

**Paper for Consideration by  
14<sup>th</sup> East Asia Hydrographic Commission Conference  
Tokyo, Japan, 27- 28 September 2022  
IHO Secretariat Report**

**Submitted by:** Secretariat of the IHO

**Executive Summary:** This paper reports on activities of the IHO Secretariat that may impact the work of the East Asia 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 EAHC13, Guyana, Solomon Islands, Ghana, Samoa, Kenya, Lebanon, 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.

### **Outcomes of the 5<sup>th</sup> Meeting and preparation of the 6<sup>th</sup> Meeting of the IHO Council**

2. 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.
3. 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 via the RHCs by Member States and invited the IRCC to provide these recommendations to the RHCs as a matter of priority. A 2<sup>nd</sup> IRCC Workshop on the IHO Strategic Plan was conducted on 28 April 2022 in accordance with the IHO CL 12/2022 where EAHC presented on “Regional experiences of measuring SPI”.
4. The sixth meeting of the IHO Council is scheduled to take place in Monaco, from 18 to 20 October 2022 as in-person-meeting. 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 3<sup>rd</sup> Session of the IHO Assembly, the main topics on the C-6 agenda will be the “Roadmap for the S-100 Implementation Decade”, the “Dual 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”.

### **5. Recommendations:**

- 5.1. EAHC 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.
- 5.2. EAHC members to note the appropriate HSSC’s governance document on the ‘dual fuel’ concept.

5.3. EAHC members are reminded to declare in which Regional Hydrographic Commission (RHC) they wish to be counted for the purpose of determining the number of seats allocated to each RHC on the IHO Council (CL27/2022 refers) and discuss about the election of its member for a seat of Council number 3 for the Inter-Assembly period 2023 – 2026.

### **Preparation of the 3<sup>rd</sup> Session of IHO Assembly**

6. Due to the ongoing uncertainty caused by the global COVID pandemic, the IHO Secretariat has been forced to identify an alternative venue for the third session of the IHO Assembly (A-3), as the Auditorium Rainier III is likely to still be in use as the Principality's primary COVID testing and Vaccination Centre. The new venue will be the Grimaldi Forum Exhibition Centre and the dates have been changed to Tuesday 2 May to Friday 5 May 2023. The Opening Ceremony for the Assembly will take place on Tuesday morning, 2 May 2023. During that Ceremony, it is intended to celebrate the 120<sup>th</sup> 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 in Monaco, and the IHO Member States are invited to consider sending a ship to the Port of Monaco during A-3.
7. 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**

8. 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 is 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>.
9. The budget assigned to 2022 has benefited not only from funds not used in CBWP2021, but also from additional resources made available by the Republic of Korea for capacity building activities from the Regional Commissions (the so-called non-earmarked activities). In this regard, the Secretariat has reaffirmed the strong engagement to explore all possible ways to increment the Budget allocated to CB from 2023 onward.
10. EAHC has four funded CB projects in the 2022CBWP:
  - A-15 Technical Visit to Cambodia (from 2021 A-08)
  - P-11 Hydrography for Disaster Mitigation and Humanitarian Support
  - P-37 Developing and Implementing a Regional Framework for Disaster Mitigation and Management (from 2021 P-15)
  - P-41 Hydrographic Data Managements to Support Disaster Relief (from 2021 P-19)

### Empowering Women in Hydrography (EWH)

11. The 2<sup>nd</sup> 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.

12. 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-cbcs-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

13. 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.
14. Mr Hak Yoel You is the EAHC CB Coordinator for planning and implementing the regional CB activities.

#### IHO-Singapore Lab

15. The IHO and Singapore launched the Joint IHO-Singapore Innovation and Technology Laboratory on 26 October 2021. The Lab seeks to optimize the resources of IHO Member States to harness and develop emerging technologies in the hydrographic domain that support safe maritime navigation and the protection of the marine environment.
16. In accelerating innovation in the field of hydrography, the Laboratory aims to (i) conduct research and testing of projects proposed by IHO Member States, IHO organs and other stakeholders; (ii) grow knowledge and foster collaboration on global standard-setting for the development and application of technologies enhancing safety at sea; and (iii) promote a multidisciplinary and collaborative environment to drive innovative solutions and develop pioneering technologies through active partnerships.
17. The IHO Lab currently carries out two projects:

- Investigate the automated conversion of the IHO S-57 Electronic Navigation Chart (ENC) to the IHO S-101 ENC. This project supports the development of the S-100 Electronic Chart Display and Information System.
- Develop a digital Infrastructure to improve information exchange between harbours and hydrographic office. The outcome of this project will inform the IHO S-131 Marine Harbour Infrastructure product specifications.

#### 18. **Recommendation:**

- 18.1. EAHC members are invited to continue follow and evaluate the possibility to contribute to the CB Programme.
- 18.2. EAHC members are invited to participate at the EWH project and provide proposals via the specific webpage (<https://iho.int/en/basic-cbsc-ewh>) set up under the Capacity Building Sub-Committee (CBSC) for this project.
- 18.3. EAHC members are invited to provide contributions of online learning material to the Project Team established for the IHO e-Learning Center at KHOA.
- 18.4. EAHC members are invited to participate in the Lab projects and contact the IHO Lab general manager (Dr. Parry Oei) for the details.

#### **Crowd-Sourced Bathymetry, GEBCO and Seabed2030**

19. 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.
20. 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 32 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](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.

21. 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 GGC38 (April 2022) 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. As a consequence, GGC38 approved the creation of a Drafting Team to develop a GEBCO Strategic Plan in line with the IHO Strategic Plan (2021-2026) and the IOC Medium Term Strategy (2022-2029).
22. Both the initiatives to review the GEBCO Governance and GEBCO Strategic Plan were endorsed by IRCC.
23. The 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.

#### **24. Recommendations:**

EAHC members are invited to:

- 24.1. 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.
- 24.2. Make data freely available for inclusion in the DCDB and the widest possible use, in accordance with IHO Resolution 1/2017.
- 24.3. Reply to the IHO CL 25/2022 for the adoption of Edition 3.0.0 of B-12 – Guidance on Crowdsourced Bathymetry (deadline 1<sup>st</sup> October 2022).
- 24.4. Review national legislation to remove barriers restricting CSB activities within their waters.

#### **IMO Decisions affecting IHO Work Programme**

25. The 9<sup>th</sup> Session of the IMO Sub-Committee on Navigation, Communications and Search and Rescue NCSR took place as remote virtual meeting from 21 to 30 June 2022 with physical presence of Director Abri Kampfer at IMO HQ in London.
26. NCSR9 agreed to the draft amendments to SOLAS chapter XIV and the Polar Code parts I-A and I-B (ships safety).
27. NCSR9 agreed to the draft MSC circular on ECDIS Guidance for good practice (deletion of some of the obsolete references made to the Data Presentation and Performance Check (DPPC) dataset of IHO in relation to anomalies), to be disseminated as MSC.1/Circ.1503/Rev.2, and forward it to the Committee for approval;
28. NCSR9 approved the draft MSC resolution on Performance Standards for Electronic Chart Display and Information Systems (ECDIS) and forward it to the Committee (MSC 106, November 2022) for adoption. The revised ECDIS Performance Standards now include references to IHO Product Specifications S-98, S-100 and S-101.

29. NCSR9 agreed on a transitional period of three years between 1 January 2026 to 1 January 2029, during which new installations of ECDIS compliant with either the existing IMO Resolution MSC.232(82) standards or the newly introduced S-100 based IMO ECDIS Performance Standards is accepted.
30. EAHC members should note that IHO has now commitments towards IMO and other stakeholders to achieve operational status on the prioritized S-100 Product Specifications in accordance with the Roadmap for the S-100 Implementation Decade. All regions are now called up to achieve substantial coverage including robust distribution and update services for S-101 ENC's and related products by 1 January 2026.
- 31. Recommendations:**
- EAHC is invited
- 31.1. to set up a S-100 Services Coordination transition for S-57 to S-101 and other S-1xx for the East Asia and apply instructions from IRCC/WEND (reference: WENDWG Letter 02/2022).
- 31.2. to report via EAHC representative in WENDWG at WENDWG13 on the S-100 Roadmap for East Asia.

## **IHO and United Nations activities Decade of Oceans for Sustainable Development**

### United Nations Decade of Oceans for Sustainable Development

32. The IHO Secretariat attended the 2<sup>nd</sup> 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. The side-event was co-hosted by the IHO and the Stockholm Environment Institute, together with Sweden, Kenya, Belize, the United Kingdom, the African Union, the OECD, and IOC UNESCO. It focused on how Seabed mapping and marine data can support multifunctional spatial planning and the sustainable use of the oceans.
33. For the SB2030 side event IHO SG provided conclusive remarks for the closing, ensuring that the role of hydrography was properly represented and that due credit was attributed to the activities in which we are engaged.

### UN Open-ended Informal Consultative Process on Oceans and the Law of the Sea

34. The 22<sup>nd</sup> Meeting of the body took place in New York HQ from 6 – 10 June. The ICP on Oceans and LoS facilitate the annual review by the General Assembly of developments in ocean affairs and the law of the sea with an emphasis on identifying areas where coordination and cooperation at the intergovernmental and inter-agency levels should be enhanced (resolution 54/33). This year's general theme was "Ocean monitoring".
35. SG IHO contributed as panellist to Segment 2 "International cooperation and coordination in advancing ocean observing and addressing related challenges" and by means of his presentation titled "Mapping the Ocean to deliver base line information for all specific observations & interoperable ocean data in support of the digital twin".
36. The panel discussions were dominated by the presentation of global oceanographic observing systems like GOOS, operated under the auspices of IOC-UNESCO, and the ARGO program. This gained valuable insights:
37. Ocean observation which is currently funded 40% through project money. This unsustainable arrangement was identified as one of the main obstacles to evolve to a more integrated observation environment as required to meet the aspirations articulated under the goals of the

UN Decade for Ocean Science. Further shortcomings presented were:

*Observing Systems are only partially adequate*

- Gaps in coverage
- Some processes insufficiently observed

*Most observations cannot be used to their full extent*

- Many observations not FAIR
- Many observations not fit for multipurpose use

*Duplication of efforts*

- Non-optimal use of resource

#### UN Committee of Experts on Global Geospatial Information Management

38. The 12<sup>th</sup> Session of the UN GGIM took place at UN HQ in New York from 3-5 August.
39. The Group of Standard Development Organizations (SDO) formed by ISO, OGC and IHO report of the three organizations elaborated on their collective efforts made since UN-GGIM Committee meeting in August 2021.
40. OGC's work on the development of modernized open API standards and the integration of geospatial information, statistics and other data to address access to. The work of OGC community included a strong focus on improving connections of OGC standards with IHO Standards and ISO Standards.
41. S-100 Universal Hydrographic Data Model to support the creation and maintenance of interoperable maritime data product services that are compliant with the ISO 19100 series of geographic information standards and the projected work with coastal nations to engage on using the IGIF-MSDI Maturity Roadmap for real-world (Marine) SDI development.
42. Overview of the work done regarding the use of geospatial standards in supporting the measurement and monitoring of the SDGs, the continued support to the standards pathway for the Implementation Guide of the IGIF; and presented practical examples on the implementation of geospatial standards that help further strengthen the Standards Guide.
43. The Group of Standard Development Organizations (SDO) conducted in addition a side event which was organized and moderated by the IHO.
44. Under the title "Bringing Land and Sea together – How standardization helps to implement the Integrated Geospatial Information Framework in Coastal States" this event presented the approach of the maritime domain how marine geodata can be operationalized by means of IGIF paradigms and presented case studies demonstrating how World Bank's IGIF methodology is applied in developing island/coastal Nation States.
  - 44.1. Dr John Nyberg (USA), Chair of the UN-GGIM Working Group on Marine Geospatial Information, informed the participants about the progress made in the layout of the interpretation of the IGIF for hydrography (IGIF-H).
  - 44.2. Kathrine Kelm (UK) of the World Bank, and Dr Gerald Wang (UK) of UKHO introduced the methodology of OGC/IHO/World Bank collaboration on the IGIF-MSDI Maturity Model, and
  - 44.3. Chris Body (Australia) informed about the recent developments on ISO's project to harmonise IHO marine administration with ISO land administration domain model.

#### **45. Conclusions and recommendations:**

- 45.1. IHO is only one in a multitude of voices. Visibility and networking is essential but comes

with costs and efforts.

- 45.2. IHO is well organized and effective thanks to the representation of Member States through hydrographic offices which belong to the national administration and enjoy secured funding for systematic work.
- 45.3. IHO has a chance to become a main player for the digital twin of the ocean if the suitability of the S-100 concept is understood and adopted beyond our traditional stakeholder's community. In liaison with OGC and ISO, IHO should strive to interface with the oceanographer's community put focus of marine geo services like nowcast, forecast and simulation. ARGO is a good example.
- 45.4. IHO should consider further development of existing and new authoritative regional and global geoinformation services such as GEBCO grid, ENC coverage, CATZOC, undersea feature names, S-130 polygon and ... marine protected areas.
- 45.5. EAHC is invited to take note of the engagement of the IHO Secretariat in the UN initiatives and the items for further consideration such as identification of themes of the hydrographic domain in support of Strategic Goal No 3 - for example:
- 45.5.1. renew Sea Ice data service provision (S-411)
  - 45.5.2. start to collect MPA information (coverage, metadata) to become prepared for a test case for S-122 GIS service
  - 45.5.3. allocate human and material resources to assist the Secretariat in outreach to UN Ocean decade activities addressing themes of the Arctic region

### **IHO GIS and Databases**

46. Work has continued on the IHO internal systems. Especially, two components are to be mentioned:
- IHO Country Information system, and
  - IHO Online Form system.
47. 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 EAHC 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.



48. The status of updates in the IHO Country Information Database concerning the EAHC Countries, including those provided for C-55, is as follows:

Country	P-5 –Yearbook Last update received	C-55 Last update received
Brunei Darussalam	February 2020	nil
China	May 2021	June 2005
Democratic People's Republic of Korea	February 2021	November 2019
Indonesia	June 2022	March 2019
Japan	June 2022	November 2018
Malaysia	February 2022	March 2018
Philippines	October 2019	February 2020
Republic of Korea	February 2022	February 2022
Singapore	February 2020	September 2020
Thailand	March 2021	March 2021

49. 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.

**Recommendation:**

50. Countries in the EAHC Region are invited

50.1. 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**

51. The IHO Secretariat is continuing its outreach efforts online. While progress has been a bit slower in 2022 in some areas, the numbers are still increasing. On LinkedIn, technical posts tend to get higher views, whereas on Facebook content relating to the sustainable use of the oceans or on joint initiatives with other organizations tend to do better. From 1 January 2022 to 5 September 2022, the IHO website had a total of 572,892 page views. The LinkedIn page had 5713 followers in September 2022, with a cumulated total of 162,664 views of all IHO posts. The post on Iraq joining the IHO had 6061 views. The upwards trend continued on Facebook with the post of the sailing ship Sir Ernst leaving Punta Cana as part of the CSB initiative getting 8.2K impressions in January 2022. On Twitter, the best result so far was in June 2022 with a total of 13.3K tweet impressions for all posts that month.

International Hydrographic Review (IHR)

52. 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.

53. 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.

54. 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>.
55. Next year, the Review will celebrate its 100<sup>th</sup> Anniversary. It is planned create a specific edition to address the relevance and the changing focus of this oldest IHO publication.

**56. Actions Requested of EAHC:**

- 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.