

Mediterranean and Black Seas Hydrographic Commission (MBSHC)

22nd VTC

27-28 May 2021

Report of the IHO Secretariat

Submitted by:	IHO Secretariat
Executive Summary:	This paper provides a summary report of matters of interest related to the work of the IHO Secretariat.

Status of Membership of the IHO

1. Solomon Islands, Ghana, Samoa and Lebanon has been 91th, 92nd, 93rd and 94th Member of the IHO during the report period. Unfortunately, there are four Member States Democratic Republic of the Congo, Serbia, Syria and Vanuatu suspended from Member States rights, being in arrears in its contributions now for two consecutive years.

Regional Applications for Membership of the IHO

2. The non-IHO Member States of the MBSHC region (Albania, Israel and Libya) need to be encouraged to become IHO members.

3. The IHO Secretariat, in cooperation with the Department of External Relations of the Government of Monaco, stands ready to assist, through diplomatic or other channels, for membership of the IHO of non-member States in the Mediterranean and Black Sea region.

INT Chart and ENC Production Coordination - Region F

4. Italy, as Chair of the MBSHC International Charting Coordination Working Group (ICCWG) for Region F, is responsible to provide regular updates to S-11 Part B - Catalogue of INT Charts. The status of the INT chart scheme for region F is contained in Edition 4.0.6, May 2021 of S-11 Part B. (See Region F coordinator document MBSHC22-6.4.2).

5. **Recommendation.** MBSHC Member States are encouraged to continue to support the Chart coordinator, in providing the IHO Secretariat with regular updates to S-11 (ENC Approved Schemes in particular). If the resignation of Italy as Chart Coordinator is confirmed, the MBSHC is invited to designate a representative of the MBSHC in the WENDWG.

IHO GIS and Databases

6. The IHO Country Information system has been progressively upgraded to include administrative information and facilitate the maintenance of the IHO publications such as Yearbook (P-5) and Status of Hydrographic Surveying and Charting Worldwide (C-55) posted on the IHO website. The IHO Online Form system has been used since March 2019 and has been widely accepted by the Member States for the Circular Letter responses and the updating of P-5 and C-55 (CL20/2019 and CL03/2020 refers).

7. **Recommendation.** MBSHC Member States are invited to review their entry in the IHO Yearbook and C-55 and to provide the IHO Secretariat with the appropriate updates or to report no change (CL 20/2019 refers).

Outcomes of the Second IHO Assembly

8. The second session of the IHO Assembly (A-2) took place from 16 to 18 November 2020 as remote event (VTC). The ACLs related to A-2, as well as the list of Decisions and the publication P6 – Proceedings of the 2nd Session of the IHO Assembly 2020 are available on the IHO website for consultation.

9. At the A-2 the IHO Member States approved the new IHO Strategic Plan which lays out the organization's priorities for the coming years (2021-2026). The inclusion of Goal 3 related to participation in international initiatives on the sustainable use of the oceans, confirms that the IHO is now, also, clearly committed to reconciling the use and the preservation of the marine environment, in line with the global initiatives, such as UN Decade for Ocean Science and Seabed2030. Assembly participants approved the Roadmap for the implementation of the IHO Universal Data Model (S-100) which can be utilized by all users of ocean data including navigation, marine energy, oceanography etc. The IMO e-navigation Strategy Implementation Plan requires that all Maritime Services be S-100 conformant, as it specifies the method for data modelling and developing product specifications. A-2 also approved the establishment of the joint IHO-Singapore Innovation and Technology Laboratory in Singapore to coordinate and test-bed initiatives under the proposed composition, governance structure and terms of reference for the governing board and the management team.

10. Member States also approved the new project proposed by Canada on Empowering Women in Hydrography - EWH, which aims to increase gender equity and the number of women in leadership positions. The project will include training and communication on different hydrographic careers. Finally, as clear example of how the Hydrographic Community is evolving and dealing with extraordinary circumstances, the Assembly approved the establishment of a new IHO e-learning centre hosted by the Republic of Korea at the Korea Hydrographic and Oceanographic Agency (KHOA). The organization had been wanting to increase the offering in terms of distance training for some time and the current pandemic highlighted the need for this.

11. **Recommendation.** MBSHC is invited to consider the need to adapt their respective instruments / statutes to comply with the recommendations of the IHO Resolution 2/1997 as amended by A-2 as appropriate (Decision A2/09) and any other A-2 Decisions such as Decision A2/07 (gender-neutrality) and A2/10 (response to disasters).

Outcomes of the 4th Meeting of the IHO Council

12. The Council had been tasked by A-2 with making the Strategic Plan real, a task that must be accomplished quickly to ensure that the IHO reaches its goals. The A-2 had also tasked the Council with implementation of the S-100 Roadmap, which included S100 standards and offered increasing safety of navigation by ensuring that the most up-to-date information was available with the vision of its delivery to mariners seamlessly integrated with other data such as navigational aid information and weather. Following that, the Council decided to set up a repository webpage to facilitate its accessibility and maintenance (Action C4/19 refers). The A-2 had then also tasked the Council to work through the technical, operation and regulatory challenges associated with the transition from paper-based products and S-57 ENC's to the S-100 suite of standards and services.

Recommendation. MBSHC is invited to consider the new Strategic Performance Indicators of the Strategic Plan 2021-2026 allocated to IRCC by the Council, preferably prior to IRCC-13 in

order to be in a position to make proposals and recommendations on the targets/metrics/operational procedures in support of IRCC to monitor them.

13. The fifth meeting of the IHO Council is scheduled to take place in Monaco, from 19 to 21 October 2021. The preparation of this meeting has already started (See CCL 01/2021). It can be noted that in accordance with the Rules of Procedures of the Council, the deadline for submission of proposals by IHO Member States is 19 July 2021, while a revised provisional agenda together with supporting documents and timetable will be provided to Member States at least two months before the opening day of the meeting (19 August 2021).

IHO Outreach

14. The theme for World Hydrography Day 2020 was “Hydrography – enabling autonomous technologies”. A number of WHD events were held by many of the IHO Member States and the events reported to the IHO Secretariat were displayed on IHO website.

15. Taking into account the IHO Centenary (to be described later on) and the A-2 decisions, the theme of the World Hydrography Day for 2021, as announced by IHO CL 01/2021, is:

“One hundred years of international cooperation in hydrography”

16. Taking into account the impact of digital outreach, the new IHO website totalled 258,363 page views in 2020. The substantial increase in online communication, including social media, resulted in a 191% increase in followers on the IHO LinkedIn page with a new record of 30,000 total views for June 2020. On Twitter, the account was created at the end of 2019, and recorded 17,200 total views in April 2020. The video on World Hydrography Day had over 16,000 views on the YouTube channel. These initiatives have contributed to raising awareness about the IHO’s activities among hydrographers, but also among a wider audience.

17. The *International Hydrographic Review (IHR)* is a pdf publication, with peer-reviewed articles, with two editions a year and an annual printed copy consisting of a compilation of the articles. Access to this publication is free via the IHO website and without restriction. Member States are strongly urged to contribute to the Review as an important means of sharing information on their activities and developments within the hydrographic community. Other organizations or individuals working in related hydrographic fields, are also invited to contribute to this publication. Through its 98 years of existence, the IHR has counted on the important collaboration of the worldwide Hydrographers, most from the Member States Hydrographic Offices, and from the members of the IHR Editorial Board that have contributed to the maintenance of this important publication.

18. Capt (ret) Brian Connon (USA) was appointed as new IHR Editor with effect from January 2020 and coordinated already the two editions of 2020. In his first editorial he expressed the intention to continue the evolution of the IHR to "best serve the need of the IHO and the hydrographic community" and be "the journal of choice for hydrographic content". As a sign of the changes that were implemented in 2020, the cover page of the IHR was aligned with the most recent branding image of the IHO. The IHR provides an ideal opportunity for Regional Hydrographic Commissions and Member States to publicise technical and other achievements in the region. An editorial board comprising a representative from each region has been established.

19. At the IHO Secretariat, a dedicated team composed by some IHO staff and the IHR Editor is working on the IHR Website, which will be available by 2021. The task for building the new IHR website was assigned to an IT and Website Company. One important aspect will be the classification of the articles by collections, to allow the users to better find the articles by the respective main topics (collections).

20. **Recommendation.** MBSHC is invited to contribute to the Review as an important means of sharing information on their activities and developments within the hydrographic community. All contributions should be sent to the IHR Editor - Capt (Ret) Brian Connon at the email address ihreview@iho.int (copy to brian.connon@saildrone.com) or via the IHO Online Form System. The deadlines are:

- End of January for the May Edition
- End of July for the November Edition.

IHO Centenary Celebrations (IHO-100)

21. The IHO Secretariat has already undertaken the preparations for the IHO Centenary celebrations ranging from 2019 to 2021, as important milestones of the IHO. In this respect, a Prestige Book was issued in 2020, and a commemorative stamp was issued by the Principality of Monaco on 26 February 2021 for the IHO Centenary.

22. With the IHO CL 16/2021, it was established that the major focus of the IHO Secretariat's outreach activities for 2021, as reported at the 2nd IHO Assembly, will be the celebration of the 100th anniversary of the creation of the International Hydrographic Bureau on 21 June 1921 – later to become the Secretariat of the International Hydrographic Organization. According to Decision A2/15, the "**Peak-of-the-peak**" event was originally planned for World Hydrography Day (WHD 2021) on 21 June 2021 with Member State representatives coming to participate in person.

23. In consideration of the continued travel and physical meeting limitations induced by the COVID19 pandemic, the IHO Secretariat has decided to reformat the celebrations. The "Peak-of-the-peak" event is now planned to be held as a hybrid event consisting of a small reception at the Secretariat with a select few representatives of local authorities and stakeholders by invitation only, exhibitions of modern survey technology in Monaco harbour and a panel discussion. Due to the ancient relations between the IHO and the Principality of Monaco and France, it is expected that His Serene Highness, Prince Albert II of Monaco and a representative from the French Government will honour the IHO with a speech, as well as His Excellency Peter Thomson, UN Special Envoy for the Ocean, who has confirmed his participation. Italy expressed the intention to send the Italian Navy tall ship Amerigo Vespucci to Monaco.

24. The Secretariat is currently working on a suitable digital presentation of all these activities, so that Member States around the world can participate "virtually". An important element will be the live broadcast of the speeches, as well as a broadcast of videos, highlighting the importance and the role of hydrography, and a virtual panel discussion on future challenges.

Capacity Building Programme

25. The level of 2020 activity of the IHO Capacity Building (CB) Programme remained at the same level as in 2019. Expenditure in the IHO 2019 CB Work Programme was 1% smaller than the budget for the previous year. The ongoing financial support is provided by the Nippon Foundation of Japan, the Republic of Korea and by a contribution from the IHO budget with in-kind support from Member States and from industry. In 2019, 91% of the budgeted work program was executed and paid for.

26. The COVID-19 pandemic has had a significant impact on the 2020 CBWP and the 2021 CBWP was reviewed accordingly, carrying over from 2020 CBWP to 2021 CBWP most of the activities not executed in 2020. The big surplus estimated for the end of 2020 will therefore

urgently be needed to execute the 2021 WP. Only the 2021 CBWP funded activities will be moved to the 2022 CBWP, in case the COVID-19 pandemic continues to affect the execution of the 2021 CB planned activities.

27. A Project Team under the CBSC has been established to draft a revised Capacity Building Strategy (CBS). The new CBS should be adapted to the new IHO Strategic Plan and aligned with the IHO Strategic Goals.

28. **Recommendation.** MBSHC members are invited to continue follow and evaluate the possibility to contribute to the CB Programme.

Crowdsourced Bathymetry

29. The Crowdsourced Bathymetry Working Group (CSBWG) has been tasked by the Inter-Regional Coordination Committee (IRCC) to develop and update the IHO publication B-12. It provides guidelines and advice on various considerations that should be taken into account when collecting CSB data for inclusion in the global bathymetric data set which is maintained in the IHO Data Centre for Digital Bathymetry (DCDB).

30. In support of these activities the IHO DCDB has undertaken significant development to improve the data pipeline and data viewer operability. The DCDB has developed a geographic filter application, which suppresses embargoed data from public availability and places this data in a separate data store until such time as approval is given for its release into the public domain. The DCDB has also commenced initial discussions with the International Seabed Authority (ISA) on suitable methods for making its data available, either into the DCDB or directly into the GEBCO grid. The DCDB is also in advanced discussion with a number of commercial shipping companies to extract bathymetric data from their voyage data recorder systems.

31. At the IRCC12 a submission has been made in coordination with GEBCO and Seabed 2030, for RHC to identify regional coordinators to act as a point of contact and to raise the profile of data gather and provision within their respective Region, all with the view of increasing awareness and highlighting the link between gaining a complete picture of the ocean floor with the UN Decade and the SDGs. The regional coordinators would have a key role in assisting the RHC in gathering the evidence and reporting annually on the percentage coverage achieved within their Region. They would also be in a position to assist individual coastal states.

32. Following IHO CL 21/2020, the IRCC CL 01/2020 was issued to ask RHC Chairs to engage with the coastal states within their respective RHC to clarify their positions on supporting for the provision of CSB data gathered by ships within their waters. As result of the two letters, the status of the responses is available under the IHO CSBWG webpage.

33. **Recommendation.** MBSHC Members and Associate Members are invited to officialise and/or review their positions on the conduct of CSB in their waters of jurisdiction (IHO CL 21/2020 and IRCC CL 01/2020), and to identify further potential sources of bathymetric measurements and survey data providers to contribute to the DCDB data holdings.

GEBCO support through Seabed 2030

34. The General Bathymetric Chart of the Oceans (GEBCO) Project is a joint programme that is executed under the governance of the IHO and the IOC and directed by a Guiding

Committee. GEBCO is the only long-term international project with a mandate to map the ocean floor.

35. Nippon Foundation GEBCO-Seabed 2030 is a new global project within the IHO-IOC GEBCO framework with the focused goal of producing the definitive, high-resolution bathymetric map of the entire World Ocean by the year 2030. Through Seabed 2030, GEBCO's role will be recognized and reinforced as the authoritative international initiative for mapping the World Ocean, from the coasts to the deepest trenches. Seabed 2030 has established a South West Pacific Regional Center located at the New Zealand National Institute of Water and Atmospheric Research. The Antarctic and Southern Oceans are covered by the Southern Ocean Regional Center located at Alfred Wegener Institute, Bremerhaven, Germany. Each centre focuses on discovering, gathering and assembling all available bathymetric data from their region to produce regional datasets and resulting products. A global centre will merge the regional datasets to generate the production of the annual GEBCO grid as well as other products. Within this structure, the IHO-DCDB will remain the central GEBCO repository for all raw bathymetric data and all Seabed 2030 project data will be data based there.

36. The 2020 grid release showed 19% global coverage and is comprised primarily of existing data and some new data. The Grid update is anticipated to occur in June 2021. Three new initiatives have been planned: a) Ocean Frontier Mapping, b) Crowd Sourcing and c) Technical Innovation. Ocean Frontier Mapping is a programme of five science missions, initially identified for Year 4; there is likely to be some adaptations made to the programme throughout the year depending on COVID-19 related logistical arrangements with operators. For Crowd Sourcing initiative, the Seabed2030 Director is working closely with the CSBWG Chair in her capacity also as Director of DCDB. And finally, on Technical Innovation, the members of a Project Team are currently working with technology organisations, including Amazon Web Services, to facilitate future cloud based data storage/transfer/processing solutions. This aspect is increasingly important as we are handling ever increasing volumes of data.

37. **Recommendation.** MBSHC members are invited to deepen cooperation and support to the Nippon Foundation GEBCO-Seabed 2030 project. MBSHC members are also encouraged to make more detailed and comprehensive seabed data available as well as help identify new sources of data for inclusion in future GEBCO grids.

Other matters of interest of MBSHC (IHO-CIESM Agreement)

38. On 26 March 2021, IHO and CIESM (Mediterranean Scientific Commission) have renewed their Scientific Cooperation Agreement for the next 4 years. This will provide a framework for active cooperation between the two intergovernmental organizations dedicated to marine science.

39. This scientific cooperation under the renewed IHO-CIESM Agreement will focus - among others - on strengthening scientific and technical synergies in their research and monitoring of marine waters, focusing in particular on high-resolution seabed mapping, monitoring changes in the marine environment in the context of climate change, using ships of opportunity to obtain data, contributing to the global initiatives in favour of the Ocean, exchanging relevant experience on capacity building and training, as well as knowledge transfer for third parties, and then cooperating towards the provision of technical advice so as to inform marine policy in relevant international bodies and conventions. The renewal of cooperation between the two organizations is very timely, considering the launch of several international initiatives on the sustainable use of the oceans, including the UN Ocean Decade.

40. **Recommendation.** MBSHC members are encouraged to have an active role under the umbrella of the renewed IHO-CIESM Agreement, in order to increase scientific cooperation in the Mediterranean and Black Sea Region.

Action Requested of MBSHC Member States

- a. **Note** this report
- b. **Consider** all the recommendations proposed in this report
- c. **Review** entries related to IHO C-55 and P-5 (Yearbook) at least annually
- d. **Consider** submitting papers for publication in the International Hydrographic Review
- e. **Take** any other actions as considered appropriate.