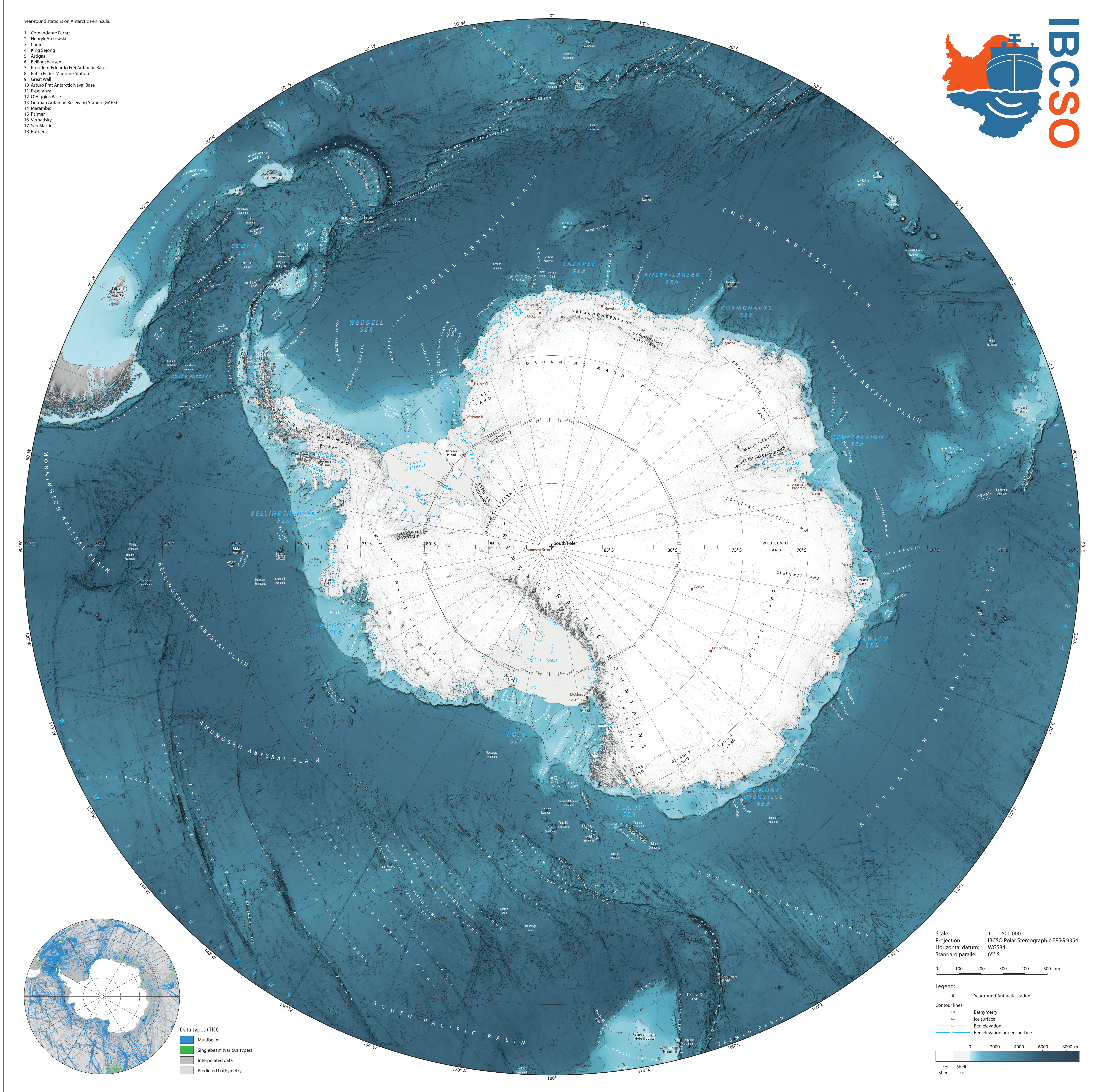


Year-round stations on Antarctic Peninsula:

- 1 Comandante Ferraz
- 2 Henryk Arctowski
- 3 Carlini
- 4 King Sejong
- 5 Artigas
- 6 Bellingshausen
- 7 Presidente Eduardo Frei Antarctic Base
- 8 Bahía Filadelfia Maritime Station
- 9 Great Wall
- 10 Arturo Prat Antarctic Naval Base
- 11 Esperanza
- 12 O'Higgins Base
- 13 German Antarctic Receiving Station (GARS)
- 14 Marambio
- 15 Palmer
- 16 Vernadsky
- 17 San Martín
- 18 Rothera



# INTERNATIONAL BATHYMETRIC CHART OF THE SOUTHERN OCEAN (IBCSO)

## Version 2

**General information**  
The Southern Ocean surrounding Antarctica is a region that is key to a range of climatic and oceanographic processes with worldwide effects, and is characterised by high biological productivity and biodiversity. Since 2013, the International Bathymetric Chart of the Southern Ocean (IBCSO) is the most comprehensive compilation of bathymetry and the most authoritative map for the Southern Ocean. IBCSO is a regional mapping project of the General Bathymetric Chart of the Oceans (GEBCO). GEBCO is a project under the auspices of the International Hydrographic Organization (IHO) and the Intergovernmental Oceanographic Commission (IOC) with the goal to produce the authoritative map of the world's oceans. Furthermore, IBCSO has combined its efforts with and is supported by the Nippon Foundation – GEBCO Seabed 2030 Project launched in 2017 by the Nippon Foundation of Japan and GEBCO. The IBCSO Project is also an integral part of the Antarctic research community and an expert group of the Scientific Committee on Antarctic Research (SCAR).

**About the map**  
The IBCSO v2 map is based on the IBCSO v2 digital bathymetric model (DBM). This DBM covers the area south of 50° S. The grid spacing is 500 m x 500 m in IBCSO Polar Stereographic Projection (EPSG: 9354) with the latitude of true scale at 65° S. It covers an area of more than 77 Million km<sup>2</sup> of seafloor. The DBM is available in two topography versions: one with ice surface elevation on the Antarctic continent (represented in this map) and one with bedrock elevation, including sub-ice topography. Furthermore, a Type Identifier (TID) grid is available that indicates the type of data that composes each grid cell. In addition, a unique Regional Identifier (RID) grid links each data cell to the corresponding metadata information and thus the DBM's cell value origin. For a detailed description and dataset download please see DOI: <https://doi.org/10.1594/PANGAEA.937574>

**Data sources**  
IBCSO v2 comprises a variety of datasets ranging from digitised contours and lead line soundings to high-resolution multibeam data. High-resolution multibeam datasets make up the basis of the compilation with a total of 464 datasets. In addition, 766 singlebeam datasets provide measured bathymetry

information. SRTM15+ v2.2 was used as predicted bathymetry for seafloor areas without direct measurements. Sub-ice shelf bathymetry is constrained by direct measurements, bathymetry inversions, and artificial steering lines. Ice surface and sub-ice sheet topography is from BedMachine.

**Workflow**  
For IBCSO v2 more than 50 billion soundings have been processed. This amount of data resulted in a large computing workload at all levels from data submission to product generation. The main processing pipeline developed to cope with this workload is called SEAHORSE. All relevant code related to the main SEAHORSE workflow is available at: [https://github.com/Seabed2030/IBCSO\\_v2\\_Dorschel\\_et\\_al\\_2022](https://github.com/Seabed2030/IBCSO_v2_Dorschel_et_al_2022)

**Data and place name references**  
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