

## Report of the Crowdsourced Bathymetry Working Group

**Submitted by:** Chair

**Related Documents:** IHO CSBWG6 report, IHO CSBWG7 report, Industry Workshop report, IHO CSB Guidance Document (B-12) Edition 2.0.1

**Related Projects:** none

**Chair:** Jennifer Jencks, USA

**Vice-Chair:** Serge Gosselin, Canada

**Secretary:** David Wyatt, IHO

**Member States:** Canada, Denmark, Finland, France, Germany, India, Italy, New Zealand, Nigeria, Norway, Philippines, Portugal, UK, USA

**Expert Contributors:** Caris, Da Gamma Maritime Ltd, Dongseo University, Farsounder, GMATEK, Olex AS, Sea-ID, PYA, TeamSurv, GEBCO, ONE Data Technology Co, SevenCs/Chartworld

*See Annex A for full details*

### 1. Meetings Held During Reporting Period

The working group held its 6<sup>th</sup> meeting at the offices of the National Oceanic and Atmospheric Administration (NOAA) - National Centers for Environmental Information (NCEI) in Boulder, Colorado, USA from 19 to 21 June 2018. The Chair of the CSBWG, Ms Jennifer Jencks (USA, Director of the DCDB), chaired the meeting which was attended by representatives from four Member States (Canada, Norway, UK and USA), and observers and expert contributors from the World Ocean Council, the NF-GEBCO Seabed 2030 Project, ONE Data Technology Co, Dongseo University and Farsounder INC. Denmark, GMATEK, Sea-ID, ChartWorld/SevenCs and TeamSurv participated remotely for various agenda items and subsequent discussions. Assistant Director David Wyatt (Secretary) represented the IHO Secretariat.

The working group held its 7<sup>th</sup> meeting in Québec City, Canada from 12 to 14 February 2019. The Chair of the CSBWG, Ms Jennifer Jencks (USA, Director of the DCDB), chaired the meeting which was attended by representatives from eight Member States (Canada, Denmark, India, Italy, New Zealand, Norway, UK and USA), and observers and expert contributors from the ONE Data Technology Co, Dongseo University, Farsounder INC, Da Gamma Maritime Ltd, GMATEK Inc, and Fugro. Assistant Director David Wyatt (Secretary) represented the IHO Secretariat.

Prior to the meeting, an Industry Workshop was conducted with representatives from CIDCO, Da Gama Maritime, EGS Survey (representing ICPC), ECC, ESRI, FarSounder, Fugro, GMATEK, Hypack, Olex, Secunda, SevenCs/ChartWorld and Teledyne CARIS. The main goal of the Workshop was to showcase a variety of current industry participants and

discuss the potential for future collaborations to advance the IHO Crowdsourced Bathymetry Initiative.

## **2. Work Programme**

### *CSBWG6*

The CSBWG briefly reviewed the final draft version of the B-12 Guidelines which was presented to the IRCC at its 10<sup>th</sup> meeting in Goa, India, in June 2018; this was followed by consideration by the IHO Council at its 2<sup>nd</sup> meeting in October and submitted for adoption by the IHO Member States towards the end of 2018.

The participants received presentations updating activities on a number of ongoing projects related to CSB.

The participants spent time considering the future tasks which had been approved by IRCC10 as a result of the adoption of the revisions to the ToRs of the CSBWG. In particular, the discussions focused on Member States' data gathering policies and future outreach strategies, for which five headline topics (need, how, what, incentives and benefits) were identified to increase contributions and participation, these would be further developed at the next meeting.

### *CSB Industry Workshop*

The invited industry representatives at the Workshop were given an overview of the IHO CSB initiative, which was followed by short presentations on current industry partner projects, examples of CSB data usage by hydrographic offices and habitat mapping projects and technology perspectives. AORA/ASMIWG, Sea-ID, NF-GEBCO Seabed 2030 and James Cook University gave presentations by remote link. There was much discussion among Workshop participants on how to expand the initiative into the various maritime sectors, what methodologies were appropriate to incentivise data gathering activities, how the data could be made available and what recognition strategies were desirable.

### *CSBWG7*

At its 7<sup>th</sup> meeting, the CSBWG briefly reviewed the final draft version of the B-12 Guidelines which was presented to Member States for adoption via IHO Circular Letter 11/2019. A full explanation was provided on the background to the generation of Edition 2.0.0 within such a short timeframe. The WG decided to start considering ways of obtaining user community feedback and comments at its next meeting, which will allow some operational experience to be gained with the current version.

The participants also considered the outreach and recognition strategies, which should be developed. The group decided to focus on Geophysical, the Research vessel, Cruise Liner, Submarine Cable, and Recreational Leisure sectors, including the Super Yacht community. It was agreed that representation at a number of events and meetings was essential to raise awareness and to progress the five headline topics (need, how, what, incentives and benefits) to increase contributions and participation. It was agreed that leading organizations and companies within each sector could be identified and approached to act as CSB ambassadors. It was proposed that the first three CSB ambassadors should be Carnival and MacGregor on behalf of the cruise industry, Fugro on behalf of the marine survey industry and PGS on behalf of the seismic survey industry. Additionally, it was agreed that closer liaison needed to be established with other IHO bodies as well as the Seabed 2030 project, in particular the Chairs of the Data Quality Working Group (DQWG) and Marine Spatial Data Infrastructure Working Group (MSDIWG) should be invited to future meetings. It was suggested that the Director and Deputy Director of the Seabed 2030 project should be invited to participate and that close harmonization of the outreach activities of both groups should be a priority.

### **3. Progress on IRCC Action Items**

Decision 20: to endorse the CSB Guidance Document.

Action 16: Chair to submit the CSB Guidance Document to the Council for endorsement and subsequent approval by Member States (deadline: C-2).

B-12 Edition 1.0.0 submitted to C-2 and subsequent changes required by C-2 incorporated into Edition 2.0.1 for approval by IHO Member States under IHO CL 11/2019 dated 25 January 2019. 35 Member States approved the adoption of B-12 out of 38 replies. A follow-up IHO CL is being prepared with the full details, including responses to the comments provided.

### **4. Problems Encountered**

There continues to be a need to overcome a degree of scepticism on the concept within parts of the IHO community and some sections of the marine domain where an overly cautious focus on potential, although untested, legal issues and concerns on commercial exploitation of data is observed. Increased awareness and information as well as stakeholder engagement/involvement should all help to overcome these reservations.

There is a growing concern over the apparent lack of dedicated resources available within national HOs to process data available via the DCDB. This is an issue that will need to be addressed for the full benefits of CSB to be realized and will require for HO's to consider engaging efforts and resources, including the development of automated processing, to integrate CSB data into their routines.

### **5. Any Other Items of Note**

The continued importance of liaison with other IHO bodies, as well as appropriate engagement with industry to progress the work items, was identified as a key enabler for the project. It was also noted the significant progress achieved.

There is a need to showcase various use cases of CSB data to indicate the benefits and how MS can utilize the 'free' data for their own national uses.

### **6. Justification and Impacts**

N/A

### **7. Actions Required of IRCC**

The IRCC is invited to:

- a. Note the contents of this report;
- b. Encourage IHO Member States to release datasets or subsets into the public domain via the IHO DCDB;
- c. Request IHO Member States state their policy on data gathering restrictions within their maritime areas of jurisdiction, as requested in IHO CL 11/2019, to enable CSB activities to be undertaken;
- d. Request IHO Member States to support the CSB initiative with positive actions, such as requiring all research vessels collect bathymetric data for late uploading, when on passage or when it does not interfere with other research activities;

- e. Request the IHO to support a scaled trial of CSB data collection as a follow on to earlier pilot programmes.
- f. Reappoint the WG to continue its work under the proposed revised ToRs; and
- g. Take what other action is deemed necessary.

Annexes:

- A. List of members.

**IHO Crowd-Sourced Bathymetry Working Group (CSBWG)  
List of Members**

<b>Member State</b>	<b>Organization</b>	<b>Name</b>	<b>E-mail (correspondence)</b>
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