The Nippon Foundation – GEBCO

SEABED 2030

100% of the Ocean Floor Mapped by 2030
Seabed 2030 Mission

100% of the Ocean Floor Mapped by 2030

To empower the world to make policy decisions, use the ocean sustainably and undertake scientific research based on detailed bathymetric information of the Earth’s seabed

Supports United Nations Sustainable Development Goal 14: to conserve and sustainably use the world’s oceans, seas and marine resources
What does “100% mapped” mean?

The GEBCO global terrain model grid

- ship-track soundings + interpolation guided by satellite-derived gravity data
- Includes regional grids which may be based on different interpolation models

18% of 30” cells have depth measurements
6% of 15” cells have depth measurements

- Real depth measurements
- Interpolated depth values
- Depth values derived from statistics of real depth values.
### Target GEBCO Grid

**Depth-dependent Variable Resolution**

<table>
<thead>
<tr>
<th>Depth Range</th>
<th>Resolution</th>
<th>% of Ocean</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–1500 m</td>
<td>100 × 100 m</td>
<td>13.7</td>
</tr>
<tr>
<td>1500–3000 m</td>
<td>200 × 200 m</td>
<td>11.0</td>
</tr>
<tr>
<td>3000–5750 m</td>
<td>400 × 400 m</td>
<td>72.6</td>
</tr>
<tr>
<td>5750–11,000 m</td>
<td>800 × 800 m</td>
<td>2.7</td>
</tr>
</tbody>
</table>
Four Pillars of Seabed 2030

• Data Assembly and Coordination
  • Integrate and process existing data & identify data gaps to inform future mapping missions
  • Promote data sharing by encouraging contribution of data to the IHO DCDB
  • Create new data products – distribute through GEBCO

• Global Community Engagement
  • Identify & engage stakeholders through community events, traditional & digital media

• Consolidate Technical and Human Capacity
  • Explore and leverage new technology
  • Engage GEBCO Nippon Foundation Training Project Alumni

• Cross-cutting area of Corporate Governance
  • Strong stakeholder communication
  • Legal and accounting standards
WP 1: Gathering, synthesizing, publishing bathymetric data
Merging all available data into the high resolution ocean map

WP 2: Development of standards, data assembly and delivery tools
Developing the tools and systems to facilitate building and using the map.

WP 3: Technology innovation
Identifying and encouraging technical innovation in bathymetric mapping

WP 4: Networking: map the gaps
Future mapping expeditions to increase the coverage

WP 5: Management
Managing the project

Seabed 2030 Culture

• Co-operation and Community Building
  • 3,000 individuals, 40 organizations, 50 countries and growing

• Coordination
  • Initial Seabed 2030 focus on > 200 meters water depth
  • Hydrographic Offices critical < 200 meters water depth

• Crowdsourcing
  • Fishing boats, cargo, passenger and cruise ships, private yachts...

• Credit and Attribution
  • Recognize data contributions, in-kind services, promotion, capacity building...

https://seabed2030.gebco.net
@seabed2030
Seabed 2030 Governance & Operations

Director + Center leads

GEBCO Guiding Committee

Advisory Group

Project Team

SCRUM
SCUFN
TSCOM

Review Panel

N Pacific & Arctic Ocean
Atlantic & Indian Ocean
Global Center
Southern Ocean
South & West Pacific
Seabed 2030 Governance & Operations
Leader Team

Operational since 1st February 2018

From left to right:
- Graham Allen (Establishment Team)
- Vicki Ferrini (Regional Centre Lead)
- Larry Mayer (Regional Center co-Lead)
- Helen Snaith (Global Center Lead)
- Boris Dorschel (Regional Center Lead)
- Pauline Weatherall (Digital Atlas Manager)
- Martin Jakobsson (Regional Center co-Lead)
- Geoffroy Lamarche (Regional Center Lead)
- Patrick Orr (Comms)
- Henry Gilliver (Comms)
Seabed 2030 Governance & Operations
Strategic Advisory Group

Dawn Wright
Chief Scientist, ESRI

Bjorn Jalving
Executive VP, Kongsberg Maritime

Dr. Kilaparti Ramakrishna
Head of Strategy, Green Climate Fund

Yulia Zarayskaya
NF-GEBCO Alumni Team Lead XPrize
Regional Approach

- Regional stakeholders
- Regional data assembly & coordination
- Regional products feed into global GEBCO products
- Follows successful model of GEBCO Regional Mapping approach
Break down of the source of data types that the GEBCO grid is based on

<table>
<thead>
<tr>
<th>Grid cell type (30 arc-second)</th>
<th>GEBCO_2014</th>
<th>New grid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interpolation guided by satellite-derived gravity data</td>
<td>66.5%</td>
<td>62.4%</td>
</tr>
<tr>
<td>Interpolation guided by computer programme, e.g. GMT</td>
<td>14%</td>
<td>14.3%</td>
</tr>
<tr>
<td>Multibeam</td>
<td>9%</td>
<td>12.4%</td>
</tr>
<tr>
<td>Single beam</td>
<td>1.9%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Pre-generated grid</td>
<td>2.7%</td>
<td>4.3%</td>
</tr>
<tr>
<td>Unidentified track type</td>
<td>3.9%</td>
<td>2.8%</td>
</tr>
<tr>
<td>Isolated soundings, e.g. ENC soundings</td>
<td>0.1%</td>
<td>0.1%</td>
</tr>
<tr>
<td>Contours</td>
<td>1.9%</td>
<td>1.9%</td>
</tr>
</tbody>
</table>