

SOUTH WEST ATLANTIC HYDROGRAPHIC COMMISSION

16TH MEETING, HYBRID – MONTEVIDEO (URUGUAY), 30-31 AUGUST 2022

Report of the IHO Secretariat

Submitted by:	IHO Secretariat
Executive Summary:	This paper reports on activities of the IHO Secretariat that may impact the work of the South West Atlantic Hydrographic Commission.

Status of Membership of the IHO

1. One of the main changes resulting from the entry into force of the revised IHO Convention is that, for States wishing to join the IHO that are already Member States of the United Nations, there is no requirement to seek the approval of existing Member States of the IHO. Since SWAtHC15 Iraq, Angola and Albania acceded to the IHO Convention and the IHO membership now stands at 98. Unfortunately, , Serbia, Syria and Vanuatu remain suspended from Member States rights.

Regional Applications for Membership of the IHO

2. The non-IHO Member States of the SWAtHC region, Bolivia and Paraguay are still to submit their instrument of accession. The IHO Secretariat, in cooperation with the Department of External Relations of the Government of Monaco, stands ready to assist these non-Member States, through diplomatic or other channels as recently done towards several non-IHO Member States in other hydrographic regions, and to pay High Level Visits to those States in the SWAtHC region not yet IHO Member States.

3. Recommendation: *SWAtHC is invited to encourage and propose to the IHO Secretariat High Level Visits to those States not yet IHO Member States, as recently done with the SWAtHC Letter 04/2022 dated 7 March 2022.*

Outcomes of the 5th Meeting and preparation of the 6th Meeting of the IHO Council

4. Among the items to be discussed were the proposals from HSSC, IRCC and the Secretariat for delivery of the Strategic Performance Indicators (SPIs) assigned to each of those bodies for the implementation of the IHO Strategic Plan, as well as the Roadmap for the S-100 Implementation Decade (2021-2030) for the development of digital products and services. Following bilateral talks between the Chair and Council Members, the Chair informed the Council that Member States stressed the need for IHO to support basic Capacity Building while also supporting the migration to S-100. The role of the RENCs had been a subject of discussion, and RENC representatives had therefore been invited by the Chair to attend the session as observers.

5. C5 noted the report and commended the IRCC, the RHCs, and IRCC Sub-Committees for their achievements as well as the outcome of the IRCC October 2021 Workshop on the IHO Strategic Plan. The Council, acknowledging the need for further recommendations on the realization of the Strategic Plan in RHCs by Member States and invited the IRCC to provide these recommendations to the RHCs as a matter of priority. A 2nd IRCC Workshop on the IHO Strategic Plan was conducted on 28 April 2022 in accordance with the IHO CL 12/2022 and SWAtHC presented on “Regional experiences of measuring SPI”.

6. The sixth meeting of the IHO Council is scheduled to take place in Monaco, from 18 to 20 October 2022. The preparation of this meeting has already started (see CCLs 01/2022, 02/2022 and 03/2022), the deadline for submission of proposals by IHO Member States expired on 18 July 2022,

whilst a revised provisional agenda together with supporting documents and timetable is available to Member States on C-6 web-page. Ahead of the 3rd Session of the IHO Assembly, the main topics on the C-6 agenda will be the “Roadmap for the S-100 Implementation Decade”, the “Duel Fuel concept for S-100 ECDIS”, the “IHO Strategic Plan 2021-2026”, the “new Capacity Building Strategy” and then the “IHO Budget and Work Programme 2023 and for the period 2024-2026”.

7. Recommendations:

7.1 SWAtHC is invited to continue on the implementation of the IHO Strategic Plan and support IRCC in identifying measures and values to measure those SPI of regional interest allocated to IRCC, in accordance with IRCC14 List of Actions, Decisions and Recommendations to RHCs.

7.2 SWAtHC members to note the appropriate HSSC’s governance document on the ‘dual fuel’ concept.

Preparation of the 3rd Session of IHO Assembly

8. The third session of the IHO Assembly (A-3) will take place in the Grimaldi Forum of Monaco from Tuesday 2 May to Friday 5 May 2023. The meeting of the Finance Committee and the meeting of the Heads of Delegations will take place on Monday afternoon, 1 May 2023 at the Grimaldi Forum of Monaco. The Opening Ceremony for the Assembly will take place on Tuesday morning, 2 May 2023. During that Ceremony, it is intended to celebrate the 120th Anniversary of the creation of GEBCO, as well as to invite those new Member States that have joined the Organization since the Second Session of the IHO Assembly to present their flag. An Industry and a Member States exhibition will take place in the same period of A-3 at the Grimaldi Forum of Monaco, and the IHO Member States are invited to consider sending a ship to the Port of Monaco during A-3.

9. The Assembly is the principal decision-making organ of the IHO (Article V of the Convention on the IHO), and it is essential that all IHO Member States are represented not only to review the past activities of the Organization, but also to adopt an effective and realistic IHO Work Programme and Budget for the next three years, and then to formulate and adopt appropriate Resolutions. All the details on the preparation and conduct of A-3 are available on <https://iho.int/en/3rd-session-of-the-assembly-2023> where the Assembly Circular Letters (ACLs) are available.

Capacity Building Programme

10. The level of activity of the IHO Capacity Building (CB) Programme was clearly affected in 2020 and 2021 by the COVID 19 Pandemic. Expenditure in the IHO 2021 CB Work Programme (CBWP) was 15,627.22 Euros, a value that cannot be compared with the previous years. Decision 5 of the CBSC19 intersessional meeting approved that the 2021CBWP funded activities not executed in 2021 can be moved to the 2022CBWP. In the same line and considering that 2022 still also affected, Decision 9 of the CBSC20 meeting approved that the 2022CBWP funded activities not executed in 2022 can be moved to the 2023CBWP. At CBSC20 Intersessional meeting, the 2022CBWP activities were prioritized, and now available at the following link: <https://iho.int/en/capacity-building-and-technical-cooperation>. SWAtHC has three funded CB projects in the 2022CBWP:

- A-16 Technical Visit to Bolivia (former 2020 A-02 and 2021 A09)
- P-34 Seminar on Raising Awareness of Hydrography (from 2021 P-12)
- P-40 Port and Shallow Water Survey Course (from 2021 P-18).

11. The budget assigned to 2022 has benefited not only from funds not used in CBWP2021, but also from additional funds made available by the Republic of Korea for capacity building activities from the Regional Commissions (the so-called non-earmarked activities). On this regard, the

Secretariat has reaffirmed the strong engagement to explore all possible ways to increment the Budget allocated to CB from 2023 onward.

12. The CB finance situation could be more difficult in 2023 with the expected reduction of the non-earmarked funds, so it was recognized that it will be very important to share resources and projects and invest in the remote activities. The CBSC20 meeting discussed the 2023 CBMP (CB Management Plan (CBMP)). Having in consideration the projects with the highest score after the evaluation process and the funding available, the projects to be funded were selected and the 2023CBWP was approved by the Sub-Committee and then uploaded to the Capacity Building and Technical Cooperation webpage on the IHO website. Discussion at CBSC20 highlighted the importance of engagement at the correct levels to build awareness of the importance of Hydrography. This supports the inclusion of Phase 0 into the IHO CB Strategy which focusses on the awareness of the importance to development Hydrographic Governance. Engagement with the correct stakeholders, on a ministerial level, is vital for the successful delivery of Technical and High-Level Technical Visits and the recipients of Technical Visits are reminded that their assistance in identifying these stakeholders is critical.

13. In terms of courses managed at IHO Secretariat level, 2 candidates were selected for 2022/2023 Master of Science Programme in Hydrographic Science at the University of Southern Mississippi (USA), sponsored by the Republic of Korea, 14 candidates were selected to participate in the 13th and 14th GEOMAC courses in Cartography Cat B (see IHO CL 19/2022) sponsored by Nippon Foundation, and 10 candidates for 2022 Cat B Hydrographic Survey Programme sponsored by the Republic of Korea were selected (see IHO CL 22/2022). For 2023/2024, the Master of Science Programme in Hydrographic Science at the University of Southern Mississippi (USA), sponsored by the Republic of Korea, will be announced in August 2022.

Empowering Women in Hydrography (EWH)

14. The 2nd Session of the IHO Assembly (A-2) approved the adoption of a new work item of Empowering Women in Hydrography (EWH) to the Work Programme of the IHO CBSC (A-2 Decision 35), and tasked the Secretariat to secure funding through allocation of IHO budget resources available and negotiation of suitable cooperation agreements with interested Member States.

15. CANADA and IHO signed an Agreement available at <https://iho.int/en/mou-agreements>. The Agreement secures the funds for the period 2021-2024, and finally describes a series of activities and initiatives which will enable more women to participate equitably in the field of hydrography and to assume more leadership roles within the hydrographic community. The project includes outreach, contact and learning, including internships, at-sea experiences and train-on-the-job activities (see IHO CLs 47/2021, 07/2022, 09/2022 and 14/2022). A specific webpage (<https://iho.int/en/basic-cb-sc-ewh>) has been set up under the Capacity Building Sub-Committee (CBSC) for this project. The first year of the EWH project has been completed successfully, with the provision of a workshop on “Gender balance & Empowering Leaders” to draw the attention on the importance of reducing gender imbalance in hydrography and more in general in STEM, the hire of an EWH project Assistant to support the implementation of the project’s activities, 1 internship on Outreach, 3 internships related with the review process of submitted programmes to the International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers (IBSC), the submission for EWH project to become an UN Ocean Decade Action, and then – as activity offered by the IHO Member States - three opportunities for an at-sea experience on a NOAA hydrographic ship. In order to get a clear picture of the gender distribution within the International Hydrographic Community, following the decision of IRCC (see Decision IRCC14/17), the IHO Secretariat invited the IHO MS with IHO CL 26/2022 to participate in a survey to determine the percentage of female employees in Hydrographic Offices and in leadership roles. IHO Member States are invited to complete the Questionnaire provided in Annex to the IHO CL 26/2022 and to return it to the IHO Secretariat no later than 30 September 2022.

IHO e-learning Center

16. Following the improvement made by the e-learning Project Team to advance in the implementation of the center, the IHO e-learning center established at KHOA is now accessible at <https://elearning.iho.int> , or via the IHO web-site. Member States who have experience in developing and providing e-Learning contents should consider actively sharing contents, resources, and experience with the e-Learning PT. The center is expected to become fully operational by the end of 2022.

17. Captain Helber Carvalho (Brazil) is the SWAtHC CB Coordinator for planning and implementing the regional CB activities.

18. Recommendation:

18.1 SWAtHC members are invited to continue follow and evaluate the possibility to contribute to the CB Programme.

18.2 SWAtHC members are invited to participate at the EWH project and provide proposals via the specific webpage (<https://iho.int/en/basic-cb-sc-ewh>) set up under the Capacity Building Sub-Committee (CBSC) for this project.

18.3 SWAtHC members are invited to provide contributions of online learning material to the Project Team established for the IHO e-Learning Center at KHOA.

Maritime Safety Information Services

19. Work by the International Maritime Organization (IMO) on the modernization of the Communications and Global Maritime Distress and Safety System (GMDSS) continues with the ongoing review and updating of the SOLAS chapters III and IV and on the related and consequential amendments to existing instruments. The consequential changes as a result of the recognition of the Iridium SafetyCast service as a recognised mobile satellite service (RMSS) provider in the GMDSS continue to be implemented. The Iridium SafetyCast service became SOLAS carriage compliant from 1 January 2020. Good progress has been made with implementation with a number of NAVAREAs due to become operational in 2022, with more entering the formal testing phase. However, there is still a number of NAVAREAs that need to commit to implementation before the service can be declared fully operational. Member States are reminded of the resources required and the responsibilities for their national Coordinator to perform their functions as part of the GMDSS. The national Coordinators should have established sources of information relevant to the safety of navigation within national waters, effective communications with the NAVAREA Coordinator and adjacent national Coordinators, if needed, to pass relevant information to all authorities and organization that need to be made aware and access to broadcast systems for transmission to their area of national responsibility.

20. Recommendations:

The SWAtHC Chair is requested to encourage all SWAtHC members to:

20.1 Encourage all information providers (NAV and MET Area Coordinators and RCCs) to complete agreements with all RMSS and commence the necessary testing of the SafetyCast system to progress towards declaring full operational status.

20.2 Establish and maintain effective communications with the relevant NAV and MET Area Coordinators to ensure the timely provision of MSI.

20.3 Use and follow the guidance provided in S-53 – Joint IMO/IHO/WMO Manual on Maritime Safety Information – to ensure the necessary facilities and capabilities are provided and maintained for the gathering and communication of MSI within their area of national responsibility.

Crowd-Sourced Bathymetry, GEBCO and Seabed2030

21. Following the last CSBWG12 hybrid meeting held in February 2022 at the IHO, The Crowdsourced Bathymetry Working Group (CSBWG) revised the IHO publication B-12 which provides guidance on the collection and use of Crowdsourced Bathymetry (CSB), and identified ways to facilitate the data gathering activities. The new edition of publication B-12 was endorsed by IRCC and the IHO CL 25/2022 was issued to request Member States to consider the adoption of Edition 3.0.0 of B-12 – Guidance on Crowdsourced Bathymetry by providing their reply not later than 1 October 2022. Besides, a new Agreement template on the “Terms of the Provision of Crowdsourced Bathymetry Data” from the Trusted Nodes to the IHO, was prepared by the CSBWG and will be part of the new edition of B-12 publication. The document represents the way for submitting Crowdsourced bathymetry data for long-term preservation and stewardship, as a joint effort between the Trusted Nodes and the IHO to accurately document the agreement and the expectations between the two entities. The new Agreement was also used to sign a historic Agreement between the IHO and International Seabed Authority (ISA) for “*Submitting marine geophysical data for long-term preservation and stewardship in IHO DCDB archive*”. It is expected that the initial contribution covers the ISA backlog of approximately 15 years of data recording and, going forward, the ISA estimates an annual contribution of approximately 750 GB each year. Future geophysical data collected by ISA contractors will be submitted by ISA to DCDB using the guidelines laid out in such Agreement.

22. The Circular Letters (IHO CL 21/2020 and IRCC CL 1/2020) to request MS to indicate their positions on the provision of CSB data are receiving new positive replies, in addition to the 31 already available at the link: https://iho.int/uploads/user/Inter-Regional%20Coordination/CSBWG/MISC/B-12_2020_FR_Acceptance_of_CSB_Data_in_NWJ_v3.0.pdf thanks also to the continuous engagement of the CSB-GEBCO-Seabed 2030 Regional Coordinators with IHO Member States, to advocate for open data access and CSB activities. In fact, there continues to be concern over the apparent lack of dedicated resources available within national HOs to process data available via DCDB. The importance of liaison with other IHO bodies, as well as appropriate engagement with industry to progress the work items, continues to be a key enabler for the project.

23. Thanks to the support of CSBWG and Nippon Foundation Seabed2030 project, the IHO Secretariat also promoted CSB through three sailing boats: the Sir Ernst and La Louise, who departed from Monaco and France for expeditions to the Antarctica in late 2021/early 2022, and committed to collect data for the IHO DCDB and generally contribute to increase our knowledge of the ocean and the Poles, and the Jancris, who departed from Cape Canaveral for an ocean crossing named “A sail for the blue” in May 2022 and arrived in Monaco on 21 July 2022. In addition to that, the IHO Secretariat with the support of GGC, CSBWG and Nippon Foundation GEBCO-Seabed2030 project, in July 2022 signed a Letter of Cooperation with the Yacht Club of Monaco to engage the world of yachting (yachts and mega yachts) in the CSB.

24. In December 2021, the International Hydrographic Organisation (IHO), the Intergovernmental Oceanographic Commission (IOC) and GEBCO Chair/Vice Chair met to discuss on how much the ocean science and seabed mapping landscape is undergoing significant change, and that the work of GEBCO (including that of the Nippon Foundation GEBCO Seabed 2030 Project) has never been so relevant or visible. It was noted that GEBCO would need to evolve with this changing environment in order to remain relevant, and that its organisational structure has grown in recent years. Therefore, it was decided to review the GEBCO Governance and establish a Project Team accordingly, which has recently started working on the Governance review.

GGC38 also noted that one of the gaps was for a GEBCO Strategic Plan that clearly sets out the connections between the strategic objectives of the parent Organizations, the future direction of GEBCO and the work of the subordinate bodies, initiatives and activities. So that, it was approved

also the establishment of a Drafting Team for drafting a GEBCO Strategic Plan in line with the IHO Strategic Plan (2021-2026) and the IOC Medium Term Strategy (2022-2029). Both the initiatives to review the GEBCO Governance and GEBCO Strategic Plan were endorsed by IRCC.

25. With IHO CL 10/2022 – and with an IOC CL within the IOC community as well – the IHO advised Member States that nominations are being sought for the 19th course of the IHO-IOC-Nippon Foundation/GEBCO Training Program leading to a Graduate Certificate in Ocean Bathymetry at the University of New Hampshire (UNH), USA. The 19th course will begin in late August 2022 and students will undertake an intensive 12-month period of lectures, practical laboratory and on-the-water projects, secondments to relevant laboratories and cruises on research or survey ships. The course represents a strong investment in future generations of ocean scientists and hydrographers, In order to liaise with this successful existing program and to identify and connect with other ocean mapping programs, at GGC38 it was decided to establish a new Sub-Committee on Education and Training.

26. Nippon Foundation GEBCO-Seabed 2030 project was endorsed as an Action of UN Decade of Ocean Science for Sustainable Development. The complex network of this project was explained along with the data ingestion in the system and mapping coverage that now stands at 23.4% (June 2022). The project is focused on mapping the gaps with three different initiatives: the Ocean Frontier Mapping, Crowd Sourced Bathymetry and Technology Innovation. It is necessary to promote the need to map the entire seabed and to encourage organizations to make their data available.

27. Seabed 2030 signed Memorandum of Understanding in recognition of the organizations' work to advance the understanding of ocean bathymetry, and to complement the goals of the United Nations Decade of Ocean Science for Sustainable Development. Besides, new global survey calls for greater coordination of seabed mapping activities were launched in London, 15 October 2021 to give a major boost to efforts to map the entire seafloor by the end of the decade. The survey aimed to develop a more consolidated global view of seabed mapping needs in order to move towards an agreed list of strategically important priority areas for further action. It also achieved its secondary aim of finding new data that could immediately feed into the emerging global map. Seabed2030 project looks forward to forming new partnerships and strengthening existing ones, as working collaboratively can greatly help fill in the gaps, as in the case of FUGRO, that in 2021 delivered to Seabed 2030 more than 2 million km² of high-resolution in-transit bathymetry data, collected by Fugro vessels, which a data coverage roughly equivalent to the size of Mexico.

28. **Recommendations:**

SWAtHC members are invited to:

28.1 Consider the impacts of the increasing global societal and United Nations (UN) driven need to complete the picture of the seafloor as well as the potential benefits to individual coastal States.

28.2 Make data freely available for inclusion in the DCDB and the widest possible use, in accordance with IHO Resolution 1/2017.

28.3 Reply to the IHO CL 25/2022 for the adoption of Edition 3.0.0 of B-12 – Guidance on Crowdsourced Bathymetry.

28.3 Review national legislation to remove barriers restricting CSB activities within their waters.

IHO and United Nations Decade of Oceans for Sustainable Development

29. The IHO Secretariat attended the 2nd UN Oceans Conference in Lisbon, 27th June – 1st July 2022 with the principle aim to ensure that seabed mapping and hydrography were appropriately represented and that the IHO's leadership in these domains was duly recognised. The IHO led one

side event on Seabed Mapping and Marine Data for Multifunctional Spatial Planning and provided closing remarks for the SB2030 side event, ensuring that the role of hydrography was properly represented and that due credit was attributed to the activities in which we are engaged. It is clear that the essential role that bathymetry plays in underpinning ocean science and related activities is becoming a mainstream concept, and consequentially other stakeholders (often with a more visible presence, larger network but less expertise/authority) are developing their own activities, initiatives and solutions that have the potential to encroach on, or duplicate IHO activity.

30. As consequence of the engagement of the IHO Secretariat in the UN initiative, the following are the items for further consideration of IHO:

- Whilst different observing systems collect various different data, the Global Ocean Observing System (GOOS) steering committee has identified a number of Essential Ocean Variables (EOVs) in order to prioritise investment through the Ocean Decade. In discussion with key stakeholders, it was suggested that depth could be added to the list of EOVs, with the IHO and IOC as leads under the auspices of GEBCO.
- Following the Global Ocean Alliance - an international movement to protect 30% of the world's land mass (land and ocean) by 2030S -, SP-122 – Marine Protected Areas could have a key role to play in supporting the sustainable use of such areas, as well as providing a global standard for the measurement of progress towards the target.
- In 2016, the Organisation for Economic Co-operation and Development published the seminal report entitled 'The Ocean Economy in 2030'. For the first time, this report explored the growth prospects for the ocean economy, its capacity for future employment creation and innovation, and its role in addressing global challenges. Further, it examined the risks and uncertainties surrounding the future development of ocean industries and the innovations and actions required in science and technology to support their progress. One area that was not explicitly described was the role of seabed mapping data and hydrography in underpinning blue growth and sustainable development. In 2023, the OECD will begin work on the revision of this report entitled 'the Ocean Economy in 2045'. Given the importance placed upon seabed mapping at the conference, the IHO has been asked to consider being the key point of contact for a dedicated section relating to seabed mapping and hydrography.

31. **Recommendation:** *SWAtHC is invited to take note of the engagement of the IHO Secretariat in the UN initiative and the items for further consideration.*

IHO GIS and Databases

32. Work has continued on the IHO internal systems. Especially, two components are to be mentioned:

- IHO Country Information system, and
- IHO Online Form system.

33. 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). Countries in the SWAtHC Region are invited to review their entry in the publications on an annual basis and provide the IHO Secretariat with the appropriate updates through the IHO Online Form system. The status of the data in the IHO Country Information Database concerning the SWAtHC Member States, including those provided for C-55 is as follows:

Country	P-5 –Yearbook Last update received	C-55 Last update received
Argentina	February 2020	April 2020
Bolivia	n.d.	May 2019
Brazil	March 2022	June 2022
Paraguay	April 2020	December 2003
Uruguay	April 2020	March 2020

34. An Esri-based GIS solution has been implemented for the efficient visualization of geospatial data stored in the Country Information System. This Cloud-based service has enabled access to various layers and functions through the IHO website such as the IHO ENC Catalogue. Currently, five WebGIS applications have been available to the public in this new environment.

35. **Recommendation.** *Countries in the SWAtHC Region 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).*

IHO Outreach

36. Considering the impact of digital outreach, in 2021, the IHO website had a total of 562,207 page views. The LinkedIn page had 4544 followers in December 2021, and saw a record 35,253 views from all its posts in June 2021, reaching total post impressions of 228,481 in 2021. The upwards trend continued on Facebook with a post on a missing GEBCO chart sheet getting 2.7K impressions in April 2021. On Twitter, the record for the year was a total of 22.9K impressions on posts in June 2021.

37. There were also several actions to raise awareness about the IHO’s work to a broader audience. The Secretariat has increased its presence on social media through articles and news about its working groups, committees and subcommittees, as well as the participation in regional and global initiatives that refer to Hydrography, especially in the framework of the UN Ocean Decade. In this regard, it is much more than simple coincidence that the United Nation’s Ocean Decade commences the same year that the IHO enters its second hundred years of existence. The Ocean Decade provides a unifying framework for scientists and stakeholders from diverse sectors to develop the scientific knowledge and the partnerships needed to accelerate and harness advances in ocean science. Being a longstanding partner of ocean scientists, it was clear from the beginning of the Strategy revision that the IHO would be among the stakeholders to proactively contribute to this initiative. In fact, the Secretariat organized an online conference as part of the UN Ocean Decade Laboratories “A Predicted Ocean” which highlight how the S-100 Universal Data Model can be used by all ocean disciplines, thereby increasing the use of data and our knowledge of the ocean.

World Hydrography Day

38. As announced with IHO CL 01/2022, the theme for WHD 2022 is as follows:

“Hydrography - contributing to the United Nations Ocean Decade”

The theme is designed to highlight the relevant contribution of hydrography as a discipline of applied sciences to the United Nations Decade of Ocean Science for Sustainable Development (2021 – 2030). The deliberations at the 5th Council meeting confirmed that several hydrographic offices have already engaged nationally in supporting the United Nations Ocean Decade and in the efforts to

reverse the cycle of decline in ocean health. The theme offers the opportunity to emphasize the competencies of hydrographers in the gathering and management of marine data and their strengths in technical collaboration on a global scale. The goal is to highlight how hydrography as an applied science supports the sustainable use of the oceans. This can include how up-to-date surveys and data can be used for initiatives for the protection of the marine environment, coastal zone management, marine protected areas, marine spatial data infrastructures, renewable energies, and all other components of the blue economy.

International Hydrographic Review (IHR)

39. Twice a year, the IHR provides an opportunity for Member States to publicize technical and other achievements in their region. An editorial board comprising a representative from each region has been established. As it was announced through IHO CL 03/2022, since 5 January 2022 the IHR has a new editor Dr Patrick Westfeld from Germany.

40. Papers for consideration for publication in the IHR should be forwarded directly to the editor (ihreview@iho.int, copy to ihr.editor@iho.int.com). The deadlines are:

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

41. In order to modernize the image of the International Hydrographic Review, its website (<https://ihr.iho.int/>) was completely revamped. It now includes a new section with articles and notes, allowing readers to view and share individual articles more easily. The IHO Secretariat has also worked with the University of New Brunswick (UNB), Canada, in a project to develop a digital repository of the complete library of the IHR. As a result, volumes from the entire collections are available online at: <https://journals.lib.unb.ca/index.php/ihr>.

42. Next year, the Review will celebrate its 100th Anniversary.

43. **Actions Requested of SWAtHC:**

- a) Note this report
- b) Consider 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.