



SCAR Sub-Group
 SG / SC
 Person
 Responsible:

IBCSO
 GS
 Boris Dorschel

XXXVII SCAR Delegates Meeting
India, September 2022

**International Bathymetric Chart of the
 Southern Ocean (IBCSO)**
2020-22 Report

Summary

Report Author(s)

Boris Dorschel (Alfred Wegener Institute, Germany)

Summary of activities from 2020-22

The main achievement during the reporting period was the publication of the second version of IBCSO in the *Scientific Data* <https://doi.org/10.1038/s41597-022-01366-7>. All associated data set (e.g. a digital chart, digital terrain models with and without the Antarctic ice sheet and an RGB version of the map) are publically available for download at <https://doi.org/10.1594/PANGAEA.937574>. Furthermore, IBCSO as part of the Nippon Foundation – GEBCO Seabed 2030 Project provided the area south of 50°S for the General Bathymetric chart of the Oceans (GEBCO) grid releases 2020 (<https://doi.org/10.5285/a29c5465-b138-234d-e053-6c86abc040b9>), 2021 (<https://doi.org/10.5285/c6612cbe-50b3-0cff-e053-6c86abc09f8f>) and 2022 (<https://doi.org/10.5285/e0f0bb80-ab44-2739-e053-6c86abc0289c>).

In parallel, bathymetric data sets were continuously added to the IBCSO database. New data were acquired during the expeditions PS124 and PS128 with RV Polarstern.

IBCSO / Seabed 2030 Regional Centre – Southern Ocean held the 2021 Arctic Antarctic North Pacific Mapping Meeting (virtual) attended the 2022 Arctic Antarctic North Pacific Mapping Meeting in person in Stockholm Sweden, 21 – 24 March 2022. Progress of IBCSO was reported at the 18th Hydrographic Commission on Antarctica Conference, Berlin Germany 24 – 26 May 2022.

Now, work on IBCSO v3 is ongoing.

Summary Budget 2021 to 2024

	2021	2022	2023	2024
	Spent	Allocated	Request	Request
(US\$)	0 (due to COVID-19)	5k?	5k	5k

Progress to date

Sub-group Outcomes Summary

Sub-group	Activity/Outcome/Benefit/Achievement
IBCSO	IBCSO publication/IBCSO v2 paper/IBCSO v2 publically available
IBCSO	IBCSO coordination/IBCSO v2/ IBCSO v2 published
IBCSO	Identification of data sets/increased data coverage/increased seafloor representation by measurements
IBCSO	Development of IBCSO workflow SEAHORSE/advanced product generation

Sub-group Cash Flow

(Since previous report to Delegates in 2020)

Sub-group	Allocation	Amount spent		
		2020	2021	2022
IBCSO		0 due to COVID-19	0 due to COVID-19	5k?

Future plans

Planned activities in 2022 to 2024

Sub-group	Planned activity
IBCSO	Printing and distribution of IBCSO v2 chart
IBCSO	Participation in SCAR Science Meeting

Planned use of funds for 2022 to 2024

Year (YYYY)	Purpose/Activity	Amount (in USD)	Contact Name	Contact Email
2022	Printing and distribution of IBCSO v2 chart	5k	Boris Dorschel	Boris.Dorschel@awi.de
2024	Participation in SCAR Science Meeting	5k	Boris Dorschel	Boris.Dorschel@awi.de
Total		10k		

Any additional detail on funds usage and desired results/outcomes

Percentage of the budget to be used for support of early-career researchers

2022:

2023:

2024:

Percentage of the budget to be used for support of scientists from countries with developing Antarctic programmes

2022:

2023:

2024:

Membership

Leadership

Role	First Name	Last Name	Affiliation	Country	Primary Language	Email	Date Started
	Boris	Dorschel	AWI	Germany	German	Boris.Dorschel@awi.de	01.06.2012

*(Please identify early-career researchers with * in first column)*

Other members

First Name	Last Name	Affiliation	Country	Primary Language	Email
See authors on publication below					

*(Please identify early-career researchers with * in first column)*

Additional information (optional)

Notable Papers

Dorschel B., Hehemann L., Viquerat S., Warnke F., Dreutter S., Schulze Tenberge Y., Accettella D., An L., Barrios F., Bazhenova E., Black J., Bohoyo F., Davey C., De Santis L., Escutia Dotti C., Fremand A.C., Fretwell P.T., Gales J.A., Gao J., Gasperini L., Greenbaum J.S., Jencks J.H., Hogan K., Hong J.K., Jakobsson M., Jensen L., Kool J., Larin S., Larter R.D., Leitchenkov G., Loubrieu B., Mackay K., Mayer L., Millan R., Morlighem M., Navidad F., Nitsche F.O., Nogi Y., Pertuisot C., Post A.L., Pritchard H.D., Purser A., Rebesco M., Rignot E., Roberts J.L., Rovere M., Ryzhov I., Sauli C., Schmitt T., Silvano A., Smith J., Snaith H., Tate A.J., Tinto K.J., Vandenbossche P., Weatherall P., Wintersteller P., Yang C., Zhang T., Arndt J.E., 2022. The International Bathymetric Chart of the Southern Ocean Version 2. Scientific Data 9, 275, <https://doi.org/10.1038/s41597-022-01366-7>.

This paper is the release paper of IBCSO v2, the most detailed and comprehensive map of the seafloor south of 50°S.

Direct support from outside organisations received for your activities

1. Nippon Foundation – GEBCO Seabed 2030 Project
2. AWI

Major collaborations your group has with other SCAR groups and with organisations/groups beyond SCAR

Within SCAR

Outside SCAR

1. Nippon Foundation – GEBCO Seabed 2030 Project
2. General Bathymetric Chart of the Oceans

Outreach, communication and capacity-building activities

The release of IBCSO v2 was prominently featured in public media, including [the BBC](#) and [National Geographic](#). An attention score is provided by [Altmetrics](#). This amazing media echo highlighted the general public interest in the Southern Ocean, Antarctica, GEBCO, and Seabed 2030. And it has already been used in the recent good news story of the return of fin whales to Antarctica <https://doi.org/10.1038/s41598-022-13798-7>.

Contributions to equality, diversity, and inclusion (EDI)

(Any specific actions the group has undertaken to advance EDI within the group and/or within SCAR)

SCAR fellowship reviewers

First Name	Last Name	Email	Principal Expertise
Boris	Dorschel	Boris.Dorschel@awi.de	Bathymetry