



# IHO Crowdsourced Bathymetry Working Group

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**Joint Meeting of TSCOM/SCRUM**  
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# IHO CSB Working Group Task

The CSBWG is tasked by the IHO IRCC to develop an IHO publication on guidance for trusted crowdsourced bathymetry (CSB) data.

This document will *provide guidelines on the collection and assessment of CSB data* for inclusion in the global bathymetric data set which is maintained in the IHO Data Centre for Digital Bathymetry (DCDB).



# Progress on IRCC Action Item

- A *first draft* of the Guidance Document was completed and made available via the IHO website to the public in 2017.
- The *final draft* version of the B-12 Guidelines were made available via the IHO website prior to IRCC10.
- Following the June endorsement of the IRCC, B-12 was endorsed by the IHO Council-2 and will be *published* on the IHO website



Guidance on Crowdsourced  
Bathymetry

# CSB Working Group 5<sup>th</sup> Meeting

*Hosted by the Secretariat of the International Hydrographic Organization, Monaco, on 5 and 6 December 2017*

Attended by:

- Vice-Chair of CSBWG, Mr Serge Gosselin (Canada) who chaired the meeting
- Representatives from nine Member States
  - Canada, Denmark, France, Italy, Nigeria, Norway, Portugal, UK and USA
- Observers and expert contributors from the Baltic and International Maritime Council (BIMCO) and Sea-ID
- Secretary General Dr Mathias Jonas, Director Mustafa Iptes, and Assistant Director David Wyatt represented the IHO Secretariat



# CSB Working Group 5<sup>th</sup> Meeting

- Draft chapters were further developed, taking into account the feedback received in response to *IHO Circular Letter 49/2017*.
- Potential future tasks were considered which could be addressed by the WG in response to discussions undertaken by IHO Member States at Assembly-1 and Council-1
- Initial proposed draft revisions to the ToRs were developed for further consideration.

Chapter 1: Data Contribution

Chapter 2: Data Collection

Chapter 3: Data & Metadata

Chapter 4: Uncertainty

Chapter 5: Additional Considerations

# IHO Inter Regional Coordination Committee (IRCC)

## *Changes to ToRs*

- Maintain the IHO publication *B-12 – IHO Guidelines on Crowdsourced Bathymetry*.
- Investigate and highlight ways to *increase data contributions and incentives* on how and why mariners should become involved.
- *Identify potential uses of CSB* by HOs and investigate how it can be portrayed, with examples and useful land equivalents;
- Provide guidance on data quality and standards for CSB in liaison with appropriate IHO Working Groups;

# IHO Inter Regional Coordination Committee (IRCC)

## *Changes to ToRs*

- Liaise with other IHO bodies involved with, and potential users of, CSB data, such as GGC, MSDIWG, DQWG and HSPT;
- Monitor Member States and Regional progress regarding development of best practices and CSB initiatives; and
- Liaise with the IHO Data Centre for Digital Bathymetry (DCDB) as it continues to develop technology to collect and distribute CSB to the public.



# CSB Working Group 6<sup>th</sup> Meeting

*National Oceanographic and Atmospheric Administration (NOAA) – National Centers for Environmental Information (NCEI), Boulder, Colorado, US 19-21 June 2018*

## Attended by:

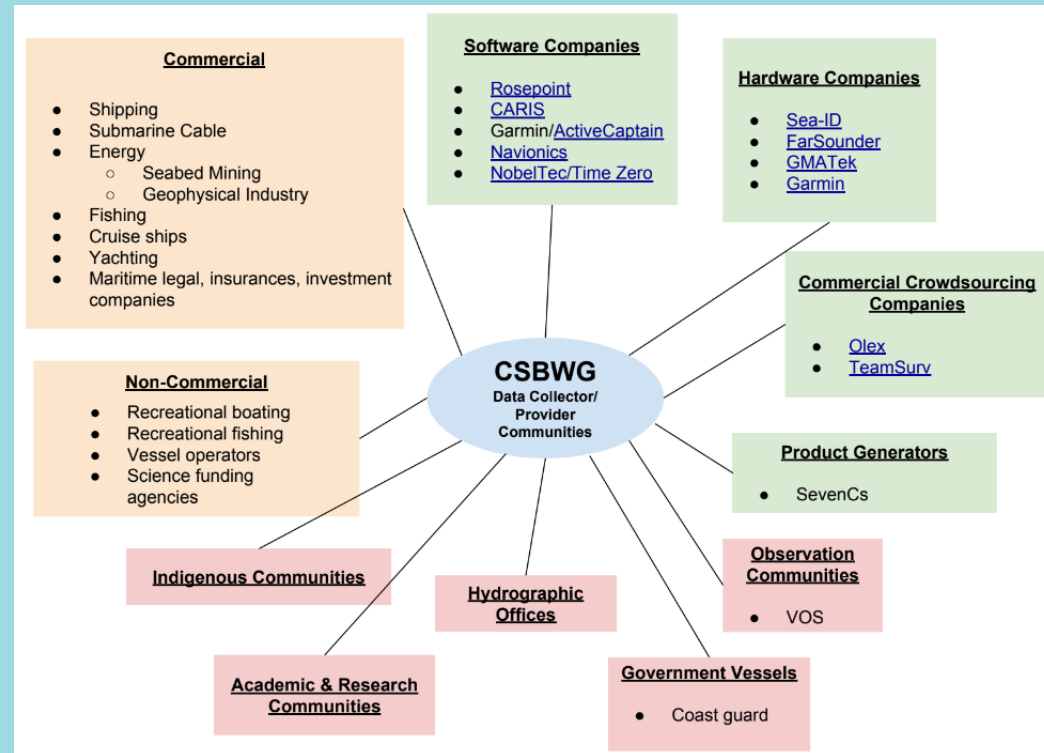
- Chair, Jennifer Jencks (USA, Director of the DCDB) & Vice-Chair Serge Gosselin (Canada)
- Representatives from four Member States
  - Canada, Norway, UK and USA
- Observers and expert contributors from World Ocean Council (WOC), the NF-GEBCO Seabed 2030 Project, ONE Data Technology Co, Dongseo University and Farsounder Inc
- Remote participants included: Denmark, GMATEK, Sea-ID, ChartWorld/SevenCs, and TeamSurv
- Assistant Director David Wyatt represented the IHO Secretariat.





# CSB Working Group 6<sup>th</sup> Meeting

- Briefly reviewed the final draft version of the B-12 Guidelines which was presented at the IRCC 10 meeting
- Updates given on a number of ongoing CSB-related activities/projects
- *Exercise to map the key contributor communities and potential users.*
- Discussions focused on future outreach strategies, for which five headline topics (***need, how, what, incentives and benefits***) were identified to increase contributions and participation



# IHO Council 2

- The IHO Council 2 (Oct 9-11, 2018) endorsed B-12 Edition 1.0.0 (IHO Guidance on Crowdsourced Bathymetry) in accordance with Resolution 2/2007.
- Edition 1.0.0 will be published on the IHO website but will not be forwarded to Member States for adoption.
- Edition 1.0.0 will remain a development documentation, updated by the CSBWG as required, until the CSBWG considers it appropriate to publish Edition 2.0.0
- A number of coastal states expressed concerns over the gathering of data within their waters of national jurisdiction, particularly the control of the data.
- There was a strong desire expressed that all data should pass through a trusted node and there was some desire for the data not to be placed in the IHO DCDB.

# CSB Working Group 7<sup>th</sup> Meeting

Canadian Hydrographic Service – Hôtel Château Laurier, Quebec City, CA 12-14 February 2019

## Planned Activities:

- Propose amendments to B-12
- Increase data contribution and incentives on how and why to become involved;
- Identify potential uses of CSB by HOs and how it can be portrayed
- Provide guidance on data quality and standards for CSB for potential future Bathymetric Information Overlay (BIO) to be displayed on an ECDIS or ECS;
- Discuss strategy on liaising with other IHO bodies and partners involved with and potential development and uses of CSB
- **Host *Industry Day* with software and hardware companies to encourage their participation in CSB initiative.**

# Concerns

- There continues to be a need to overcome a degree of skepticism on the CSB concept amid the maritime community and hydrographic organizations
  - Especially an overly cautious focus on potential, although untested, legal issues.
- Potential duplication of CSBWG efforts with Seabed 2030
  - We need to be cognizant of a potential impact on the maritime community (ie: multiple initiative fatigue)
- Data availability, accessibility, and usage
- Technology developments
  - As data volumes grow, how to handle processing, storage, visualization and accessibility
- Funding



# Solutions

- Work with the IHO to gain an increase in awareness and information of the legal requirements of different coastal states and their varying interpretation of UNCLOS with respect to CSB
- Work closely with the SB2030 Project to define roles and responsibilities and expectations of each initiative
- Continue to grow the IHO CSB Initiative. As it matures and data collection activity increases:
  - Data usage success & examples increase
  - Maritime industry engagement and enthusiasm increase
  - National acceptance will likely increase



“If we got 1% of all seagoing vessels logging data, and on average they spent half their time at sea, then that’s about 5 billion data points a day.

- Tim Thornton, TeamSurv