Crowd-Sourced Bathymetry Guidance Document – Draft Outline

Submitted by IHB

SUMMARY

Executive Summary: This document provides outline details, submitted by the IHB, for the suggested contents of an IHO CSB Guidance Document.

Action to be taken: 7

Related documents: IRCC7 Report Paragraph 11, IRCC7 Report Annex D Decision 38, IRCC7-11A CSBWG ToRs

1. Introduction

This section should provide some background and history, including the idea that passage sounding and the work undertaken by the early explorers was in reality CSB data gathering as it was not systematic in reality.

There should be an explanation on why the document is needed and what current CSB actually is understood to be and why it is important and how involvement and contribution will have an impact and how it will make a difference. The scope of CSBGD should be articulated, particularly highlighting what is not intended to be or cover.

The anticipated target audience should be identified, although also acknowledging the potential wider uses to which the guidance could be put. It is suggested maximum use of diagrams and graphics is made to avoid lengthy complex explanations.

2. Basic systems and sensors

It should not be assumed that professional mariners, the people it is hoped will gather the data, have any understanding or knowledge/training in the sensors or systems required to gather the data.

There should be a basic description of how an echo sounder works and how the different environments impact on the data quality (chemical and physical conditions). This same approach should be repeated for positional systems. Diagrams should be used to simplify the explanations and thus avoid complex verbal passages.

There should be an explanation of an integrated system – echo sounder, positional system and data logger – and the data follow within the system.

There should be an explanation of what off-sets are and how they can be determined/measured. It is import to demonstrate the impact they have on the final data and

its quality. The link between off-sets and metadata needs to be clearly articulated and therefore why it is important to reference the measurements in the metadata. Give examples of metadata showing the relation with the off-sets and the system as well as any corrections, which may need to be inserted and why.

3. Metadata

There should be an explanation of what metadata is and why it is necessary.

The minimum metadata requirement should be detailed and why these particular items are significant, there should also be details of useful additional data (weather, sea state, etc.), which can be included and why this information is helpful and the impact it will have on improving the final data quality.

There should be an explain of the relationship between time/date with environmental facts such as tide and SV, weather and sea state and how they impact on data quality and the ability of Hydrographic Offices to make an informed assessment of the data quality and comparison with other data sets.

4. Uncertainty

There should be a simple explanation of what data uncertainty is and how single point, multi-point-single observer and CSB data can be assessed. The explanation should articulate why it is necessary to determine uncertainty and how it affects the uses to which the data can be out.

An explanation table giving various levels of data uncertainty with potential data end uses would help to clarify this to the data gathers.

5. Data formats

There should be an explanation of the different data formats used by various sensors and systems. The suggested appropriate and preferred formats should be detailed and explained why these particular formats have been chosen.

So as not to put some participants off, there should be details of what process will take place if data is submitted in a different format form those indentified above.

6. DCDB development

There should be an explanation of the DCDB - its history, where it is currently located and why, who runs it and who owns the data stored in it.

There should be a simple explanation of the preferred up-load protocols (trusted node, single observer), how data mining/viewing can be undertaken, what download protocols are in place.

There should be a description of data flow (processing/validation/quality assessment of data) - collection→trusted node→DCDB→user. This will explain what happens to all collected data, regardless of source, and show to individuals the whole process and when they can expect to be able to see their data in the public domain and available from the database

viewing.

7. The CSBWG are requested to note the information provided and take as deemed appropriate.