Southern Ocean status
Plans for IBCSO 2.0

Second Seabed 2030 Arctic – Antarctic – North Pacific
Mapping Meeting 2019
University of New Hampshire
9 – 10 Nov

Boris Dorschel, Laura Hehemann, Sacha Viquerat, Simon Dreutter
The team

Southern Ocean Regional Centre
IBCSO 2.0

- Area south of 50°S
  2.5 seafloor times the area of IBCSO 1.0!
- Raster resolution of 500 m
- Grid provided by RDACC Southern Ocean to GDACC for annual updates of GEBCO grid
- IBCSO 2.0 grid published in an international, peer-reviewed journal

Background: GEBCO_14
(Weatherall et al., 2015)
Data contributions

- Data submission for IBCSO 2.0 is almost closed
- 1200+ datasets merged into functioning grid
  - ~600 pre-2013 and ~600 post-2013 datasets
- Work on cleaning the grid is in progress
- New infrastructure implemented
  - Speed up processing
  - Streamline workflow
Data contributions

1. British Antarctic Survey (BAS)
2. Polar Marine Geosurvey Expedition (PMGE)
3. Centre for Oceanographic and Hydrographic Research, Colombia (CIOH)
4. Japan Agency for Marine-Earth Science and Technology (JAMSTEC)
5. National Institute of Polar Research (NiPR)
6. State Oceanic Administration (SOA)
7. Instituto Nazionale di Oceanografia e di Geofisica Sperimentale (OGS)
8. Instituto Geológico y Minero de España (IGME)
9. National Centers for Environmental Information (NCEI)
10. L'Institut Français de Recherche pour l'Exploitation de la Mer (IFREMER)
11. Korean Polar Research Institute (KOPRI)
12. National Institute of Water and Atmospheric (NIWA)
13. Stockholm University (SU)
14. Australian Antarctic Data Centre (AAD)
15. Australian Hydrographic Office (AHO)
16. Geoscience Australia (GA)
17. Australia's Marine National Facility (MNF)
18. University of Tasmania (UTAS)
19. All-Russia Research Institute of Geology and Mineral Resources of the World Ocean (VNIIOkeangeologia)
20. Electronic Nautical Charts (ENC) Chile & Argentina
21. Japan Oceanographic Data Center (JODC)
22. Alfred Wagner Institute (AWI)
New Infrastructure

A. Homogenization
B. Tiling
C. Block median
D. Gridding
E. Automated reporting
IBCSO v1 Bathymetry Coverage
IBCSO 2.0 Bathymetry Coverage
**Metadata**

<table>
<thead>
<tr>
<th>Concept/Rough Name</th>
<th>Example</th>
<th>Definition</th>
<th>Type</th>
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<td>contrib_date</td>
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<td>Date (year) of contribution, year when the data was contributed</td>
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<td>Who acquired the data (organization)</td>
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<td>Specific URL from which data were downloaded from or could be downloaded from.</td>
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- **Minimum requirement**
  - Information on data contributor, e.g. portal
- **by you**
  - Source metadata, e.g. vessel, acquisition system, etc.
    (can be blank, but best if not!)
- **by us**
  - Compilation metadata.
    (can be blank, but best if not!)
Recent/planned mapping activities

• German institutes
  – Antarctic: Larsen C and Weddell Sea (Jan 2019)
  – RV Polarstern MOSAiC Expedition (2019/20) in the Arctic => no Antarctic Expedition
  – RV Sonne Jan - Mar 2020 sub-antarctic waters
  – Probably RV Merian activities in sub-antarctic waters

• Others?
HCA 16 / ATCM XLII

• 16th Conference of the IHO Hydrographic Commission on Antarctica (HCA)
• HCA Seminar at the XLII Antarctic Treaty Consultative Meeting, Prague

Images: https://iho.int/mtg_docs/rhc/HCA/HCA16/HCA16Docs.html
ISAES 2019

• International Symposium on Antarctic Earth Sciences (ISAES) 22–26 July 2019
  – Host: SCAR, Organizers: Korea Polar Research Institute (KOPRI)

• IBCSO 2.0 side meeting held
SCAR Open Science Conference 2020

Side meeting of the IBCSO Expert Group

Portsmouth