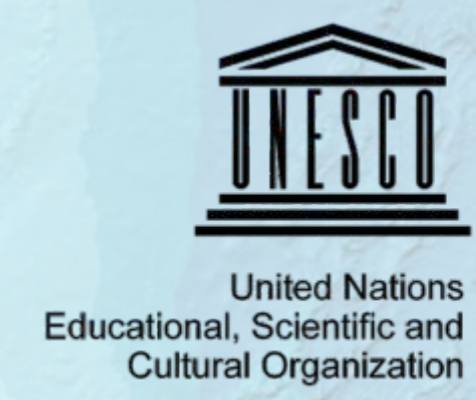


The GEBCO_2013 Grid



On behalf of GEBCO: Pauline Weatherall (paw@bodc.ac.uk), GEBCO Digital Atlas Manager, British Oceanographic Data Centre (BODC), Liverpool, UK

GEBCO operates under the joint auspices of the International Hydrographic Organization and the Intergovernmental Oceanographic Commission (IOC) of UNESCO.
www.gebco.net

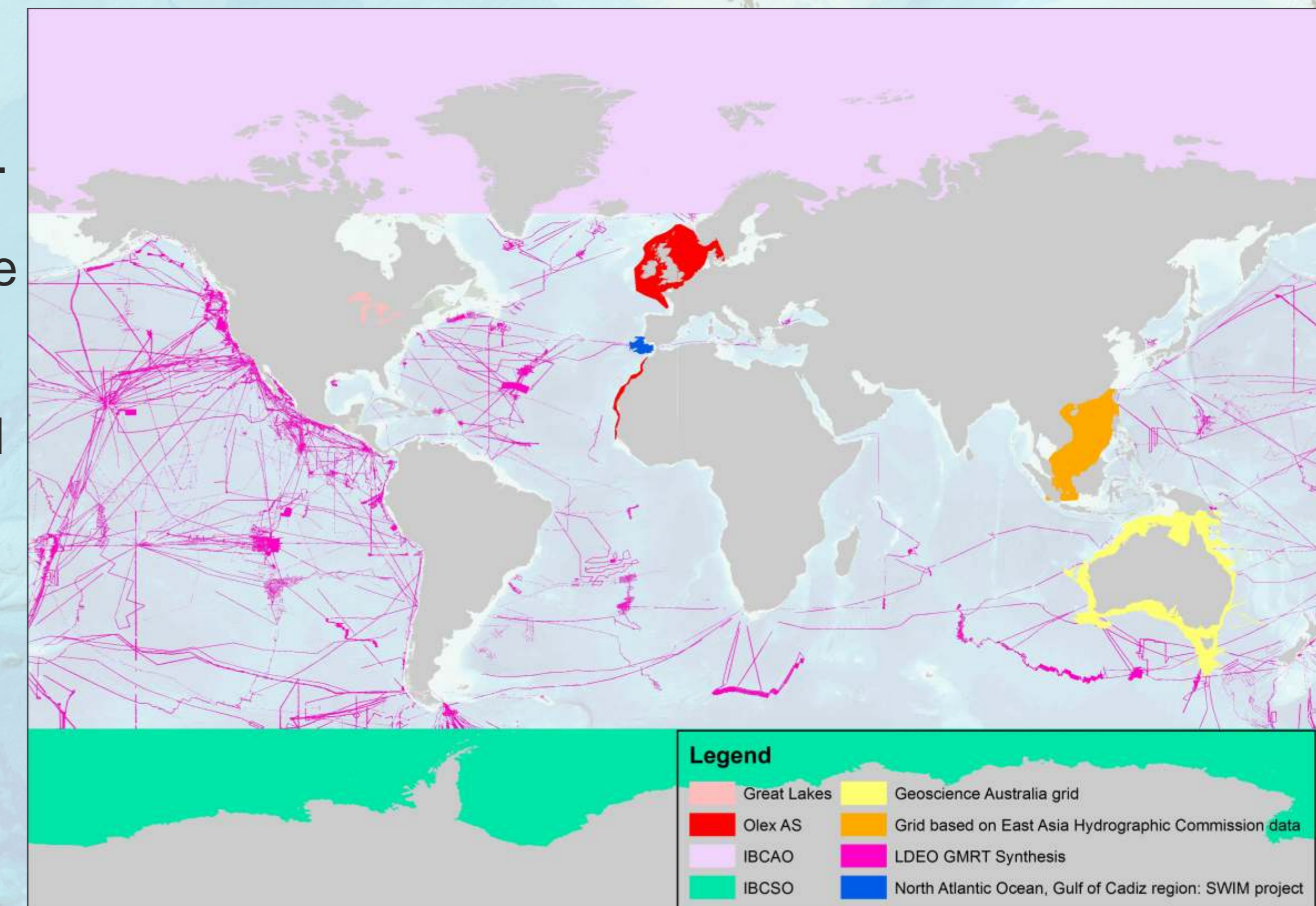
GEBCO's grid development

In 2009 GEBCO released a global terrain model at 30 arc-second intervals, the **GEBCO_08 Grid**. This data set was developed from a database of quality-controlled ship-track soundings with interpolation between soundings guided by satellite-derived gravity data. An updated version of the grid was released in 2010.

Since then, we have been working to update and improve this model. A new version of the global grid, the **GEBCO_2013 Grid**, is due for release in Autumn 2013.

It includes the following new data sets:

- International Bathymetric Chart of the Southern Ocean (IBCSO) V1
- International Bathymetric Chart of the Arctic Ocean (IBCAO) V3
- Waters around Australia: Australian Bathymetry and Topography Grid, June 2009
- Bathymetry data for all ocean regions: From the Global Multi-Resolution Topography (GMRT) synthesis, provided by the Lamont-Doherty Earth Observatory
- South China Sea region: based on sounding data from Electronic Navigation Charts (ENC), provided by the East Asia Hydrographic Commission
- North American Great Lakes: US National Oceanic and Atmospheric Administration (NOAA), National Geophysical Data Center (NGDC)
- North Atlantic Ocean, Gulf of Cadiz region: Bathymetric compilation produced under the European Social Fund (ESF) EuroMargins SWIM project
- Indian Ocean, region off Sumatra: Bathymetric survey carried out by HMS Scott in 2005
- Northwest European Continental Shelf area and waters off the West Coast of Africa: update based on bathymetry data from Olex AS
- 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")



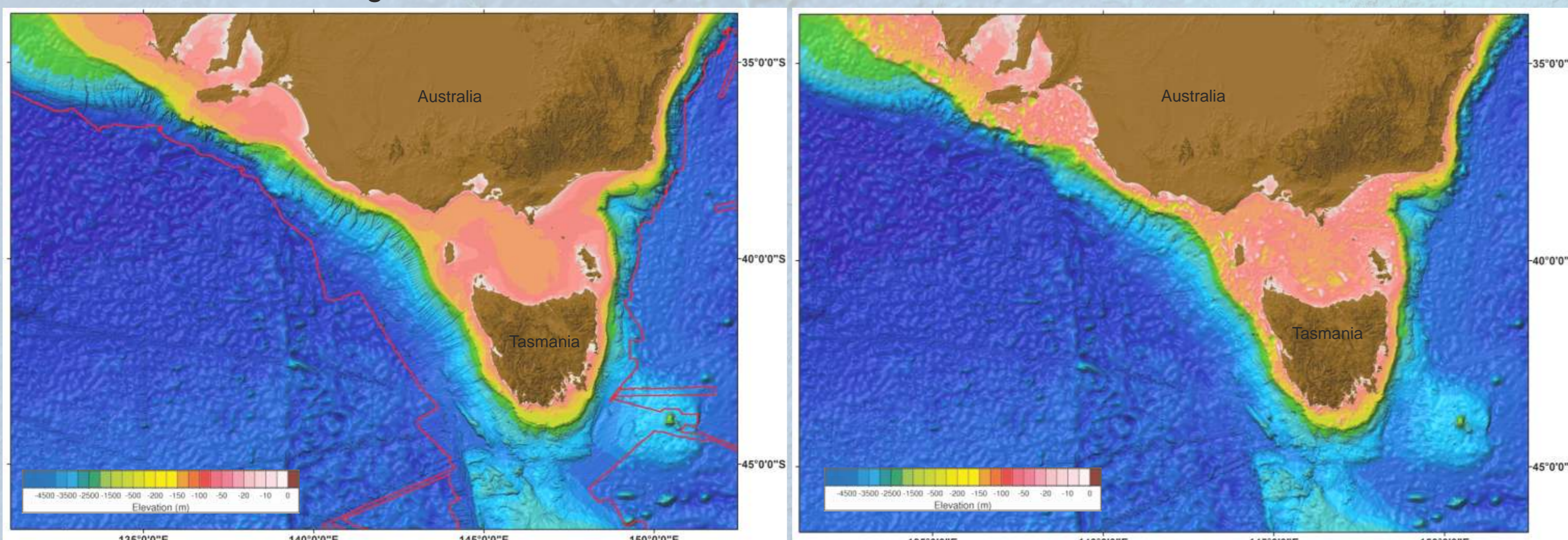
Through the Sub-Committee on Regional Undersea Mapping (SCRUM), GEBCO is aiming to build on and extend its collaboration with regional mapping groups in order to continue to improve its global bathymetric model. To assist and encourage further participation in bathymetric grid development work, GEBCO has created a technical reference manual, the IHO-IOC GEBCO Cook Book, on how to build bathymetric grids.

Find out more about the work of GEBCO's Sub-Committees and Working Groups: www.gebco.net/about_us/committees_and_groups/

Some of the updates included in the GEBCO_2013 Grid

Waters around Australia

Data from the Australian Bathymetry and Topography Grid, June 2009 (ANZLIC unique identifier: ANZCW0703013116) has been included in the new GEBCO grid for mainly shallow water regions around Australia. The grid in this area is based on Multibeam, Fairsheets and LADS data sets.

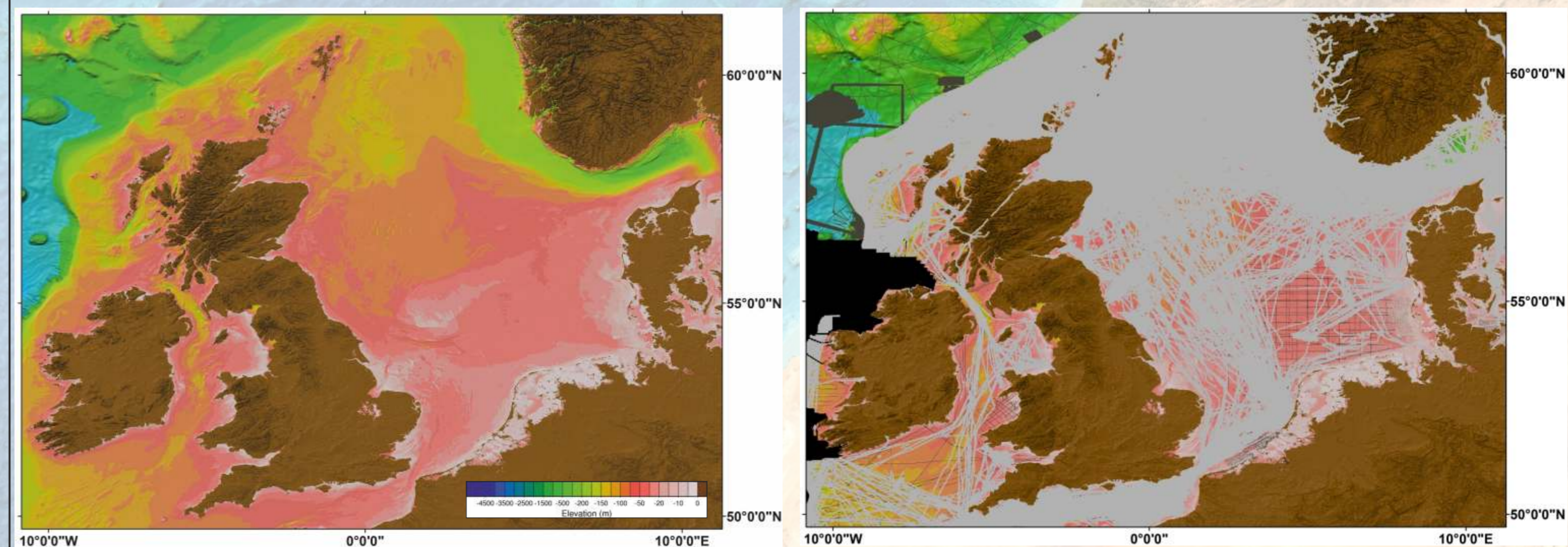


Updated GEBCO grid in the southern coastal region off Australia. Note the improved definition of the shallow water and slope regions when compared with the GEBCO_08 Grid. The updated area is outlined in red.

GEBCO_08 Grid in the southern coastal region off Australia.

Northwest European Shelf area - updated with Olex data

Data from the Olex data has been included in previous versions of the GEBCO grid. However, for this release the data coverage has been extended east for the Northwest Europe Continental Shelf region.

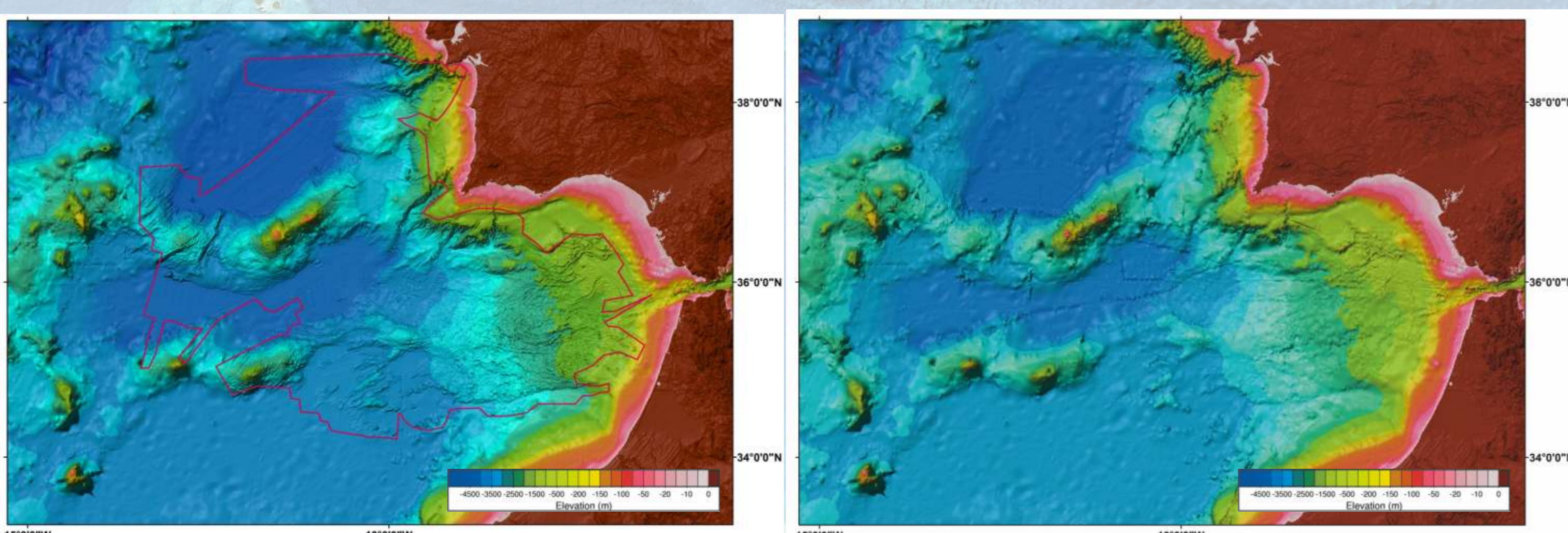


Bathymetry data from the new GEBCO grid - updated to increase the coverage of Olex data east of 0°E.

GEBCO Source Identifier Grid showing which cells in the GEBCO grid are constrained by soundings or existing grids and which are based on interpolation. Cells constrained by Olex data are shown in grey those constrained by other survey data are shown in black.

Gulf of Cadiz region

Data from the SWIM project (Earthquake and Tsunami hazards of active faults at the South West Iberian Margin: deep structure, high-resolution imaging and paleoseismic signature (doi:10.1016/j.epsl.2008.12.005) has been used to update the GEBCO grid in the Gulf of Cadiz region.

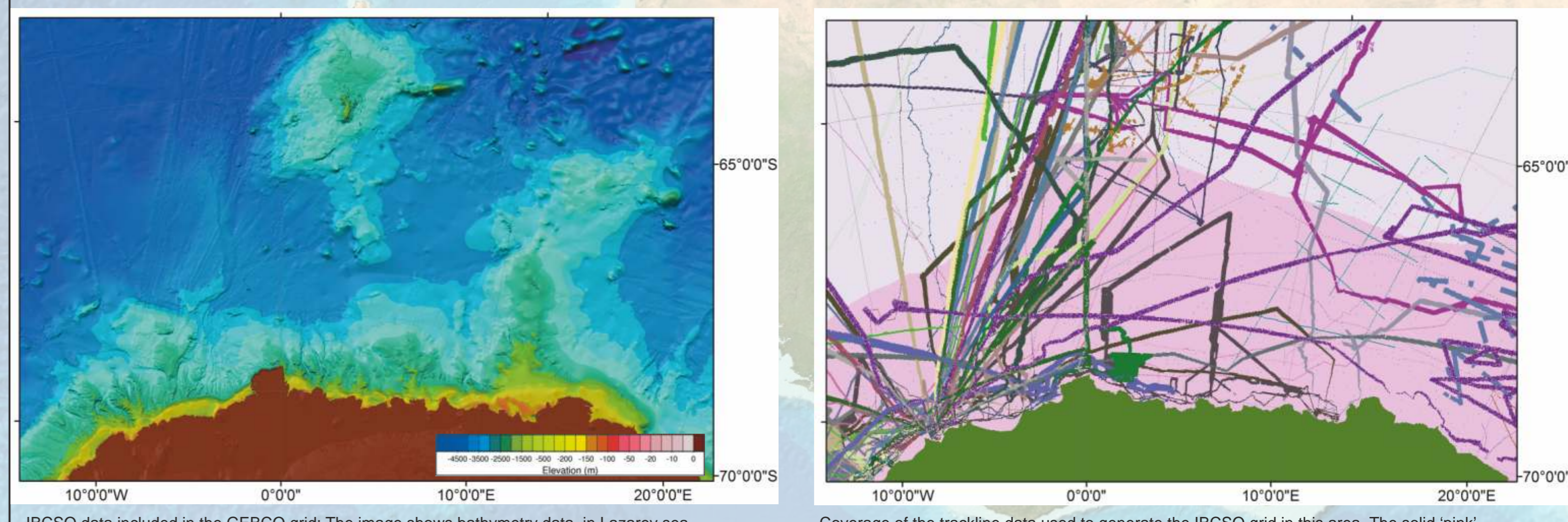


Updated GEBCO grid in the Gulf of Cadiz region. The red line encloses the updated area.

GEBCO_08 Grid in the Gulf of Cadiz region.

International Bathymetric Chart of the Southern Ocean (IBCSO)

Data from the IBCSO v1 data set has been included in the GEBCO grid south of 60°S. The images below show the bathymetry data for the part of this area and the sources of data used to generate the IBCSO grid in this region.



IBCSO data included in the GEBCO grid. The image shows bathymetry data in Lazarev sea area of Antarctica.

Coverage of the trackline data used to generate the IBCSO grid in this area. The solid 'pink' areas are based on interpolation and the solid light grey areas are based on data from the GEBCO_08 Grid.

Access to GEBCO's grids and data products

GEBCO's grids can be downloaded from the internet in netCDF form and are included as part of the GEBCO Digital Atlas. Free software is available for viewing and accessing the grids in ASCII as well as netCDF. Shaded relief imagery based on grids can be viewed as a Web Map Service (WMS).

Find out more about GEBCO's products: www.gebco.net/data_and_products/



British Oceanographic Data Centre
NATURAL ENVIRONMENT RESEARCH COUNCIL

On behalf of the GEBCO community, GEBCO's gridded bathymetric data sets are maintained and made available by the British Oceanographic Data Centre (BODC).



NATURAL ENVIRONMENT RESEARCH COUNCIL