

## 15<sup>th</sup> Meeting of the Crowdsourced Bathymetry Working Group Hybrid, IHO Secretariat Monaco 4 – 6 April 2024

### Contribution to the IHO Work Programme 2024

Task 3.6.4                      Develop general guidelines on the use and collection of Crowdsourced Bathymetry (CSB)

#### High level summary:

- The main focus of the meeting were the updates to workplan items including outreach, B-12 maintenance and regional engagement.
- CSBWG15 discussed and agreed upon a new structure for the IHO CSB Initiative which will be submitted to IRCC for approval.
- It was noted that a key area where there is a need to upskill the community is the use of the opensource tools in development. As such, a workshop will be held ahead of CSBWG16 dedicated to the use of these tools.

#### Details:

The 15th meeting of the IHO Crowdsourced Bathymetry Working Group (CSBWG) was held in hybrid format from April 4 to 6, 2024, at the IHO Secretariat in Monaco. The meeting was attended by 29 in person and 53 on-line. It was Chaired by Jennifer Jencks (USA) and supported by Belen Jimenez (NZ). The IHO was represented by Secretary General Mathias Jonas, Director Luigi Sinapi and Assistant Director Sam Harper.

The meeting began with opening remarks from IHO Secretary General Mathias Jonas, who emphasized the critical role of CSB in supporting sustainability and democratizing ocean mapping. The Chair welcomed participants and highlighted key updates, including the introduction of the new "CSB 101" document, designed as an entry-level guide for stakeholders. Attendees were reminded of the commitment to annual in-person meetings supplemented by interim virtual sessions. Updates to the group's Terms of Reference (ToRs) and work plans were also noted, ensuring alignment with the IHO's broader objectives.

#### **IHO CSB Initiative Website**

The IHO Secretariat provided an update on the CSB section of the IHO website. Efforts to improve accessibility, navigation, and cross-referencing with other platforms, such as CIDCO's site, were highlighted. The website is intended to serve as an institutional hub, complementing external resources and offering users a clear overview of CSB initiatives, related projects, and tools. Participants suggested integrating the new "CSB 101" document and promotional materials into the website to enhance outreach and user engagement.

#### **Update on the IHO Data Centre for Digital Bathymetry (DCDB)**

A brief was provided on updates and ongoing enhancements to the DCDB. Data can now be accessed via an API, and a review mechanism was introduced for datasets requiring publication approval. Work on integrating CSB data into the Autogrid application, which previously supported only multibeam data, is underway. Additionally, a next-generation map viewer is under development. Attendees discussed

the importance of tracking data usage, including metrics such as downloads and user demographics, to guide decision-making. Suggestions were made to develop a dashboard to provide these insights, which would also support the outreach subgroup's efforts.

It was reported that the DCDB team is exploring collaborations with partners like Raymarine and CCOM, focusing on data-sharing mechanisms, submission guidance, and referencing schema. Efforts are also being directed toward building internal dashboards to better serve the CSB community and decision-makers. Participants emphasized the importance of user feedback to shape these initiatives effectively.

### **Workplan Items Updates**

**Maintenance of B-12.** Guillaume Morissette reported on the maintenance of IHO publication B-12, noting that the current version is outdated. He recommended forming a dedicated project team comprising experts from hydrographic offices (HOs), industry, and academia to ensure rapid updates and innovation. This team would address governance challenges and propose a more agile maintenance approach. A proposal to create this team and define a product review cycle will be submitted to the IRCC for consideration.

**Aligning CSB with the UN Decade.** Evert Flier presented options for restructuring the CSB initiative to align with the UN Decade of Ocean Science. Two options were proposed: integrating the CSBWG work plan into the initiative or creating a distinct CSB Initiative work item. The group endorsed the latter, as it would ensure participants have access to all CSBWG outputs while maintaining a clear focus. This structure will be proposed to IRCC16, with further exploration of how CSB can formally align with the UN Decade's goals.

**Addressing Policy and Regulatory Challenges.** The Chair highlighted significant data restrictions due to member states' reluctance to permit the release of CSB data from their waters. Discussions centred on strategies to address these challenges, including engaging with Seabed 2030 and developing online platforms to showcase mapping progress and national acceptance of CSB.

**Data Classification and Standards.** Updates on data classification, industry engagement, and quality assurance tools were provided. Efforts are ongoing to evaluate CSB data within the DCDB for cartographic purposes and to develop standards for describing CSB data on ECDIS systems. Participants underscored the importance of transparency and access to tools that enhance data usability and decision-making.

**Regional Engagement.** Belen Jimenez reported on strategies to support CSB coordinators in engaging regional hydrographic commissions (RHCs). Guidance documents for coordinators were updated, and efforts to raise awareness of CSB through capacity-building initiatives were outlined. The group agreed to organize a coordinators' meeting and share the outcomes to refine processes further.

**Advancing Technology and Tools.** Participants discussed potential software solutions to support HOs in adopting CSB, emphasizing open-source tools and standardized approaches. CIDCO, in collaboration with CCOM, is developing a Python toolkit for georeferencing soundings and performing advanced raytracing using sound velocity profiles. These efforts aim to lower barriers to entry and streamline the deployment of Trusted Node solutions. Work on the CSB data cycle was also reviewed, with Brian Calder presenting tools for filtering, processing, and correcting data. He advocated for using platforms like GitHub to improve workflows and ensure accessibility. A workshop on these tools will be organized alongside CSBWG16 to build members' technical capabilities.

**Communication and Outreach.** The Communications and Outreach Strategy was presented by Sarah Grasty, who emphasized the importance of clearly defining the CSB initiative's mission and outcomes.

The strategy includes developing targeted outreach materials, leveraging existing networks, and identifying infrastructure for broader dissemination. Participants highlighted the need to prioritize communication efforts to support various work items and ensure consistency in messaging.

**Recognition and Incentives.** David Millar introduced a plan to recognize and incentivize CSB contributors, which includes distributing questionnaires to gather feedback from participants and Trusted Nodes. Despite a slow initial response, outreach efforts continue, with support from organizations such as the World Ocean Council. The findings will inform strategies to enhance participation and long-term engagement.

**Seabed 2030 and Collaborative Efforts.** Updates from Seabed 2030 highlighted its role as a Trusted Node for CSB data. Progress in processing datasets and integrating metadata was shared, along with ongoing collaborations with Smart Oceans–Smart Industries (SO-SI) and the World Ocean Council. A two-page flyer targeting the shipping industry was proposed to enhance engagement and participation.

The meeting concluded with reflections on the progress made and the challenges ahead. The Chair emphasized the need to develop metrics to measure progress against work item objectives and announced plans to implement a new reporting process for intersessional work. Participants expressed gratitude for the collaborative spirit of the meeting and the dedication of the working group to advancing CSB efforts globally.

### Photo



### Upcoming meetings:

The next CSBWG meeting, CSBWG16, will be held in Wellington, New Zealand, from March 24–28, 2025, co-hosted by NIWA and LINZ