

## IHO Secretariat comments and perspective (Secretary-General and responsible Assistant Director)

No adverse 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. However it is clear that there remains a significant misunderstanding on the goal of Seabed 2030 and the dataflow processes, which suggests the briefings are not clear, the wrong people are being briefed or back-briefing is being confused; a review of the message and its communication is recommended.

In response to the questionnaire in Annex B of the IHO CI 11/2019, 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. Discussions remain ongoing with a number of coastal states, particularly in the light of the widespread support highlighted at the recent Our Oceans conference in Norway.

In light of the announcement at the Vision to Action event in London, 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 has reported the results to the working group during the recent meeting. Reflecting on the NF Chairman announcement, she has 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 has also 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 France were not on the positive list at the time. She explained that this meant that any raw 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 made publically available. She noted this was an issue of which the Seabed 2030 planners needed to be aware and current highly sensitive political nature of data gathering. She commented that unless this obstacle is overcome, data gathering within the 200m isobath and EEZ will be fragmented and potentially incomplete.

The Secretary-General wished to highlight three 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 or GEBCO could identify suitable areas for satellite bathymetry on a global scale, ask for consent of the Coastal States via the IHO/IOC 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. It is noted that SevenCs/ChartWorld are ready to implement such a functionality.

3. Finally he noted 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, via Macgregor, 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 10<sup>th</sup> ABLOS Conference held in October in Monaco, 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 US 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, UNDOALOS, through the GGIM has requested more clarity in light of the citizen science view of the activity.

After lengthy discussions between the IHO and ISA Secretariats, Dr Jihyun Lee, Director of ISA, informed the IHO S-G formally that numerous deep sea exploration contractors will support Seabed 2030 with data of their deep sea claims in the Clarion Clipperton zone. Dr Lee acted after the IHO S-G visit to Jamaica. They are investigating the technical aspects and the IHO Secretariat has had direct contact from one of the contractors to confirm they intend to proceed with this initiative.

A further come out of the Our Oceans Conference and activates of the Secretariat and Chair and member of CSBWG has been this dialogue:

SG: I was proceeding to Oslo right after the global Our Ocean Conference with around 500 attendees. Normally I am sceptical with this way of political show but this one was different. There is great consent that Ocean care needs action and one of the items addressed again and again was ocean mapping - good for all for us engaged in hydrography. As you got out from the London meeting, SB2030, IHO, IOC is striving to unveil those data which already exist but available for limited purposes only, to motivate new measurement campaigns and encourage technical innovation. I look forward to march jointly on the road and Ocean Infinity would be a perfect ally for us.

Ocean Infinity Head of Survey: I completely agree that more work is required in 'unlocking' those data sets that are held in the commercial world and I would be very happy to collaborate with you in achieving this.

The GEBCO objectives are extremely challenging but with sufficient international support, they are not impossible to attain. I foresee that the importance of this international support will only increase with each passing year and I look forward to learning how you see the development of some sort of framework between the IHO, private finance and world trade/maritime organisations can be combined with the efforts of the scientific and commercial (oil & gas/exploration) community to ensure that low\* (>75m gridded) resolution data can be collected and released for this critical human endeavour.

As you will note a great deal is happening, 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.

This is a global endeavour, which requires collaboration, coordination and partnership at all levels, both within projects as well as between projects. No person, project or organization should claim pre-eminence or ownership of the initiative, which will be the route to certain failure; to achieve the desired goal requires collective effort and energy to harness the political rhetoric and statements into real actions and deliverables. We have heard at numerous high level events, UN gatherings down to the recent Vision to Action, the need to 'save the oceans', however the tasks remains of generating the political will to act for the greater good rather than the individual economic advantage. As my Zoologist son and all his generation say 'The time to act is now to give us a future worth having'.

Finally a thought and question, 176 UN member states supported the UN SDGs and the Decade for Ocean Science for Sustainable Development, yet when the IHO sent out a letter asking its 90 plus member states to give positive support of the random collection of data within their waters, only a third bothered to answer and only half of them indicated a positive position. We need to resolve this disconnect between top level government and responsible government departments. The challenge for this week should be how to close this circle to turn words into real action.