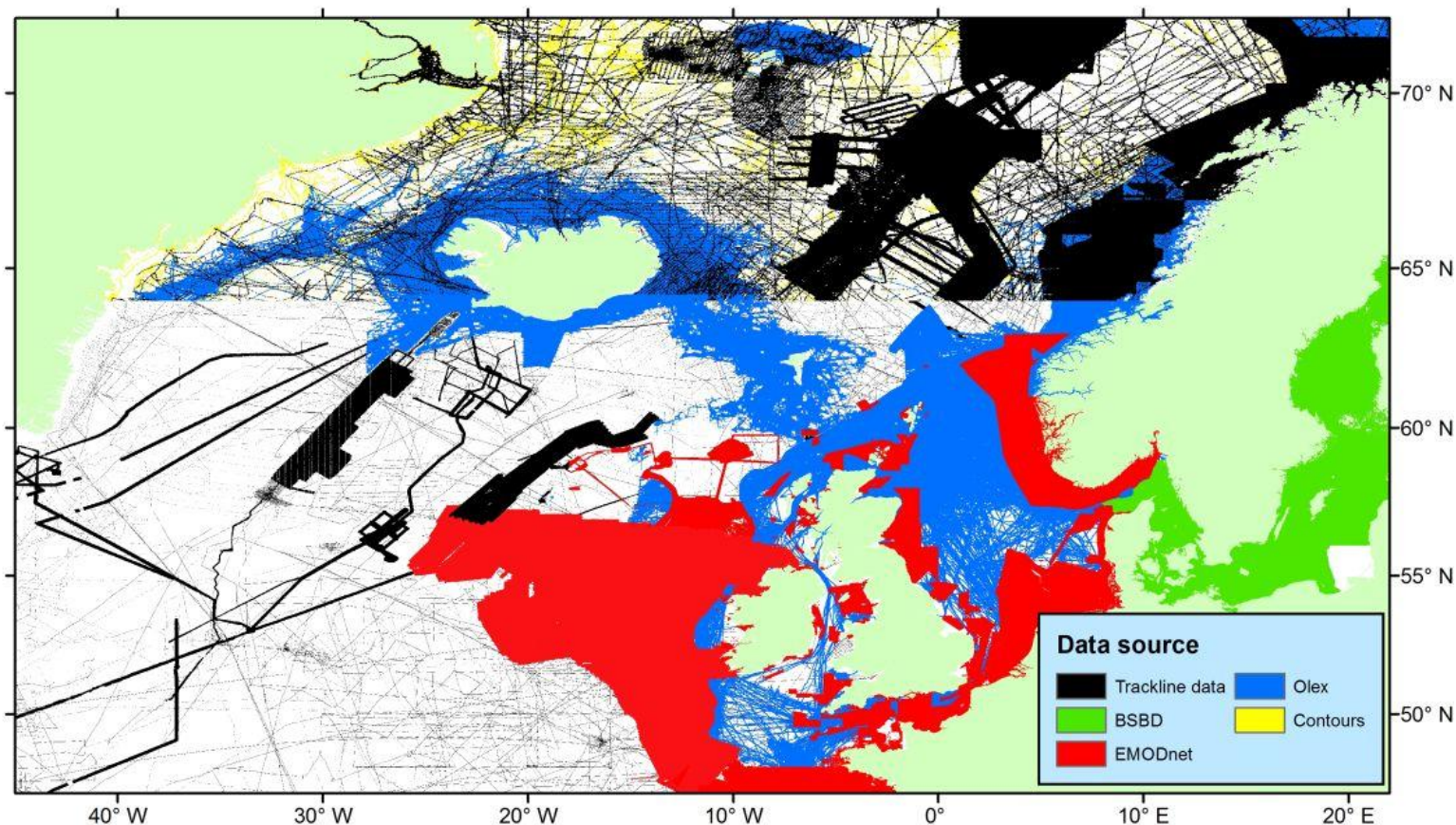
In this area the updates are largely based on data from regional compilations:

- EMODnet (2013 release of their gridded data set)
- IBCAO
- Baltic Sea Bathymetry Database
- Olex database (data collected from fishing vessels)

GEBCO's current grid development work



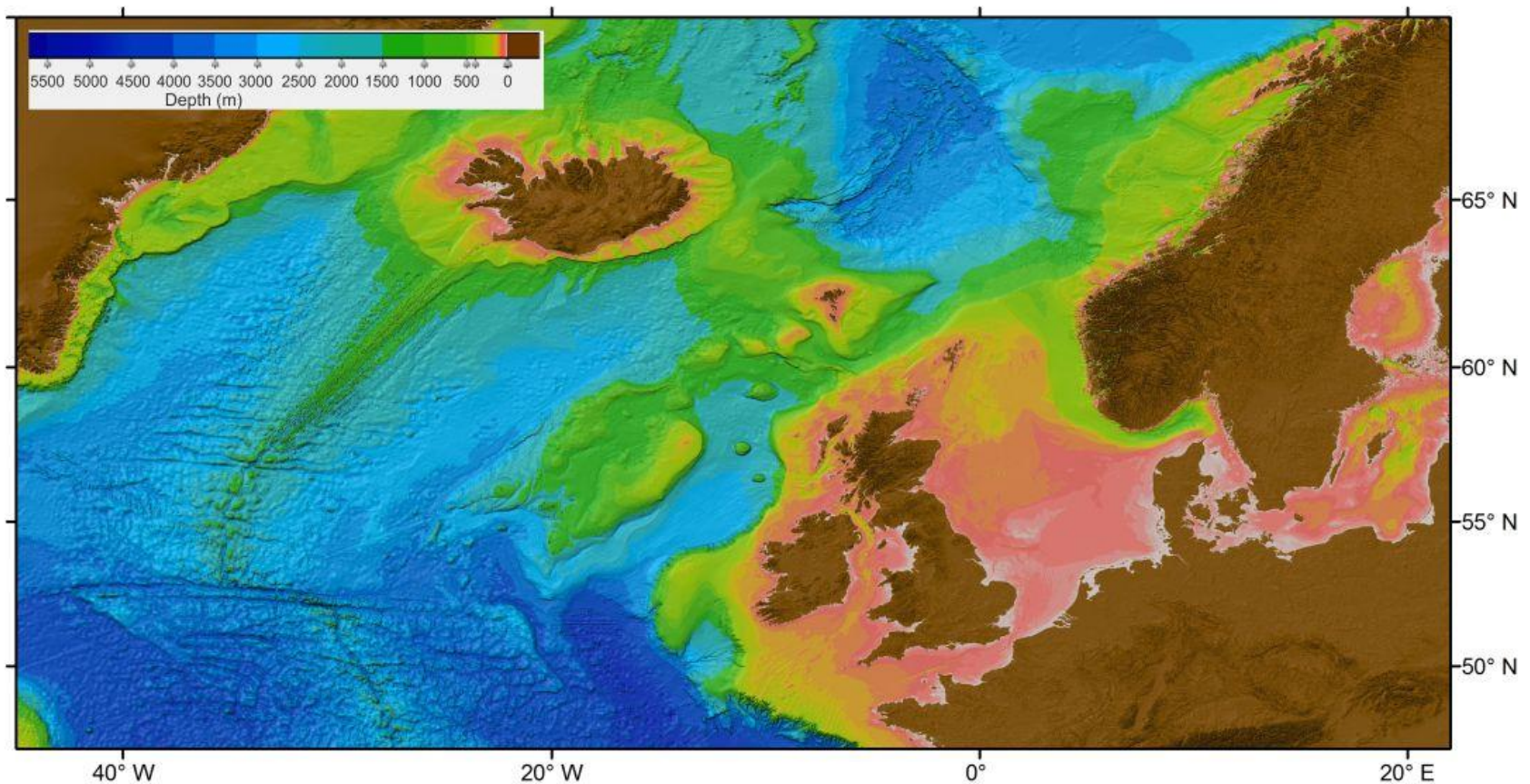
GEBCO Source Identifier Grid – showing coverage of data sources in the NW Atlantic area for 2014 release of the GEBCO Grid



GEBCO's current grid development work



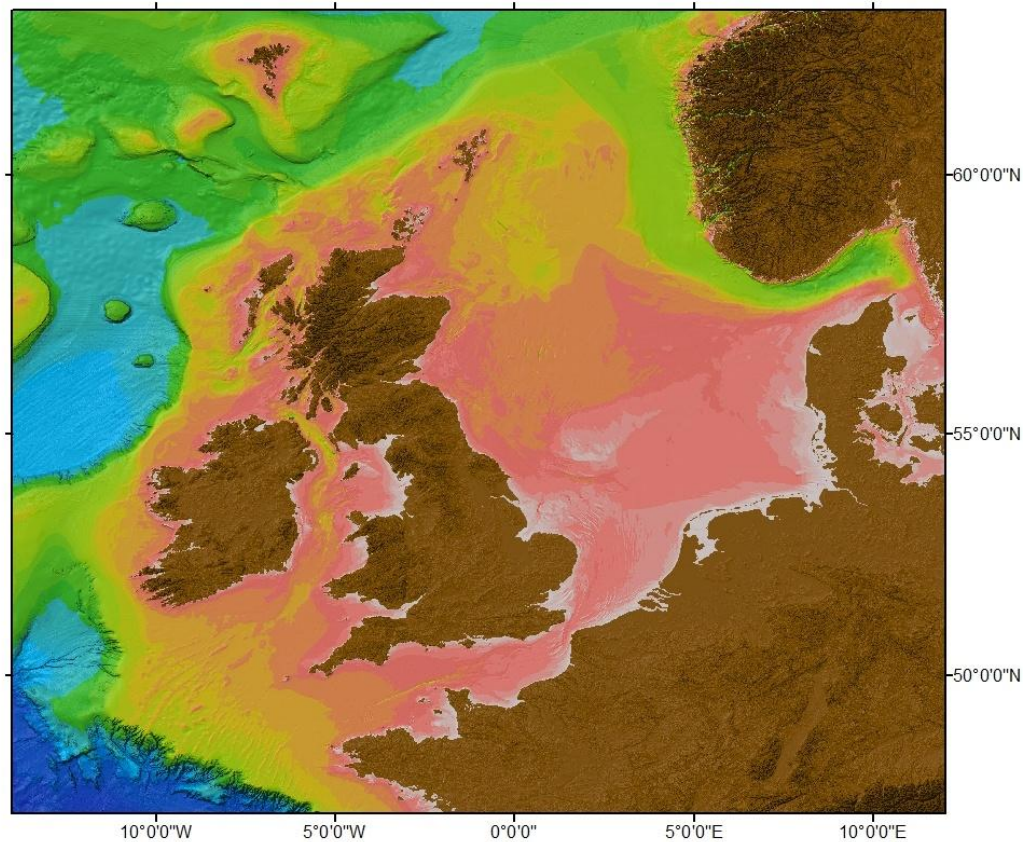
GEBCO_2014 – due for release in September 2014



GEBCO's current grid development work



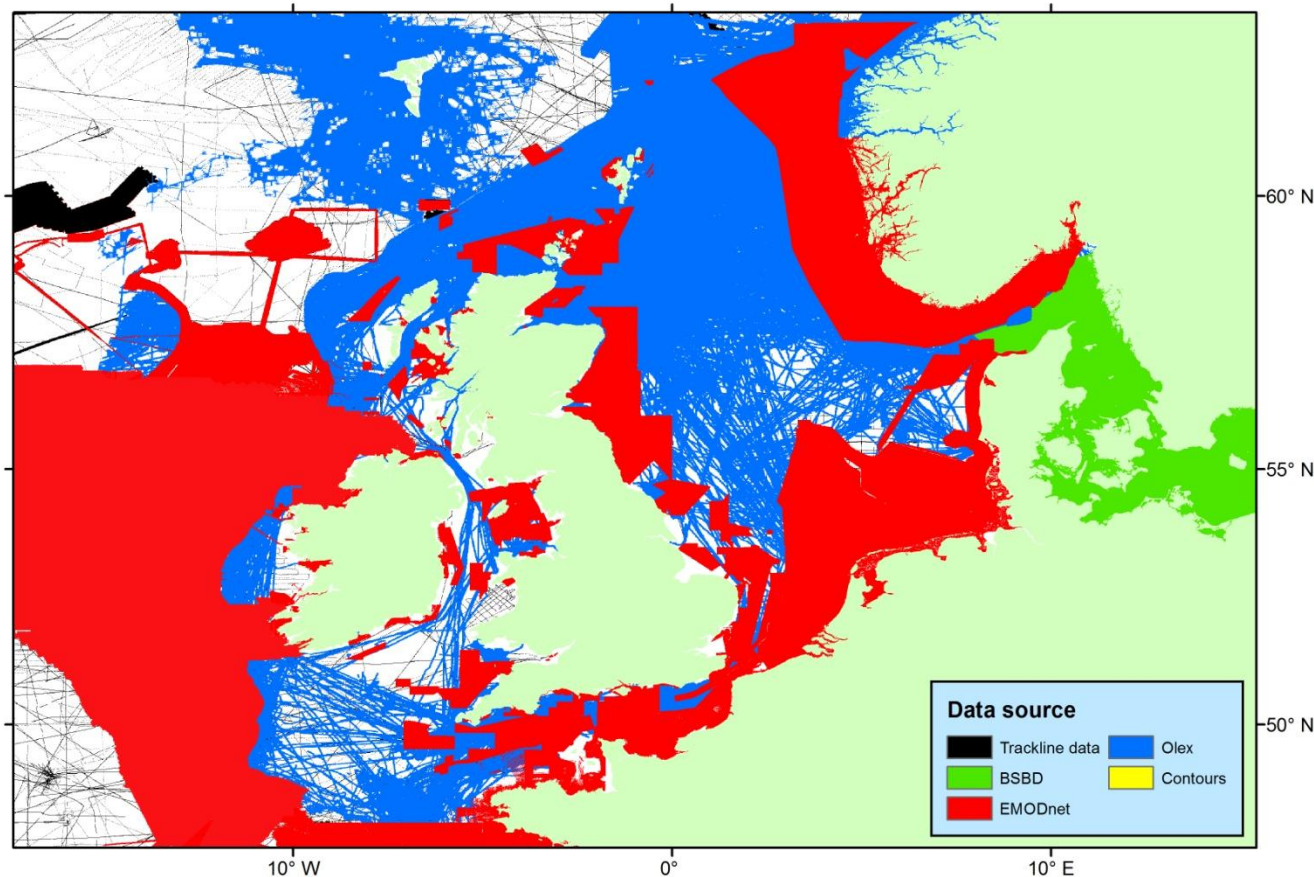
GEBCO_2014



GEBCO's current grid development work



GEBCO Source Identifier Grid – showing coverage of data sources in the NW Atlantic area for 2014 release of the GEBCO Grid



Improving GEBCO's global bathymetric model



Summary

GEBCO aims to:

- Continually update and improve its global bathymetric model and collaborate with regional mapping groups to help achieve this
- Encourage (where possible) the contribution of bathymetry data to publicly-available national or international databases

How to contribute data to help update GEBCO's global gridded data sets:

www.gebco.net/about_us/contributing_data/



Thank you

Any questions?