Discussion Points and Suggestions from CSBWG6

Topic 1: Maintenance of IHO Publication B-12

- Future editions should not be a rewrite of the document, but serve as an opportunity to:
  - update sections
  - add additional new information
  - potentially remove sections which are no longer required.

- Audience:
  - More practical guidance targeted at particular communities could be included.
  - Need to define the target audience and how it is anticipated B-12 may be used.

- More clarity required on what are the roles, capabilities and services of a Trusted Node
  - TeamSurv suggested the document could include input from Trusted Nodes directed to their contributors and how they can engage with a particular Trusted Node.

- Data Use
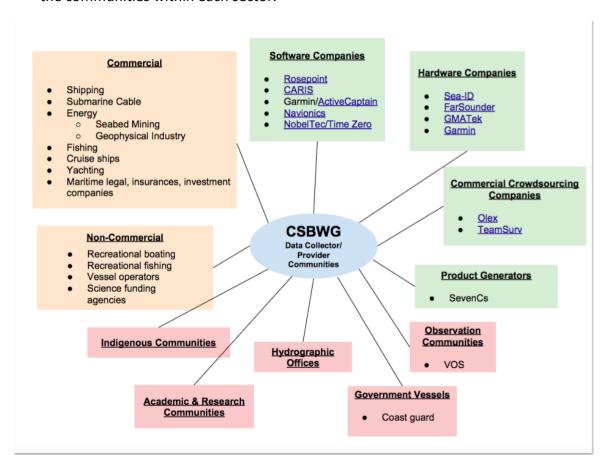 - DEN asked if there should be guidance for HOs on how to use the data.
    - NOR noted that individual HOs have differing policies, although it was felt it might be too early to develop such guidance, it may be more appropriate to highlight different approaches to progress towards a more harmonized approach.
  - An additional section could contain use-case information, which could be added to as new methods and approaches appear.

- ePublication
  - The GEBCO Cookbook might provide an example of how to maintain and manage the B-12 as a web based ePublication as the rate of development and change in technology made a traditional document less appropriate.
  - CCOM-JHC volunteered to develop a web based version of B-12, this could include a link to a live area where user cases and best practices were highlighted.
  - Suggested that the Chair approach IRCC for approval for allow B-12 to be a living document similar to B-11.

- WOC noted the need for a comprehensive Outreach strategy, as the document will not gain a wide readership alone.

Topic 2: Developing an Outreach Strategy

- The WG "mind mapped" to identify the various sectors engaged with CSB and some of the communities within each sector.

Commercial
- Shipping
- Submarine Cable
- Energy
  - Seabed Mining
  - Geophysical Industry
- Fishing
- Cruise ships
- Yachting
- Maritime legal, insurances, investment companies

Software Companies
- Rosepoint
- CARIS
- Garmin/ActiveCaptain
- Navionics
- NobelTec/Time Zero

Hardware Companies
- Sea-ID
- FarSounder
- GMATek
- Garmin

Non-Commercial
- Recreational boating
- Recreational fishing
- Vessel operators
- Science funding agencies

CSBWG
Data Collector/ Provider Communities

Commercial Crowdsourcing Companies
- Olex
- TeamSurv

Product Generators
- SevenCs

Indigenous Communities

Hydrographic Offices

Observation Communities
- VOS

Academic & Research Communities

Government Vessels
- Coast guard

- WOC noted the need to separate the different sectors and develop appropriate strategies and tools for each.

- Identified the five high-level headline topics to be communicated and drafted text to be further developed as the messages to be communicated: ***Need, What, How, Benefits, Incentives.***

- **What is the NEED/Why are we doing this**
  - Understanding our oceans better is essential for development and the benefit of Humanity…because
    i. the oceans deliver to us 50-60% of our oxygen supply
    ii. food supply
  - Lack of knowledge – we need you to contribute
  - We know more about the moon and Mars…
  - Your data will help create a global common good for the benefit of mankind
  - Survival of mankind…growing population… (how do we make the ocean more relevant
    to those that only think of the land?)
  - …for the improvement of the seafloor model…the base layer is the knowledge of ocean depths and shape

- **WHAT do we want you to do.**
  - Collect data (collect good! data)
  - Share your data (make your data publicly available)
  - Evangelize (encourage/promote others)
  - Be curious. Talk to us. Engage.

- **HOW we want you to do it.**
  - Read B-12
  - Join or become a Trusted Node
  - Turn on collection in your software
  - Ask your software and hardware provider if they have data collection capability

- **Global BENEFITS:**
  - The seafloor base layer will support many other disciplines.
    i. Better bathy leads to better fish farm locations, better tsunami modellers, etc, - improves overall ocean system knowledge
  - Saving lives, property and environment (eg: Sri Lanka 2004)
  - Global common good
  - Fulfilment of SDG14
  - Safety of navigation
  - Better data

- **INCENTIVES to the data provider:**
  - Better data (eg: I know where to go fishing this weekend)
  - Safety of navigation
  - Cost savings

- ○ Market development opportunities
- ○ Acknowledgement strategy (eg: Good corporate citizenship award)

- Seabed 2030 suggested developing a single sheet with the main messages, tools, FAQs and measuring results and successes.
- ***Seabed 2030 agreed to take these topics and text and develop community-specific messaging/talking points.***
  - ○ ***Action for CSBWG7?***
- The participation Seabed 2030 should be used to leverage their organizational strategies.

- CCOM-JHC suggested translation of the B-12 for the data collector was a major element of the communication strategy and that the equipment manufacturers could be leveraged to articulate the message through their customer base and communication methods.

- WOC highlighted the need for SMART leverage and questioned whether the correct companies and business communities are already engaged and suggested methods to identify the gaps in communication and recipients.
  - ○ FarSounder acknowledged industry is likely to be best placed to engage with the mariner community.

- Need for better coordination between the organizations through an inventory of potential contributors to ensure multiple inquiries are not directed.
- It was identified there needs to be closer engagement with other relevant IHO WGs (DQWG, NIPWG, NCWG, MSDIWG, HSPT– see IHO website for the WGs ToRs and mandate) and the Open Geospatial Consortium (OGC) Marine Domain WG.

Topic 3: Identify Potential Uses of CSB

Outcomes from the CHS use-case
- CAN noted a number of charting issues which had been highlighted by the CSB data when compared to the limited charted data.
  - Vice-Chair highlighted the importance of checking all data received for safety of navigation issues and provide the information to the maritime community as protection against future litigation.
  - TeamSurv highlighted the importance of filtering out the poor quality or anomalous data to assist in the data management load, currently the process is undertaken using HO official data as the comparator.
  - CAN noted that the area and use of the data would dictate the effort required and the assessment on the size of variation would become significant.

- It was recognized that HOs have finite resources and have limited ability to process and utilize the CSB data; ***it was suggested that automated processes could be better used to assist in the data management processes.***

- It was suggested an S-100 base Product Specification (PS) could be developed
  - It was highlighted that this would be creating a standard and therefore IHO resolution 2/2007, as amended, would apply. This would take the WG into a standards area required to follow strict and time consuming procedures.
  - IHO recommended a less formal bathymetric information overlay to which contributors could add their own data as well as any other data they wished
  - Discussions with ChartWorld/SevenCs had indicated that it could be possible to inbed a global tidal mode and a contouring algorithm.
    - This would effectively generate 'instant bathymetry' for the contributor.
    - ChartWorld/SevenCs had indicated they could make the resources available under an IHO or Seabed 2030 contract to undertake the development and deliver the product.

- It was noted that CARIS does not read GeoJSON format data at present;
  - ***Chair requested all to ask CARIS to develop the ability to read this format***.

HO perspectives
- DEN provided a perspective from the HO, noted that while old data and data of unknown source is in use, modern CSB has not been included.
  - Recommends a best practice guidance for HOs would be of benefit.
- NOR highlighted the on-going scepticism of HOs towards CSB, which had a negative impact on encouraging contributions.

White Paper
- It was suggested a white paper be developed to highlight use cases from multiple HOs, detailing their individual approach to using CSB
  - Document multiple use cases for publishing on the IHODCDB/CSB web page to provide examples and experiences to HOs and to highlight the breadth of current uses of CSB data to potential contributors
  - Action Chair/All Recommended developing a use case document, which highlights what different approaches are being taken and development of a less formal overlay.
- DEN suggested AHC could develop a pilot project from the user case perspective.