16th Meeting of the Crowdsourced Bathymetry Working Group and CSB Tools Workshop
NIWA, Wellington, New Zealand, 26 – 28 March 2025

Contribution to the IHO Work Programme 2025	
Task 3.6.4	Develop general guidelines on the use and collection of Crowdsourced Bathymetry (CSB)

High level summary (can be used for posting on social media. Please provide concise lists in bullet point format):

- CSBWG16 and its preceding CSB Tools Workshop were well attended and highly successful, with strong calls for annual workshops, regular developer sessions, and expanded training materials for installers and trusted nodes.
- The Working Group updated its Work Plan by closing completed tasks, revising others, introducing new priorities, and acknowledging delays caused mainly by limited personnel.
- A revised maintenance approach for the IHO CSB Guidance Document (B-12) was endorsed for submission to IRCC17, alongside a decision to align the CSB Initiative with the UN Ocean Decade through a dedicated task team.
- Ongoing efforts addressed national regulatory barriers, CSB use for nautical products, and strengthened engagement with Regional Hydrographic Commissions, including plans for a coordinators' workshop and updated coordinator roles.
- Software and data-cycle activities were consolidated, Trusted Node support was refocused on producing operator manuals, and longer-term initiatives continued on communications, incentives, and developing a Theory of Change for the CSB Initiative.

Details:

The 16th meeting of the IHO Crowdsourced Bathymetry Working Group was held from 26 – 28 March 2025, was co-hosted by The National Institute of Water and Atmospheric Research (NIWA) & Land Information New Zealand (LINZ) and attended by approximately 50 participants (30 in person). The working group meeting preceded by a CSB Tools Workshop (24-25 March).

CSB Tools Workshop

Members of the IHO CSBWG and experts from industry, government, academia, and nonprofit organizations met for a highly successful two-day workshop focused on CSB tools, best practices, and practical implementation, featuring technical presentations, hands-on hardware and software sessions,

live data-collection demonstrations, and a full-day developer hackathon exploring open-source solutions; participants recommended holding the workshop annually alongside CSBWG meetings with regular intersession developer sessions, expanding to stand-alone “how-to” and hackathon events, and developing supporting materials such as trusted-node and installer manuals, instructional videos, and more targeted future workshops.

CSBWG16

The CSBWG reviewed the IRCC15-approved Work Plan at CSBWG15, noting that although many tasks were completed, several remained outstanding due mainly to limited personnel. Some activities were discontinued, others revised, and new tasks introduced. The overall work plan was updated to reflect progress and changing priorities.

CSBWG16 endorsed a proposal to revise the maintenance process for the IHO CSB Guidance Document (B-12), transferring responsibility for data and metadata requirements to DCDB while retaining Member-State-approved elements under Resolution 2/2007 and maintaining them through an IHO GitHub repository. The group will seek IRCC17 approval. The Working Group also agreed to pursue alignment of the CSB Initiative with the UN Ocean Decade and established a task team to prepare a proposal.

To better understand national policy and regulatory barriers to CSB adoption, outreach letters were sent to several national hydrographers, with responses received so far from Norway and Kiribati. Persistent challenges include coastal State concerns over unauthorized surveys and perceived liability when using CSB. A briefing package addressing these issues was finalized and shared for broader use.

Progress continued on evaluating CSB data for nautical products, despite the absence of a current lead for this work area. Contributions included proposed revisions to S-44 Annex A, testing of DCDB access services, development of Canadian ingestion tools, and U.S. NOAA work on automated pipelines for CSB extraction, processing, quality assessment, and charting support.

Engagement with Regional Hydrographic Commissions remained strong through joint CSB and Seabed 2030 presentations, with agreement to adopt the title GEBCO/SB2030/CSB Coordinators and update guidance accordingly. Plans are underway to hold a coordinators’ workshop before the next intersession, and the possibility of establishing similar roles within IOC regional meetings is being explored.

Due to reduced industry participation, work on software tool support was merged into the broader effort to clarify the CSB data cycle and tools, which completed recommendations on DCDB data access and continued work on workflows, OpenVBI development, bias correction, uncertainty estimation, and future architecture reviews. The Trusted Nodes activity was refocused on its original purpose, with preparation of an operator and installer manual identified as a high priority.

Several strategic activities remain under development, including a communications and outreach plan, a recognition and incentive strategy now under new leadership, and further refinement of the CSB Initiative through adoption of a Theory of Change framework. The IHO Secretariat has been tasked with preparing a draft model for discussion at the next intersession meeting.

Photo

Upcoming meetings:

The next CSBWG meeting, CSBWG17, will be held at the Centre for Coastal and Ocean Mapping at the University of New Hampshire, USA, between the 2 – 6 March 2026.