

THE NIPPON FOUNDATION-GEBCO

SEABED 2030



Webinar 3: Increasing Data Coverage: Crowdsourced Bathymetry and Data Coverage Polygons

Webinar Chair:

Mr. Stuart Caie, SWPHC Seabed 2030/CSB
Coordinator

Presenters:

Mr. Kevin Mackay, Head Seabed 2030 South
and West Pacific Regional Center

Ms. Jaya Roperez, Data Manager, Seabed
2030 South and West Pacific Regional Center

Ms. Jennifer Jencks, Director IHO Data Center
for Digital Bathymetry



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United Nations Decade
of Ocean Science
for Sustainable Development

2022 SWPHC Seabed 2030/CSB Webinar Series: Webinar 3, June 21, 2022

Today's Agenda

13:00 - 13:10 Welcome & logistics

13:10 - 13:30 Introduction, Recap and Homework Review

13:30 - 14:00 CSB and the role of the HOs

14:00 - 14:30 Review of web app

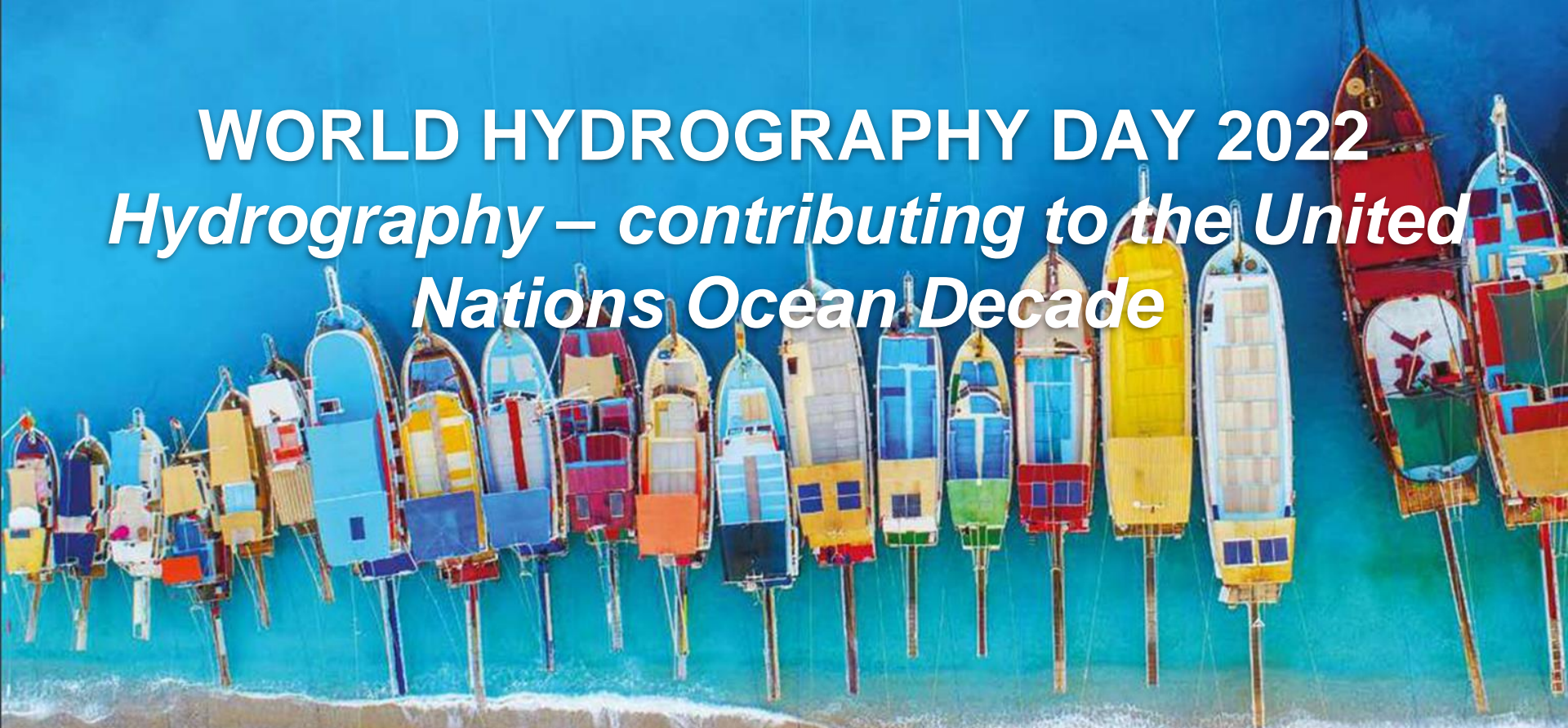
14:30 - 14:50 Provision of polygon coverage

14:50 - 15:00 Conclusions and Homework for Next Session



WORLD HYDROGRAPHY DAY 2022

Hydrography – contributing to the United Nations Ocean Decade



2021
2030 United Nations Decade
of Ocean Science
for Sustainable Development

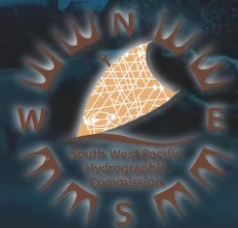


THE NIPPON FOUNDATION-GEBCO

SEABED 2030

Introduction, Recap & Homework Review

Mr. Stuart Caie, SWPHC Seabed
2030/CSB Coordinator



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2022 SWPHC Seabed 2030/CSB Webinar Series: Webinar 3, June 21, 2022

Overview of Webinar Series



Objectives of this Webinar Series

- Overview & Introduction:
 - Objectives, strategy and motivation of the Nippon Foundation - GEBCO Seabed 2030 Project
- Promote collaboration and coordination
- Review current status of ocean mapping for this region
- Demonstrate online tools that are available
- Engage the community of stakeholders
 - Gather information about existing data, planned mapping efforts
 - Input on needs of stakeholders with respect to tools, workflows, regional mapping priorities
- Develop a roadmap for completing mapping of the region by 2030



Webinar Schedule

- Webinar 1 - May 10: Where are we now? Introduction and Goals including review of current mapping status in the region
- Webinar 2 - May 24: How do we build the map? How can you contribute data?
- **Webinar 3 - June 21: Increasing Data Coverage: Crowdsourced Bathymetry and Data Coverage Polygons**
- Webinar 4 - July 1: Moving Ahead Together: Summary, Next Steps and Wrap up.



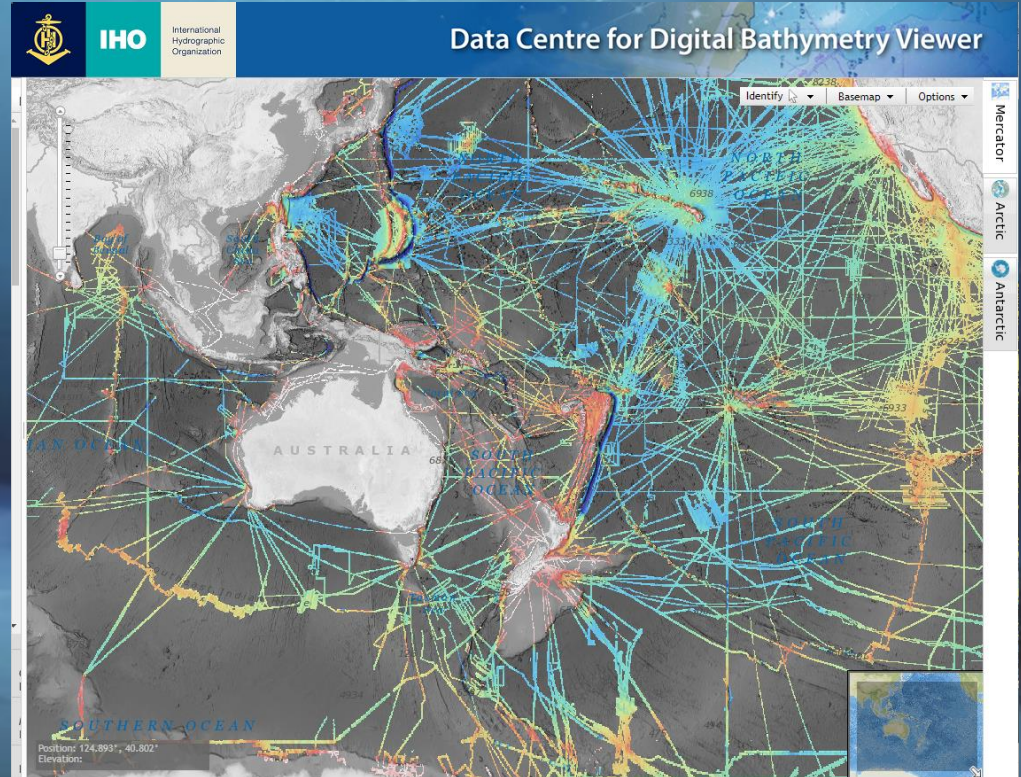
Goals for today

- Discussion and review previous webinars and Homework
- Introduce the IHO Crowdsourced Bathymetry initiative, how CSB can be contributed to the IHO DCDB, and how hydrographic offices can become involved.
- Web App
 - How to identify data gaps
 - Polygon coverage request: goals, formats, metadata
- Discussion and Homework for final webinar



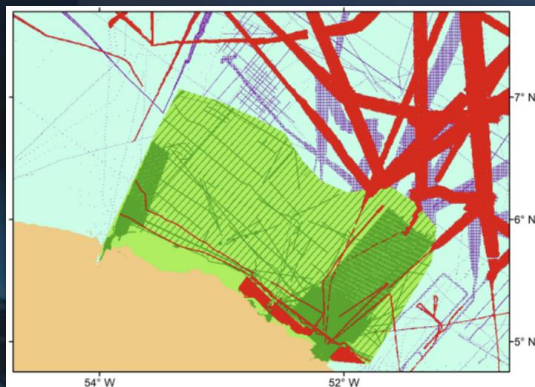
Recap Webinar 1: Where are we now?

- Introduction to Seabed 2030 & South and West Pacific Regional Center
- Introduction to IHO Digital Centre for Digital Bathymetry (DCDB)
- Status of mapping in the region



Recap Webinar 2: How do we build the map?

- Data Assembly Process
 - Type Identifier (TID) Grid
- How to access data
- How to contribute data



How to contribute data

Please use the form below to make contributions of multibeam and/ or single-beam survey data, individual soundings or existing grids to help update our gridded data sets and products. If you have any problems in completing the form, then please email this information to the Global Center (gdacc@seabed2030.org).

GEBCO Data Contribution Form

GEBCO's aim is to provide the most authoritative, publicly-available bathymetry of the world's oceans. It operates under the joint auspices of the International

IHO Data Centre for Digital Bathymetry (DCDB)

The IHO DCDB was established in 1990 to steward the worldwide collection of bathymetric data. The Centre archives and shares, freely and without restrictions, depth data contributed by mariners. The IHO DCDB is hosted by the [U.S. National Oceanic and Atmospheric Administration \(NOAA\)](#) on behalf of the IHO Member States.

The DCDB archive includes over 30 terabytes of oceanic depth soundings acquired with multibeam and singlebeam sonars by hydrographic, oceanographic and industry vessels during surveys or while on passage.

The DCDB also archives and provides access to data contributed in support of the [IHO Crowdsourced Bathymetry \(CSB\) initiative](#).

The [IHO DCDB Data Viewer](#) shows the global coverage of the DCDB's bathymetric data holdings as well as the spatial extent of data archived at other repositories via web services.

[Access Data](#)

Jump to

- > [Our data contributors](#)
- > [Join the Crowdsourced Bathymetry initiative](#)

Share this



Discussion & Review of Homework Assignment



Review of Homework #2

- Does data exist that can be contributed?
[gebco.net/about us/contributing data/](http://gebco.net/about_us/contributing_data/)
- Do you have upcoming surveys that you can share information about?
 - Assemble information about upcoming surveys and data acquisition opportunities (bounding box, polygons, shapefiles, coordinates)
 - Send to CSB/Seabed 2030 Coordinator
- Do you have technical challenges that we might be able to help you address?



Review of Homework #2

- Download data from your region from GEBCO and DCDB and provide feedback on the quality and extent of data.
- What challenges or issues did you have downloading and/or viewing the data?



CSB and the role of the HOs

Jennifer Jencks

Chair, IHO Crowdsourced Bathymetry Working Group
Director, IHO Data Center for Digital Bathymetry



Crowdsourced bathymetry (CSB) is the collection and sharing of depth measurements from vessels, using standard navigation instruments, while engaged in routine maritime operations.





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The IHO Crowdsourced Bathymetry Initiative

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In 2014, the IHO initiated a collaborative project to encourage mariners to collect and contribute “crowdsourced bathymetry”.





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The IHO Crowdsourced Bathymetry Initiative

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A Working Group was formed and tasked to develop **B-12 IHO Guidance on Crowdsourced Bathymetry** that states the IHO's policy towards, and best practices for, the collection and contribution of CSB.

- Edition 2.0.0 was approved by MS in 2019.
- Edition 3.0.0 endorsed by IRCC 14 in June. A call for approval will be issued via CL this summer.

Updates include: *incorporating feedback from operational use and experience, making the document more "equipment agnostic", simplifying the document and making it more accessible to ALL readers (data collectors, providers and users).*

IRCC 14 Website:



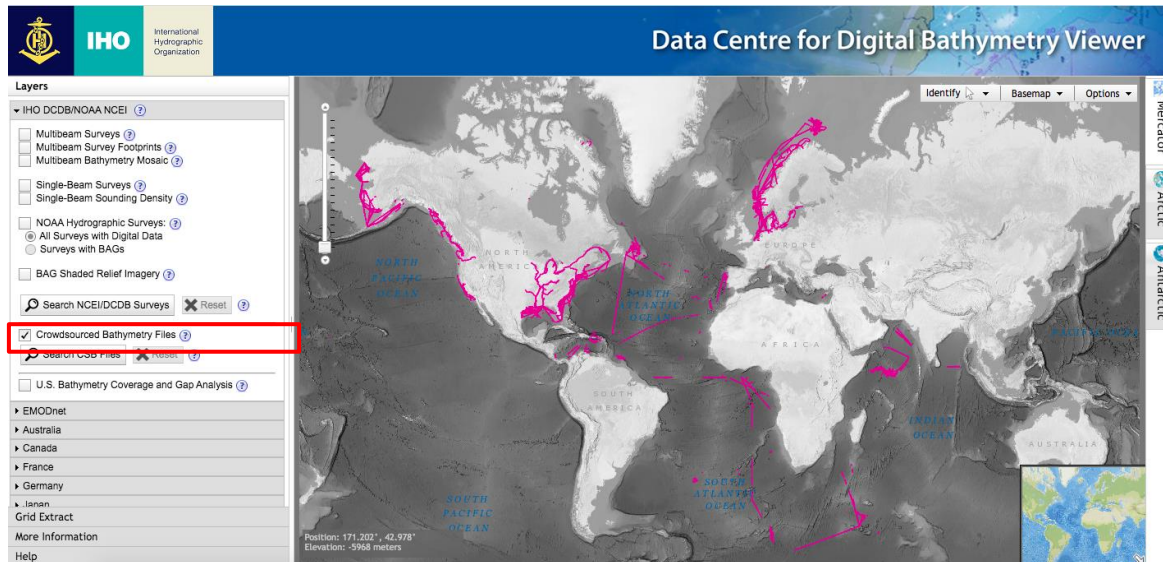


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The IHO DCDB established a data pipeline to allow the public to contribute, discover and download CSB data via a web-based map viewer interface.



ncei.noaa.gov/maps/iho_dcdb

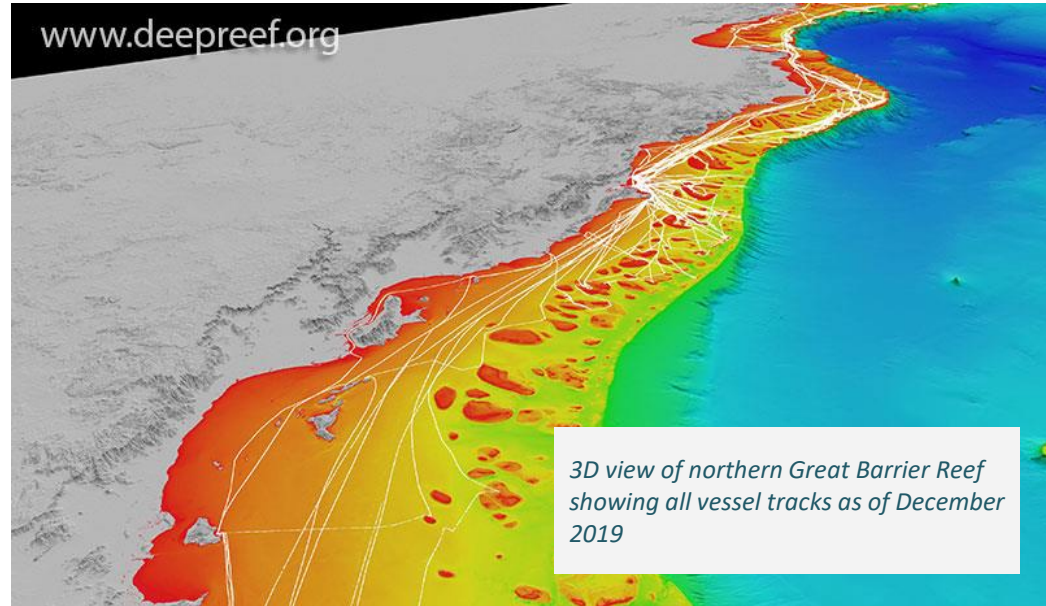


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The Value of CSB Data

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- Data with scientific, commercial & research value at no cost to the public sector
- Fill gaps where data is scarce (eg: Arctic, SIDS)
- Useful along shallow, complex coastlines
- Identify uncharted features
- Assist in verifying charted information
- Confirm whether charts are appropriate for the latest traffic patterns.



...but only if vessels collect and donate depth information while on passage

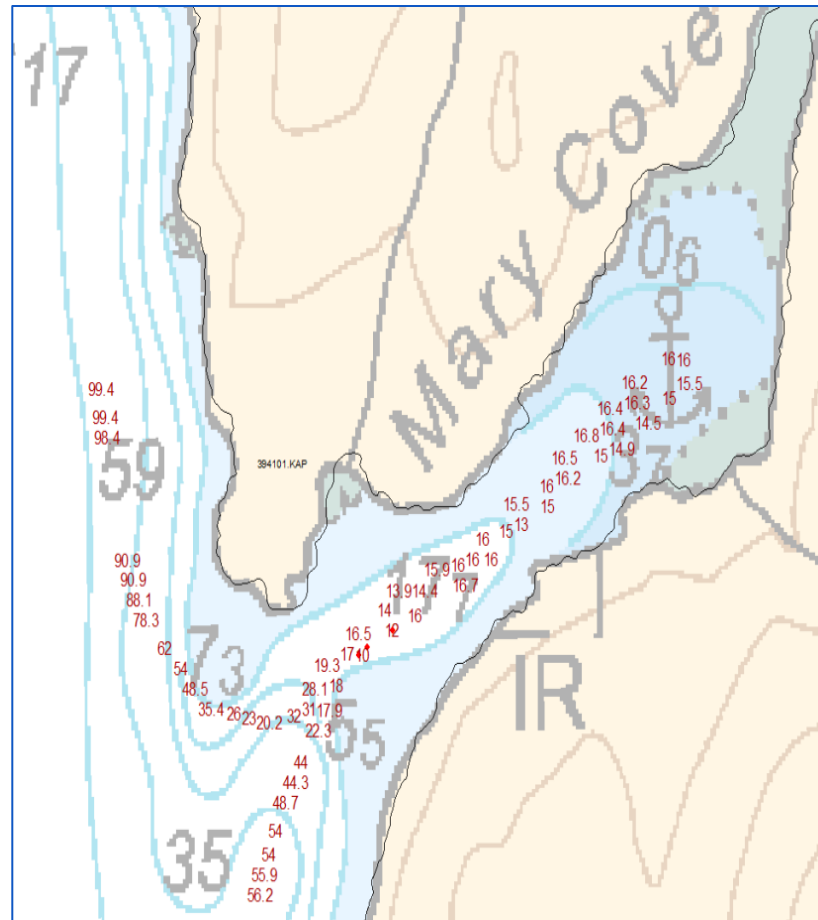


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The Value of CSB Data

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- The Canadian Hydrographic Service has used CSB to update several Inside Passage charts along coastal routes.
- A systematic comparison of charted depths < 10 m yielded improved charted channel depths, data density and improved chart compilation in areas that were surveyed with single beam.
- CSB helped prioritize survey areas for the following survey season
- CSB has initiated the publication of Notices to Mariners.



CSB revealed some chart compilation problems.

Don't use the chart to figure out how much anchor chain you need!



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IHO CL 01/2020 & IRCC CL 21/2020

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- All coastal States are requested to indicate their position on the ***provision of CSB data*** from ships within waters subject to their jurisdiction into the public domain
- To date, 31 coastal States (**green**) have replied positively*



[*iho.int/uploads/user/Inter-Regional%20Coordination/CSBWG/MISC/B-12_2020_EN_Acceptance_of_CSB_Data_in_NWJ_v3.0.pdf](https://iho.int/uploads/user/Inter-Regional%20Coordination/CSBWG/MISC/B-12_2020_EN_Acceptance_of_CSB_Data_in_NWJ_v3.0.pdf)



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IHO Circular Letter 21/2020

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“...Member States are requested to indicate their position on the provision of CSB data from ships within waters subject to their national jurisdiction into the public domain as well as highlighting ...any caveats they wish to apply to such provision.”

SWPHC IHO Member States:

Australia, Fiji, France, New Zealand, Papua New Guinea, Samoa, Solomon Islands, Tonga, UK, USA, Vanuatu.

The IHO encourages member states to review IHO CL 21/2020 and, if possible, offer a positive response to the IHO Secretariat prior to the SWPHC 20.

iho.int/uploads/user/circular_letters/eng_2020/CL21_2020_EN_v1.pdf



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IRCC Circular Letter 1/2020

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“...The Chairs of RHCs are requested to encourage associate members, observer States as well as any other coastal State within their region, to indicate their position on the provision of CSB data from ships within their waters of national jurisdiction”

SWPHC Associate States:

Cook Islands, **Indonesia**, Kiribati, Nauru, Niue, Palau.

SWPHC Observer States:

New Caledonia.

The IHO encourages all coastal states to review IRCC CL 1/2020 and, if possible, offer a positive response to IHO Secretariat prior to the SWPHC 20.

https://iho.int/uploads/user/Inter-Regional%20Coordination/IRCC/IRCC_Letters/IRCC_Letter_2020_01_CSB_Activities.pdf



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CL Questionnaire asks:

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- Do you support or object to the CSB data provision for depth measurements from the internal waters, territorial sea, or EEZ of your country?
- Do you wish to be informed when such information is received by the IHO DCDB?
- Do you wish to review such information before its ingestion into the IHO DCDB?
- Do you wish for the opportunity to put caveats on the further dissemination of such data?

Enclosure to IHO CL 21/2020
IHO File S3/2649

CROWDSOURCED BATHYMETRY DATA PROVISION – COASTAL STATE POSITION FOR WATERS SUBJECT TO THEIR NATIONAL JURISDICTION

TEMPLATE FORM

(to be returned to the IHO Secretariat **no later than 4 September 2020**)

E-mail: cl-lc@iho.int - Fax: +377 93 10 81 40)

IHO clarification on Crowdsourced Bathymetry Activity

For the purpose of this Circular Letter, the following terms have the specified meanings:

Bathymetry is the determination of ocean, coastal, and inland water depths. The general configuration of sea floor as determined by profile analysis of depth data.

Crowdsourcing is a process by which people and/or groups voluntarily submit observations, data, or information to accomplish a task or goal.

Crowdsourced bathymetry is defined by the IHO as the collection of depth measurements from vessels, using standard navigation instruments, while engaged in routine maritime operations.

Crowdsourced bathymetry data provision is the transmission to the IHO Data Centre for Digital Bathymetry for ingestion, aggregation, categorization, and public dissemination of depth measurements made by vessels, using standard navigation instruments, while engaged in routine maritime operations.

IHO Data Centre for Digital Bathymetry (DCDB) was established in 1990 to steward the worldwide repository of bathymetric data. The Centre archives and shares, freely and without restrictions, depth data contributed by mariners. The IHO DCDB is an IHO resource that is hosted by the U.S. National Oceanic and Atmospheric Administration (NOAA) on behalf of IHO Member States.

Internal Waters, Territorial Sea, and Exclusive Economic Zone have the same meanings as are given those terms under the 1982 UN Convention on the Law of the Sea.

Questions:

- 1) Do you support or object to the crowdsourced bathymetry data provision for depth measurements from the internal waters of your country?

SUPPORT ☐

OBJECT ☐

CAVEAT:



ACCEPTANCE OF CROWDSOURCED BATHYMETRY ACTIVITIES AND PROVISION OF RESULTANT DATASETS IN NATIONAL WATERS OF JURISDICTION

1. Based on the comments received to the questionnaire in Annex B to IHO CL 11/2019 and to the questionnaire in Enclosure to IHO CL 21/2020, the following table is published as the Positive List to guide potential data gathering and provision activities undertaken by the wider maritime community in waters of national jurisdiction:

Coastal State	Internal	Caveat	Territorial	Caveat	EEZ	Caveat
Argentina	No	-	No	-	Yes	Provide copy of dataset to Hydrographic Office
Belgium	No	-	Yes	Inform Hydrographic Office of new dataset to allow review of data, provide copy of dataset and highlight major variances	Yes	Inform Hydrographic Office of new dataset to allow review of data, provide copy of dataset and highlight major variances
Brazil	No	Prior authorisation required, inform Hydrographic Office of new dataset to allow review of data; no MBES; gridded data only, raw data via HO	No	Prior authorisation required, inform Hydrographic Office of new dataset to allow review of data; no MBES; gridded data only, raw data via HO	Yes	Prior notification, no MBES; gridded data only, raw data via HO
Cameroon	Yes	Inform Hydrographic Office of new dataset to allow review of data	Yes	Inform Hydrographic Office of new dataset to allow review of data	Yes	Inform Hydrographic Office of new dataset to allow review of data
Canada	Yes	No MBES without approval; inform Hydrographic Office of new dataset	Yes	No MBES without approval; inform Hydrographic Office of new dataset	Yes	No MBES without approval; inform Hydrographic Office of new dataset
Colombia	No	-	No	-	Yes	Inform Hydrographic Office of new dataset to allow review of data

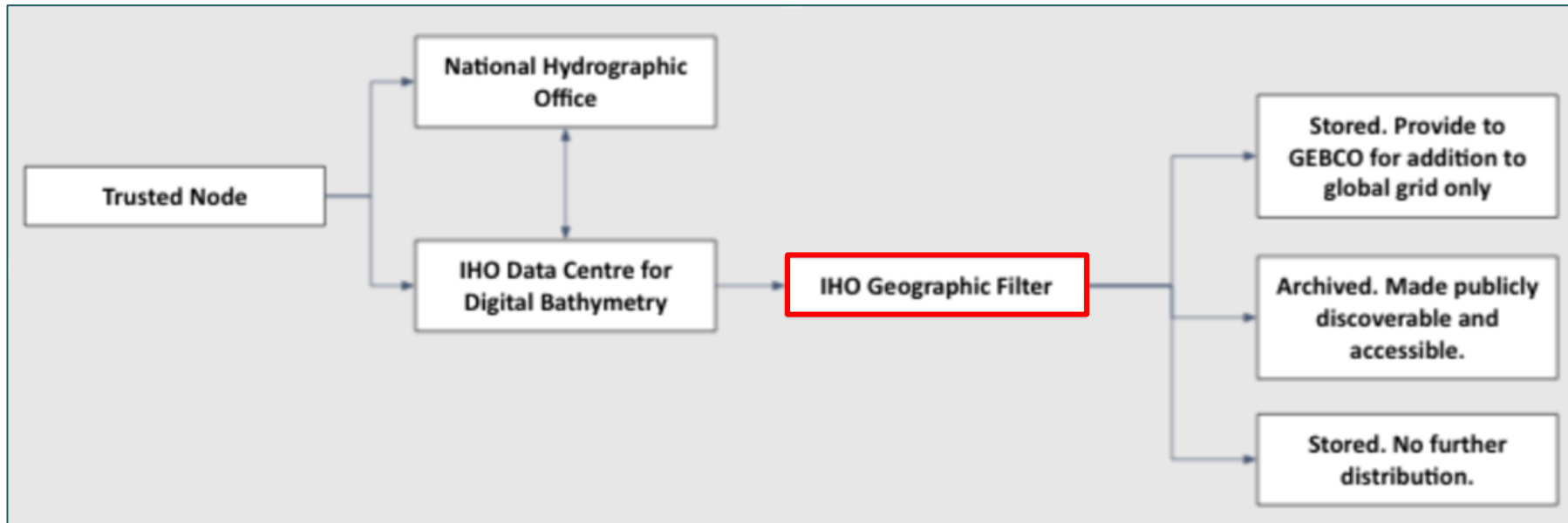


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Geographic Filter

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In response to feedback provided to IHO CL 11/2019, IHO CL 21/2020 and IRCC CL 1/2020, the DCDB implemented (and continues to update) a geographic filter for incoming data to take into account coastal countries' positions on the distribution of CSB collected in their areas of jurisdiction.





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Geographic Filter

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The DCDB is currently working to automate the notification and approval process of data for coastal states who have provided positive responses but request pre-approval of data before the public distribution from DCDB.

[Home](#) [Manage](#)

Username: Chris Slater [Log Out](#)

Layer Chooser Show

French Exclusive Economic Zone

ID	296
GEONAME	French Exclusive Economic Zone
TERRITORY1	France
ISO_TER1	FRA
SOVEREIGN1	France
TERRITORY2	
ISO_TER2	
SOVEREIGN2	
TERRITORY3	
ISO_TER3	
SOVEREIGN3	
ISO_SOV1	FRA
ISO_SOV2	
ISO_SOV3	
EXCLUDE	manual
DATA_SET	EEZ

Trace Id	Publish	External Id	Provider	Platform	Instrument	Start Time	End Time	File Name	File Size	Last Updated
000033e4-759c-4591-af98-04c29f6b967b	true Change	MACGR-9221566-AIDAAURA-oyHjp011	MacGregor	Anonymous		2020-03-28T03:08:33Z	2020-03-28T03:10:16Z	20220322085844674039_9221566-AIDAAURA-oyHjp011.tar.gz	965	2022-03-28T21:17:48.738516Z
000042ca-d435-4d84-ae4-ec04163d4dc2	true Change	MACGR-9221566-AIDAAURA-oyHjp011	MacGregor	Anonymous		2020-04-29T03:00:32Z	2020-04-29T03:02:36Z	20220322083434750180_9221566-AIDAAURA-oyHjp011.tar.gz	798	2022-03-28T15:16:03.354039Z



CSB Data Holdings

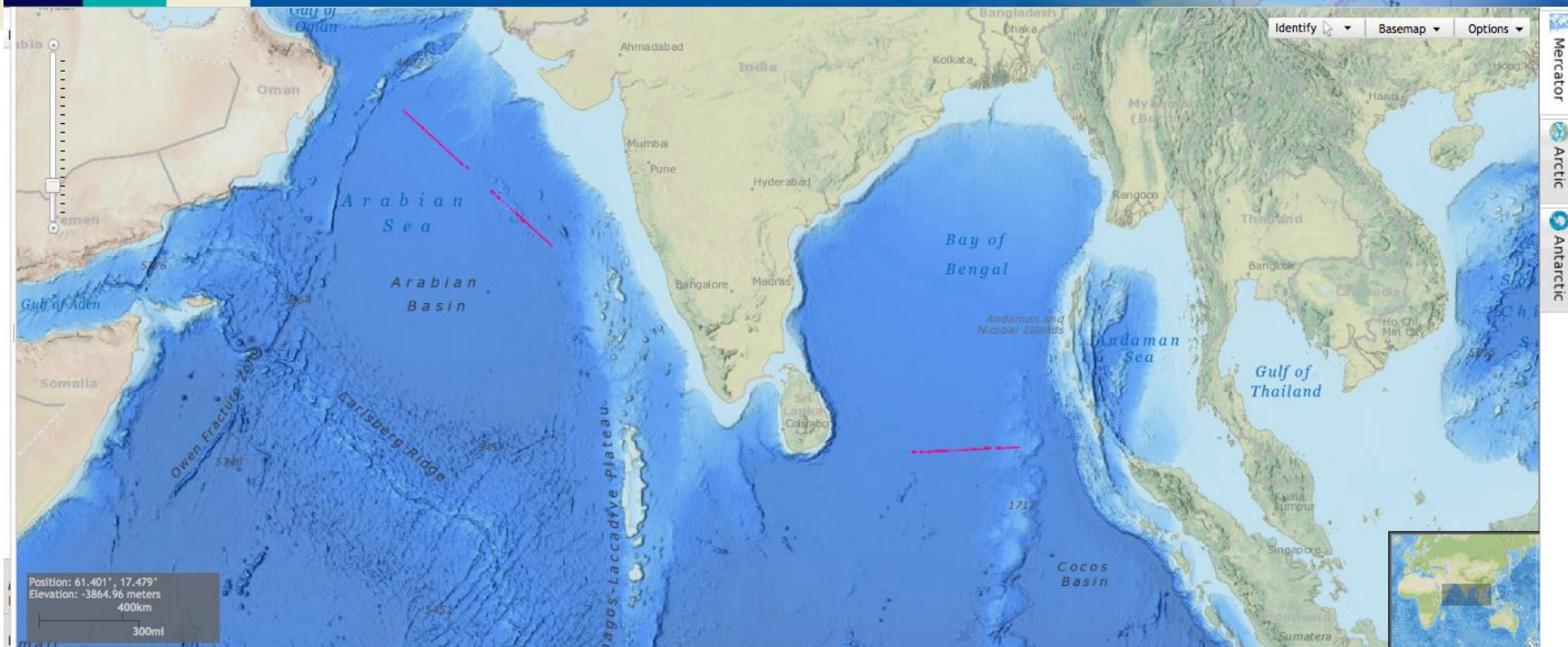
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Data Centre for Digital Bathymetry Viewer

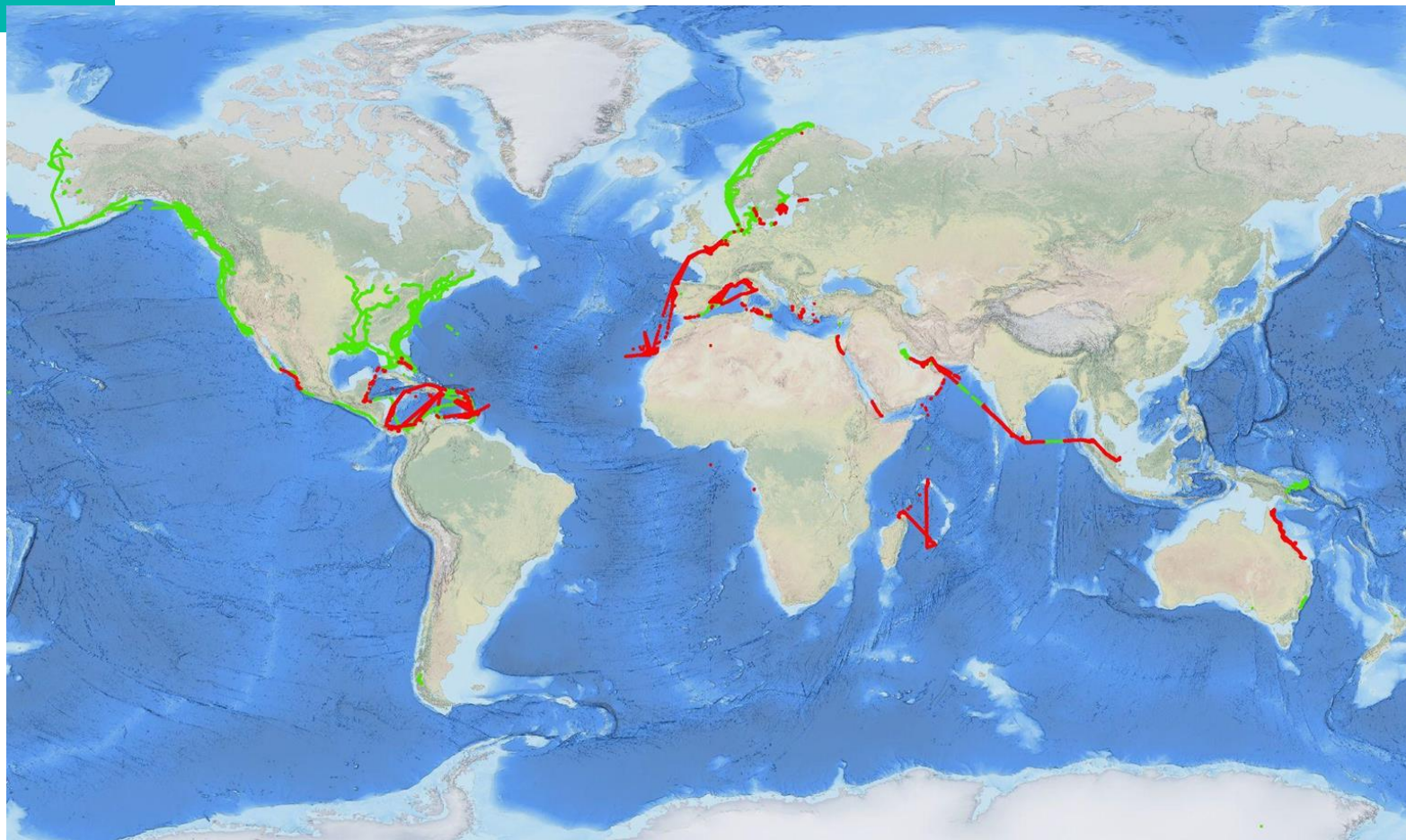




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CSB Data Holdings

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ALL states are invited to ask questions and share perspectives.

Questions?





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How to Contribute CSB Data

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- The DCDB accepts CSB contributions through a network of **"Trusted Nodes"**
 - Eg: organizations, companies or universities serving as data liaisons between mariners (data collectors) and the DCDB.
 - Trusted Nodes may supply data logging equipment, provide technical support to vessels, download data from data loggers, and be responsible for data transfer directly to the DCDB.
- CSB data must be provided in either CSV or GeoJSON, and capture the minimum required information (XYZ, timestamp).





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CSB Trusted Nodes – Software Companies

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Rose Point Navigation System

- Mariners can enable their electronic charting system log file to record *position, depth, and time*.
- When a mariner updates their software or chart catalog, data is transmitted to the DCDB



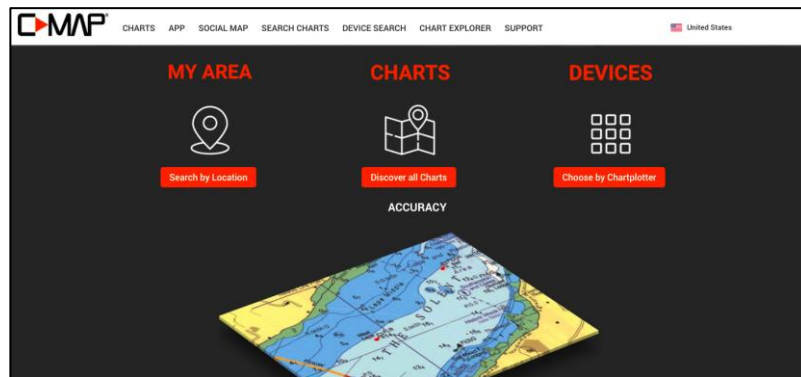
www.pcmaritime.com



www.rosepointnav.com

Navico C-MAP

- Finalized testing of new bathymetric feed b/w DCDB & navigation software company.
- Data contributions to begin this summer.





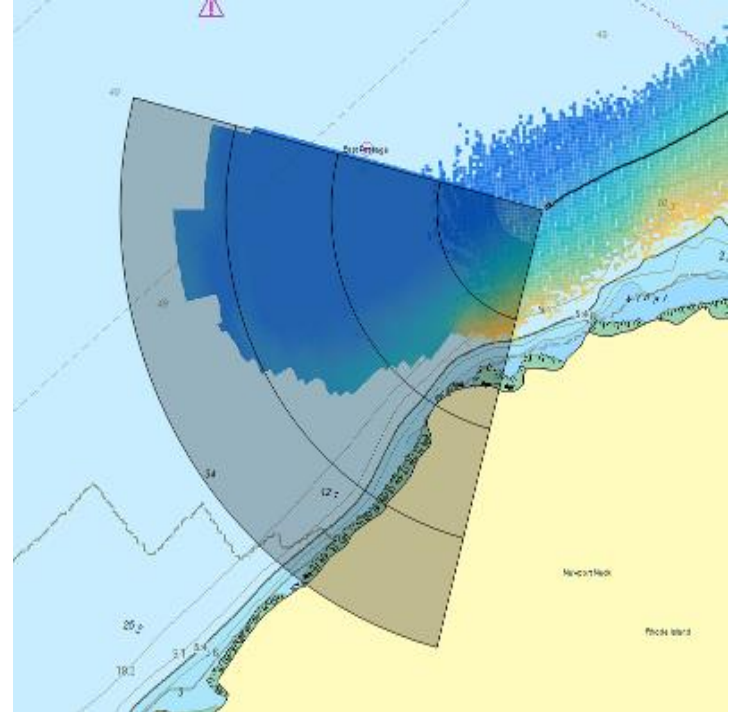
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CSB Trusted Nodes – Hardware Companies

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FarSounder Inc.

- Designs and manufactures 3D Forward Looking Sonar (3D-FLS) for navigation and obstacle avoidance.
- Customers are given the option to participate in CSB collection and contribution





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CSB Trusted Nodes – Cruise Line Industry

Carnival Cruise Line

- Macgregor Germany supplies Carnival Cruise Lines with VDR solutions.
- Voyage Data Recorders (VDR) are a mandated device for effectively all ships on international voyages.
- By default, this device is logging depth sounding data for IMO mandated shipborne single beam devices.
- A bathymetric feed was established between MacGregor and the DCDB



Voyage Data Recorder



MACGREGOR

 **Carnival®**



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CSB Trusted Nodes – Marine Contractors

Petroleum Geo-Services (PGS)

- Implemented a data feed from PGS vessels to the DCDB



M2Ocean

- Finalizing metadata content and testing data submissions with data collected by Hydroballs (small autonomous bathymetric buoys).
- Data contributions to begin this summer.





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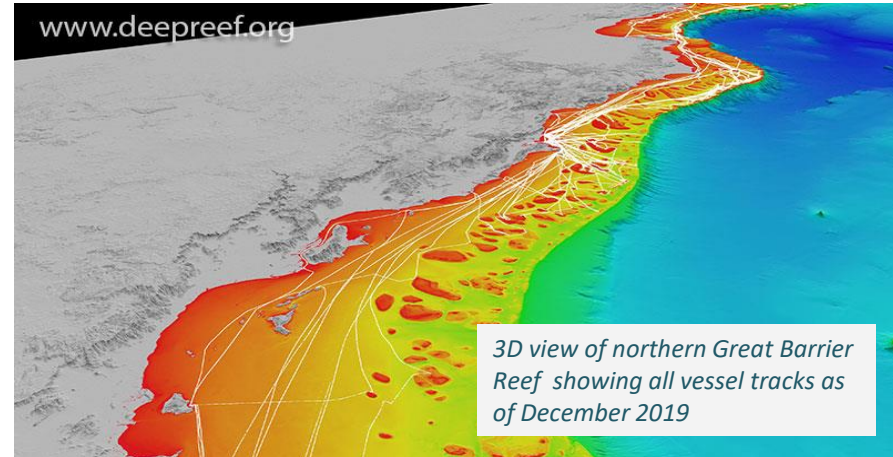
CSB Trusted Nodes – Academia/Research

James Cook University

- Distributed inexpensive data loggers to ~10 volunteer vessels using their own echo sounder and GPS sensors along the Great Barrier Reef
- Data is at the DCDB
- Awaiting interpretation of Australia's response to IHO CL 21/2020



SmartLog USB data
logger





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CSB Trusted Nodes – Seabed 2030 Project

Objective:

1. Facilitate field trials that will accelerate CSB activity
2. Collect data in data scarce areas
3. Grow excitement about the CSB initiative!

In return, a potential program must guarantee the provision of staff to:

1. Hand out data loggers to the community
2. Assist local mariners in set up
3. Provide a copy of these data to Seabed 2030 for inclusion into the DCDB and the GEBCO grid



Support includes provision of data loggers (NMEA0183 and NMEA2000) and installation support (where needed).



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CSB Trusted Nodes – Seabed 2030-funded CSB Programs

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Greenland Institute of Natural Resources

- Phase 1: aim to engage approximately 50 vessels of various sizes- 30 data loggers deployed so far.

The Institute For Maritime Technology & The South African Navy HO

- 100 data loggers deployed to SANHO/IMT.
- Planning of trials: identification of stakeholders, establish relationships, feasibility studies, regular communication via various channels.

Bureau of Marine Transportation - Palau

- 100 data loggers received (NMEA0183 and NMEA2000)
- Coordinating with South & West Pacific Seabed 2030 Data Center
- Will receive support from U.S. Navy for logger installation and setup in 2022.



"Sea Lab 1", IMT – trial deployment (Credit: CDR Christoff Theunissen)





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CSB Trusted Nodes – Seabed 2030-funded CSB Programs

- **MY Dapple:** Data loggers installed on main vessel and all work boats since October 2021.
- **NIWA Workboats:** Logging from data loggers and installed echo sounders.
- **Department of Conservation:** Data loggers en-route to be installed.
- **New Zealand Coastguard:** Discussions currently underway





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IHO CSB Working Group

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- **Meetings:** 13 meetings, 1 industry workshop
- **Chair:** Jennifer Jencks, USA; **Vice Chair:** Peter Wills, Canada
- **Representatives from 18 Member States:** Canada, China, Denmark, **France**, Germany, India, Italy, Lebanon, Mexico, Netherlands, **New Zealand**, Norway, Portugal, South Africa, Sweden, **UK**, Uruguay, **USA**
- **IHO Secretariat:** IHO Assistant Director Sam Harper, IHO Director Luigi Sinapi



- **Observers and expert contributors:** CCOM-JHC, CIDCO, Da Gamma Maritime Ltd, Dongseo U, ECC AS, ESRI, FarSounder, FLIR Systems AB, Fugro, GMATEK, Inc., James Cook U, JAMSTEC, Navico/C-Map, ONE Data Tech Co., Olex, PYA, Seabed 2030, Sea-ID, SevenCs/ChartWorld, TeamSurv, Teledyne CARIS, World Maritime University, and World Ocean Council



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CSBWG Outreach

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- Super yacht & leisure community
- Survey
- Geophysical & Submarine Cable industry
- Fisheries
- Cruise Line industry
- Software/hardware industry
- Hydrographic Offices
- Academic/Scientific Research



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CITIZEN SOURCED DATA
HELP REVEAL THE DEEP AND SHARE YOUR DATA

CROWDSOURCED DEPTH INFORMATION

Commercially owned ships can participate in increasing our knowledge of the ocean by sharing depth measurements from navigation instruments while out at sea. Known as Crowdsourced Bathymetry (CSB), this information can help identify uncharted features such as seamounts and canyons, verify charted information, and help fill the gaps where no data exists.

CRUISE SHIPS


Many expedition cruise ships explore the world's oceans, often in areas where data is sparse, non-existent, or of poor quality. These are exactly the places where contributions to global seafloor mapping efforts can have the greatest impact.

To minimise effort on the part of the ship's crew, data collection and contribution of data can occur by using either built-in navigation software systems that are participating in the CSB initiative, or through a small hardware data logger that can be interfaced to the ship's NMEA data bus. Routinely measured parameters such as under keel depth and position, can then be stored, uploaded and contributed to local and global mapping initiatives. These contributions can also benefit navigational safety, detect unknown hazards, and aid other mariners and ocean scientists.

By contributing data, cruise ships can help avoid accidents, environmental damage and make the oceans a safer place for all. Additionally, participation in this global effort can be included in the cruise line's marketing materials highlighting the various ways they contribute to scientific endeavors.




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DR. MATHIAS JONAS
IHO SECRETARY-GENERAL

"Getting to know the ocean is the greatest mapping adventure of our times. Many underwater mountain ranges, volcanoes, canyons have yet to be discovered and named."

© George Despins

BECOMING A 'TRUSTED NODE'

The IHO's Data Centre for Digital Bathymetry (DCDB) accepts CSB data contributions through organizations, companies or universities that serve as data aggregators and / or liaisons between mariners (data collectors) and the DCDB. These "trusted nodes" help the CSB effort in a variety of ways ranging from supplying data logging equipment or software, providing technical support to vessels, downloading data from data loggers, aggregating collected data and facilitating data transfer. The IHO DCDB will help identify the best-suited "trusted node" type for you.



Contributed data should include depth, position and time stamp. While additional information is encouraged, data does not need to include vessel name, IMO number or anything else with the vessel identification prior to uploading to the IHO DCDB database. By contributing data to the IHO DCDB, the provider will not be held liable for the data submitted.

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FIND OUT MORE

Further information about collecting or contributing data can be found at the IHO DCDB website (ngdc.noaa.gov/iho/) or by contacting representatives of the IHO Crowdsourced Bathymetry Working Group at bathymdata@iho.int

Visit seabed2030.org to learn more about the Nippon Foundation-GEBCO Seabed 2030 project, which aims to bring together all available bathymetric data to produce the definitive map of the **world ocean floor by 2030**.

NOAA's Bay Hydro-I crowdsourced bathymetry test tracks in green overlaid on multibeam survey data demonstrates how changes can be detected.



Image courtesy of NOAA

3D view of northern Great Barrier Reef showing all vessel tracks as of December 2019.



© Rob Beaman

iho.int/en/bathymetric-publications

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iho.int/en/communication-material



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How can YOU become involved?

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- Offer a positive response to the IHO or IRCC Circular Letters before the SWPHC20 (Feb 2023)
- Participate in the IHO CSB Working Group
- Volunteer to become the next Seabed 2030-funded CSB Program!



Please contact your CSB/Seabed 2030 Coordinator - Stuart Caie scaie@linz.govt.nz

Questions?

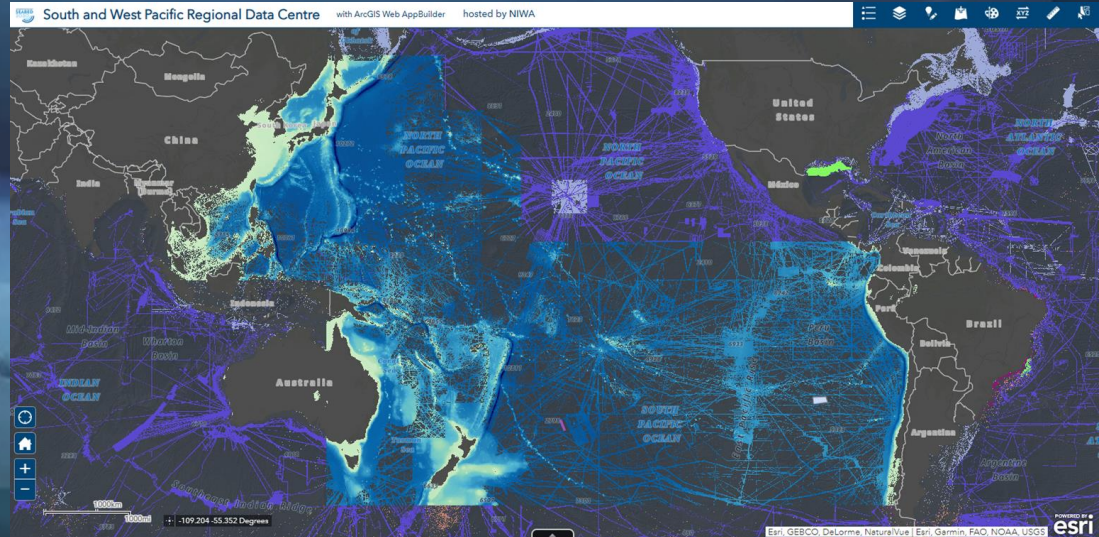


Review of web app



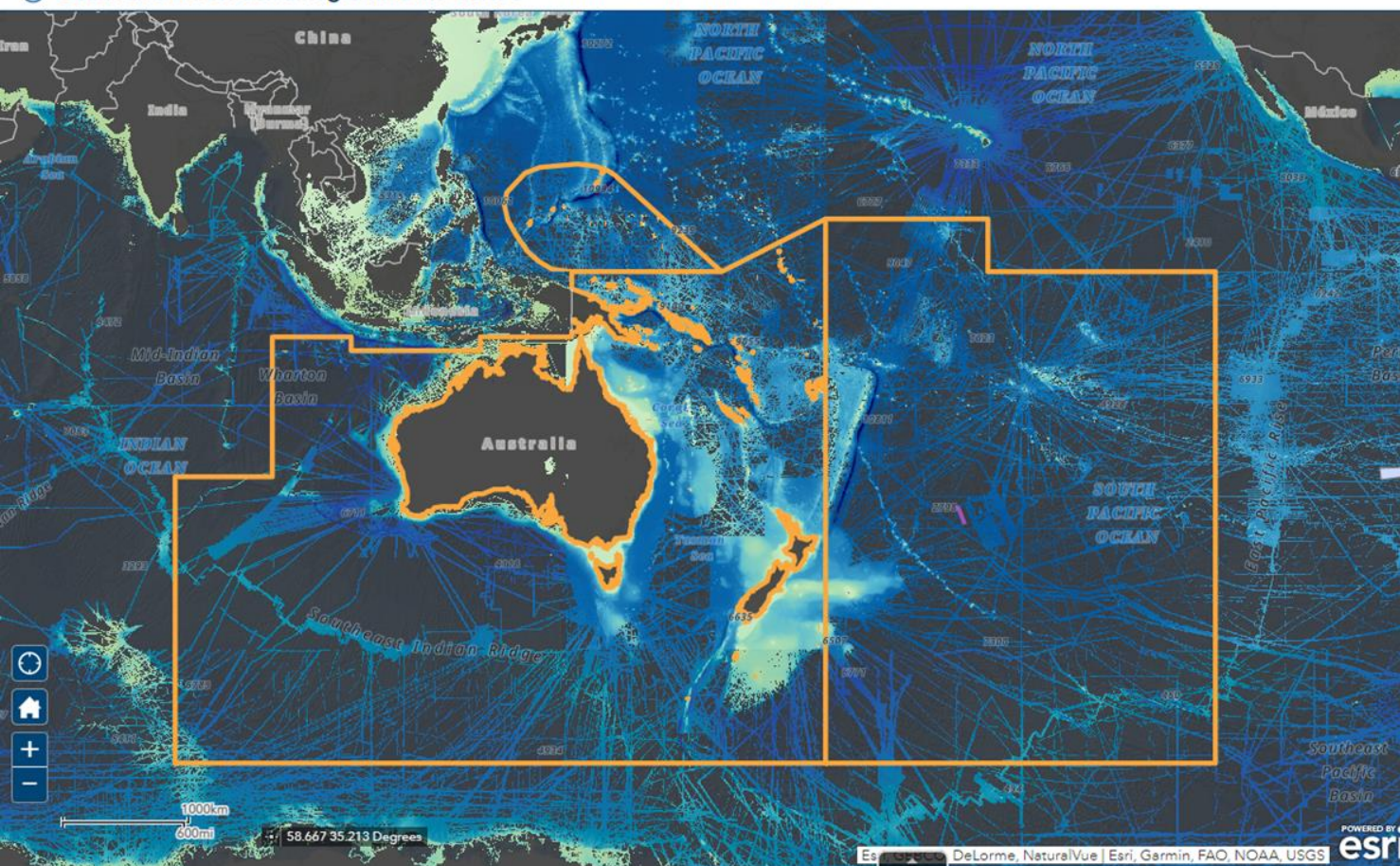
South-West Pacific: Summary of known existing data

- Publicly Available Data - actively being integrated into Seabed 2030 regional data products
 - NOAA NCEI / IHO DCDB
 - JAMSTEC
 - AusSeabed
 - PANGAEA
 - MGDS
 - SIO
 - R2R
 - GMRT
 - LINZ
 - NIWA
 - GNS Science
 - EMODNET
- Non-public Data - Strategy needed to gain access to data for GEBCO/Seabed 2030
 - IHO and IOC Member States
 - Industry
 - UNCLOS
 - NGO
- Other??



SW Pacific Region: GEBCO 2021 Coverage

South and West Pacific Regional Data Centre with ArcGIS Web AppBuilder hosted by NIWA



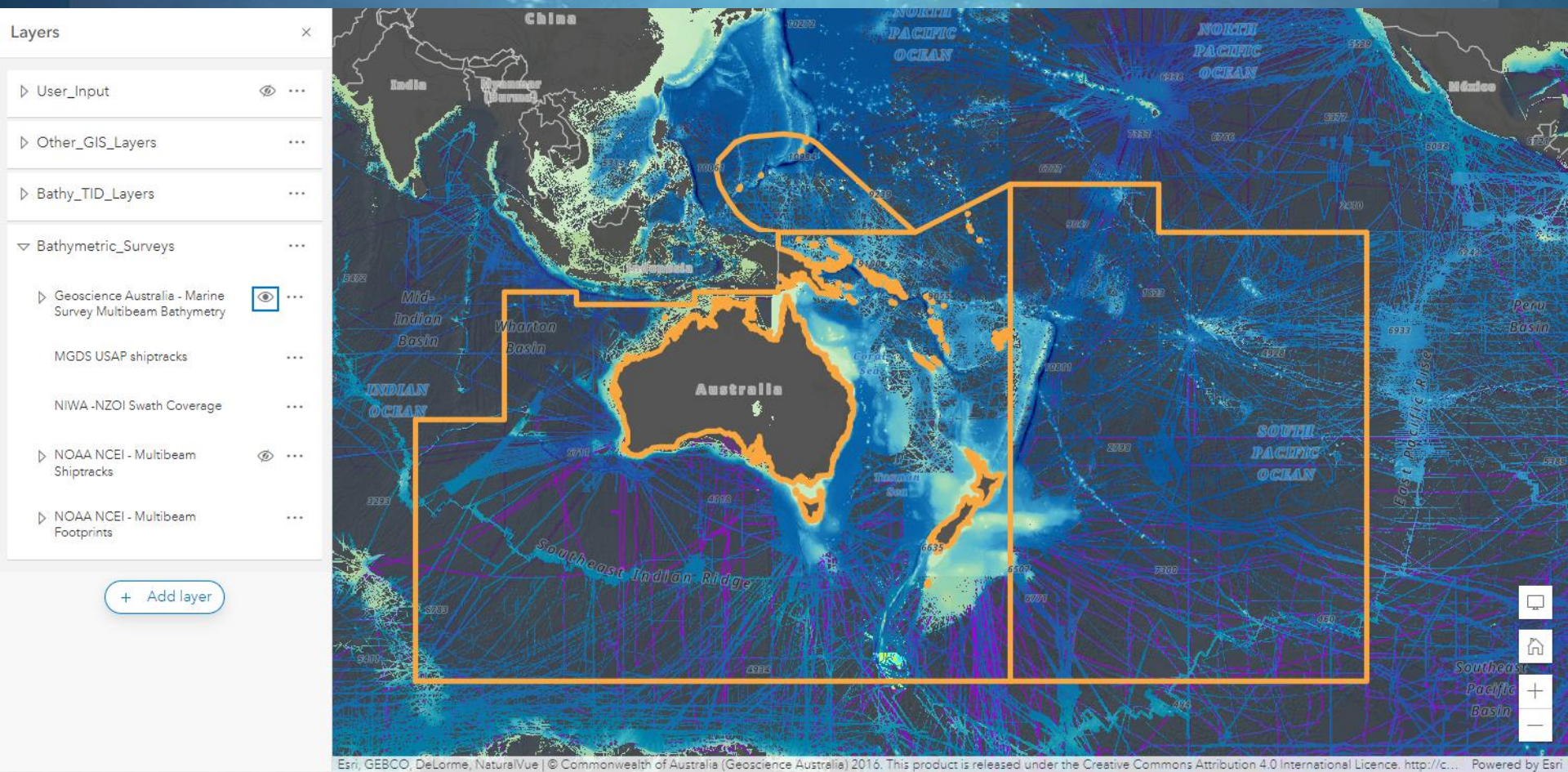
Layer List

- ☐ NIWA -NZOI Swath Coverage ...
- ☐ MGDS USAP shiptracks ...
- ☒ IHO_RegionalHydrographicCommission ...
- ☐ EEZ_MarineRegions_v11 ...
- ☐ WDPA_Jan2022_polygon ...
- ☐ WDPA_Jan2022_points ...
- ☐ NOAA NCEI - Multibeam Shiptracks ...
- ☐ NOAA NCEI - Multibeam Footprints ...
- ☐ Geoscience Australia - Marine Survey Multibeam Bathymetry ...
- ☐ GEBCO Undersea Features ...
- ☒ SeWPac_2021_bathy ...
- ☒ GEBCO_2021_bathy_DirectMeasurements ...
- ☐ GEBCO_2021_TID_DirectMeasurements ...
- ☐ SeWPac_2020_TID ...
- ☐ SeWPac 2019 TID ...
- ☒ World Ocean Reference ...
- ☒ World Ocean Base ...

Esri, DeLorme, NaturalVue | Esri, Garmin, FAO, NOAA, USGS

POWERED BY
esri

SW Pacific Region: Existing Data (Public/Non-Public)



SW Pacific Region: Strategies to Map the Gaps

Key Activities:


- Data discovery and sharing
- CSB (shallow-water: crucial)
- Making Transits Matter - mapping during transits
 - Industries
 - NGOs
 - Research vessels

COMMUNICATE



COLLABORATE





SW Pacific Region: Survey Planning, AOI, Existing Tools





Survey Coordination Tool
PRIORITIES, REQUESTS AND PLANNING




**HOME**

**PLANS**

**REQUESTS**

**AREAS OF INTEREST**

Welcome to the ASB Survey Coordination Tool


 About

The ASB SCT was developed by FrontierSI on behalf of AusSeabed and captures three record types, a survey plan, a survey request and a area of interest profile.


The survey plans records the survey's intended area of interest, its specifications and intended deliverable.

The survey request record the information required for submission to the Hydroscheme Industry Partnership Program (HIPP) review panel.


The area of interest profile enables an organisation to highlight the areas of our marine jurisdiction that are of interest for surveying.

 **Survey Plans**

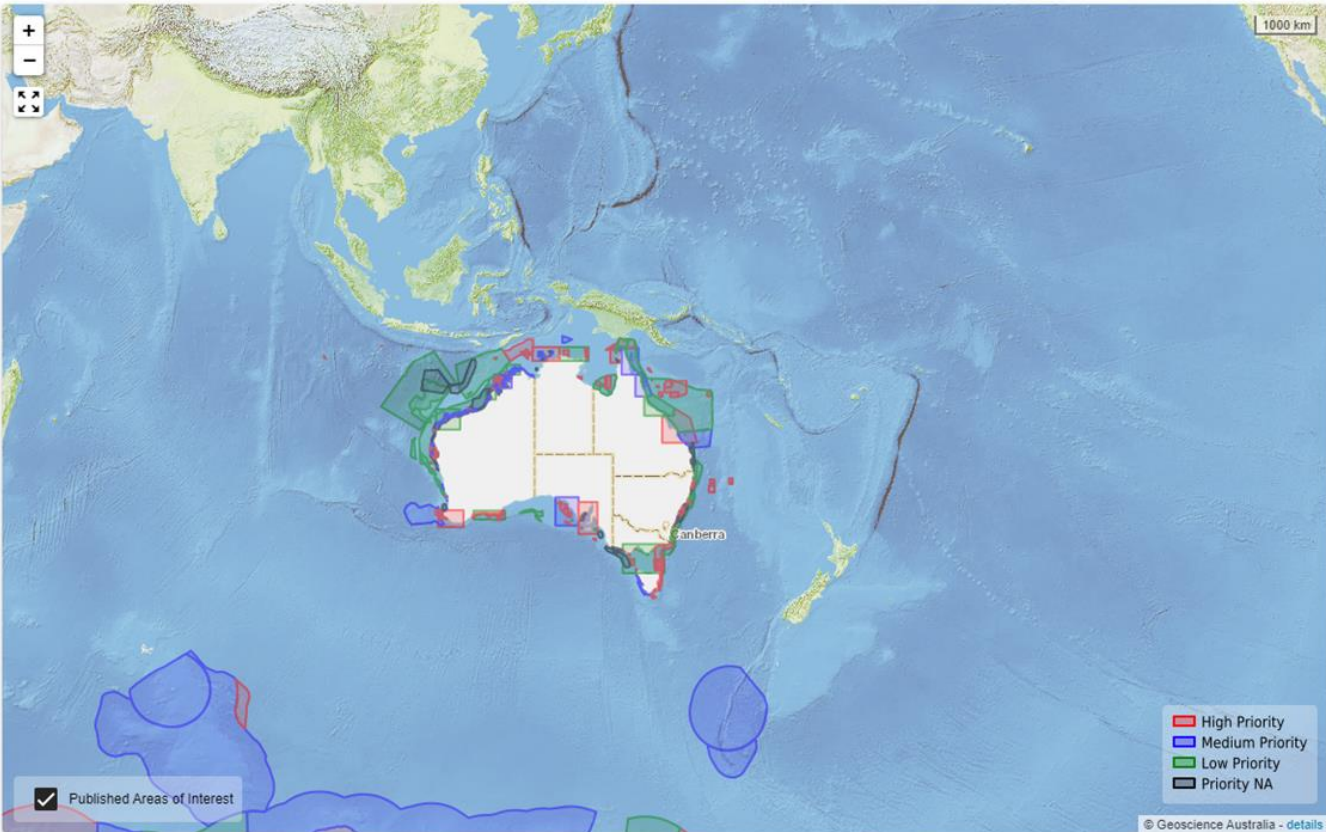
Add a new Survey Plan or update existing Survey Plan

 **HIPP Requests**


Add a new HIPP Request or update existing HIPP Request


 **Areas of Interest**


Create or update an Area of Interest




☒ Published Areas of Interest

 High Priority

 Medium Priority

 Low Priority

 Priority NA

© Geoscience Australia - details

<https://coordination.ausseabed.gov.au>

<https://coordination.ausseabed.gov.au/>

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SW Pacific Region: Survey Planning, AOI, Existing Tools

The screenshot displays the 'South and West Pacific Regional Data Centre' web application. The main map area shows a dark background with blue lines representing survey routes. A dialog box titled 'Add Survey Line / Area' is open, prompting the user to 'Select a template to create features or click a feature on the map to edit it'. The dialog lists two templates: 'CommunitySurvey_UserInput_Data.Location' and 'Route Plan'. The 'Route Plan' template is selected, and a 'New Feature' button is visible. Below the dialog, a smaller map view shows a detailed view of a survey area with a red line and a scale bar indicating 200km and 100mi. The bottom of the interface shows the 'SaWPac Webmap App' logo and the Esri logo.

The screenshot displays the 'South and West Pacific Regional Data Centre' web application. The main map area shows a dark background with blue lines representing survey routes. A dialog box titled 'Select' is open, showing a list of layers. The 'Route Plan' layer is selected, and a 'Selection actions' menu is open, listing various actions such as 'Zoom to', 'Pan to', 'Flash', 'Export to CSV file', 'Export to feature collection', 'Export to GeoJSON', 'Statistics...', 'Create layer', 'Save to My Content', 'View in Attribute Table', 'Smart Editor', and 'Clear selection'. The bottom of the interface shows the 'SaWPac Webmap App' logo and the Esri logo.

SW Pacific Region: Survey Planning, AOI, Existing Tools



<http://drive.google.com/file/d/1u18J5bMuBPX8bqZIFa2988YWleNf0Enj/view>



Provision of polygon coverages and transit plan



SW Pacific Region: Let's Talk and Work Together!

Transit / Survey Line Planning Request


Info Needed:

- *Origin and Destination*
- *Number of Transit Days*
- *Vessel Name*
- *MBES model*
- *Transit Speed*

Data Discovery and possible exchange/sharing

South and West Pacific Ocean Regional Center

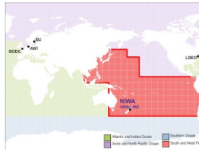
Center Head

 Kevin Mackay

Regional Data Portal

South and West Pacific Regional Community Survey

Contact:
pacific@seabed2030.org



gobco.net/about_us/contributing_data/

Home Data & Products Seabed 2030 Training News & Media About

Contributing Data

Home » About » Contributing data

How to contribute data

Please use the form below to make contributions of multibeam and/ or single-beam survey data, individual soundings or existing grids to help update our gridded data sets and products. If you have any problems in completing the form, then please email this information to the Global Center (gdlaco@seabed2030.org). Watch a [short video](#) on how to contribute data.

GEBCO releases a new global grid every year, generally in late June. Find out more about the [grid generation process](#).

South and West Pacific Regional Mapping Community Survey

Data Discovery

As we are all trying our best to gather as much publicly-available data as possible to be compiled into the GEBCO grid, we are aware that there are datasets which cannot be made public at the moment for various reasons. We believe that the existence and coverage of these datasets should still be identified to help the public understand where there is actual data.

Hence, we would like to appeal to you about this, and we need your help.

First, please check the latest GEBCO data compilation coverage in the region ([SWPaC Data Coverage](#)) and if there are data that you know of that is not in the web app, you can either

1. In the web app, draw a polygon of the estimated coverage of the data using the User_Input widget/tool, or
2. Reach out to us.

Please note that your polygon input is viewable by the public.

Kindly check the option/s on ways how you can help us.

- ☐ I/We can share the coverage/extent of the data that we have but cannot be made public.
- ☐ I know someone / an entity who holds datasets that are not in the latest GEBCO compilation.
- ☐ I/We have datasets but we need to decimate it to the resolution that we are allowed or comfortable to share.

You can also upload the file that can describe the data, whether it is a report, map or vector file.

Supported file formats:
Image files (bmp, eps, jpeg, tif, xif)
Document (pdf, doc, docx, dot, xls, xlsx)
Data File (txt, csv, zip, 7z, gz, tar, json, geojson, xml)

Note: Maximum file size is 10 MB. If the file you want to send us is more than the limit, we can send you an FTP link where you can upload your file/s.

1 Select file (number of files allowed: 1 - 10)

Back

Submit

Page 7 of 7

E-mail us at pacific@seabed2030.org

Questions?



Summary

- Webinar 1:
 - Introduction to Seabed 2030 & South and West Pacific Regional Center
 - Introduction to IHO Digital Centre for Digital Bathymetry (DCDB)
 - Status of mapping in the region
- Webinar 2:
 - Examples from the Pacific (Kiribati & Niue)
 - How is the GEBCO product assembled for the SWPHC Region
 - How to contribute data
 - How to access data



Summary

- Webinar 3:
 - IHO CSB Initiative - Introduction, description of how CSB can be used and contributed to the IHO DCDB, and how hydrographic offices can become involved.
 - Web App Review
 - Polygon Coverage - purpose, formats & metadata

Reminder: World Hydro Day!



The banner features the logos for 'THE NIPPON FOUNDATION-GEBCO SEABED 2030' and 'UNITED NATIONS OCEAN CONFERENCE LISBON 29 JUNE - 3 JUNE 2022' on the left. The main text 'UN Ocean Conference 2022' is centered over a background image of a coral reef.

Seabed 2030 - Mapping for People and Planet

Official Side Event
6-8pm (WEST), Wednesday 29 June - Lisbon

The Nippon Foundation-GEBCO Seabed 2030 Project is delighted to announce that we will be hosting an Official Side Event at the upcoming UN Ocean Conference in Lisbon.

We invite you to join us in-person or online for this high-level panel session which will look at the benefits of ocean mapping from a global perspective, and explore how mapping data is essential to supporting the UN SDG 14 and Decade outcomes, as well as safeguarding our future and that of the planet.

Details can be found at:
<https://seabed2030.org>



Reminder: Annual Meeting

4th South and West Pacific Regional Mapping Community Meeting

Microsoft Teams

📅 5 July 2022, 12:00 - 7 July 2022, 14:30

Event details >



Details can be found at: <https://seabed2030.org>



Homework #3

- Encourage the review and response of IHO CL 21/2020 and IRCC CL 1/2020
- Consider participating in the next round of CSB Field Trials by receiving Seabed 2030-funded data loggers
- Contribute shapefiles/polygons of existing coverage and planned surveys
- Assemble information about technical challenges that we might be able to help you address

Provide above information to your SWPHC Seabed 2030 Coordinator

Stuart Caie: scaie@linz.govt.nz



Next Webinar in this Series

Webinar 4 – July 1: Moving Ahead Together: Summary, Next Steps and Wrap up

- Summary of responses from participants
- Develop Seabed 2030 Strategy for the SWPHC Region?
- Other?

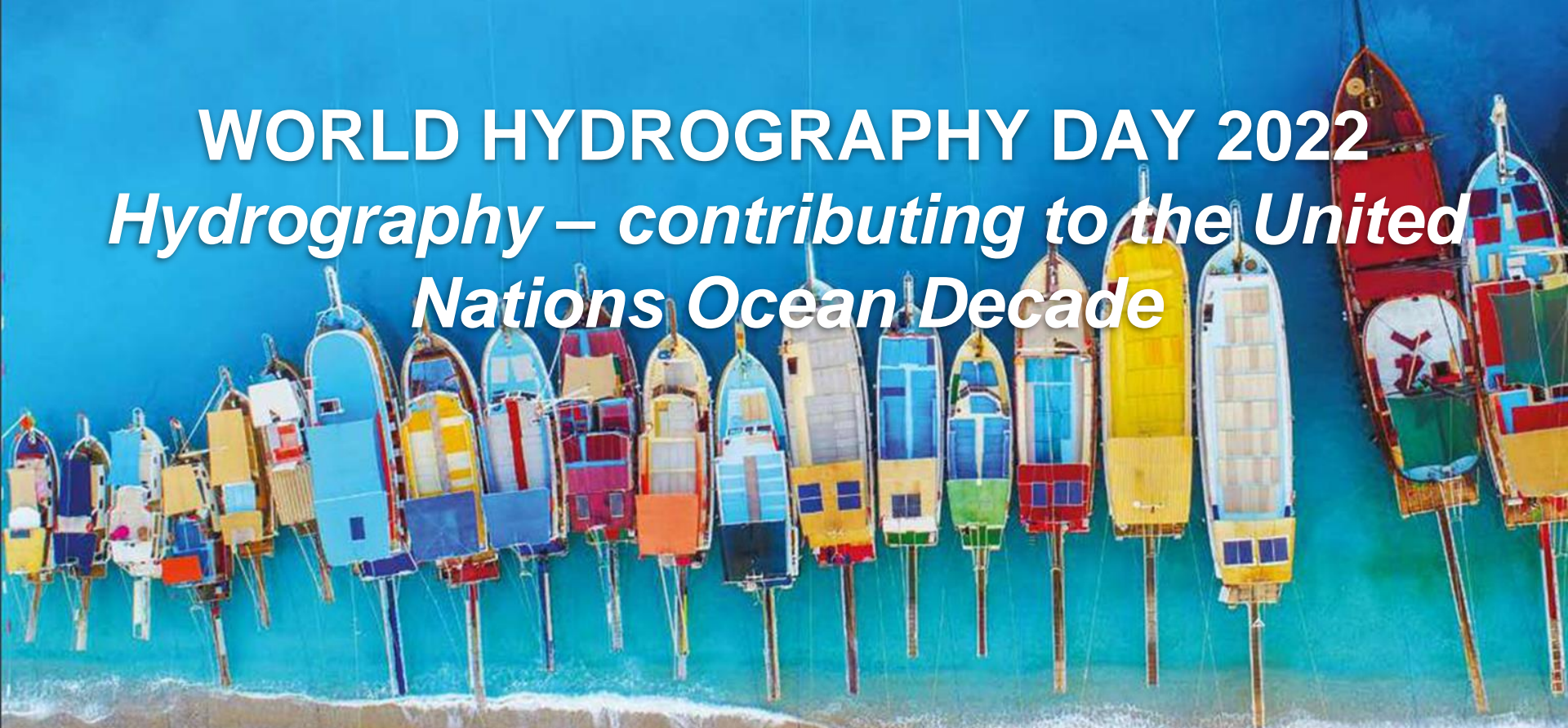


Photo!



WORLD HYDROGRAPHY DAY 2022

Hydrography – contributing to the United Nations Ocean Decade



2021
2030 United Nations Decade
of Ocean Science
for Sustainable Development





Thank you!

Join us 1st July for Webinar 4:
Moving Ahead Together:
Summary, Next Steps and Wrap up.



Webinar Documents, Presentations & Recordings:
<https://iho.int/en/events-recordings>

