

Updating the GEBCO Grid

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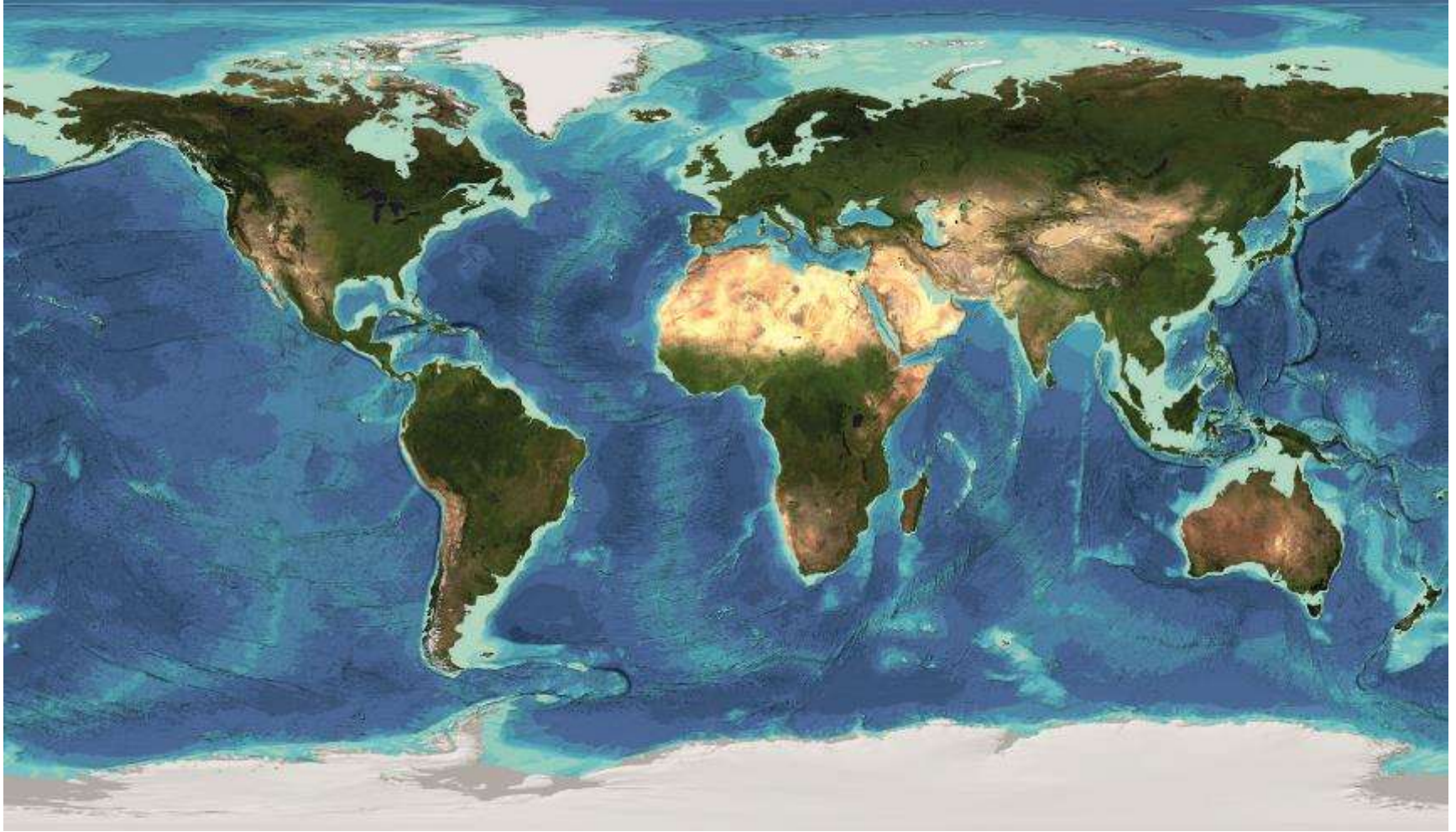


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New version of the GEBCO grid released in December 2014 – **GEBCO_2014**



GEBCO_2014 Grid

- Global terrain model at 30 arc-second intervals
- Update to previous grid, GEBCO_08, last published in 2010
- 'Base grid' is SRTM30_plus v5
- Accompanied by a Source Identifier grid (SID) – shows which grid cells are constrained by data/grids and those based on interpolation
- GEBCO_2014 includes new data from a number of regional mapping projects and from contributed data sets

GEBCO_2014 Grid

New data sets contributed in the form of

- Pre-existing grids, e.g. IBCAO, EMODnet
- Soundings, e.g. ENC data sets
- Trackline data

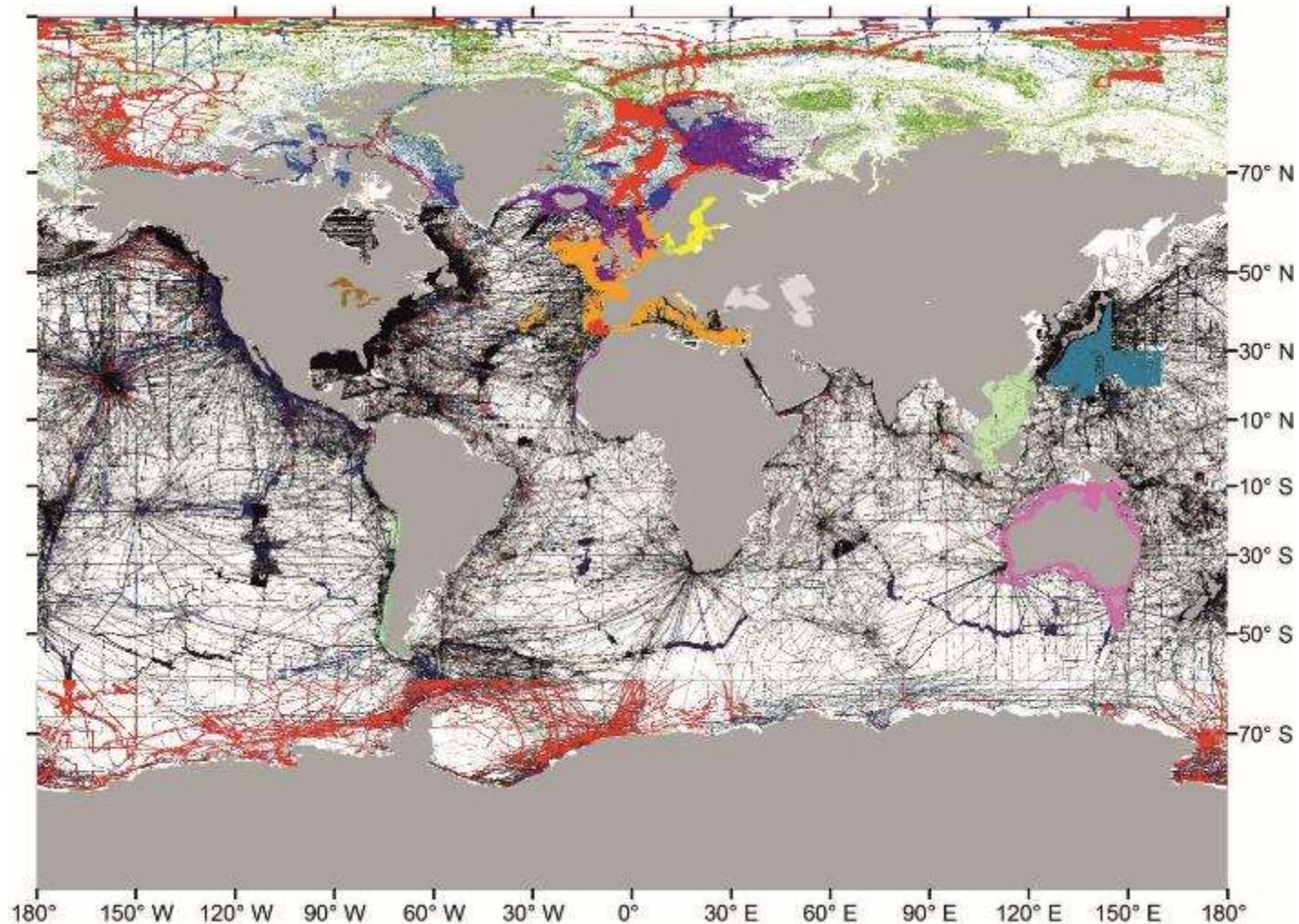
Methodology used to include data on top of the 'base' grid largely depends on the data type

Methods used to include pre-existing grids: mainly 'remove-restore' procedure

GEBCO_2014 Grid – new data sets

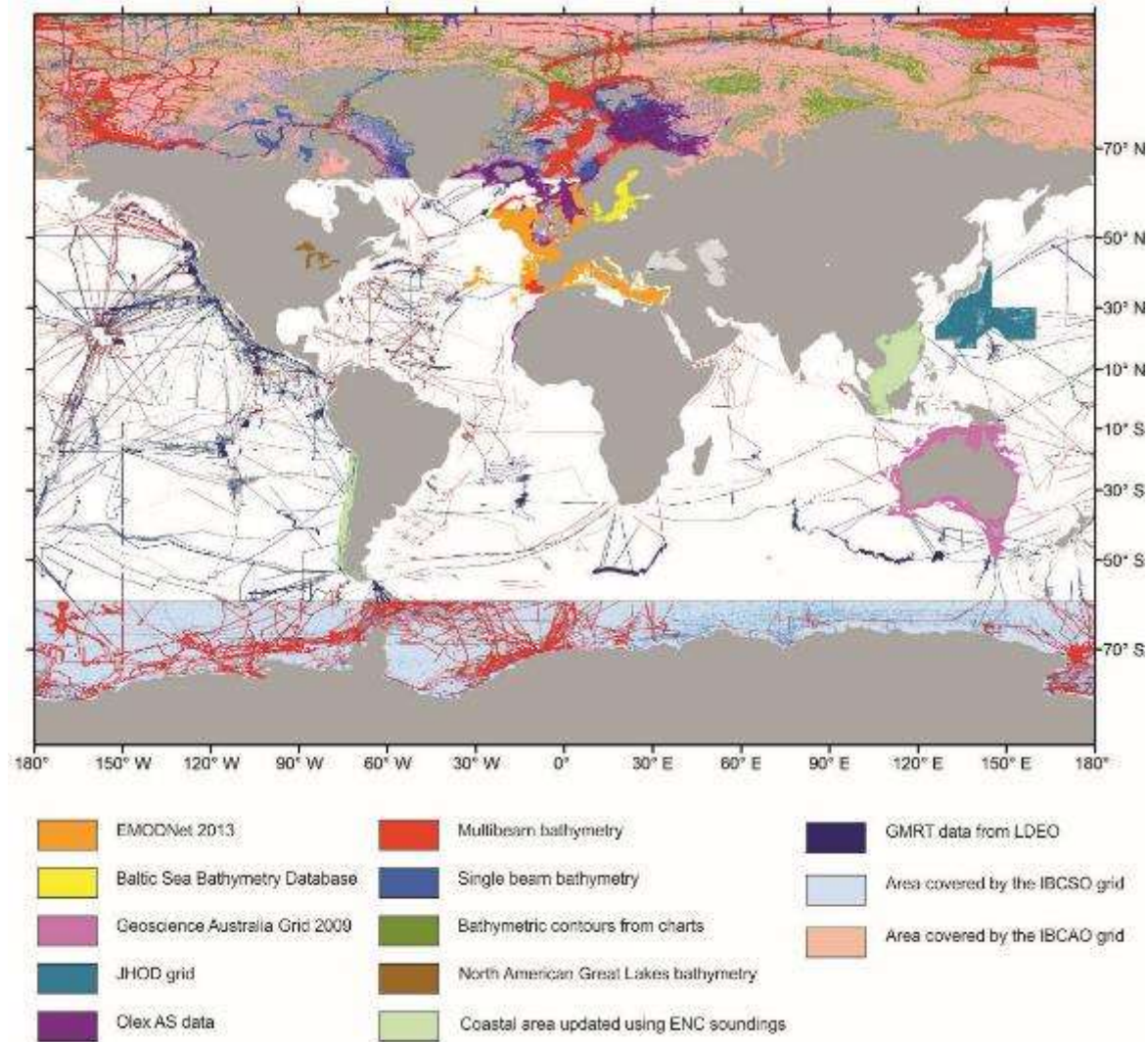
- International Bathymetric Chart of the Arctic Ocean (IBCAO) version 3
- International Bathymetric Chart of the Southern Ocean (IBCSO) version 1
- EMODNet Bathymetry grid – 2013 release
- Baltic Sea Bathymetry Data Base
- Waters around Australia: Australian Bathymetry and Topography Grid, June 2009
- Bathymetry data for all ocean regions: From the Global Multi-Resolution Topography (GMRT) Data Synthesis, provided by the Lamont-Doherty Earth Observatory at Columbia University
- Japan Coast Guard Grid for the North Western Pacific Ocean region
- South China Sea region: update based on sounding data extracted from Electronic Navigation Charts (ENC), provided by the East Asia Hydrographic Commission
- North American Great Lakes: Bathymetric grids provided by the US National Oceanic and Atmospheric Administration (NOAA), National Geophysical Data Center (NGDC), U.S
- North Atlantic Ocean, Gulf of Cadiz region: Bathymetric compilation produced under the European Science Foundation (ESF) Euromargins SWIM project “Earthquake and Tsunami hazards of active faults at the South West Iberian Margin: deep structure, high-resolution imaging and paleoseismic signature”
- Indian Ocean, region off Sumatra: Bathymetric survey carried out by HMS Scott in 2005
- Waters off the West Coast of Africa: update based on bathymetry data from Olex
- Northwest European Continental Shelf area: update based on bathymetry data from Olex
- South Pacific Ocean, Coral Sea region, update to correct an error in the GEBCO grid due to the inclusion of an erroneous island (“Sandy Island”)
- Waters off Chile, update based on ENC sounding data

GEBCO_2014 Grid



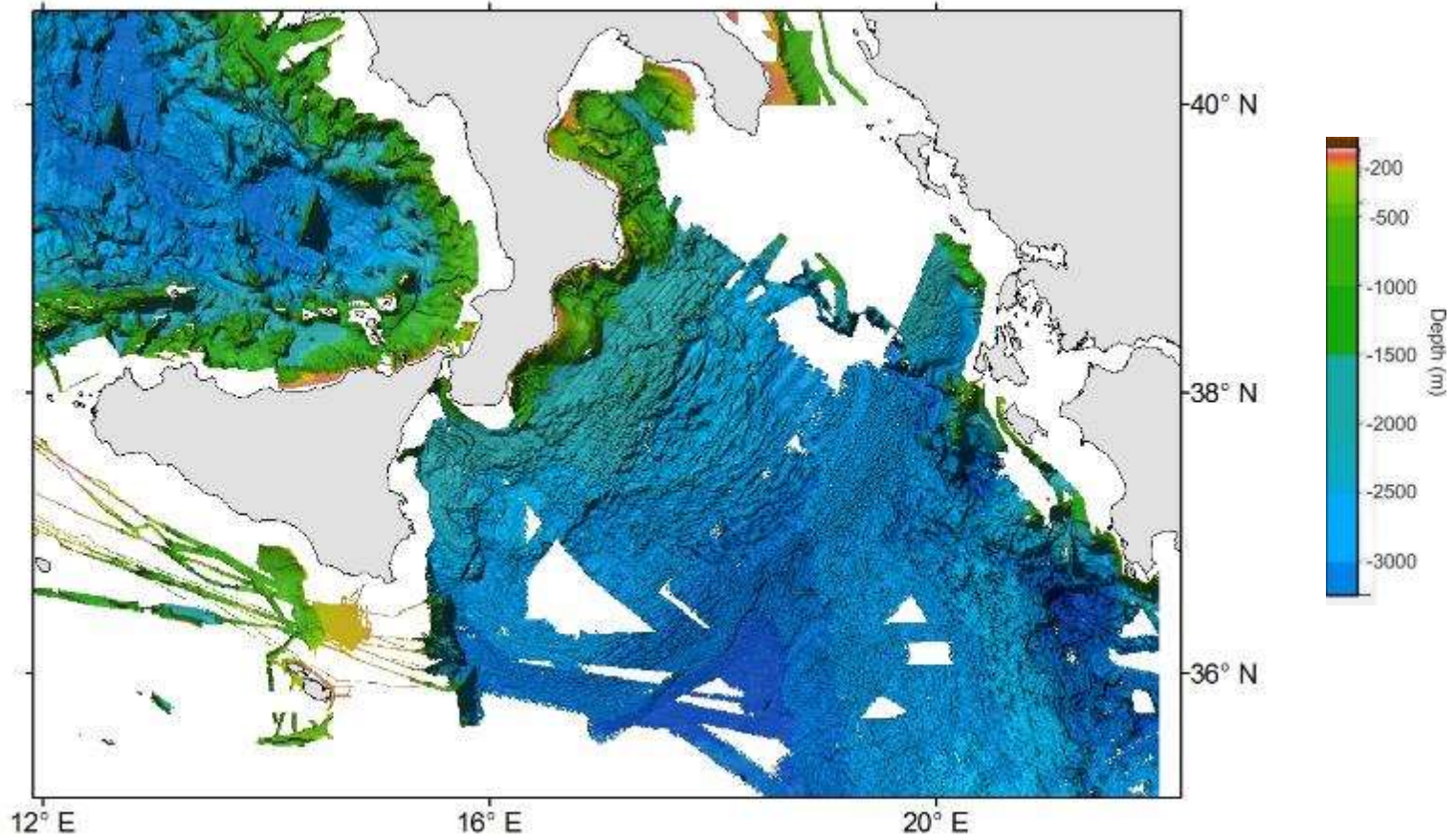
Coverage of GEBCO_2014 Source Identifier grid – grid cells based on interpolation (where identified) are shown in white

GEBCO_2014 Grid



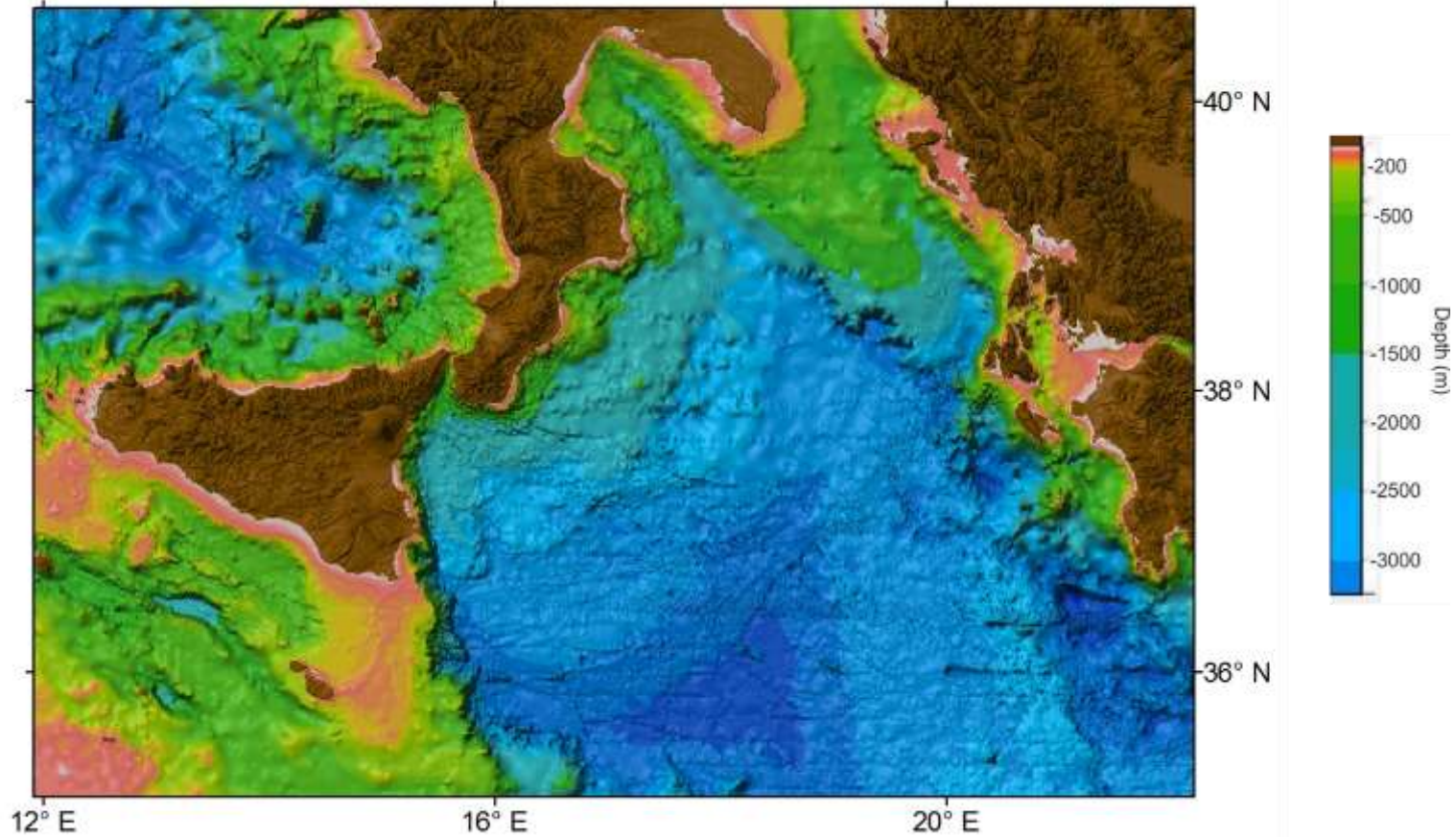
Coverage of news data sets included in GEBCO_2014

GEBCO_2014



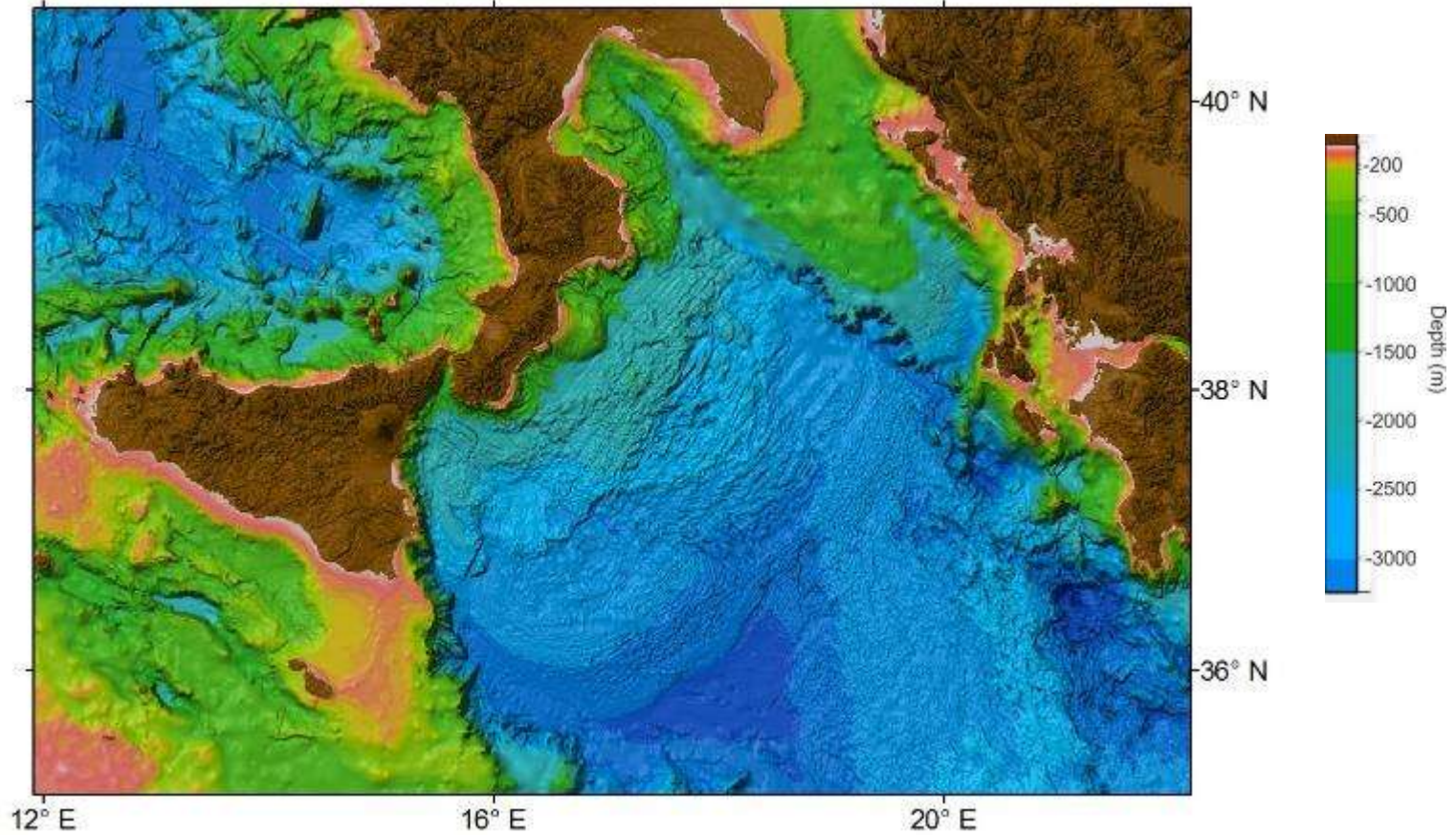
EMODnet grid

GEBCO_2014



GEBCO_08 grid

GEBCO_2014

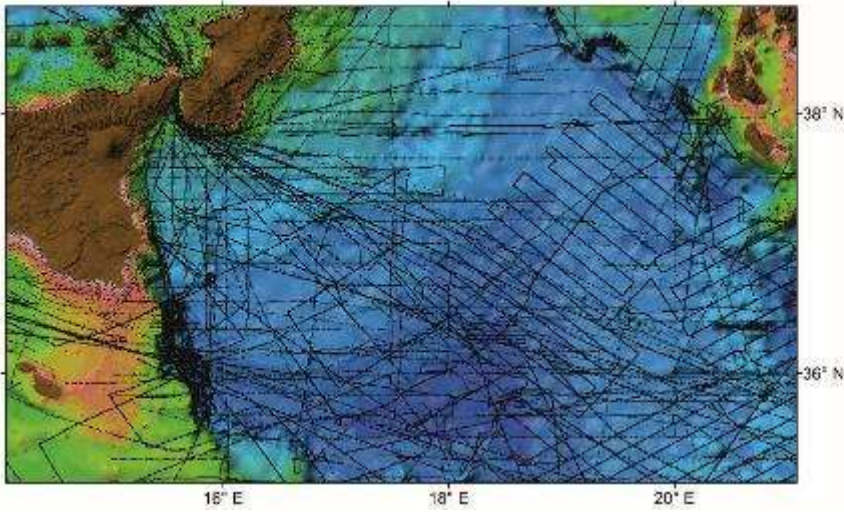


GEBCO_2014

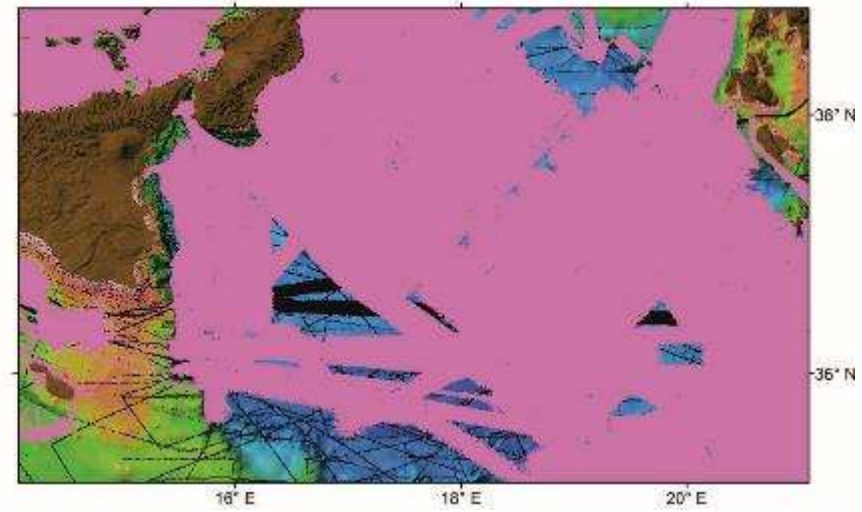
GEBCO_2014 Grid

Example comparison between previous grid GEBCO_08 and GEBCO_2014

GEBCO_08 - track coverage shown in black from SID grid



GEBCO_2014 - coverage of EMODnet from SID grid shown in pink



Further comparison imagery and data set documentation available on GEBCO's web site:

http://www.gebco.net/data_and_products/gridded_bathymetry_data/gebco_update_history/version_20141103/

Making GEBCO's grids available

GEBCO's gridded data sets are available to download from:
www.gebco.net/data_and_products/gridded_bathymetry_data/



The screenshot shows a web browser window with the URL www.gebco.net/data_and_products/gridded_bathymetry_data/. The page features a sidebar on the left with social media icons for Facebook, Twitter, Email, and RSS, and a section titled "Follow GEBCO via" with icons for Facebook, Twitter, YouTube, and RSS. The main content area includes a heading "in additional export formats" and a description of the "Identifier (SID) Grid". Below this is a bathymetric map of the Atlantic Ocean with a search box overlaid. The search box contains the coordinates "-47.1706, 15.1282 -13.8462 51" and a "Clear" button. Below the search box is a list of data sets with expandable arrows:

- GEBCO_2014 Grid (30 arc-second interval)
- GEBCO_2014 Source Identifier (SID) Grid (30 arc-second interval)
- GEBCO One Minute Grid (1 arc-minute interval)

At the bottom of the page, there are buttons for "Add data to basket" and "View basket".

Making GEBCO's grids available

Data accessible for user-defined areas or global grid files

Export formats:

- One dimensional (1D) netCDF grid (aimed for use with GDA)
- CF compliant netCDF (2D)
- Esri ASCII raster
- Data GeoTiff

Other GEBCO-related work at BODC

- Development of a contour data set for the GEBCO_2014 Grid
- Web Map Service (WMS) update work
- WMS development work for delivering metadata for the SID grid
- Statistics on data downloads and access to GEBCO's web site

included in:

- www.gebco.net/about_us/meetings_and_minutes/documents/bodc_gebco_report_october_2015.pdf

Thank you



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