

THE NIPPON FOUNDATION-GEBCO

SEABED

2030

Update for Project Year 5

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IHO

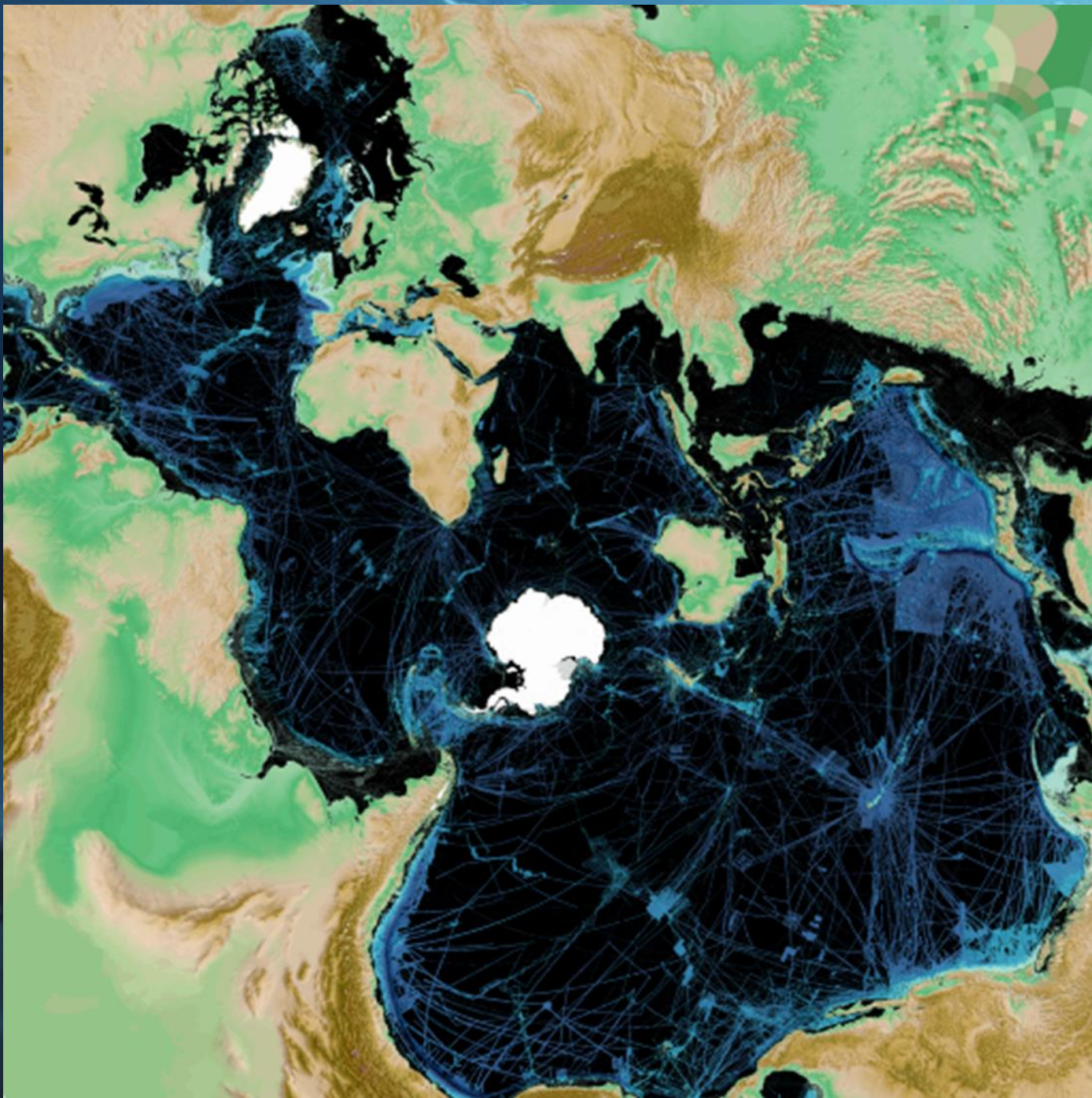
International
Hydrographic
Organization



Intergovernmental
Oceanographic
Commission



2021 United Nations Decade
of Ocean Science
2030 for Sustainable Development



It really is

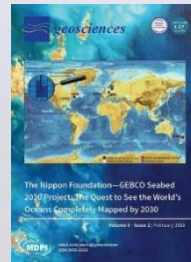
Our One Ocean!



Seabed 2030

Collaborative project between The Nippon Foundation and GEBCO to inspire complete mapping of the world's ocean by 2030 and to compile all bathymetric (depth) data into the freely-available GEBCO Ocean Map.

Seabed 2030 is an “accelerator” to fast-track GEBCO’s aim



Endorsed Decade Programme

June 2016



June 2017



June 2021

Project Update for Project Year 5

Q1 (Aug - Oct 21) & Q2 (Nov 21 – Jan 22)

Update by Project Work Packages:

WP1 – Data

WP2 – Systems & Tools

WP3 – Technology Innovation

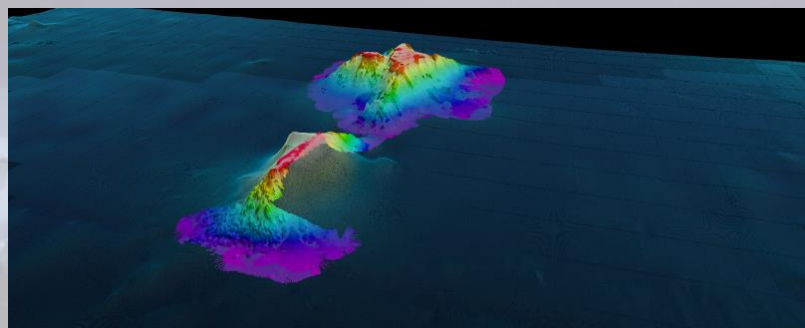
WP4 – Mapping Activities

WP5 – Management



WP1 – Data

- **GEBCO 2021 Grid also released via Web Map service**
- **IBCAO 4.1 published for the Arctic Ocean**
- **IBCSO 2.0 published for the Southern Ocean**
- **Data ingestion via:**
 - **Extensive engagement with data donor organisations**
 - **Data mining with counties/entities**
 - **Includes much new data from EV Nautilus missions (MOU partner)**

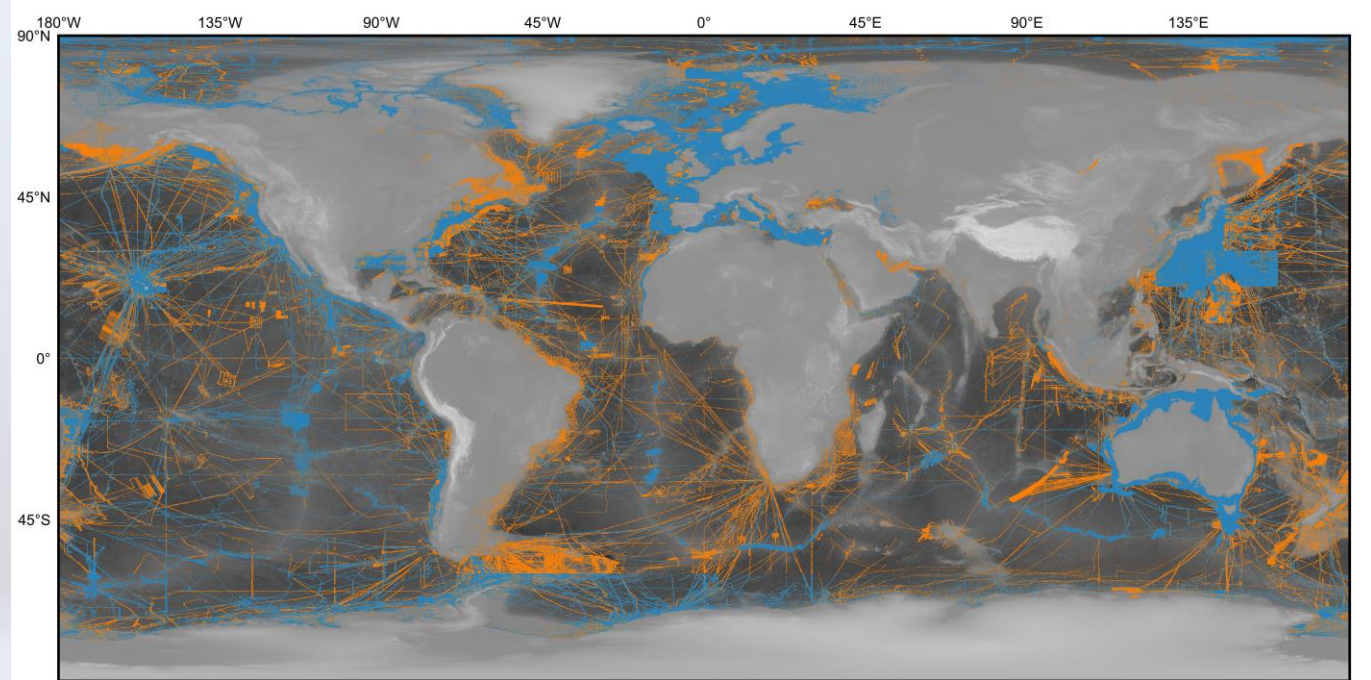


E/V Nautilus – Mercury & Loudoun Seamounts (Pacific)

Progress so far...

GEBCO 2021 Grid Delivery

- GEBCO Grid stood at 6% coverage when Seabed 2030 began
- Ocean mapping coverage now stands at **20.6%** (June 2021)
- Still almost 4/5ths of the ocean floor still to be mapped



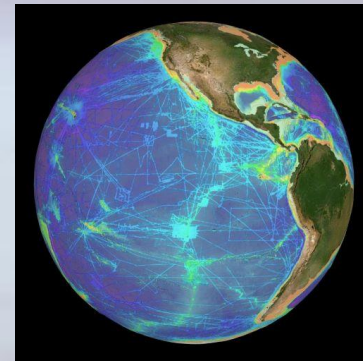
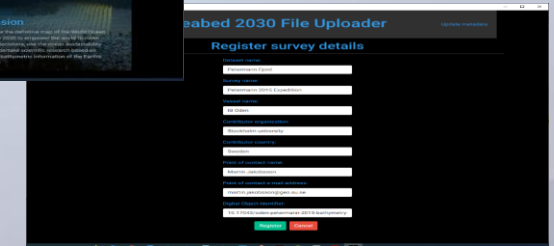
— GEBCO 2014
— Data additions to 2021

Courtesy: Martin Jakobsson, SU



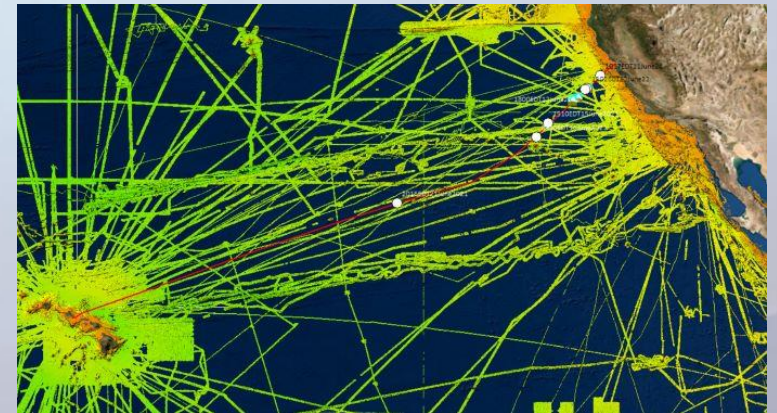
WP2 – Systems & Tools

- Process improvements at Centers
- Surveying System Bathy Data Uploader
 - Collaboration with Kongsberg Maritime
 - Beta version developed
- Statistics routines developed on Amazon Web Services (AWS)
- Collaboration with Scripps on SRTM+ base grid improvements
- UNH Web App visualization refined



WP3 – Tech Innovation

- Tech Strategy White Paper in prep
- Grid Stats improvements cross-Centers
- Refined/demo new-gen CSB loggers (UNH)
- Global Center as a CSB Trusted Node
- Proved viability of autonomous data gathering on Sairdrone's Pacific crossing (TOTT)
- Seabed 2030-Kongsberg Maritime Cloud Processing
 - KM *Blue Insight* platform
 - Backlog processing – force multiplier



Sairdrone – San Francisco to Hawaii transit

WP4 – Mapping Activities

- Data from wider Ocean Frontier activities:
 - IB Oden - Arctic
 - EV Nautilus & DSSV Pressure Drop - Pacific
 - USCGC Healy - NW Passage
 - RV Polarstern - Atlantic & Southern Ocean
- Ocean Frontier Mapping Project
 - Funded mappers - DSSV Pressure Drop



WP4 – Mapping Activities

- CSB
 - South Africa/Greenland/Palau
 - SWPac & others
- Satellite Derived Bathy (SDB)
 - Madagascar
 - Federated States of Micronesia
 - Maldives
- Fugro transit bathy - 2 million sq km milestone

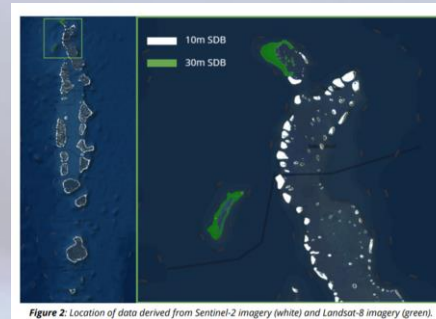
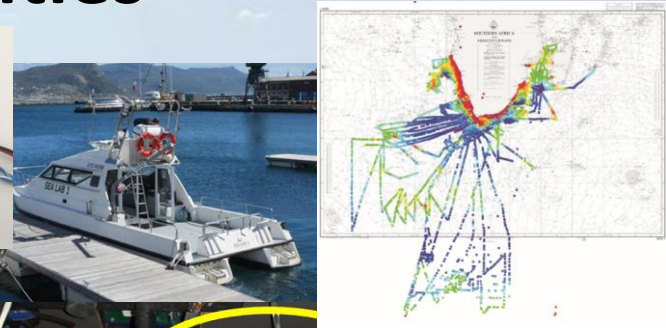


Figure 2: Location of data derived from Sentinel-2 imagery (white) and Landsat-8 imagery (green).

Courtesy: SANHO

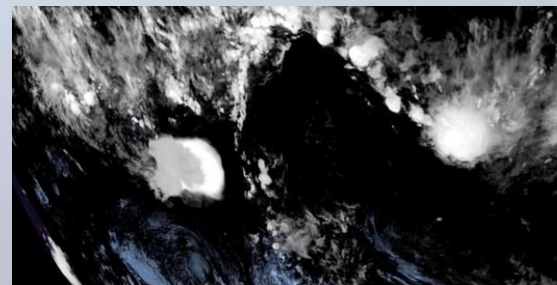


Copyright: Fugro

WP4 – Mapping Activities

TESMaP

- NIWA- Nippon Foundation Tonga Eruption Site Mapping Project
- RV Tangeroa & USV Maxlimer
- Multi-science including bathymetry



Courtesy: NOAA



Courtesy: SKI



Courtesy: NIWA

WP5 – Management

- Head of Partnership & Head of Comms recruitment
- Wind-in-the-Sails Survey and global prioritisation work ongoing
 - Workshops in 2022 Q1
- OFM Bid Dec 21 to Nov 22 submitted and approved
- Contribution to GEBCO Code of Conduct
- MOU and supporters growing:
 - 8 new MOUs this period (overall total 28)
 - 7 MOUs under negotiation
 - 171 supporters total (up from 156 in Year 4)



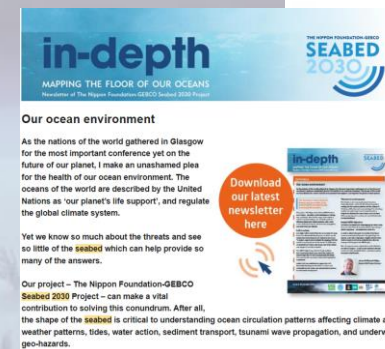
WP5 – Management (cont'd)

- Much engagement with wider community - mostly virtual - significant events:
 - COP26 (*in person*)
 - Paris Peace Forum
 - Royal Society of Naval Sciences (Sweden)
 - Global Maritime Forum
 - Ocean Business (*in person*)
 - NZ Marine Sciences Society Conference
 - Southern Ocean Decade & Polar Forum
 - UNESCAP CSB Conference
 - SEAIGNEP (Africa)
 - Map the Gaps GEBCO Symposium
 - One Ocean Summit (*video clip*)
 - Oceanology International (*in person*)
 - Monaco Oceans Week (*in person*)
 - and many more.



WP5 – Management (cont'd)

- Alumni Engagement
 - Ocean Frontier Mapping Project & TESMaP
 - SeaKoMaP in preparation
 - Hd of Engagement chair of 2022 Alumni Seminar organizing committee
- Media activity
 - *in-depth* periodic newsletter well received
 - Press releases widely circulated
 - 102 media items
 - Significant articles submitted to
 - *Sea Technology Magazine*
 - *Ocean News & Technology*
 - Social media – 1689 followers



A new partnership has been announced between The Nippon Seabed 2030 Project and Global Oceans. The two parties will work together to map ocean bathymetry and contribute to the global effort to produce the world's ocean floor, complementing the goals of the United Nations Decade of Ocean Exploration.

The project between The Nippon Foundation and GEBCO to inspire the world to explore the ocean by 2030, and to compile all bathymetric data into the freely available GEBCO Seabed 2030, is a joint programme of the International Hydrographic Organization (IHO) and is the only global effort to map the entire ocean floor. Seabed 2030 is formally endorsed as a



Discussion Points

- **Meetings:**
 - **Stockholm 50+ (Jun 22)**
 - Side event
 - **UN Ocean Conference (Jun/Jul 22)**
 - Side event
- **New Data**
 - Grid currently at XX.x % - more data still to be included