



# General Bathymetric Chart of the Oceans

– GEBCO –

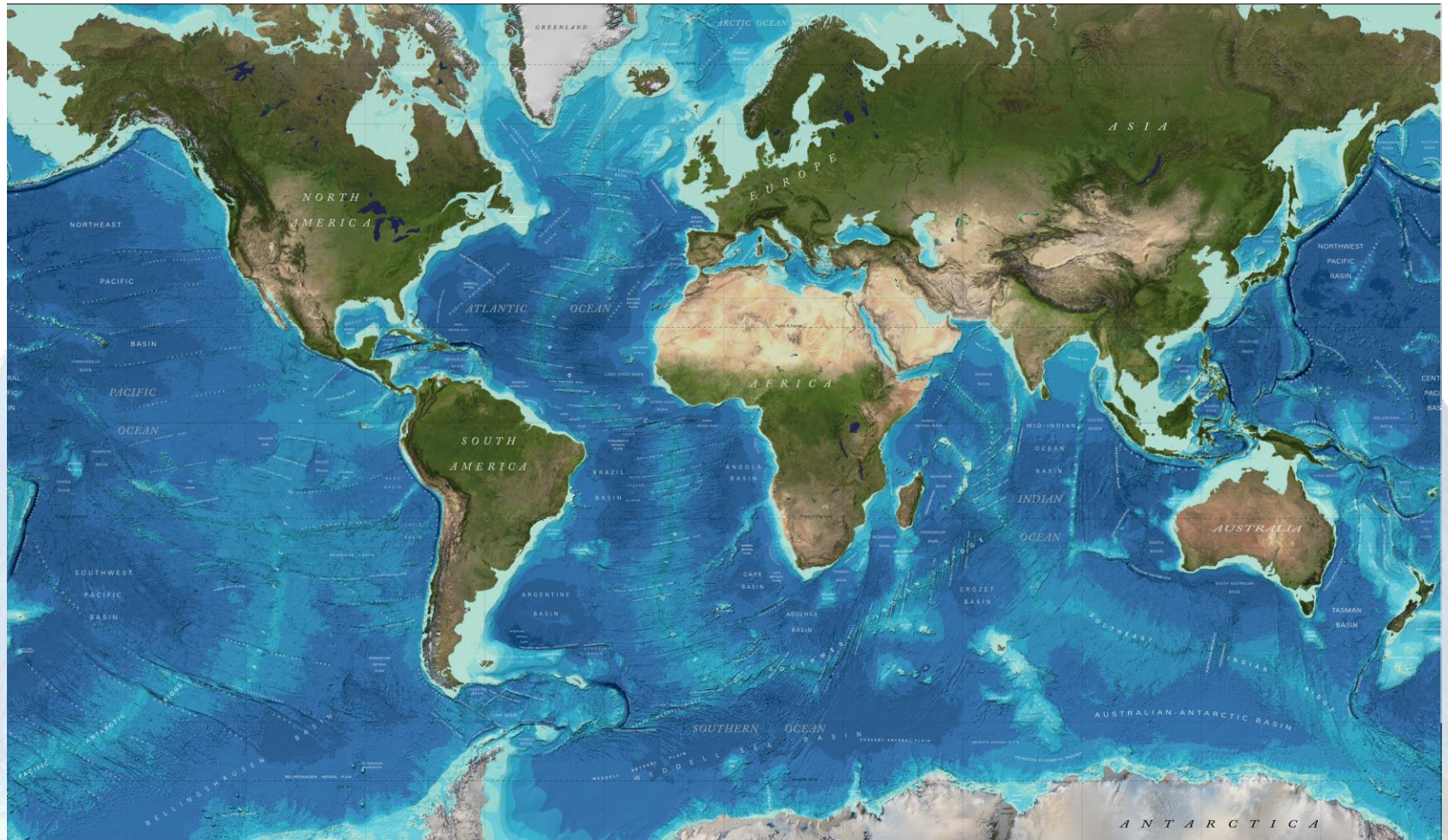
A look at the world from an ocean's perspective

*On behalf of GEBCO: Boris Dorschel<sup>1</sup>, Martin Jakobsson<sup>2</sup>*

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2 Department of Geological Sciences, Stockholm University*

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# What is GEBCO?



GEBCO aims to provide the most authoritative, publicly-available bathymetric data sets for the world's oceans

# GEBCO's organisational structure



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

- GEBCO is led by a Guiding Committee consisting of five IHO-appointed members; five IOC-appointed members; Sub-committee Chairs and the Director of the IHO-Data Centre for Digital Bathymetry (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 and the IHO-IOC GEBCO Cook Book

[www.gebco.net/about\\_us/committees\\_and\\_groups/](http://www.gebco.net/about_us/committees_and_groups/)



Intergovernmental  
Oceanographic  
Commission

# What is GEBCO?



First GEBCO paper chart series initiated in 1903

# Over 100 Years of GEBCO



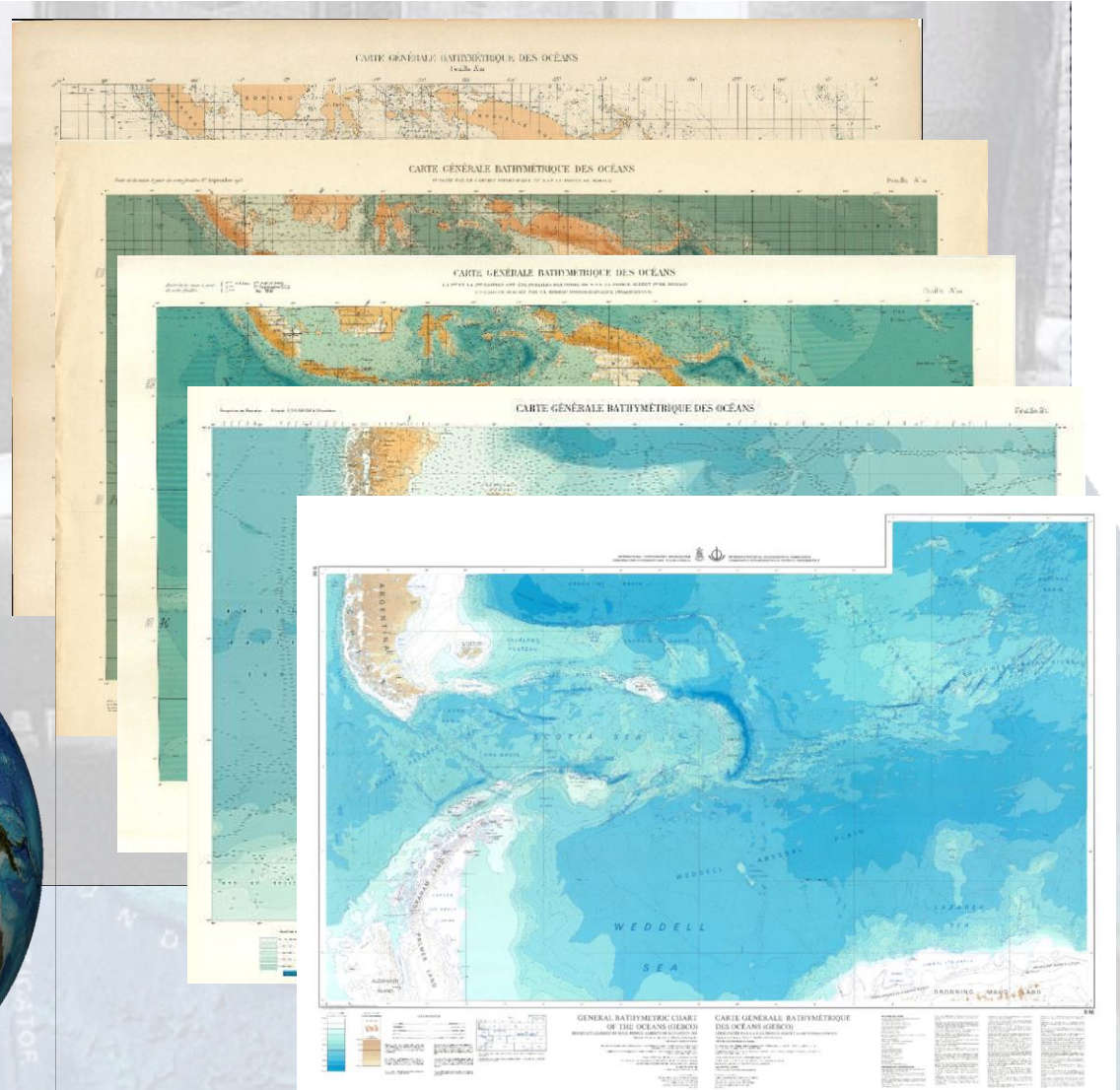
1<sup>st</sup> Edition 1903

2<sup>nd</sup> Edition (1912 to 1930)

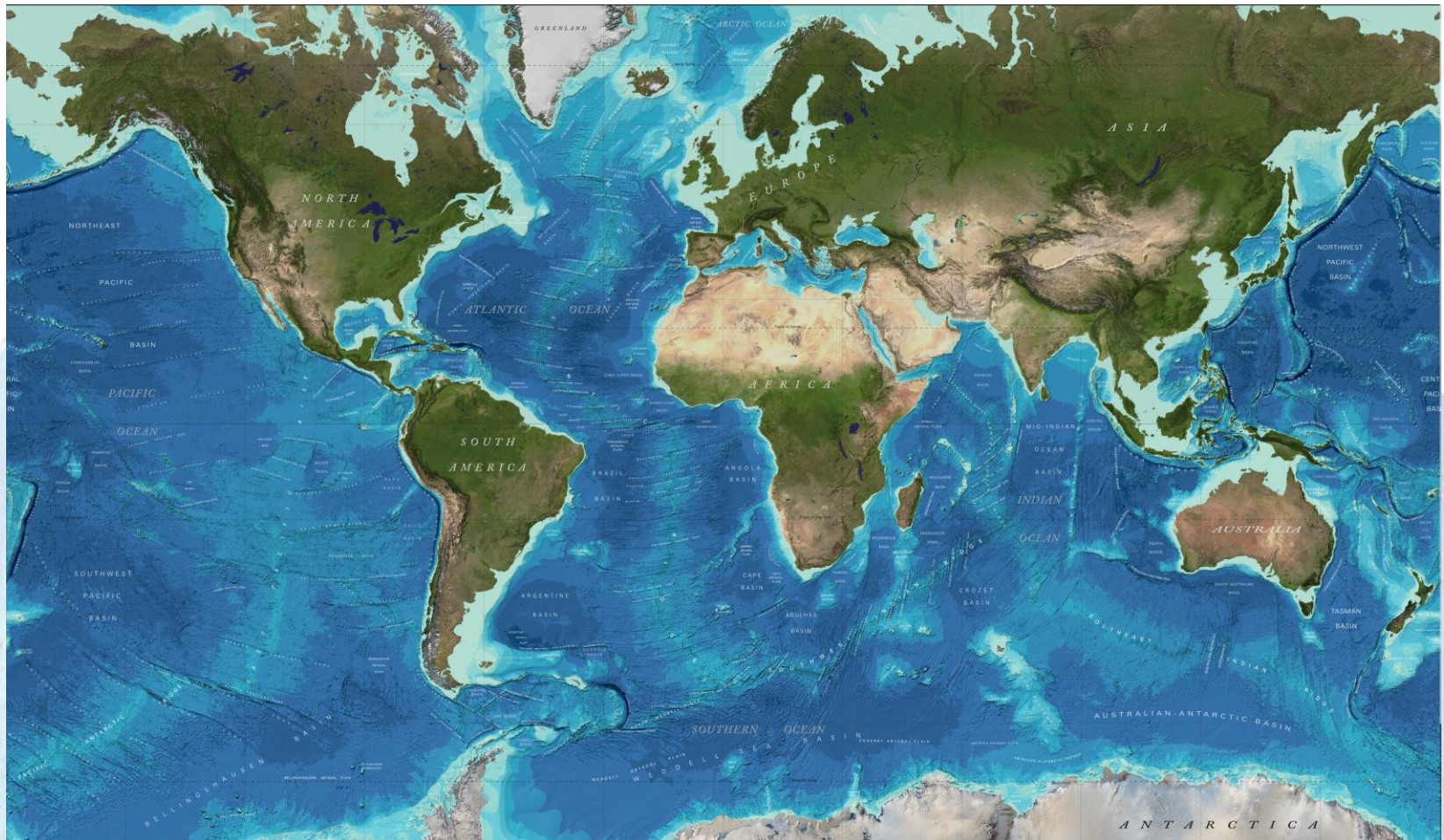
3<sup>rd</sup> Edition (1932 to 1966)

4<sup>th</sup> Edition (1958 to 1973)

5<sup>th</sup> Edition (1972 to 1984)

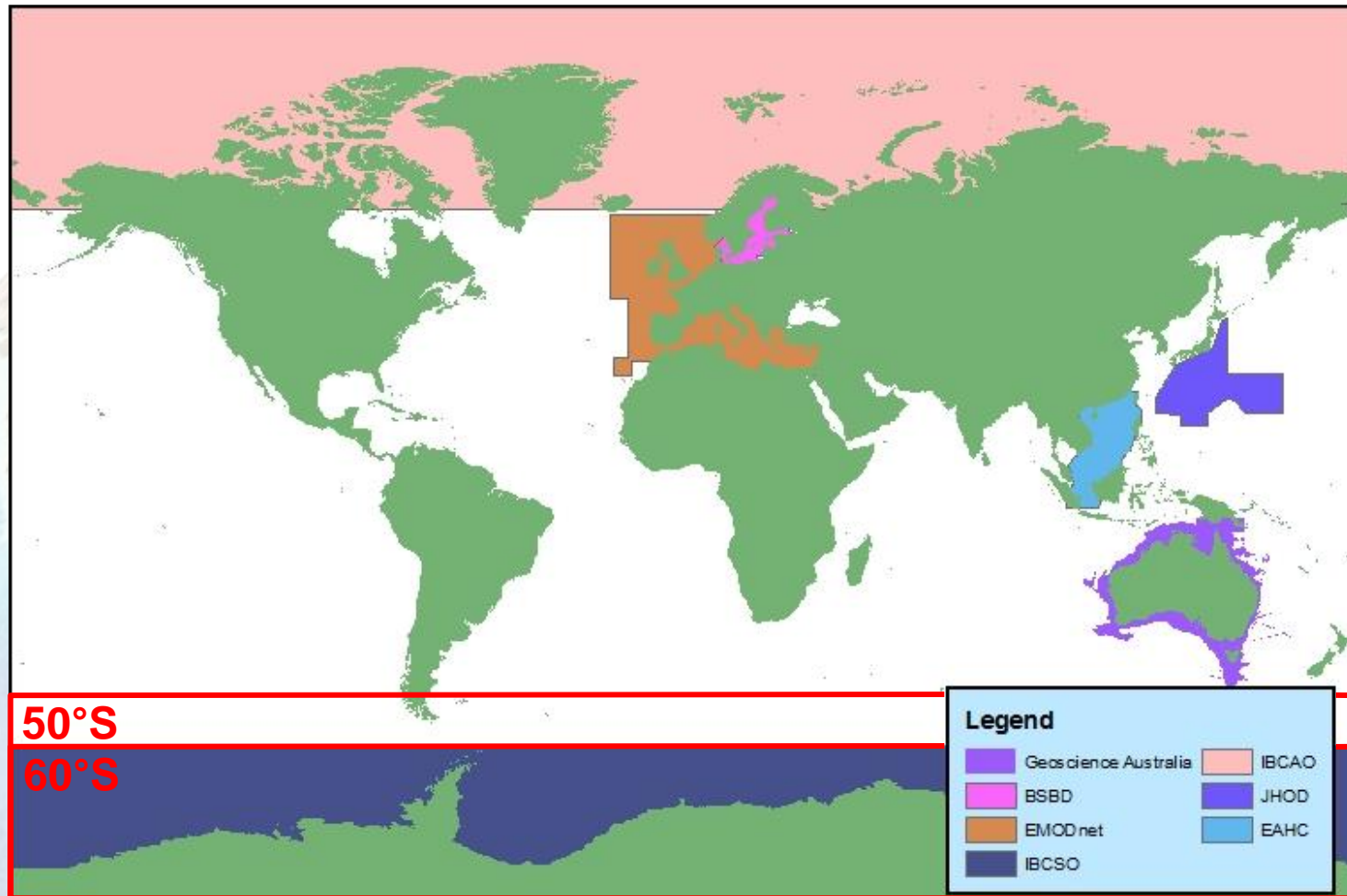


# GEBCO's products: global bathymetric grid



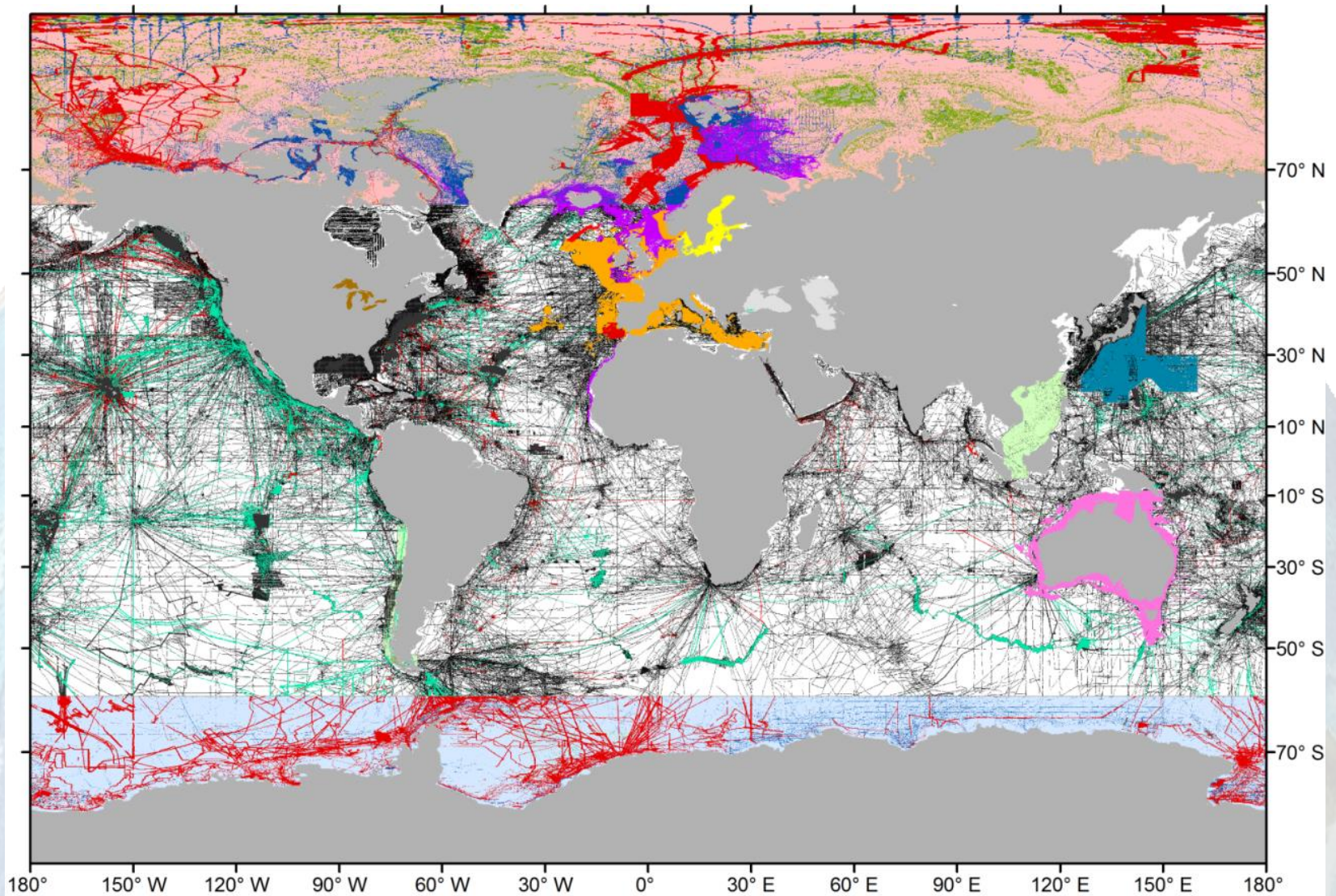
GEBCO's grids are made available for non-navigational purposes:  
[www.gebco.net/data\\_and\\_products/gridded\\_bathymetry\\_data/](http://www.gebco.net/data_and_products/gridded_bathymetry_data/)

# Regional mapping work



Coverage of some of the regional compilations included in the current GEBCO Grid

# GEBCO's products: Source Identifier Grid





# More GEBCO's products



- Global gridded bathymetric data set (30 arc-second interval)
- GEBCO Gazetteer of Undersea Feature Names
- GEBCO Digital Atlas
- Grid viewing software
- Printable maps
- Web Map Service (WMS)
- IHO-IOC GEBCO Cook Book
- [www.gebco.net/data\\_and\\_products/](http://www.gebco.net/data_and_products/)

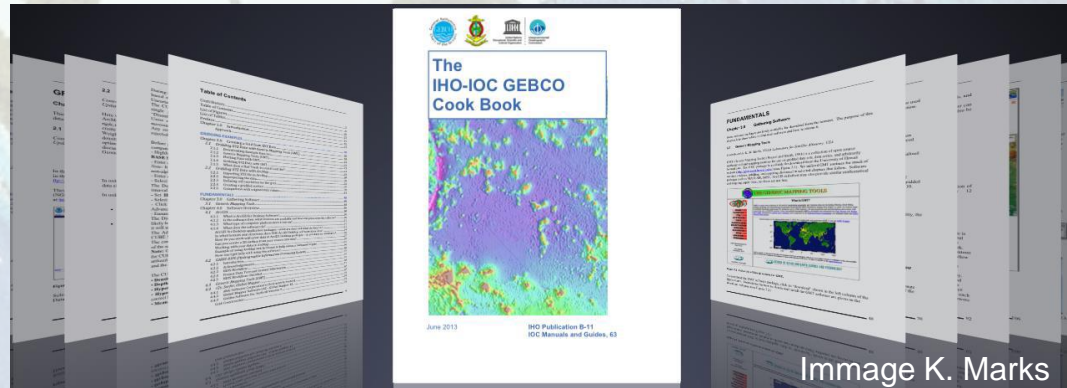
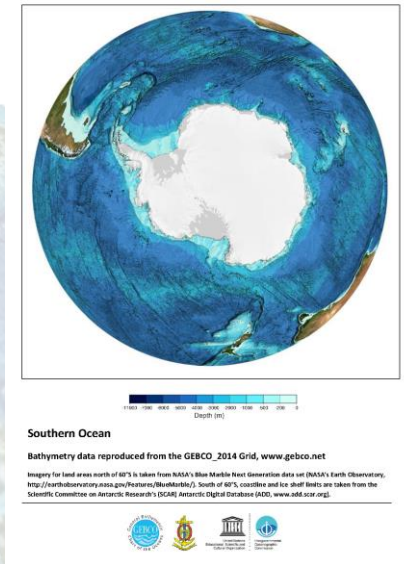
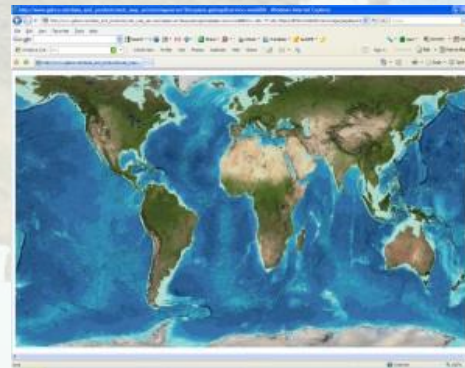
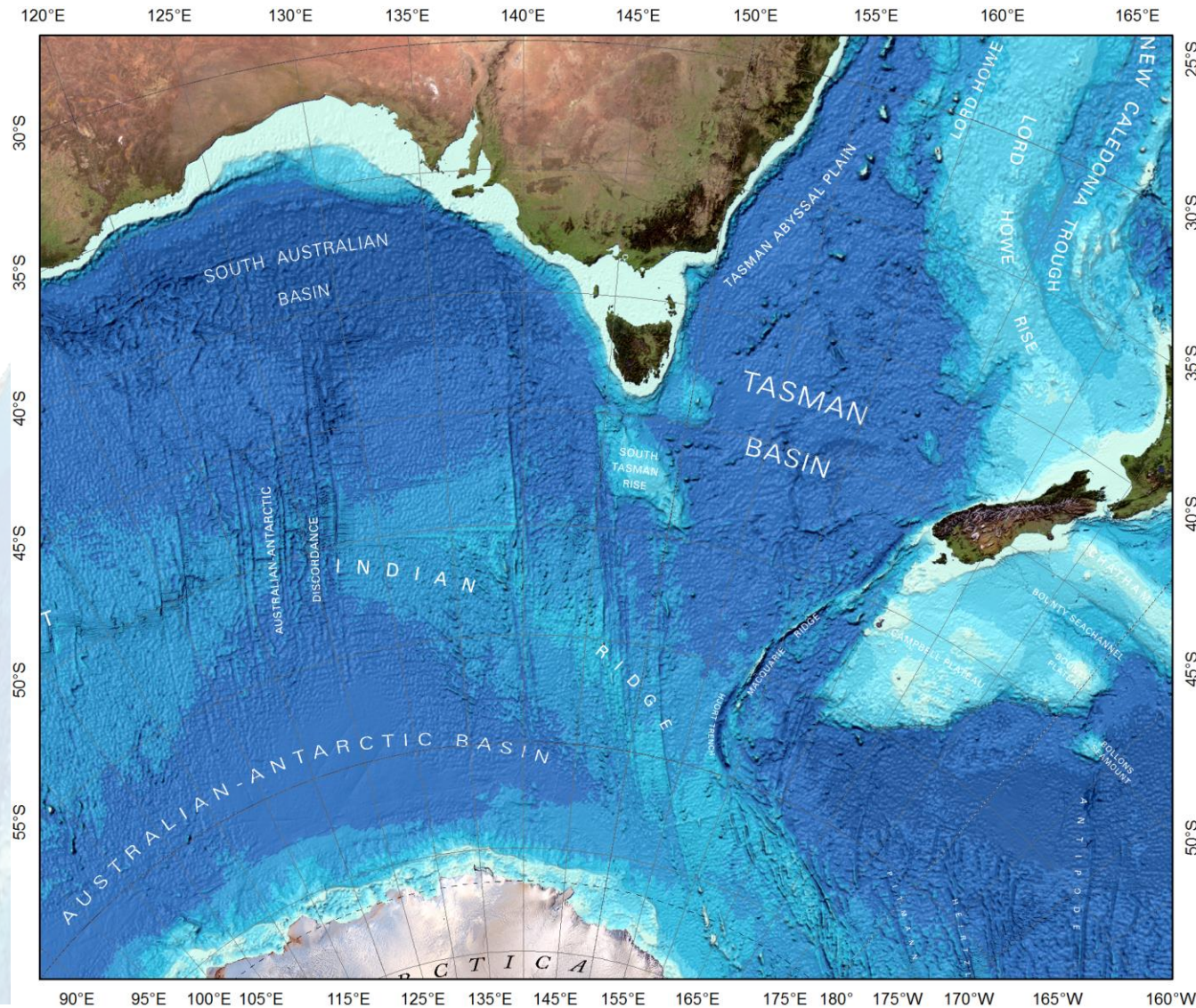


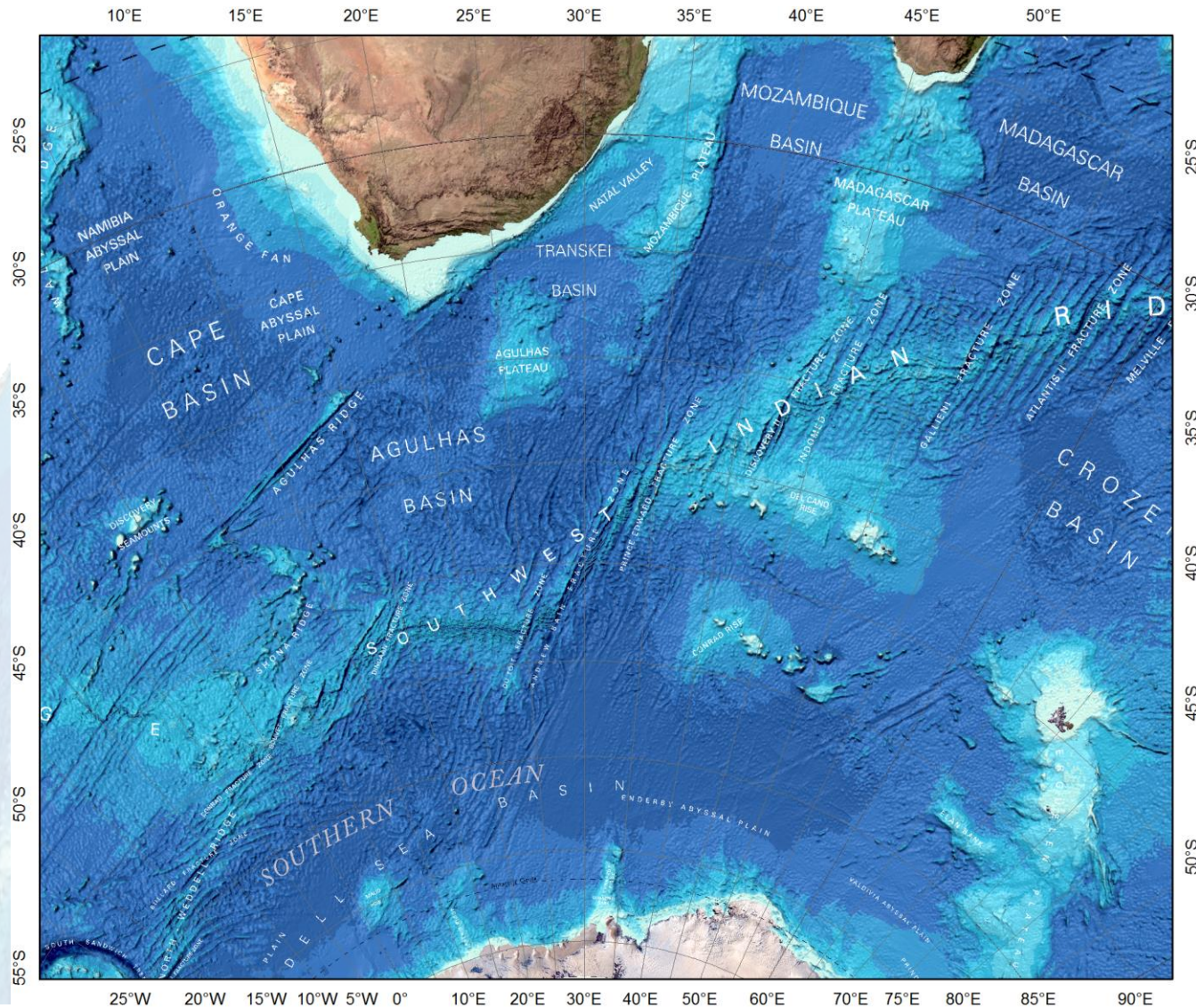
Image K. Marks

# GEBCO map examples



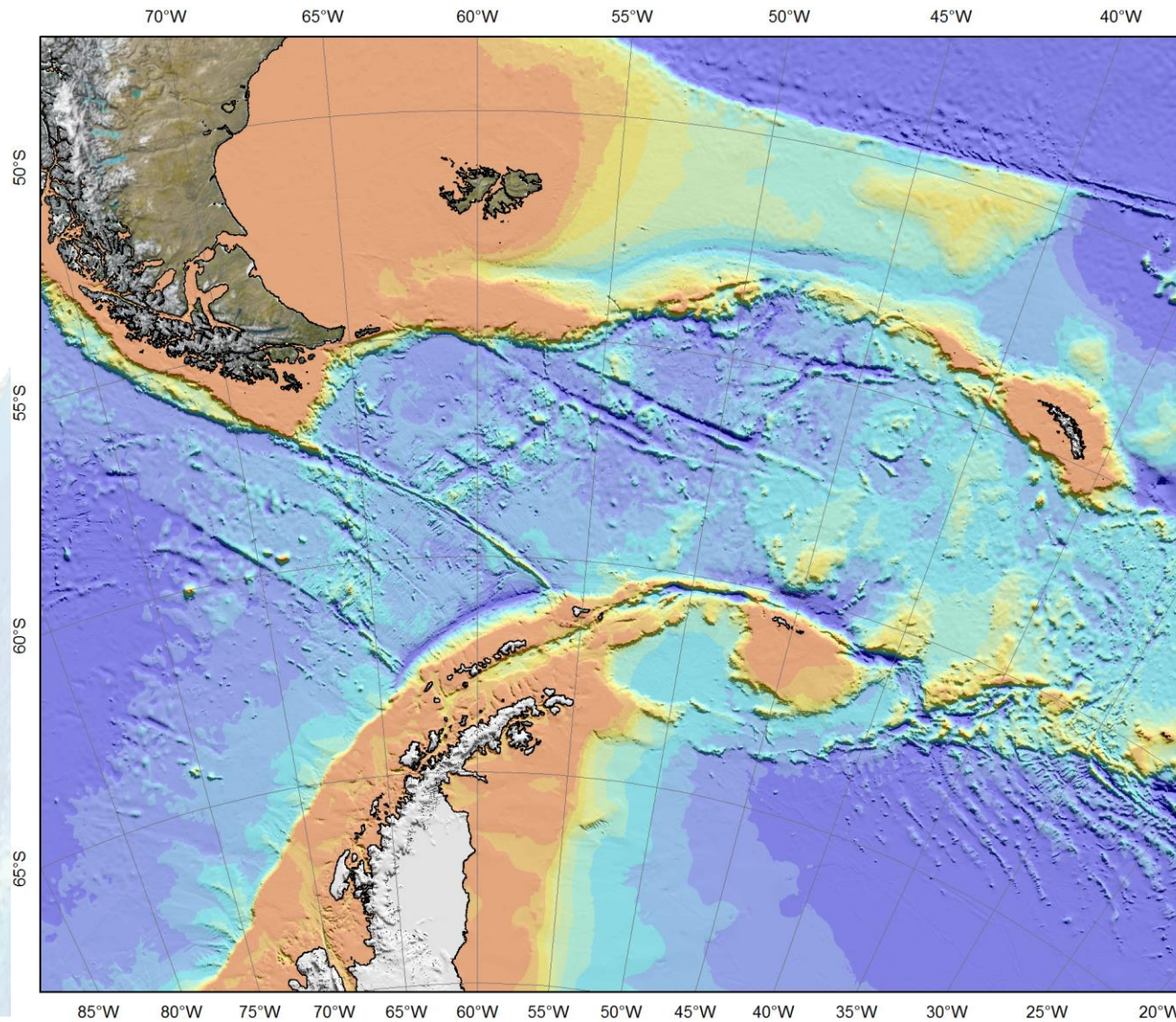
Southern Ocean between Australia, New Zealand and Antarctic

# GEBCO map examples

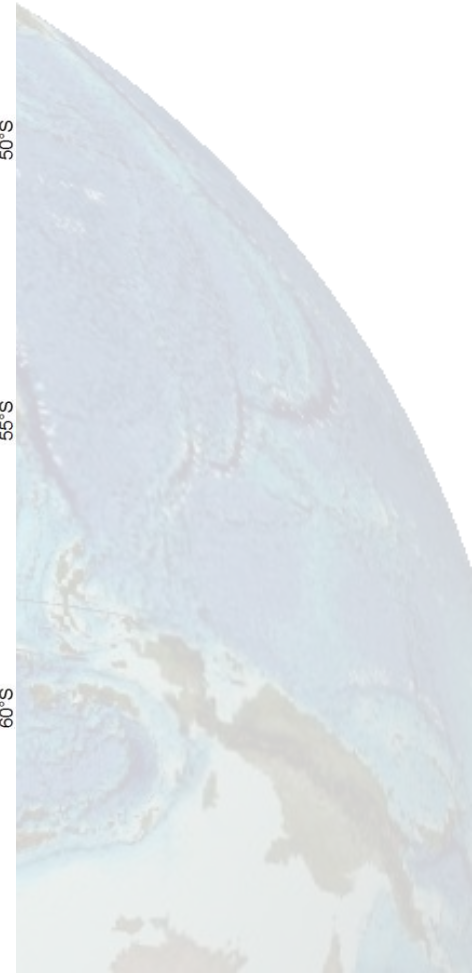


Southern Ocean between Africa and Antarctic

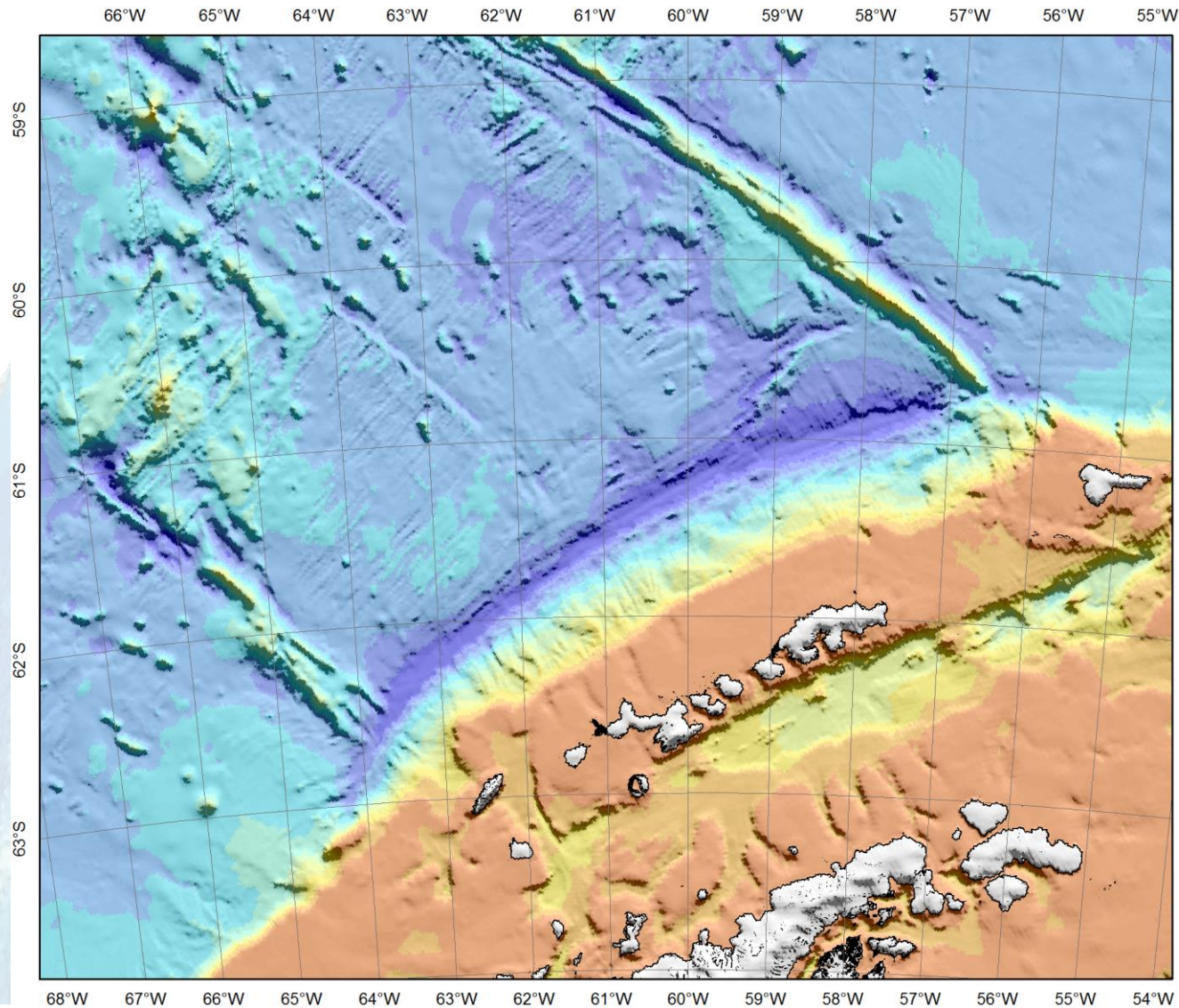
# GEBCO map examples



Drake Passage  
and Scotia Arc

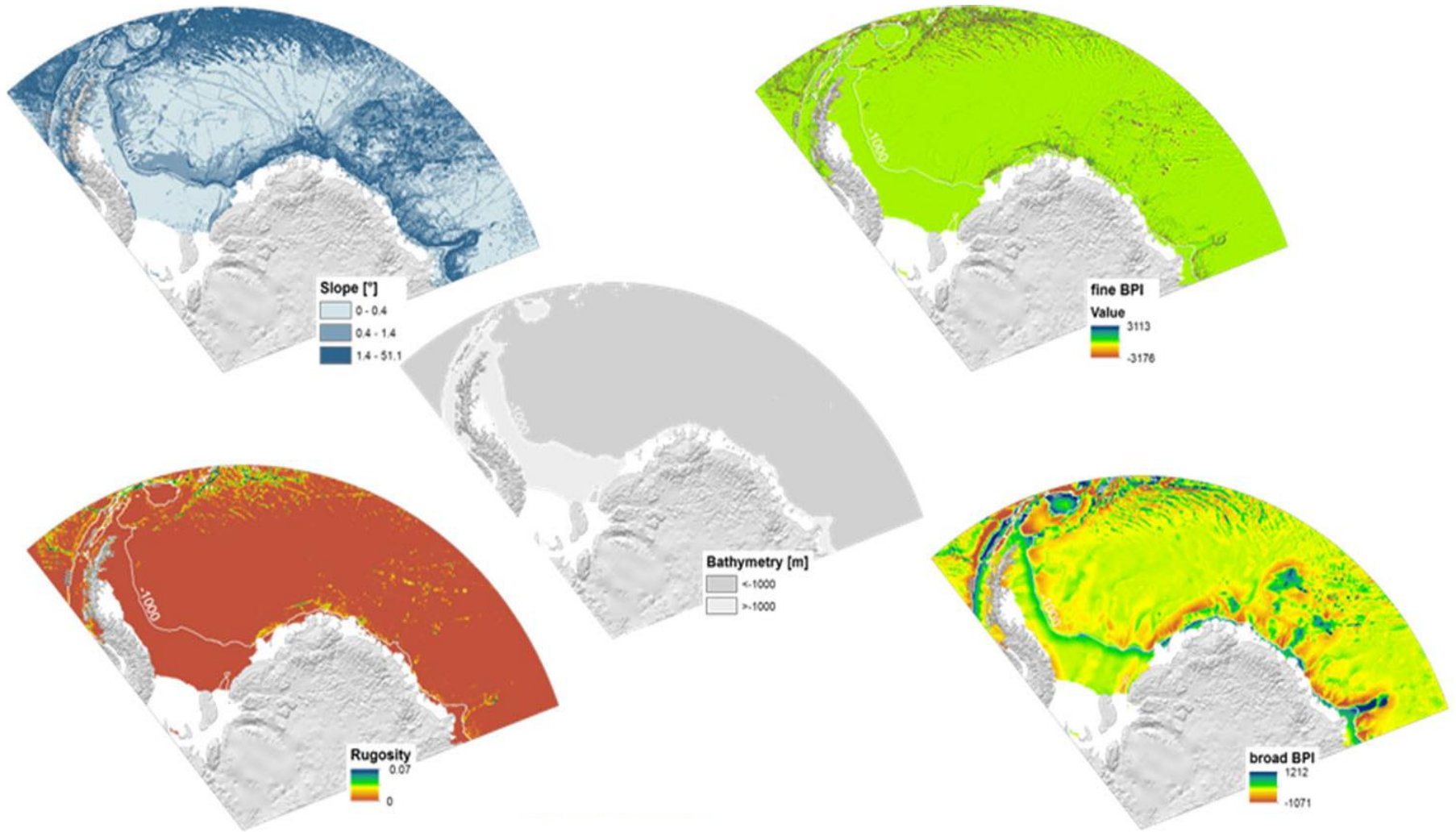


# GEBCO map examples



Antarctic Peninsula


















# Bathymetry derived products

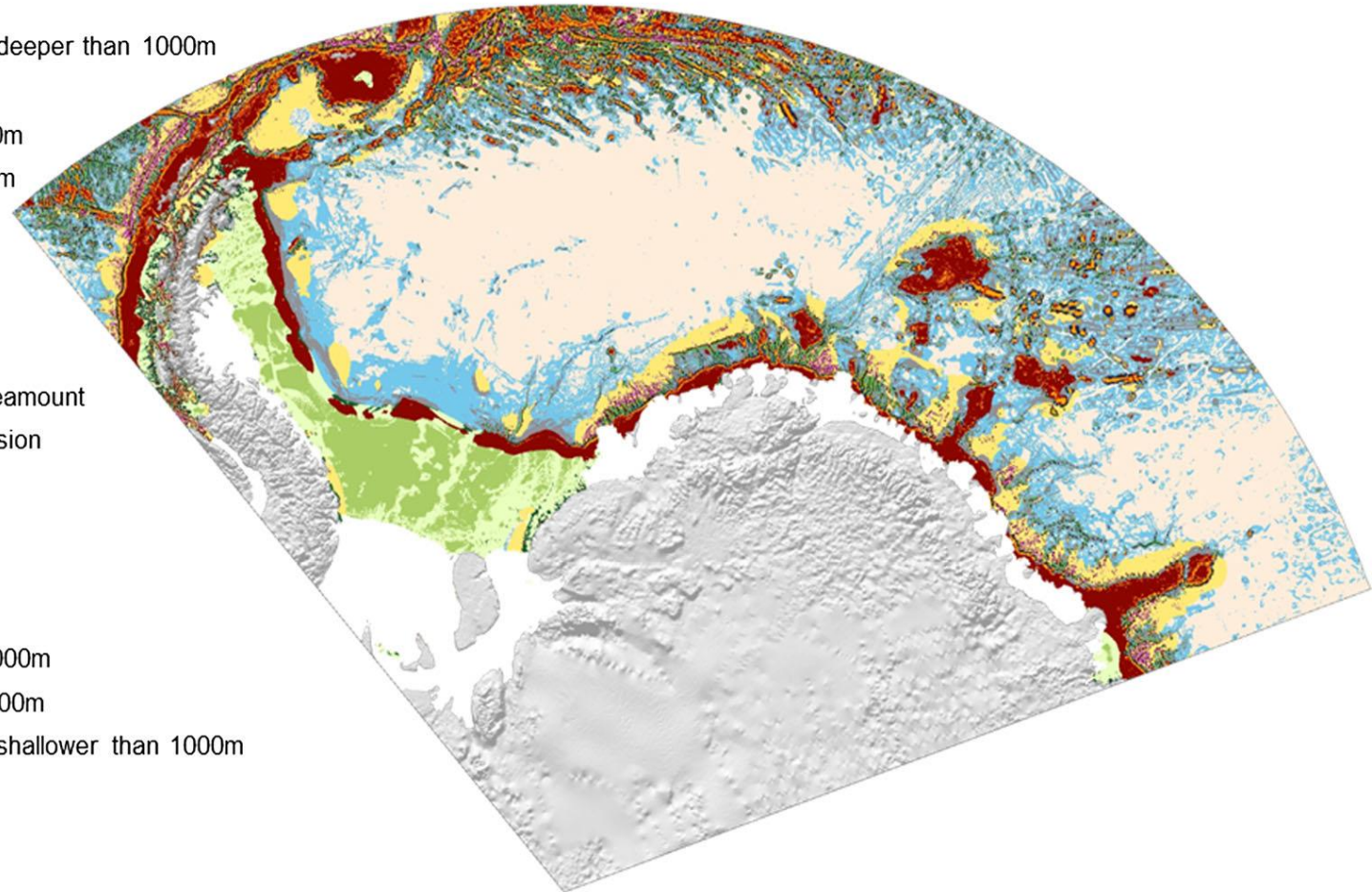


Geo-morphological analyses (Jerosch et al., 2015)

# Bathymetry derived products

## Seabed classes

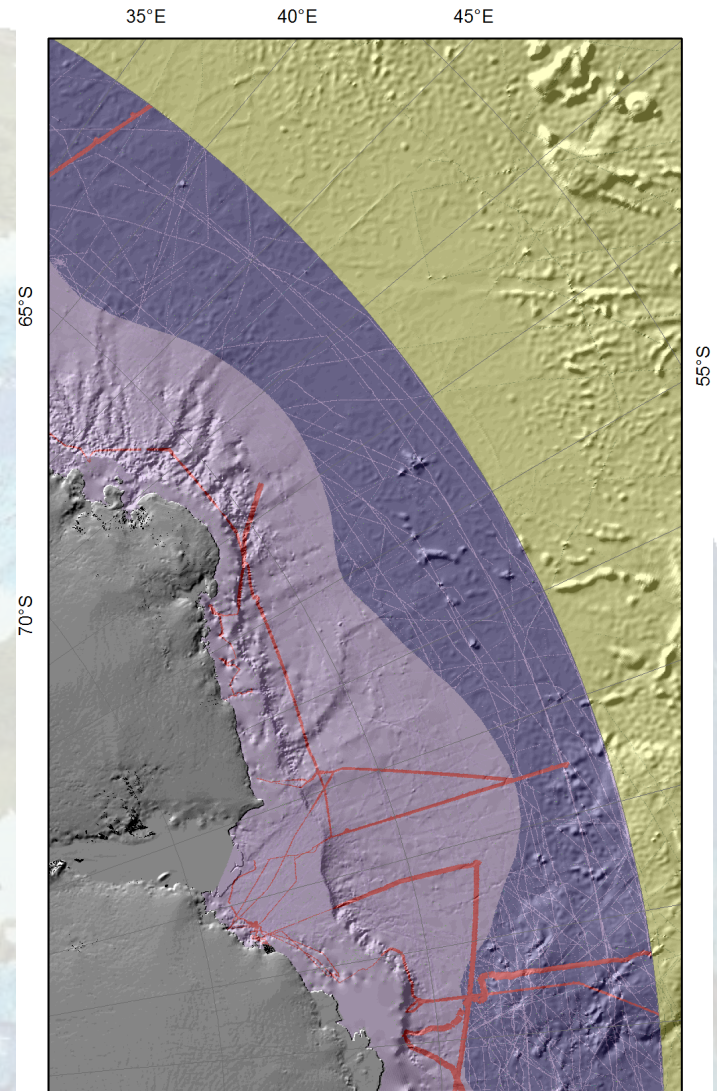
-  01-local ridge, pinnacle on slope deeper than 1000m
-  02-plain deeper than 1000m
-  03-gentle slope deeper than 1000m
-  04-steep slope deeper than 1000m
-  05-depression
-  06-scarp
-  07-local depression on flat ridge
-  08-flat ridge
-  09-narrow ridge, rock, outcrop, seamount
-  10-local ridge, pinnacle in depression
-  11-trough, local depression
-  12-local flat ridge top
-  13-local depression
-  14-plain shallower than 1000m
-  15-gentle slope shallower than 1000m
-  16-steep slope shallower than 1000m
-  17-local ridge, pinnacle on slope shallower than 1000m



Geo-morphological analyses (Jerosch et al., 2015)

# Filling the data gaps

- Raising awareness of the 'data gaps' to encourage data collection in these regions
- Encouraging organisations to make their bathymetric data sets easily discoverable and accessible, either directly or by contributing data to international publically-available databases such as the IHO Data Centre for Digital Bathymetry (IHO-DCDB)
- Crowd-sourced bathymetry (CSB) initiatives – such as the IHO CSB Working Group
- Bathymetric data collected in the scope of scientific project





# GEBCO's next Generation



## Nippon Foundation/GEBCO Training Programme

- Training for a new generation of seafloor mappers
- A 12 month course leading to a Postgraduate certificate in Ocean Bathymetry – University of New Hampshire, USA
- Funding for the programme is provided by the Nippon Foundation of Japan
- By now, over 60 scholars from 32 coastal states have taken part in the course
- Information at:

[www.gebco.net/training/](http://www.gebco.net/training/)



A 3D bathymetric map of the Indian Ocean region, showing the continental shelves, deep-sea basins, and trenches. The map is color-coded by depth, with shallower areas in light blue and deeper areas in dark blue. Labels include 'INDIAN OCEAN', 'CELEBES BASIN', 'SUNDRA TRENCH', and 'INVESTIGATOR BASIN'. The text 'Thank you!' is overlaid in the center in a large, yellow, italicized font.

*Thank you!*