

THE NIPPON FOUNDATION-GEBCO

# SEABED 2030

Update for SWPHC19

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*24 February 2022*

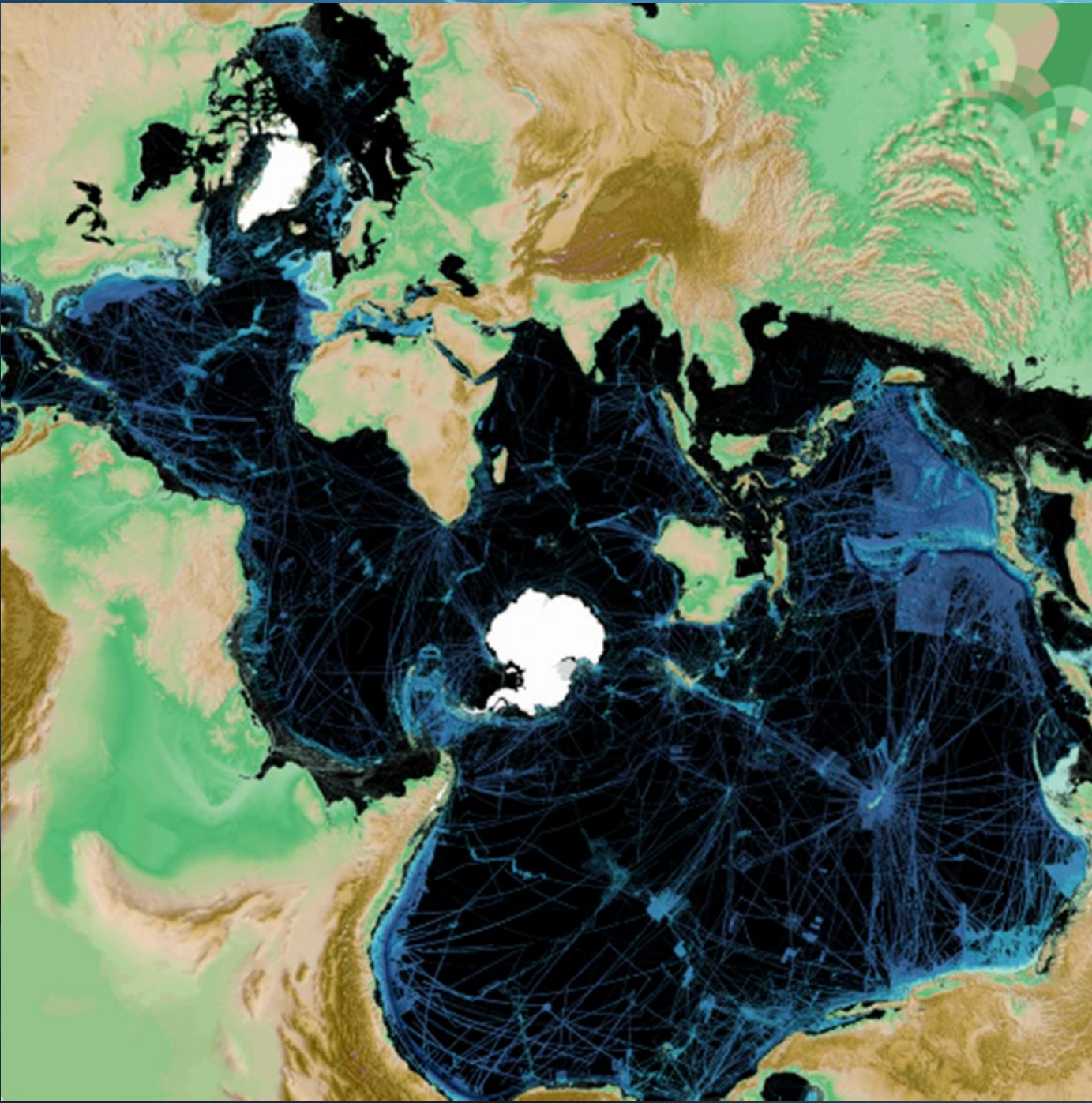


IHO

International  
Hydrographic  
Organization







*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**

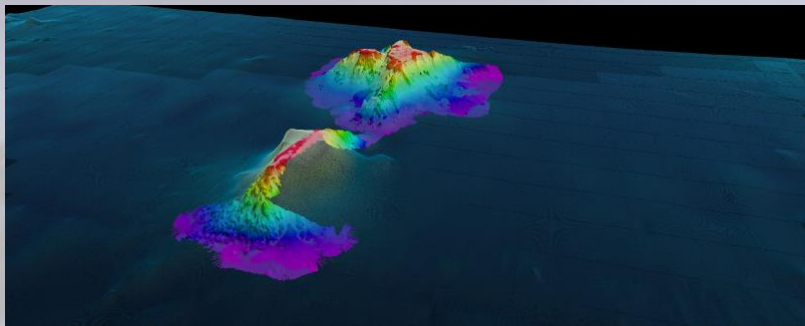
**WP5 – Management**





## WP1 – Data

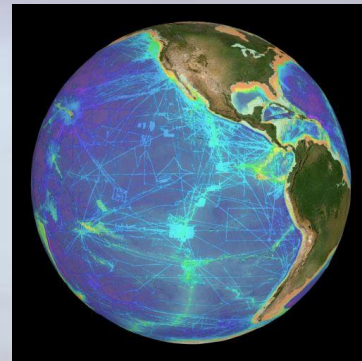
- GEBCO 2021 Grid released – 20.6% mapped
- IBCAO 4.1 published for Arctic Ocean
- IBCSO 2.0 published for Southern Ocean
- Data ingestion via:
  - Extensive engagement with data donor organisations
  - Data mining with counties/entities



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

## WP2 – Systems & Tools

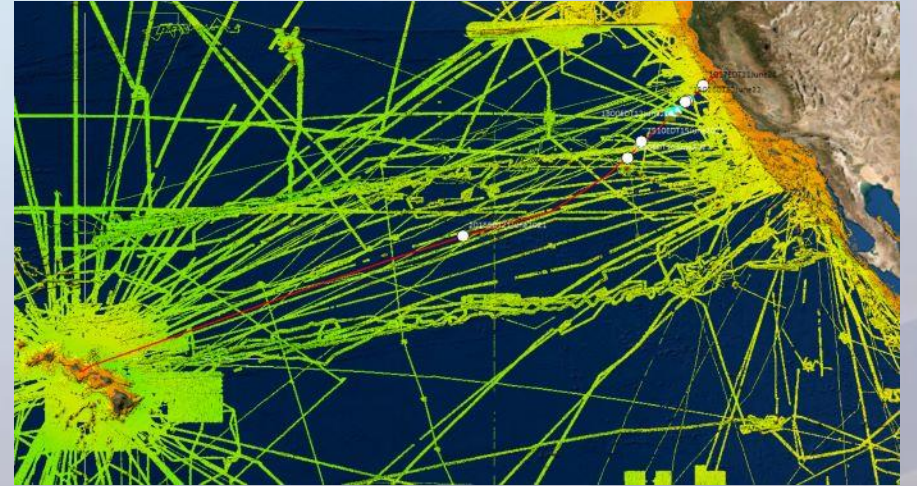
- Process improvements at Centers
- Surveying System Bathy Data Uploader
  - Collaboration with Kongsberg Maritime
  - Beta version developed
- Statistics routines developed on AWS
- Collaboration with Scripps on SRTM+ base grid improvements
- UNH Web App visualization refined





## 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



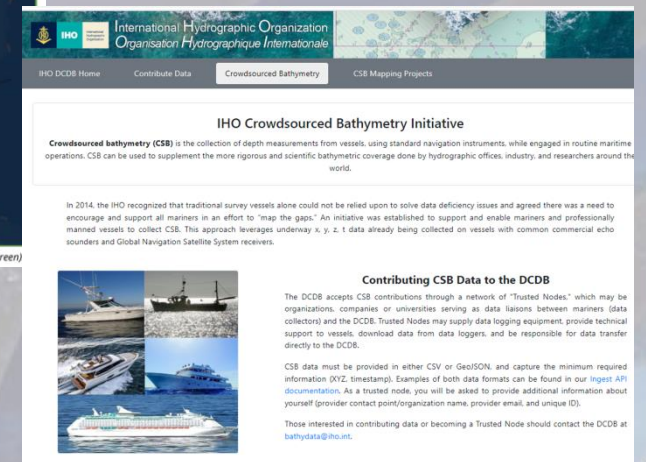
*Saildrone – San Francisco to Hawaii transit*

# 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



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





# 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





## 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





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

