

Welcome remarks on behalf of the IHO Secretariat

On behalf of the Secretary-General, Dr Mathias Jonas, who apologies for not being here and being at the Our Oceans Conference in Norway, and the IHO Secretariat, welcome to Monaco and the IHO Secretariat. It is good to see a strong turnout, 20 participants with 8 Member States and 7 different Industry partners represented; I thank those of you who have made the long journey here.

No comments or criticism were received or made at the recent 3rd meeting of the IHO Council with respect to B-12, CSB, GEBCO Project or the Seabed 2030 initiative.

The positive list of coastal states has been published on the IHO website, the Secretariat is still considering the merits of both the positive list and a negative list. In the current climate and taking political and psychological considerations into account, it is still felt better to remain with the positive list, probably until a majority of IHO Member States have indicated their positive support, then it may be appropriate to highlight the coastal states who are not supportive and who are in a minority. At the IHO Council meeting, the Hydrographer of Canada confirmed that a positive response to Annex B would be provided before the end of the month. Discussions remain ongoing with Australia and other coastal states.

Mr Sasakawa, Chair of the Nippon Foundation, announced yesterday at the Vision to Action event in London that the Nippon Foundation intends to increase its sponsorship of ocean data gather in two separate initiatives:

The World Ocean floor in some remote places is so poorly mapped that a ship can travel through areas the equivalent of a medium-sized country without passing over any previously collected depth soundings. The NF refers to these areas as the “Ocean Frontiers”. These areas are not typically transited by marine traffic and by the year 2030, they will remain unmapped if Seabed 2030 does not actively take measures. This lack of basic knowledge about the seafloor is a challenge for achieving the United Nation’s Sustainable Development Goal (SDG) 14, “conserve and sustainably use the oceans, seas and marine resources for sustainable development,” for undertaking scientific research, and for acquiring a fundamental understanding of the functioning of our ocean and planet. Nowhere will the challenge to achieve the goal of complete mapping of the ocean seafloor by 2030 be greater than in these remote “Ocean Frontiers.”

The NF proposes that the Extending the Mapping of Ocean Frontiers initiative, within the Nippon Foundation – GEBCO – Seabed 2030 project, carries out the following:

1. Fund the addition of dedicated mapping days onto already scheduled and funded scientific expeditions in unmapped areas of the World Ocean, specifically if they target the Ocean Frontiers;
2. Fund the creation and management of a pool of experienced multibeam operators that can assist expeditions that lack the technical capacity for multibeam data acquisition and ensure that data are collected at all the times during an expedition, including along transits. (This concept has already been successfully proven with the Deep Five and Ryder 2019 Expeditions) and more opportunities already exist.

Secondly they propose that Seabed 2030 fund the purchase of data loggers; and the Nippon Foundation-University of New Hampshire Ocean Mapping Programme alumni scholars, with suitable technical assistance, arrange the installation on vessels and the local management. Overall program management, operation and maintenance will be provided.

It is proposed they will start with five regions, 20 countries and five vessels in each, a total of 100 vessels worldwide. They will not start the 100 simultaneously but will get started in several of the countries with strong alumni scholars and the best support. Then they will scale up, they feel they can start quickly if they dedicate human resource it.

It is recognised that it does not have to be limited to alumni countries but alumni represent many countries where a modest amount of effort can raise the profile of seabed mapping significantly. With more resources they feel they can scale the programme up to a global scale. A solid management team can handle many more than 100 vessels without major expansion. Costs per vessel reduce significantly with scale. They envisage 1000 vessels across 50 countries by the mid-term of Seabed 2030.

The NF is proposing to underwrite this project in the region of \$3 to \$5 millions per year under the 'Nations for Bathymetry' banner.

In emails the Chair of the CSBWG highlighted that the CSBWG is talking with the UKHO and the Hydro SAN to stand up a GBR-type pilot project in remote island areas for which the UKHO has charting responsibility and around SA. Both HO's have expressed great interest in partnering. She also noted that UNH/CCOM-JHC have purchased and tested a number of loggers (unit price much less than \$1000 each) and will be reporting the results to the working group during the meeting. She noted that Brian Calder will likely be speaking about this at the event in London. She also highlighted that she had presented an almost identical proposal to UNH last month - to utilize the alumni to, again, serve as the "Rob Beaman" in their regions.

She did highlight the continued challenge of countries NOT granting permission for CSB to be collected in their waters and made available. Noting that Japan, Australia, UK or Canada were not on the positive list at the time. She explained that this meant that any data that comes in to the DCDB or Seabed 2030 that falls within the EEZ of a country NOT on the positive list cannot be used. She noted this was an issue of which the planners needed to be aware in conversations at the London event. She commented that unless this obstacle is overcome, CSB will not be much of a contribution.

The Secretary-General took the opportunity to emphasize that CSB was an original IHO project and there are women and men who have done the ground work for it and remain the driving force behind the initiative. He highlighted that NF support for IHO's CSB campaign is most welcome.

The Secretary-General wished to highlight three other aspects:

1. The Secretariat was visited by a manager of European Space Agency (ESA) who are looking for applications for satellite data of the most modern generation (Sentinel). ESA provides global coverage (including the poles) in 10 m resolution, updated every 5 days as a processed combination of radar and optical measures for free. He suggested the IHO (CSBWG) could identify suitable areas for satellite bathymetry on a global scale, ask for consent of the Coastal States via the IHO network and task the two companies capable (Argans (France/UK) and eomap (Germany)) to process the data. It is felt that 100 m resolution would be achievable.
2. Each ECDIS system records position, date and carriage required echo sounder data as a default for a minimum of 24 hours. It will be proposed that the ECDIS manufacturers, at the CIRM Conference in Malta in April 2020, implement a simple function for exporting this data - "press a button for the greater good". It is suggested they could be awarded with a label "Supports Seabed2030" and donate an award for vessels/companies who are most active.

3. Finally he notes that practically all SOLAS vessels are required to carry voyage data recorders. Advanced shipping companies read VDR content remotely and store the data ashore for investigation and statistics. Carnival Cruise line has offered their full database in Hamburg of their VDR data gathered over years for more than hundred cruise ships. He noted that the Director DCDB and her staff managed the technical interface and that data transfer to Boulder for injection is "ready to go".

The ABLOS BM identified a clear outcome from the recent 10th ABLOS Conference held here earlier this month, that there was a need to investigate the legal status of CSB in relation to UNCLOS and whether it is correct to define it as hydrography and whether it impacts on the right of innocent passage. Two lawyers and an academic volunteered to produce a legal discussion paper for publication in journals to investigate the issues. In addition a Division of the UN GGIM has requested more clarity in light of the citizen science view of the activity.

Ladies and gentlemen, a great deal is happening in the CSB world, there are many initiative and programmes all working towards achieving a full picture of the seafloor and contributing to the United Nation's Sustainable Development Goal (SDG) 14 and the UN Decade for Ocean Science for Sustainable Development, neither of which will be achievable without the fundamental bathymetric dataset, which underpins these initiatives and goals. Hydrography and bathymetry are key to the measuring of all the 'physics of the oceans', however without the base dataset this will not be achieved, we need ways, ideas and methods to increase the 'bathymetric philanthropy' to complete the full picture of the ocean floor.

There is much work to be done, I am sure under the guidance and direction of your most able and experienced vice-chair, you will make significant progress on these topics.

To you Mr Vice-Chair and to all participants I wish an enjoyable stay in Monaco and a successful and fruitful meeting.