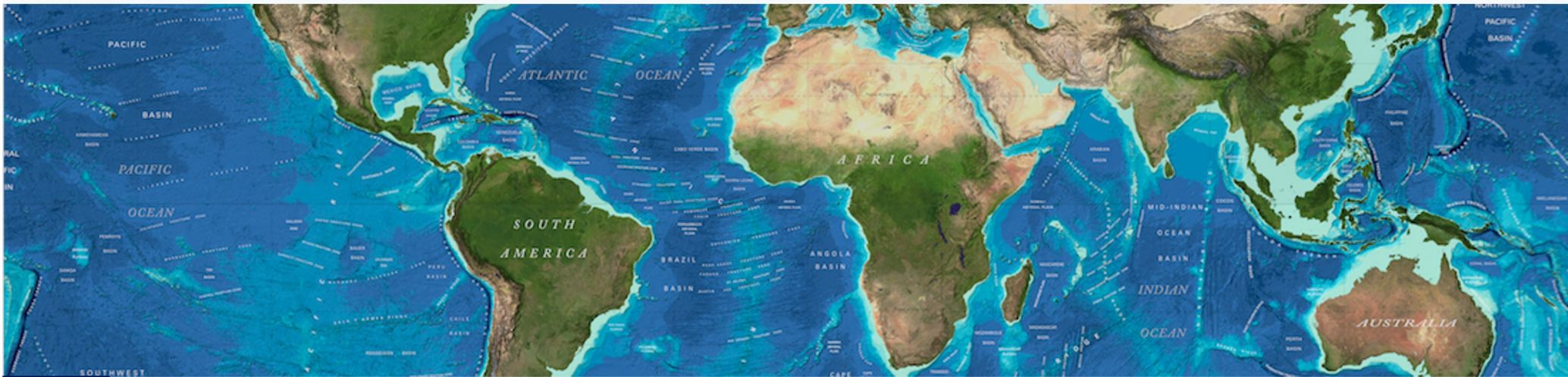


CSBWG Inter-session Meeting 01/2024

Welcome & Opening Remarks



International Hydrographic Organization
Organisation Hydrographique Internationale

15th October 2024
VTC

CSBWGIS01-2024



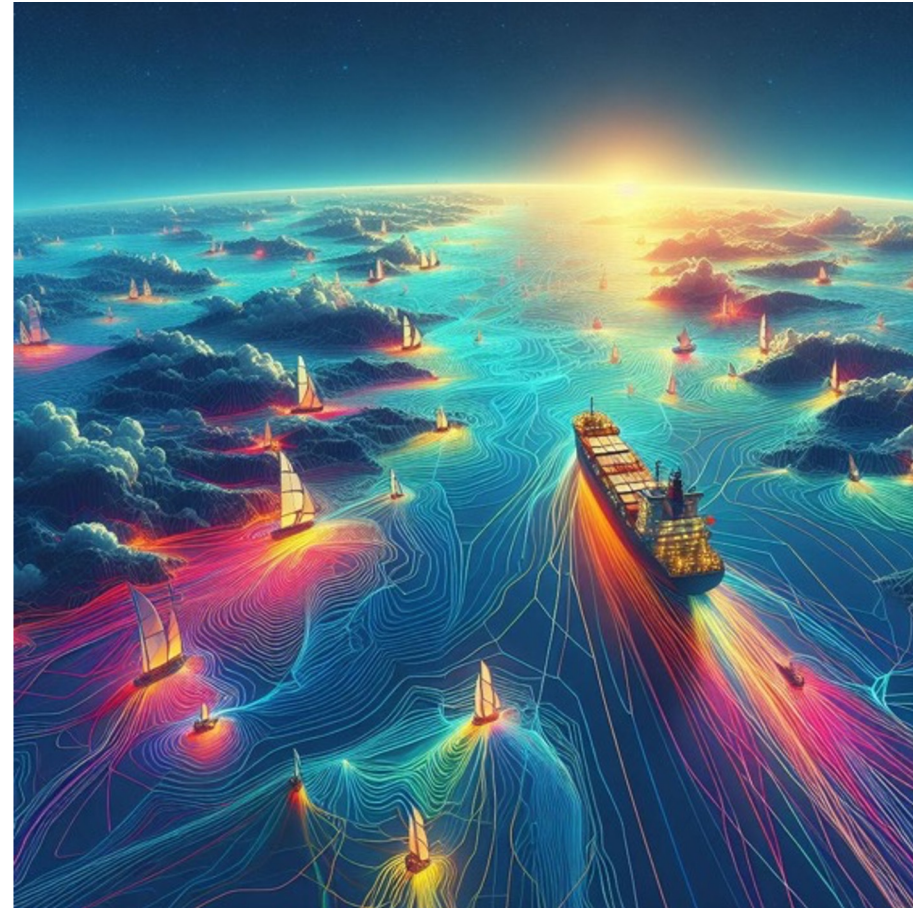
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IHO Crowdsourced Bathymetry Intersession Meeting

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Main Purpose: To ensure that ongoing work is on track, and to acknowledge and discuss any issues with delivery that we anticipate.

Main Outcome: An updated CSBWG work plan



AI design by Liva Goba



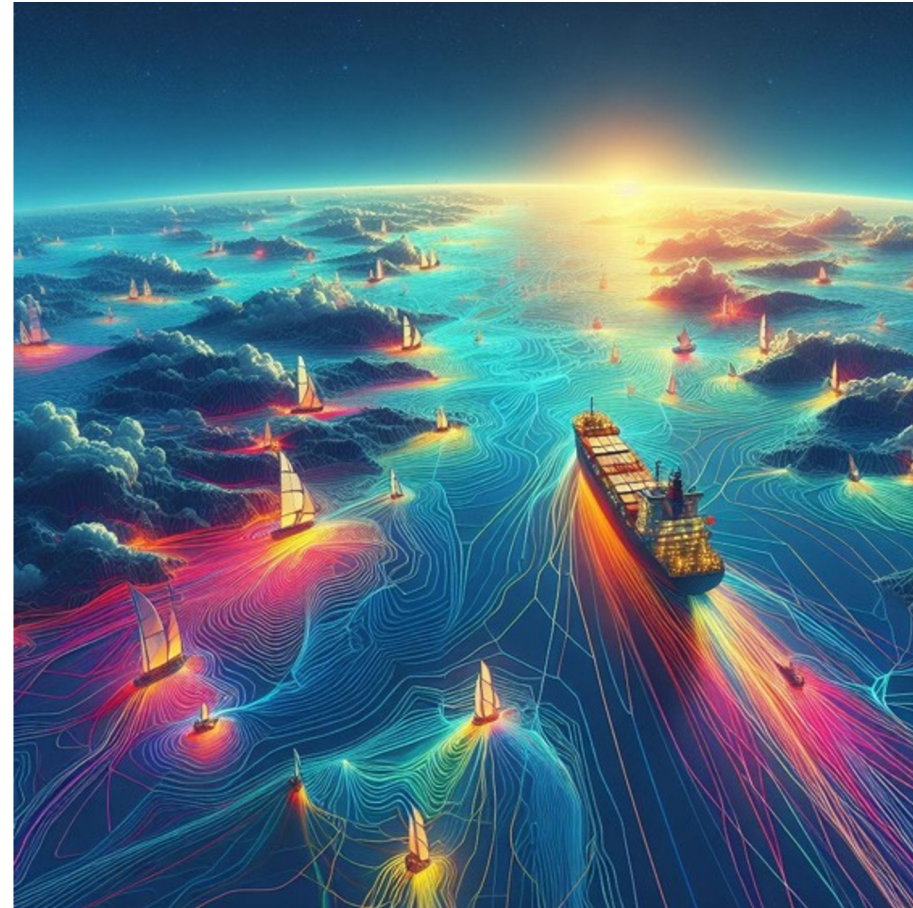
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IHO Crowdsourced Bathymetry Intersession Meeting

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Ground Rules:

- Everyone may speak
- Raise your hand to speak
- Speak only when WI Lead, Chair or VChair have called on you
- Respect the 10 minute time limit
 - Be cognizant of your questions, comments and whether others also are in queue to speak
- Parking Boards (Issues, Decisions, Actions) will be used
- Raise additional questions/comments to WI Leads in the chat window
- No dedicated health break. Excuse yourself when needed.



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Time	Item	Lead(s)	Docs
2000 – 2010	1. Welcome and opening remarks 1.1. Welcome and opening remarks 1.2. Domestic and administrative arrangements	Chair/IHO Sec	
2010 – 2210	2. CSBWG Work Items – 10 min updates 2.1. Work Item A: Maintain & update B-12 2.2. Work Item C: HO-specific issues/opportunities re. national policy/regs related to CSB 2.3. Work Item D: HO-specific issues relating to CSB data 2.4. Work Item E: Support CSB/SB2030 Coordinators in their RHC engagement 2.5. Work Item F: Software Tool Support 2.6. Work Item G: Trusted Node Support 2.7. Work Item H: CSB data cycle 2.8. Work Item J: Recognition & incentive strategy plan 2.9. Work Item K: Deliver the IHO CSB Initiative	G Morissette J Jencks A Klemm B Jimenez B Jensen G Morissette B Calder D Millar IHO Sec	
2210 - 2225	3. IHO DCDB CSB Dashboard	Chair	
2225 - 2245	4. CSB Tools Workshop (24-25 March, 2024)	Chair/Vice Chair	
2250 - 2300	5. Closing proceedings	Chair/IHO Sec	

	Work Item	Lead	Team
A	Maintain and update IHO CSB Guidance Document (B-12)	Guillaume Morissette	Georgie Zelenak, Idris Salaudeen, Evert, Thierry Schmitt
B	Submit IHO CSB initiative as a UN Decade Action	Evert Flier	Jenn Jencks, Sam Harper, David Miller
C	Gather, prioritize and respond to HO-specific issues/opportunities regarding national policy/ regulations related to CSB	Jenn Jencks	Evert, Steve Keating, Chandana Rathnayake, Denis Haines
D	Gather and prioritize HO-specific issues relating to CSB data, including but not limited to Nautical Cartography	Anthony Klemm (acting)	Giuseppe Masetti, Hans Oias, Andy Talbot, Akim Mahmud, Michel Breton
E	Support CSB/SB2030 Coordinators in their RHC engagement	Belen Jimenez Baron	Jenn, Evert, Anthony, Denis, Stuart
F	Discuss and propose potential software tool support for HOs	Brian Jensen	Emma Wise, Meredith Payne, Mathieu Rondeau, Idris S., Benjamin Barbier, Knut Hartman, Thierry
G	Clarify support identified by current Trusted Nodes needed for current and future Trusted Nodes.	Guillaume Morissette	Matt Zimmerman, Linden Brinks, Brian Calder, Colin Thomson
H	Clarify all aspects of the CSB data cycle and capture known issues, requirements and suggested enhancements.	Brian Calder	Shaul Solomon, Colin, Giuseppe, Guillaume, Georgie, Brian Miles
I	Develop a communication plan in coordination and collaboration with related efforts (SB2030, GEBCO, etc)	Sarah Grasty	Steve Monk., Meredith, Akim M., David M., Derek Niles, Tim Kearns, Belen, Pauline Weatherall, Jennifer Cheveaux, Idris, Chandana, Denis
J	Develop a recognition & incentive strategy plan	David Miller	Matt Z., Linden B., Sarah G., Jennifer C.



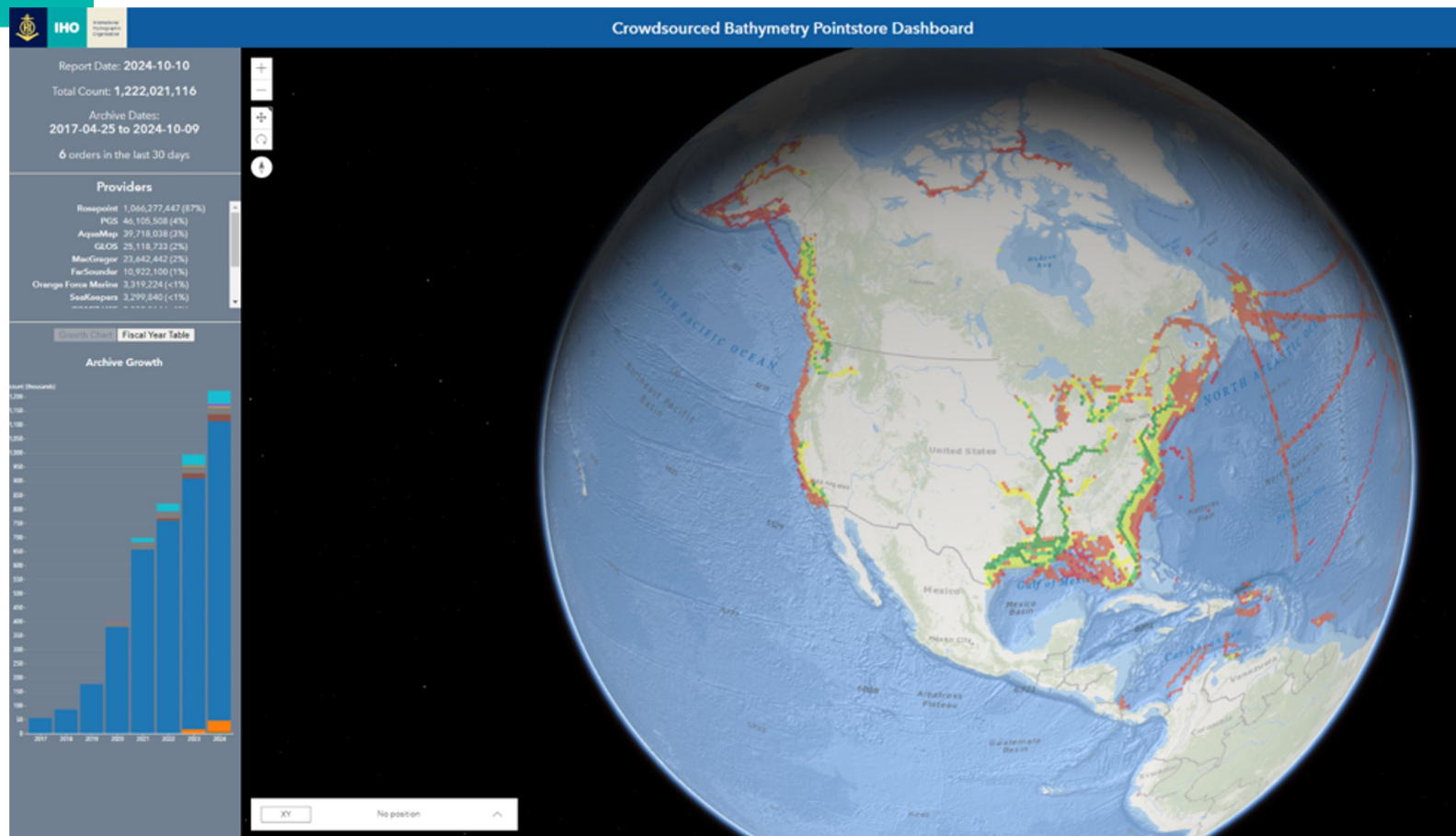
Work Item Updates



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CSBWG15 report (Action 6):

Gather feedback on metrics that could feed a DCDB Dashboard and report back to CSBWG Intersession.

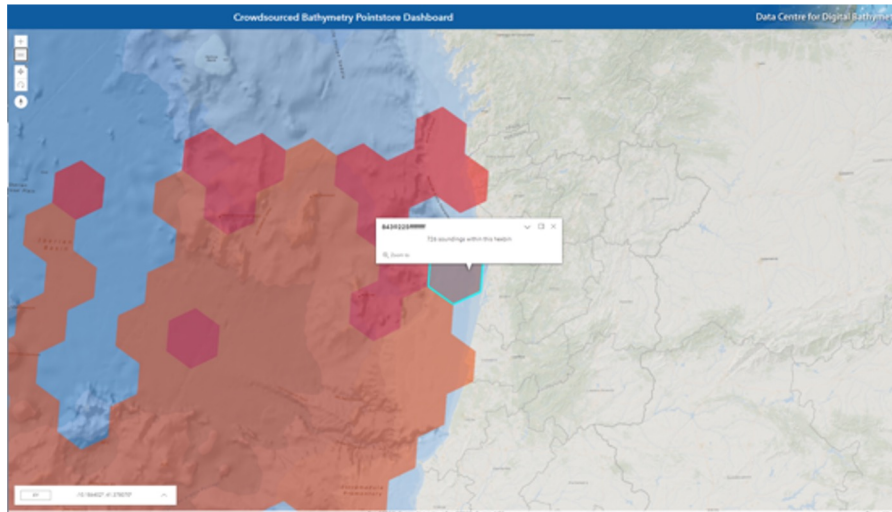


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IHO DCDB CSB Dashboard

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Goal: Build out our internal DCDB dashboard for external community use.



Report Date: 2024-10-10

Total Count: 1,222,021,116

Archive Dates:
2017-04-25 to 2024-10-09

6 orders in the last 30 days

Providers

Rosepoint	1,066,277,447 (87%)
PGS	46,105,508 (4%)
AquaMap	39,718,038 (3%)
GLOS	25,118,733 (2%)
MacGregor	23,642,442 (2%)
FarSounder	10,922,100 (1%)
Orange Force Marine	3,319,224 (<1%)
SeaKeepers	3,299,840 (<1%)
SONARWIZ	2,822,611 (<1%)

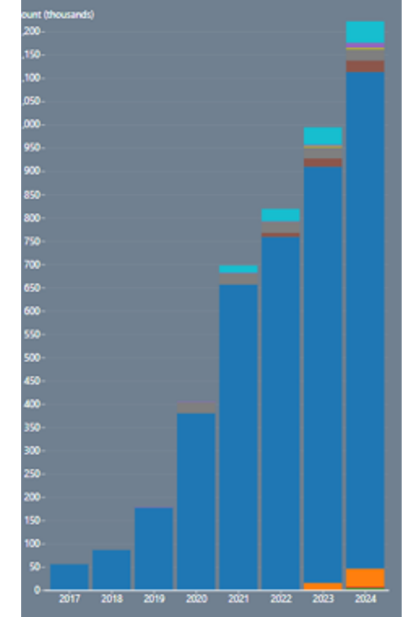
Growth Chart Fiscal Year Table

Counts by Fiscal Year

Year	Soundings	Growth	Total Archive
FY17	42,999,831		42,999,831
FY18	41,731,710	49%	84,731,541
FY19	53,211,046	39%	137,942,587
FY20	204,956,771	60%	342,899,358
FY21	271,375,292	44%	614,274,650
FY22	181,124,301	23%	795,398,951
FY23	139,657,381	15%	935,056,332
FY24	278,985,984	23%	1,214,042,316

Growth Chart Fiscal Year Table

Archive Growth





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IHO DCDB CSB Dashboard

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Matt Zimmerman's Suggestion:

1. Keep the **internal DCDB dashboard** focused on the technical user. Add features like new data alerts, monitoring number of views, etc.)
1. Have a **separate contributor friendly dashboard** for helping to tell the story and energize contributors

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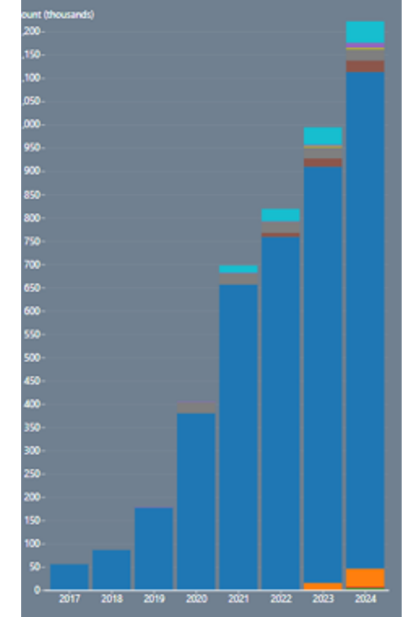
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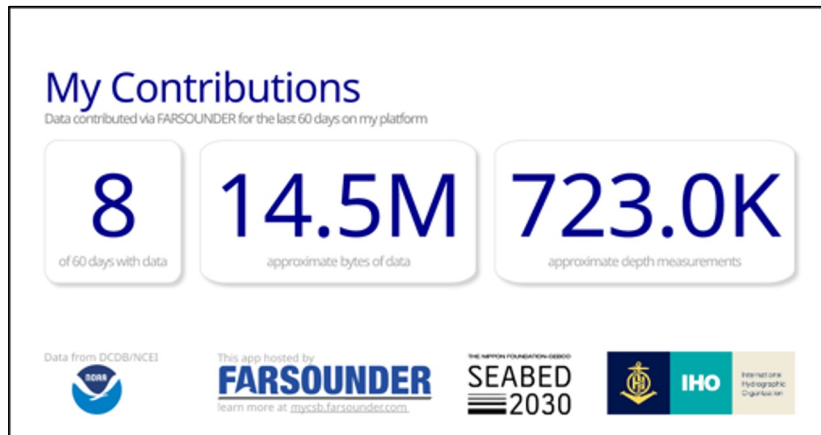
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Heath Henley's Suggestion (adding to Matt's):

- Set up a badge endpoint that dynamically returns an image that displays stats for a given provider.
- An endpoint that takes a path or query parameter to specify the provider, and returns an image.
- Providers could just add an image tag wherever they want to show off their stats.



GitHub Stats Generator

built for your convenience by @joshxfi

github username: theme:

private commits: border:

APIs used for the stats:
anuraghazra/github-readme-stats
DenverCoder1/github-readme-streak-stats

Show Result

Preview

Josh Daniel Bañares' GitHub Stats

☆ Total Stars Earned:	112
🕒 Total Commits (2024):	1.4k
🔧 Total PRs:	329
🕒 Total Issues:	81
📁 Contributed to (last year):	9

A

"You can make cooler looking stats images, for example, inspired by this type of thing people use for their github stats..." - Heath

Example of what Farsounder is currently doing to make a dynamic social image



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Anthony Klemm's Suggestion:

- Show top contributors (at the vessel level) in past month
- Show growth rate of contributions from each trusted node each quarter
 - Shows if participation in each trusted node are growing or waning, and at what rate
- Show number of individual contributors from each trusted node
 - Visualize that number over time to see if contributors are growing, stable, or declining in each trusted node.

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COASTMAP	2,550,000 (<1%)



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Jeff Marshall's Suggestion:

- It might be valuable to *get a sense of how much data could be collected in various regions versus what is currently being collected/available in the DCDB.*
- That might be achieved by comparing the current data inventory to available AIS data (vessel counts/vessel types).
- Although this may be biased in nearshore areas where AIS data is more readily available, it might help focus our efforts in recruiting vessels (or vessel groups) to participate in the CSB program.
- I'm not exactly sure of the best way of quantifying this, but even including AIS data as an overlay may provide some quick insight.





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IHO DCDB CSB Dashboard - Next Steps

- This summer, an "Audit Statistics" view was added to the DCDB CSB application (ie: Crowbar) with the intent to transform each metric into a time-series
 - Currently displayed in a table as we decide the best way to represent the data in time
- *"Enhancing the DCDB CSB Internal Dashboard"* and *"Building a prototype DCDB CSB External Dashboard"* has been added to our development backlog for 2025
- DCDB will meet with Farsounder to discuss potential collaboration/leveraging/lessons learned etc.

The screenshot shows the 'Crowbar / Audit' interface. On the left, there's a sidebar with 'Audit Logs' and a table with columns 'Type', 'Trace ID', and 'Provider'. The main area displays the 'Audit Statistics' table, which has columns for 'Creation Date', 'Unique Vessels', 'Trusted Nodes', and 'Public Volume (GB)'. The table contains 15 rows of data, all showing 'Carnival Corp, Seakeepers' as the trusted node and a volume of 10 GB. A pagination bar at the bottom shows '1' selected out of 15 items.

Creation Date	Unique Vessels	Trusted Nodes	Public Volume (GB)
2012-06-08T04:26:25-06:00	1	Carnival Corp, Seakeepers	10
2013-10-08T12:26:25-06:00	1	Carnival Corp, Seakeepers	10
2017-10-08T08:21:25-06:00	1	Carnival Corp, Seakeepers	10
2018-10-08T12:26:25-06:00	1	Carnival Corp, Seakeepers	10
2020-10-08T12:26:25-06:00	1	Carnival Corp, Seakeepers	10
2020-10-11T12:26:25-06:00	1	Carnival Corp, Seakeepers	10
2022-11-10T12:26:25-07:00	1	Carnival Corp, Seakeepers	10
2023-06-01T12:26:25-06:00	1	Carnival Corp, Seakeepers	10
2023-10-08T12:26:25-06:00	1	Carnival Corp, Seakeepers	10
2023-10-12T12:26:25-06:00	1	Carnival Corp, Seakeepers	10
2024-01-10T12:26:25-07:00	1	Carnival Corp, Seakeepers	10
2024-02-08T09:25:25-07:00	1	Carnival Corp, Seakeepers	10
2024-03-08T11:31:25-07:00	1	Carnival Corp, Seakeepers	10
2024-04-01T12:26:25-06:00	1	Carnival Corp, Seakeepers	10
2024-04-08T12:26:25-06:00	1	Carnival Corp, Seakeepers	10

Ignore the dummy metrics, they're just for show.



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IHO CSB TOOLS WORKSHOP

24-25 March 2025
(preceding CSBWG16)

*Hosted by NIWA & LINZ , at National Institute for Water and Atmospheric Research
Wellington, New Zealand*

Aims to showcase a variety of current and under-development tools that pertain to all steps of the CSB data cycle, are available to the public, and are intended to advance the IHO Crowdsourced Bathymetry Initiative.

Developers would provide assistance with first attempts to use these tools while also gathering user feedback.

All Hydrographic Offices are encouraged to participate & attend.



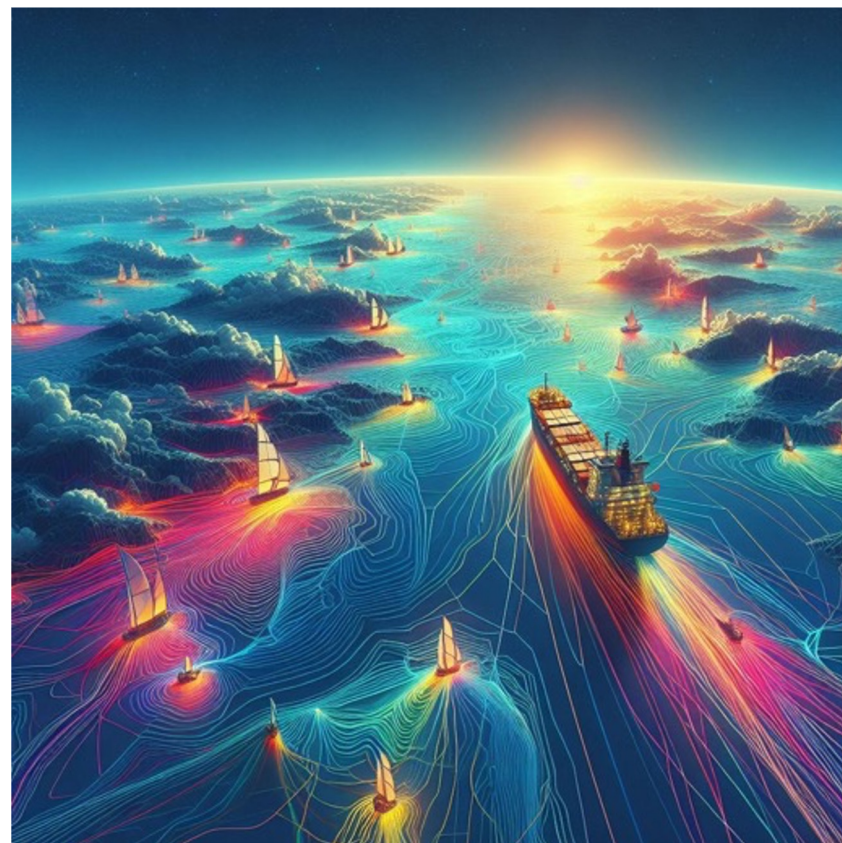
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Key Objectives:

- Welcome, listen, share and discuss current CSB data life cycle tools
- Demonstrate tool capabilities
- Provide feedback to tool developers
- Hydrographic offices and other interested organizations bring their own CSB database to apply demonstrated tools and have something to take back to home office.
- Hands on demonstration of data logger installation - pending availability of demo vessel and number of attendants



AI design by Liva Goba



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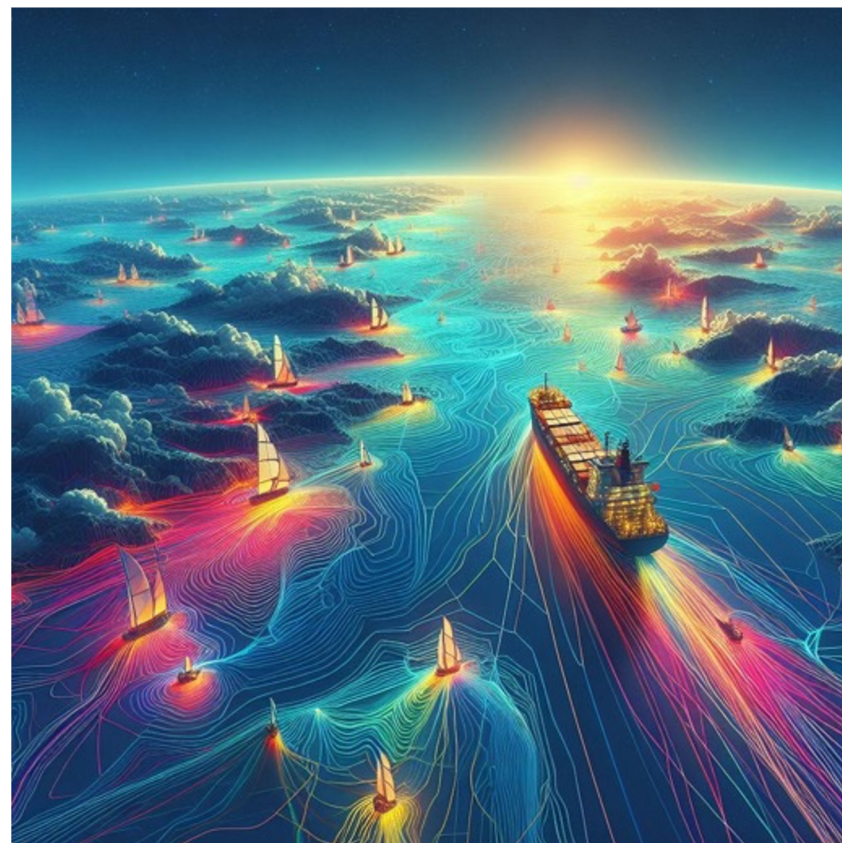
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Expected results and uptake

After the workshop, attendees will have an overview of the entire CSB data cycle and will take home practical experience with available resources to enhance their CSB data management capabilities.

This overview will provide hydrographic offices and other organisations with key input to pursue the gathering and use of CSB data in their office or to build a case for deciding whether CSB is worth pursuing in their future.



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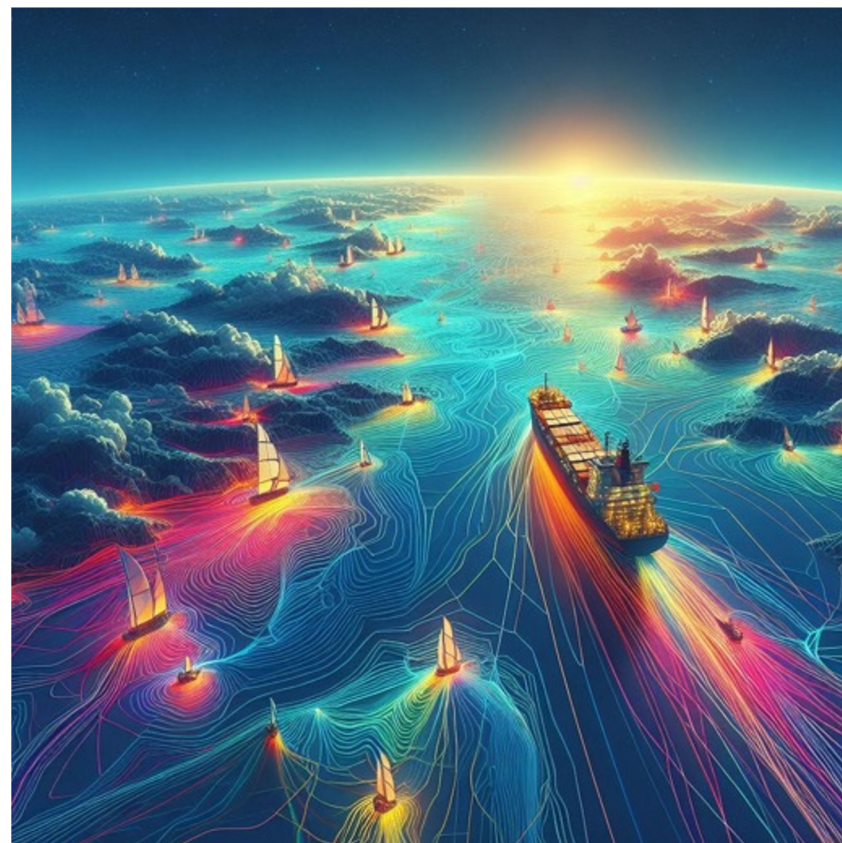
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Suggested Topics for the CSB Tools Workshop:

- Collecting and Transmitting/Contributing CSB Data
- CSB Data Discovery and Access
- CSB Data Processing
- CSB Data Products



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Collecting and Transmitting/Contributing CSB Data

- Seabed2030 data loggers - Seabed 2030
- The Wireless Inexpensive Bathymetry Logger (WIBL) project - CCOM/UNH
- CSBSchema - CCOM/UNH
- OFM Mussel kit
- Other?



openbathymetry.cidco.ca/technology-partners



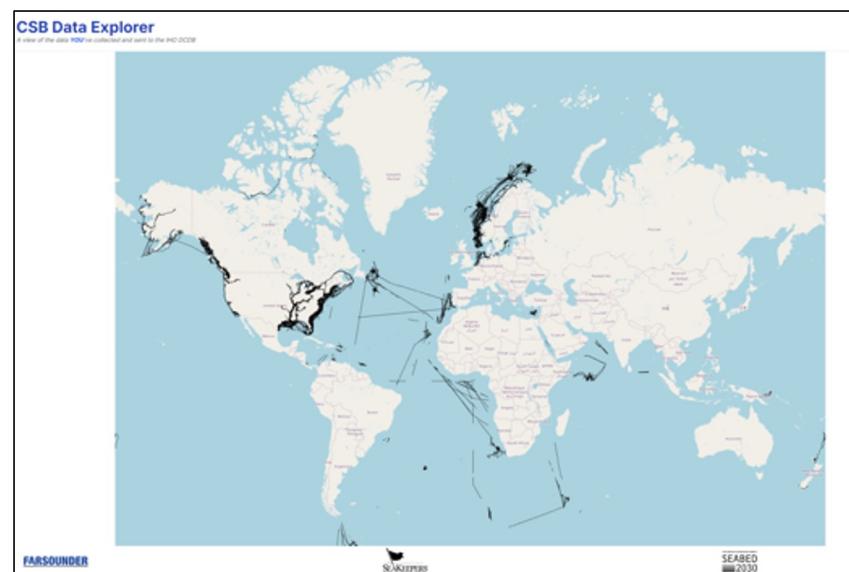
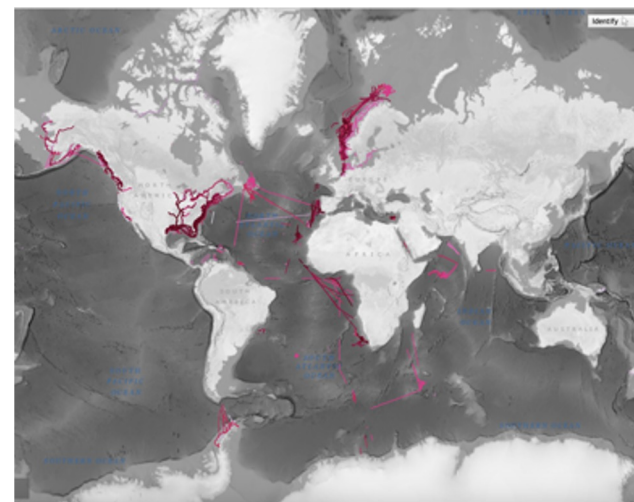
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CSB Data Discovery and Access

- IHO DCDB data discovery and access - DCDB
- Orange Force Marine working with partners
- CSB Data Explorer - FarSounder (Virtual presentation)
- Email Notifications for New CSB Data - Heath Henley (Virtual presentation)
- Other ?





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CSB Data Processing

- OpenVBI - CCOM/UNH
- VBICompare - CCOM/UNH
- NOAA CSB Processing Chain - NOAA

🔧 SOFTWARE FOR CSB DATA

OPEN SOURCE

The Wireless Inexpensive Bathymetry Logger (WIBL) project

The WIBL project aims to provide a minimally functional end-to-end hardware/firmware/cloud software environment for collecting CSB data.

- [Read more](#)

CSBSchema

The project includes software to validate files against the B-12 json format.

- [Read more](#)

OpenVBI

The OpenVBI project aims to gather together a collection of community-vetted algorithms for all aspects of the processing of volunteer data.

- [Read more](#)

VBICompare

The VBICompare project provides tools to interact with the DCDB archive of CSB data.

- [Read more](#)

NOAA CSB Processing Chain

This project provides guidance on NOAA's developing pipeline for CSB data processing, including water level and vertical offset corrections, filtering, and product construction.

- [Read more](#)



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CSB Data Products

- ?



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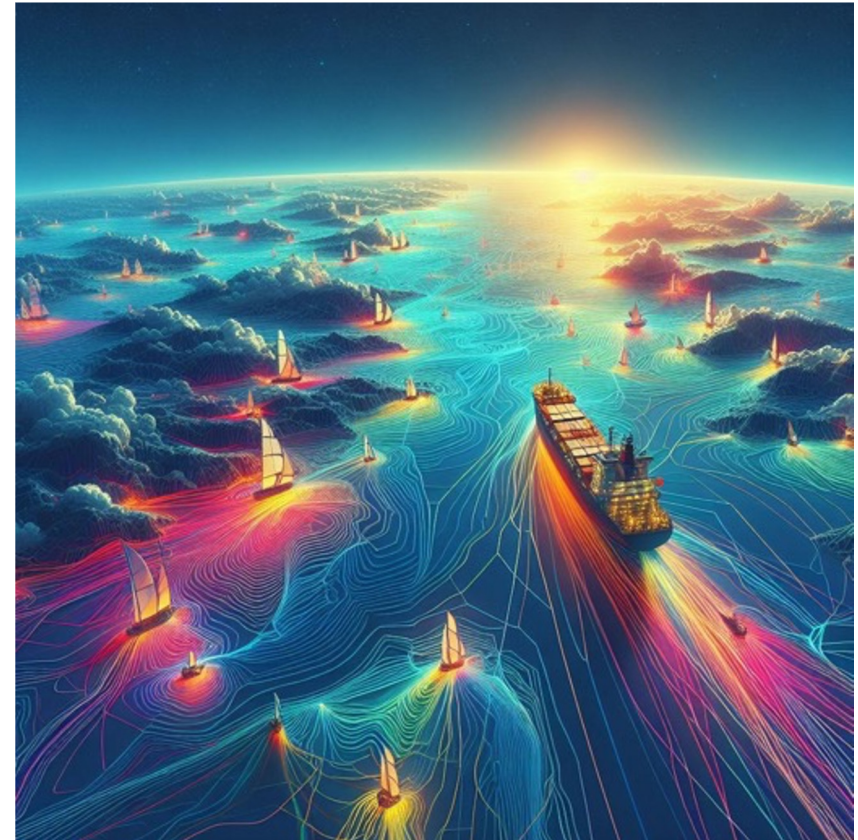
CSBWG Tools Workshop

Suggested Topics for the CSB Tools Workshop:

- Collecting and Transmitting/Contributing CSB Data
- CSB Data Discovery and Access
- CSB Data Processing
- CSB Data Products
- Are we missing anything?

Next Steps

- Who will organize? Work Item H?
- Confirm participants
- Continue to advertise at RHC meetings



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Questions?

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