

Introduction

The 2025 Atlantic and Indian Oceans Regional Mapping Community Meeting gathered participants from across the globe to discuss progress, challenges, and innovations in seafloor mapping. This event facilitated knowledge sharing and collaboration among experts, stakeholders, and organizations aligned with the Seabed 2030 project's mission to map the world's ocean floors by 2030. The virtual meeting was conducted over three days and was organized around themes that would help the community understand the mission and the progress of the Atlantic and Indian Oceans Regional Center, familiarize with the data contribution workflow and tools that are used to develop the regional product, and provide a platform for them to share their insight regarding ocean floor mapping.

Meeting Summary

Day 1 Summary

The first part of the day focused on understanding the mission of the Atlantic and Indian Oceans Regional Center and how they collaborate with the community to advance seafloor mapping within the Atlantic and Indian Oceans. After the short break, the presentations were more focused on technical aspects of data processing and tools that are available to the community to QA/QC their data and generate maps.

Recap of the key points from the presentations:

- Overview of the Center and a general introduction to The Nippon Foundation GEBCO Seabed 2030 Project,
- The regional updates provided by the data managers emphasized the steady growth of data contributions and the diversity of contributors. The increase of data coverage within the Atlantic and Indian Oceans is the result of the collaborative efforts towards data sharing.
- A detailed regional capacity development update illustrated with actions related to distributing and consolidating skills and knowledge within the community was presented through the several collaborative initiatives where the AIORC team participated
- A brief report on the work done by the GEBCO Technical SubCommittee for Ocean Mapping (TSCOM) which emphasized the three critical strategies and actions:
 - Data sharing: Increasing available data via existing archive and transit
 - Enhance metadata generation and web services usage
 - Encourage the use of GSF formats to avoid redundancy in data processing, which will also help integrating various datasets
 - Unify approaches for disseminating information and outcomes

- A technical insight into the IHO-DCDB role in advancing seafloor mapping, with a presentation of existing resources and tools for users to access and download bathymetry data, but also to grid existing data on the IHO DCDB bathymetry viewer.
- The crowdsourced bathymetry (CSB) initiative was presented during the first day with an invitation to the upcoming Crowdsourced Bathymetry working group Tools Workshop which will be held in Wellington, New Zealand in March 2025. The critical information shared during Jessica Nation's presentation included an overview of a few open source tools being developed at the IHO-DCDB and the importance of joining the working group to increase awareness and involvement as this initiative becomes instrumental to the participation of nations in the global endeavor of mapping the ocean floor.

Day one presentations concluded with the description of the steps to take when contributing data to the project.

Day 2 Summary

Day 2 was marked by an engaging discussion with the CSB/Seabed 2030 coordinators for Regional Hydrographic Commissions (RHC). During their intervention, LCDR Telmo Geraledes Dias (Instituto Hidrografico, Portugal), Hans Öiås (Swedish Maritime Administration, Sweden) and Diego Billings (National Land Agency of Jamaica) highlighted their activities and engagement within the RHC to improve collaborations and advance ocean floor mapping at the regional level. The session followed a question-led format followed by Q&A around the following topics:

- Topic 1: Sharing best practices from one RHC to another that could benefit the community to address lack of resources and challenges
- Topic 2: Identifying ways for Seabed 2030 to provide better support to the regional commissions in their mission
- Topic 3: Identifying mechanisms and platforms to improve sustained collaboration within the community

During the discussion, common issues encountered in mapping were shared and the need to reinforce collaboration especially to allow acquisition within territorial boundaries. Examples from the Swedish experience helped identify best practices such as voicing the concerns and collaboratively determining a solution to advance mapping projects.

Part of the discussion raised concerns linked to mapping in shallow water using SDB. Encouraging governments to take part in mapping initiatives is also one key point highlighted from the exchanges. This implies developing strategies focused on lobbying on the importance of mapping initiatives to back Marine Spatial Planning and Blue Economy.

The panel provided feedback on existing tools that are available on the IHO-DCDB interface to contribute and review data: ensuring that instructions are humanly readable and providing the information on a more user-friendly approach would help the community to implement the guidelines (which includes some codes).

As expected from the previous day, the interest regarding Crowdsourced bathymetry was emphasized during the discussions. Though the panelists pointed at the low quality of this type of data (not at the hydrographic standard) and reckon the challenge that comes with collecting CSB data, they encouraged their acquisition and leverage the existing tools accessible on the IHO-DCDB to fasttrack the achievement of a 100% mapped ocean by 2030.

The participants were also interested in Satellite Derived Bathymetry (SDB) since it has more flexibility in terms of access and could support mapping initiatives where no other data exists.

The need for training resources and capacity building were also at the core of the discussion. Implementing cross sector training that is replicable and accessible, even for the activities that seem basic was presented as priority action. Frequent training can create new impulses in ocean mapping especially for data processing, which would motivate data contributions. Implication of government in the funding process or any other support was also encouraged in relation to the development of strategies, especially if they are made aware of the significance of bathymetric data. The AIORC team reiterated their availability to collaborate and develop tools that would support the community's initiatives. Examples include WebApp (the MACHC web app, the WIObathy web app), and sharing sessions (WIObathy data workshop).

Lastly, improving communication across sectors and stakeholders was discussed. One of the main feedbacks was for the project to increase visibility at the regional level which would help the community to understand Seabed 2030's goal and actions, and improve their participation towards a fully mapped ocean floor by 2030.

Day 3: Summary

Following a brief recap of Day 2 discussions and a summary of key takeaways, the final day of the Atlantic and Indian Oceans Regional Community Virtual Meeting began with a series of community update presentations. The primary objective of Day 3 was to gather input on how the project team could strengthen collaboration and better support stakeholders in advancing their seafloor mapping efforts. Each presentation was followed by a Q&A session, allowing participants to share insights and raise questions.

Participants emphasized the value of platforms such as the IHO Data Center for Digital Bathymetry (IHO-DCDB) for data access, noting that community-driven suggestions continue to improve the user experience. However, the pace of implementing and adopting these recommendations remains slow.

Field experiences shared by participants highlighted persistent technological challenges—particularly in processing survey data onboard research vessels. Time and personnel constraints often delay post-survey data handling, underscoring the need for enhanced onboard capabilities and streamlined workflows. There is also a need to shift from the theoretical availability of data to practical, user-friendly access, and to address data gaps stemming from limited regional capacity.

Seafloor mapping initiatives continue to face common barriers in the region, with slow data access and usage being key obstacles. A central recommendation was to adopt a more inclusive approach by partnering with institutions that understand the specific needs and operational contexts of their countries. Establishing regional coordination groups was also proposed to improve collaboration and knowledge exchange. Finally, participants emphasized the importance of targeted outreach to raise awareness of the value of seafloor mapping and to build momentum for sustained, impactful engagement.

Meeting Outcomes

Part of the community meeting focused on gathering input from the regional community to help prioritize actions related to capacity building. Specific requests are listed below and will be folded into center strategy in the coming months.

Training and Resources

- Create tutorials for using publicly available tools, data submission processes, and the various map viewers. Include case studies and real-world examples.
- Offer Webinars focused on bathymetric data processing, metadata generation, and open-source tools like GeoMapApp and MB-System.
- Increase Multilingual Resources
- Ensure meeting recordings, tools, and training resources are publicly available

Regional Capacity Building and Coordination

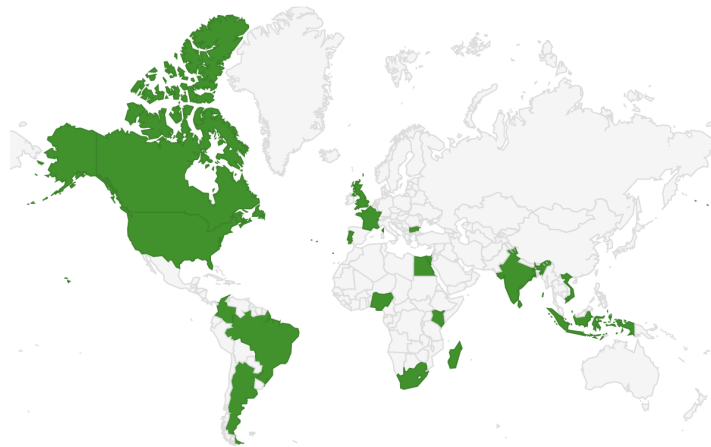
- Facilitate Partnership Building
- Connect smaller research institutions and contributors with international organizations for technical and financial support
- Develop targeted strategies for increasing engagement in underrepresented areas within the region.
- Revitalize Seabed 2030 newsletter
- Actively solicit feedback from stakeholders
- Consider further incentivizing participation and contributors with certificates, public acknowledgment.

Participation Overview

The event attracted over 100 unique participants during its three days, with representation from 45 countries throughout the region. This represents a 100% increase in the number of countries compared to our regional meeting in 2023. This growth was driven in part by strategic promotion from the Seabed 2030 communications team and active member participation in African conferences, as well as overall growth in our global movement.



2025 Meeting Participation by Country (45 countries)



2023 Meeting Participation by Country (22 countries)

Meeting Participation Summary by Day

Day of Meeting and Topic	# Attendees
Day 1: Regional Center Updates & Technical Session on Data, Tools and Resources	94
Day 2: Overviews and Panel Discussions: Regional Mapping Commissions and Initiatives	93
Day 3: Greater Ocean Mapping Community Forum	97

Meeting Resources

- [Seabed 2030: Atlantic - Indian Oceans Regional Center Office Hours](#)
- [Youtube Recordings](#)
- [Resource Library](#)