THE NIPPON FOUNDATION-GEBCO D

Update for SWPHC19

Jamie McMichael-Phillips Project Director

24 February 2022

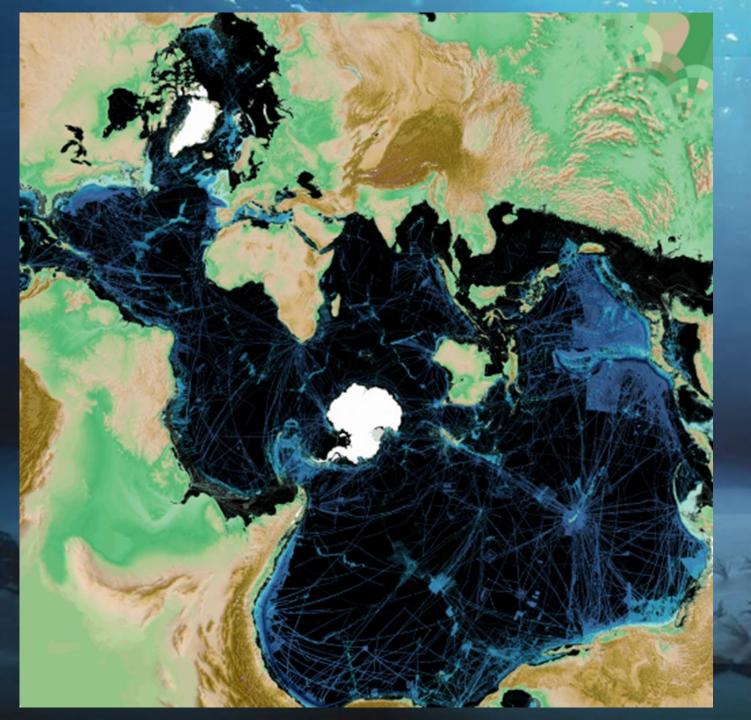








2021 United Nations Decade of Ocean Science 2030 for Sustainable Develop



It really is

Our One Ocean!

Seabed 2030 Vision:

100% of our Ocean Floor mapped by 2030



Project Update

Update by Project Work Packages:

WP1 – Data

WP2 – Systems & Tools

WP3 – Technology Innovation

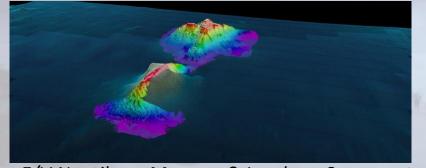
WP4 – Mapping Activities

WP5 – Management



WP1 – Data

- GEBCO 2021 Grid released 20.6% mapped
- IBCAO 4.1 published for Arctic Ocean
- IBCSO 2.0 published for Southern Ocean
- Data ingestion via:
 - Extensive engagement with data donor organisations
 - Data mining with counties/entities

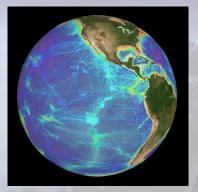


E/V Nautilus – Mercury & Loudoun Seamounts (Pacific)



WP2 – Systems & Tools

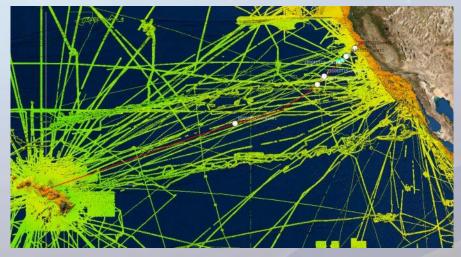
- Process improvements at Centers
- Surveying System Bathy Data Uploader
 - Collaboration with Kongsberg Maritime
 - Beta version developed
- Statistics routines developed on AWS
- Collaboration with Scripps on SRTM+ base grid improvements
- UNH Web App visualization refined





WP3 – Tech Innovation

- Gridding Statistics improvements
- UNH work on new-gen CSB loggers
- UKHO/Teledyne Caris GAM
 - Generalised Additive Model bathy cleansing
- Proved viability of autonomous data gathering on Saildrone's Pacific crossing
 - Two Oceans Two Technologies initiative
- IHO-CSB Trusted Node Global Center
- Cloud-based Processing developments



Saildrone – San Francisco to Hawaii transit



WP4 – Mapping Activities

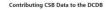
- Data from wider Ocean Frontier activities:
 - IB Oden in Arctic
 - EV Nautilus & DSSV Pressure Drop in Pacific
 - USCGC Healy in NW Passage
 - RV Polarstern in Atlantic & Southern Ocean
- Ocean Frontier Mapping Project
 - Funded mapper onboard DSSV Pressure Drop
- Satellite Derived Bathy (SDB)
 - Mauritius
 - Federated States of Micronesia
 - Maldives
- IHO-CSB -South Africa/Greenland/Palau/SWPac
- Fugro transit bathy 2 million sq km milestone





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





ort all mariners in an effort to "map the gaps." An initiative was established to support and enable ma

The DCDB accepts CSB contributions through a network of "Insted Nodes," which may be organizations, companies or universities serving as data liaisons between mariners (data collectors) and the DCDE. Trusted Nodes may supply data logging equipment, provide technical support to vesselis, download data from data loggers, and be responsible for data transfe directly to the DCDE.

CSB data must be provided in either CSV or Geo/SON, and capture the minimum require information (XYZ, timestamp). Examples of both data formats can be found in our ingest A documentation. As a trusted node, you will be asked to provide additional information abour unsrelf (provider contact point/organization name, provider email, and unique ID).

Those interested in contributing data or becoming a Trusted Node should contact the DCDI

WP5 – Management

- Flagship Programme of the Ocean Decade (June 2021)
- Endorsed by the 2021 Paris Peace Forum (July 2021)
- Wind-in-the-Sails Survey & global prioritisation work ongoing
 - Workshops in 2022 Q1/2
- MOU and supporters growing:
 - MOUs 24 to date
 - MOU with New Zealand Government









R

of Ocean Science

WP5 – Management (cont'd)

- Much engagement with wider community
 - Mostly virtual presence
 - Significant events:
 - One Ocean Summit
 - 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

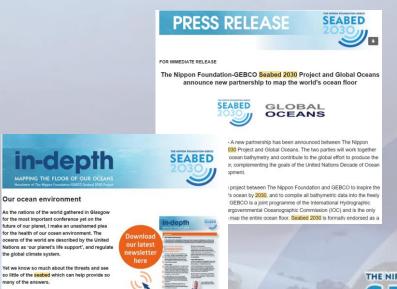
.... and many more.





WP5 – Management (cont'd)

- Alumni Engagement
 - Ocean Frontier Mapping Project
 - Hd of Engagement chair of 2022 Alumni Seminar organizing committee
- Media activity
 - in-depth periodic newsletter
 - Press releases widely circulated
 - Twitter– 1638 followers





the shape of the seaded is critical our neutral units and the shape of the seaded is critical to understanding ocean circulation patterns affecting climate and weather patterns, tides, water action, sediment transport, tsunami wave propagation, and underwater geo-hazards.



Thank you all for listening and thank you also for your support!









University of New Hampshire



National Oceanography Centre



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