



IHO

International
Hydrographic
Organization



United Nations
Educational, Scientific and
Cultural Organization



Intergovernmental
Oceanographic
Commission

Seabed 2030 & GEBCO

GEBCO & Seabed 2030



www.gebco.net

What is GEBCO?

General Bathymetric Chart of the Ocean
Started by Prince Albert I of Monaco in 1899!

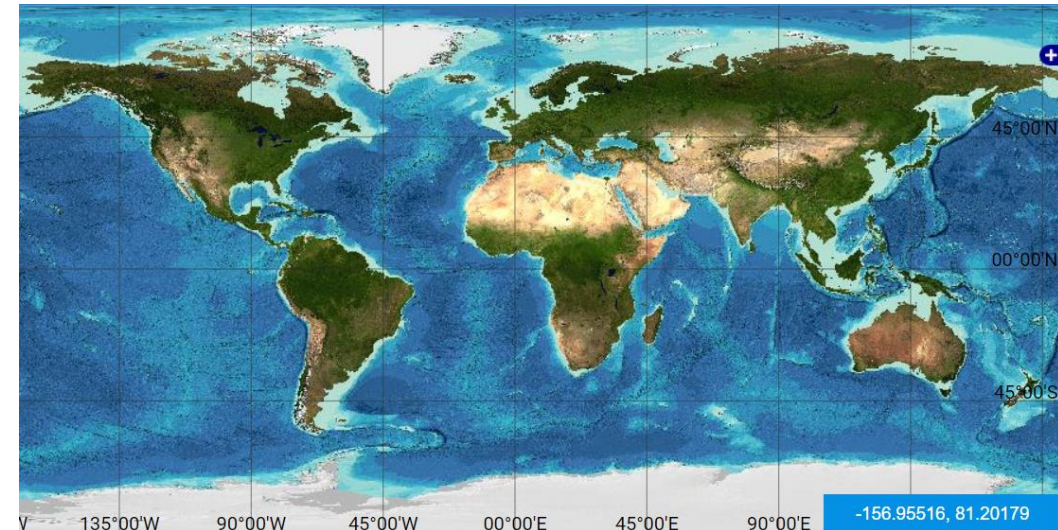
An IHO & IOC joint Project



A **voluntary** community of international **scientists** and **hydrographers** collaborating with the support of their parent organizations.'



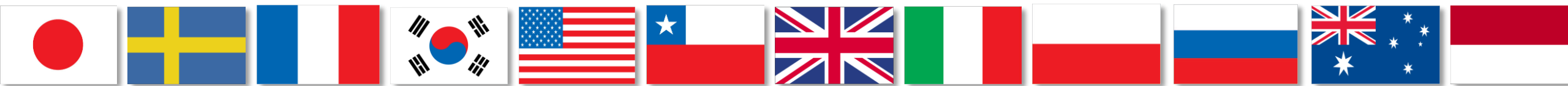
Any time you see a global map of ocean topography it is the GEBCO map.



How is GEBCO governed?

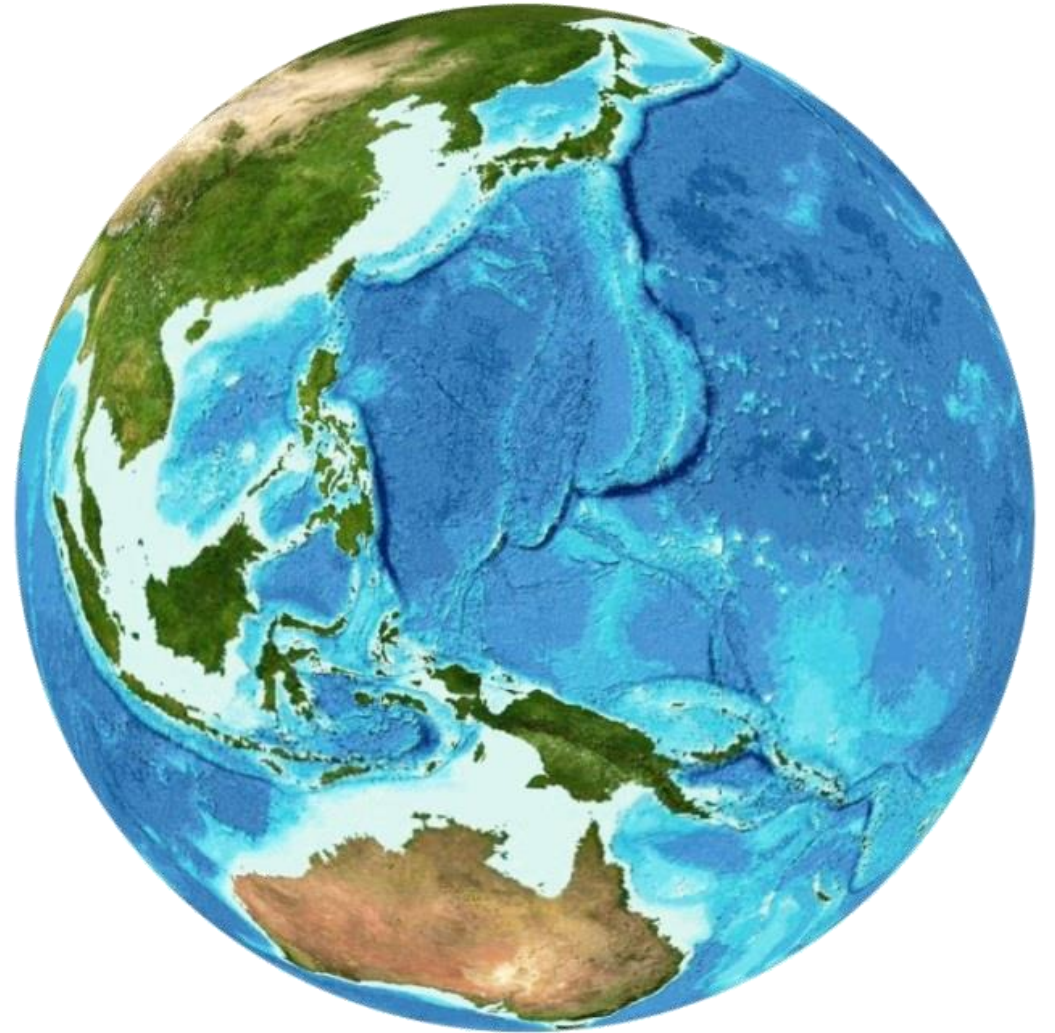
Directed by a *Guiding Committee* and supported by *sub-committees* and *ad hoc working groups*:

- Technical Sub-Committee for Ocean Mapping (TSCOM)
- Sub-Committee for Undersea Feature Names (SCUFN)
- Sub-Committee for Regional Undersea Mapping (SCRUM)
- Sub-Committee on Communications, Outreach & Public Engagement (SCOPE)
- IHO-IOC GEBCO Cook Book Working group



GEBCO outputs:

- **GEBCO ocean map:**
Global gridded bathymetric data
GEBCO 2019: 15 arc-second grid
- Gazetteer of Undersea Feature Names
- Grid viewing software
- Printable maps
- Web Map Service (WMS)
- IHO-IOC GEBCO Cook Book
- GEBCO-NF Alumni





The Nippon Foundation-GEBCO Seabed 2030 Project



A collaborative project between The Nippon Foundation and GEBCO to inspire the complete mapping of the world's ocean by 2030 and to compile all bathymetric data into the GEBCO Ocean Map.



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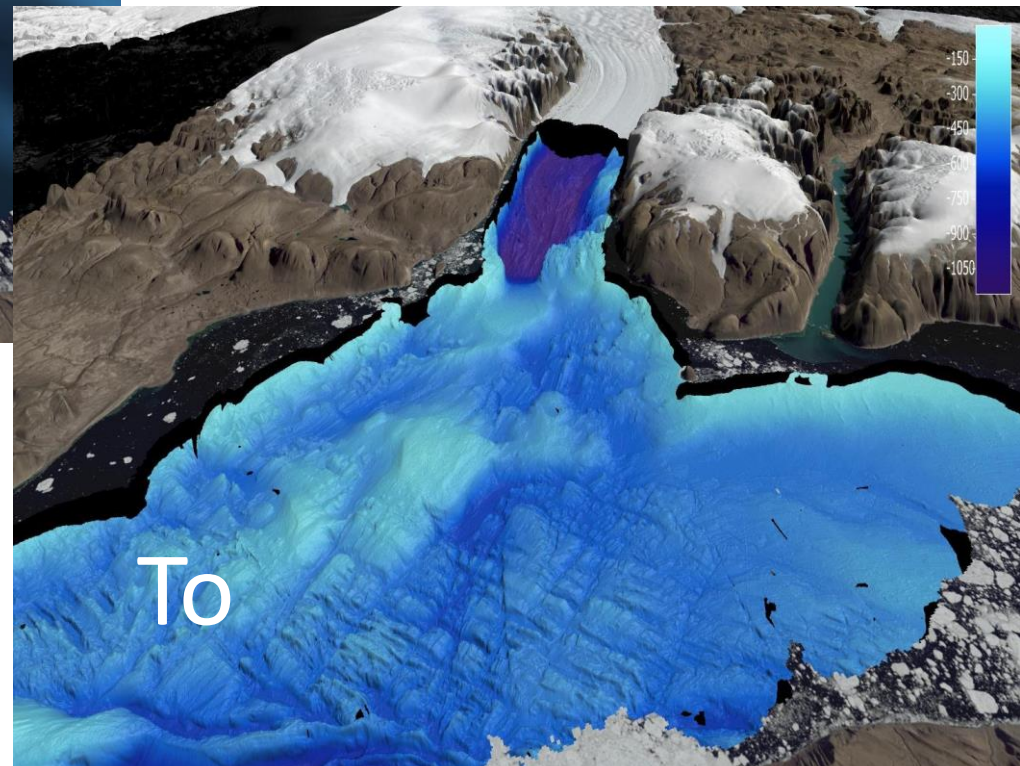
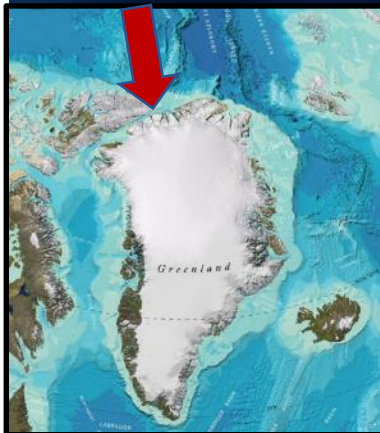
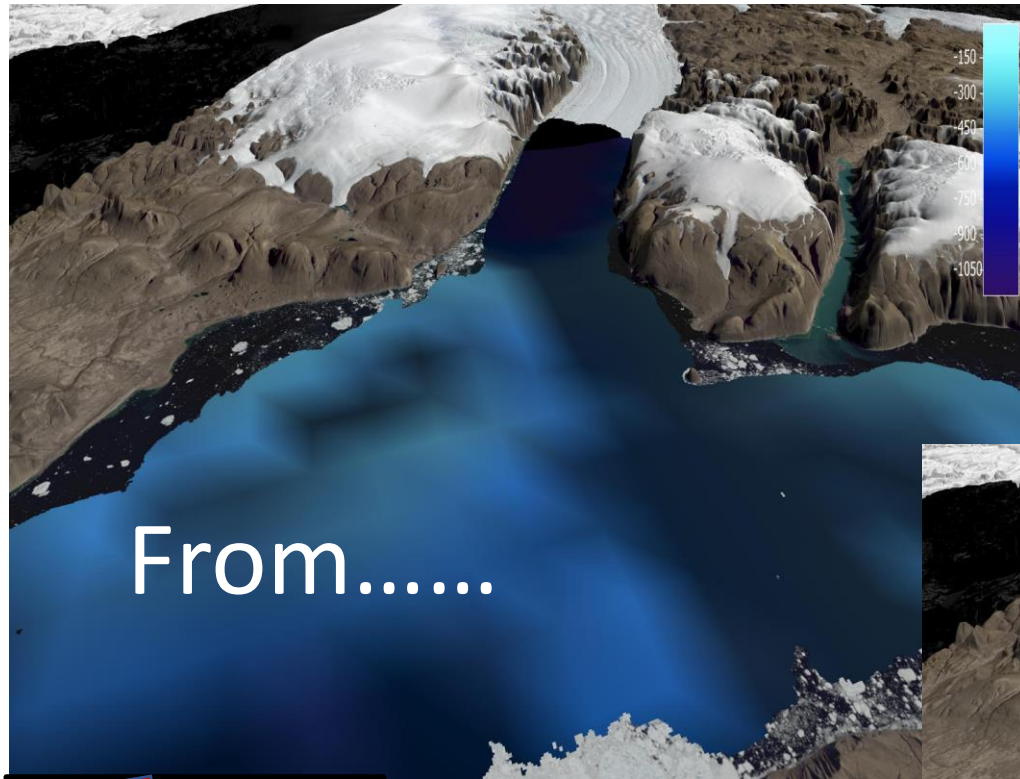
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-The **Nippon Foundation** is a private Japanese-based, non-profit grant-making organization with a mission based around philanthropic activities to pursue global maritime development and assistance for humanitarian work.

-The **General Bathymetric Chart of the Oceans (GEBCO)** organization operates under the joint auspices of the International Hydrographic Organization (IHO) and the Intergovernmental Oceanographic Commission (IOC) of UNESCO

GEBCO Ocean Map

the most authoritative, publicly-available world ocean map



How much of the ocean is mapped?



$$X + Y + Z = 100\%$$

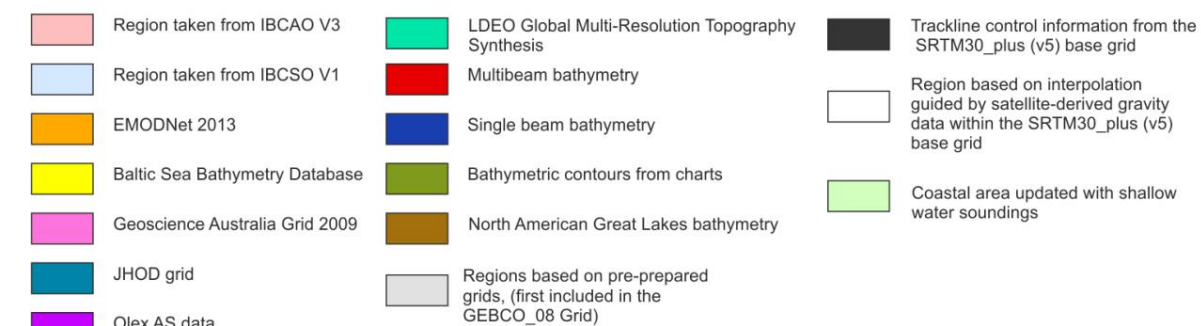
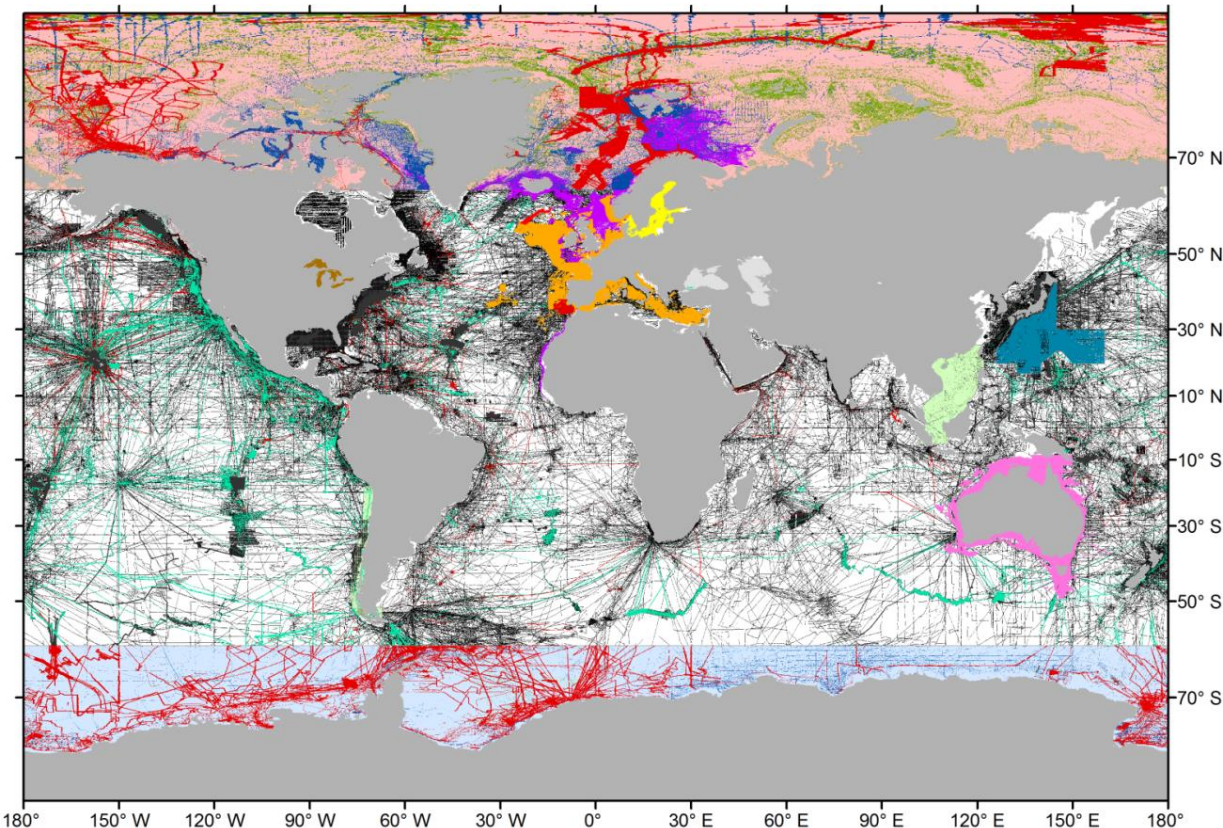
X: Data in GEBCO 2019

X = 15%

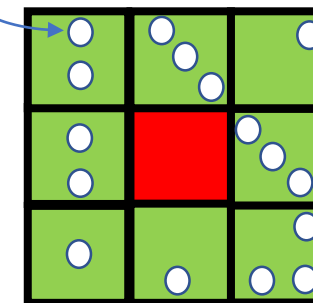
Y: Data that exists but not yet in GEBCO

- Public
- Embargoed

Z: Data that must be measured (map the gaps)

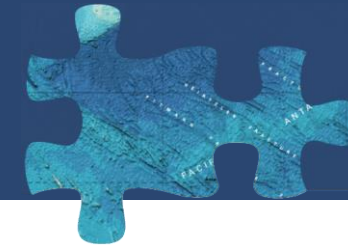


Data point



15% of GEBCO 2019 cells have data
85% interpolated data

Seabed 2030 Strategy



Today



Tomorrow



REGIONAL CENTERS

1. North Pacific-Arctic Ocean



Stockholm University



University of New Hampshire

2. South & West Pacific Ocean



NIWA
Taihoro Nukurangi



Land Information
New Zealand
Iaitia te whenua

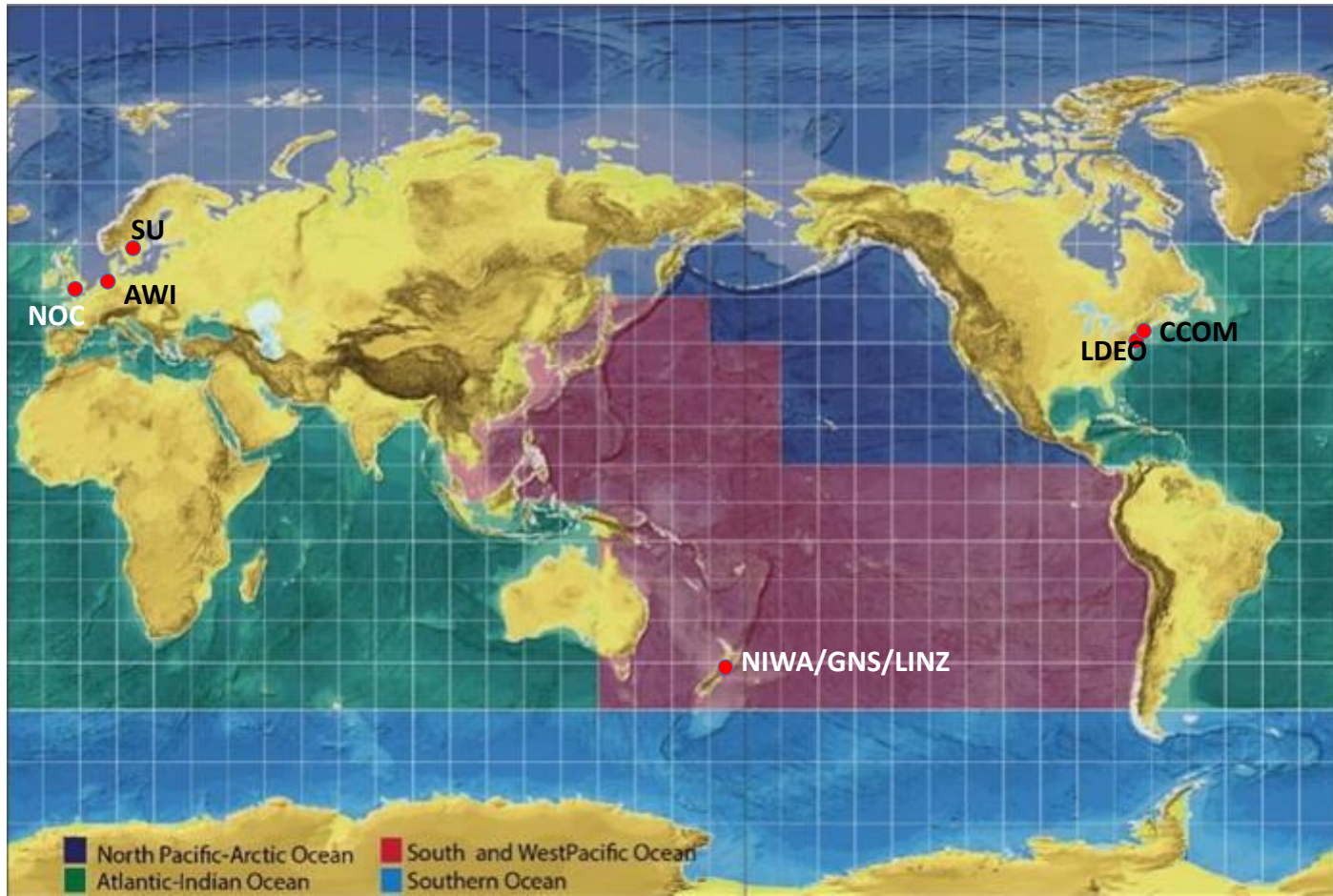
3. Atlantic-Indian Ocean

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

4. Southern Ocean



ALFRED-WEGENER-INSTITUT
HELMHOLTZ-ZENTRUM FÜR POLAR-
UND MEERESFORSCHUNG



GLOBAL CENTER



National Oceanography Centre

NATURAL ENVIRONMENT RESEARCH COUNCIL



Existing data

- Share (professional) data with Seabed 2030 Centers

Regional mapping initiatives

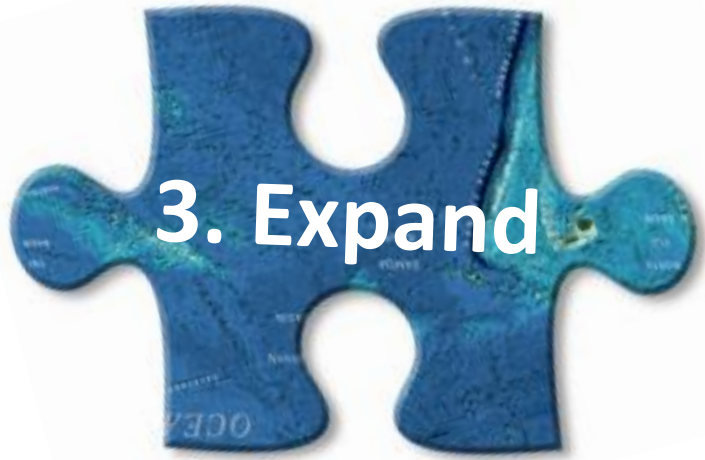
- Share local maps with Seabed 2030 Centers



2. Optimize

- Optimize and maximize existing equipment**
 - Turn it on & share the data

- Optimize ship tracks of expert contributors (commercial survey and research vessels)**
 - Route through the gaps (map the gaps)

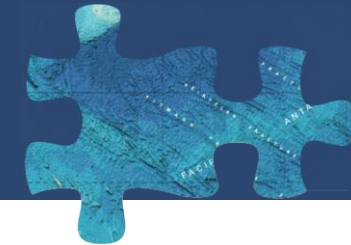


□ Increase mapping activity

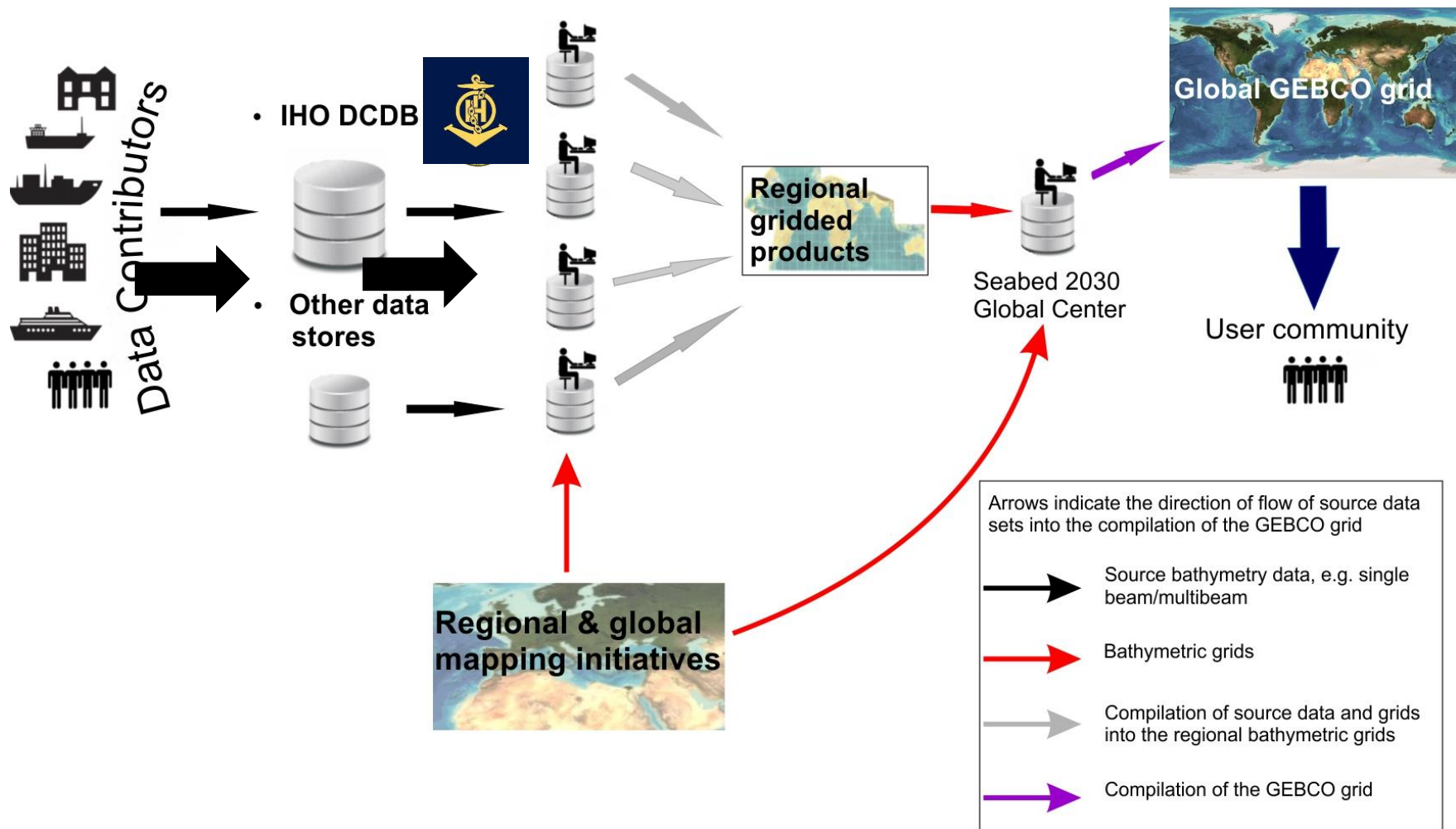
- Research expeditions
- Survey expeditions
- Crowd Sourced Bathymetry (CSB)
 - Fishing fleet
 - Maritime industries
 - Leisure
 -



- ❑ **Accelerate technology innovation uptake**
 - Autonomous and unmanned measuring platforms



Data





GEBCO-NF Alumni team win XPRIZE, 31st May 2019

