

**Paper for Consideration by
15th EAthC Conference
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 Eastern Atlantic Hydrographic Commission.

Operations of the Organization under the IHO Convention since the last EAthC Conference (EAthC14) in September 2017

1. The amendments to the IHO Convention and its supporting Basic Documents entered into force on 8 November 2016. Since last EAthC Meeting the first meeting of the Council (C-1), as a new organ of the Organization, was put into operation.
2. The first meeting of the Council took place in Monaco from 17 to 19 October 2017 and will meet annually thereafter. The subsidiary organs of the IHO reported to the Council that will then referred endorsed proposals for adoption either to the Assembly or to the Member States through correspondence.
3. The main outcomes of the 1st meeting of the IHO Council were reported in CL 55/2017.
4. Regional Hydrographic Commissions are established in its own right by statutes and recognized by the Assembly (Article 8 of IHO General Regulations). They are sovereign to identify tasks, ways and means to address the specifics of hydrography within their respective region. If such regional hydrographic issues are of operational relevance for the international community they can be forwarded by the respective Regional Hydrographic Commission through the link with IRCC. The chairs of the Regional Hydrographic Commissions are regular IRCC members. They report to IRCC and in turn report back to the Regional Hydrographic Commissions about IRCC issues.
5. With regard to the interrelation between the Regional Hydrographic Commissions and the Assembly, Regional Hydrographic Commissions enjoy the right to report to the Assembly directly. However, the applicable IHO Resolution 2/1997 is under review. The Secretariat proposes to discuss how reporting items of relevance shall be synchronized with the Council Chair report to the Assembly which is largely based on the annual IRCC Chair report put forward to the Council.
6. **Recommendations. EAthC to consider** how the EAthC reporting to the Assembly shall be synchronized with the Council Chair report to the Assembly.

Status of Membership of the IHO

7. 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. In 2017 **Malta, Vanuatu, Seychelles** and in 2018 **Bulgaria** acceded to the IHO Convention and became the 86th, 87th, 88th and 89th Member States of the IHO respectively. On 1 January 2018 **Dominican Republic** was reinstated as Member State, suspended since 1983. Unfortunately there are still three Member States remaining suspended, Democratic Republic of the Congo, Serbia and regrettably Syria was recently suspended from Member States rights, being in arrears in its contributions now for two consecutive years. The following States in the EAthC region have yet to apply to become members of the IHO: Benin, Cabo Verde, Congo, Côte d'Ivoire, Equatorial Guinea, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mauritania, São Tome and Principe, Senegal, Sierra Leone, and Togo. All are Member States of the IMO.

INT Chart and ENC Production Coordination - Region G

8. Mr Laurent Louvart (Shom, France) is the designated INT Chart / ENC Coordinator for Region G, and he is supported by Mr Vincent Lamarre (Shom, France) as executive officer.

9. The status of the INT chart scheme for Region G is contained in Edition 3.0.4 of S-11 Part B which was made available in September 2018. According to the S-11 Part B Web Catalogue¹ there are 172 INT charts in the scheme, from which 141 have been produced and published. All EAtHC Members and Associates are requested to check their individual entries and provide updated information as appropriate. According to the information available on the last version of the IHO ENC Coverage catalogue, this commission has a seamless ENC approved scheme for usage bands 1, 2 and 3.

10. Early January 2018, the IHO Secretariat informed the Chart Coordinators that the project INTToGIS Phase II was underway, thanks to the outstanding support provided by KHOA (Republic of Korea). For more information, see Doc. [HSSC9-11A-INF1](#). INTToGIS Phase II aims to provide a very useful scheming tool, putting together ENC and INT charts, new base maps and some useful tools for a more efficient and consistent INT chart and ENC scheming (AIS data base, overlap checker, etc.). As agreed at the last WENDWG meeting, some Chart Coordinators are now experimenting INTToGIS II before it is commissioned and made available to all, hopefully early next year. The Region G Coordinator has already provided his initial feedback to the IHO Secretariat.

11. Adoption of Ed. 3.1.0 of IHO Publication S-11 Part A requires new arrangements for the monitoring of INT charts ([CL 11/2018](#) refers).

12. EAtHC was represented at the 8th meeting (March 2018) of the WENDWG.

13. The elimination of overlapping ENC data that are navigationally significant is one of the main objectives of the WEND Principles. A new IHO Resolution addressing this issue was adopted by IHO Member States (See. IHO [CL 19/2018](#) – *Adoption of new IHO resolution on the elimination of overlapping ENC data*). WENDWG considered the outcome of this resolution at its recent 8th meeting from 20 to 22 March 2018 in Buenos Aires, Argentina and IRCC10 endorsed the resulting report. The EAtHC should also note the comment provided by France in preparation of the 2nd meeting of the Council (See Doc. [C2-4.2B](#)).

14. At its 13th meeting in Monaco (January 2018), the Data Quality Working Group arranged a workshop where participants shared their best practices on the way CATZOC values are populated for S-57 ENCs by Hydrographic Offices. In order to facilitate the harmonization and prepare the future transition to S-101 ENCs, it is recommended that EAtHC ENC Producers provide their guidelines to the DQWG.

15. Recommendations. EAtHC to consider:

- a) the results of the 8th WENDWG meeting held in March 2018;
- b) providing regional CATZOC practices to the DQWG;
- c) the maintenance of ENC Schemes when the INTToGIS Phase II is commissioned;

Maritime Safety Information Services

16. MSI Capability and Supportability. The IHO Capacity Building strategy lays particular emphasis on the fundamental capability for all coastal States to provide a maritime safety information (MSI) service in support of their international obligations.

17. **Recommendations.** The Chair is requested to encourage all coastal States to:

- a) maintain regular communication with the regional NAVAREA Coordinator(s) and inform of any change of personnel or contact details (See also Permanent Action EAtHC14-05);
- b) use and follow the guidance provided in S-53 – *Joint IMO/IHO/WMO Manual on Maritime Safety Information*;

1 As of 24 September 2018

- c) request National Coordinators to review the contents of the relevant Annexes of the GMDSS Master Plan (GMDSS.1/Circ.21 31May 2017 refers) and to use the annexed questionnaire for electronic submission, whilst also cross checking the details submitted for inclusion in IHO publication C-55 for consistency; and
- d) report, as appropriate, on the outcomes of IMO Mandatory/Voluntary Audits that have occurred in their country, which may include recommendations on MSI, hydrographic and charting matters.

Capacity Building Programme

18. The level of activity of the IHO Capacity Building (CB) Programme decreased in 2017. Expenditure in the IHO 2017 CB Work Programme (625 952 Euros) was 18% smaller than the budget for the previous year. 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. The Secretariat is continuing its campaign to find additional donor States and funding organizations. In 2017, 80% of the budgeted work program was executed and paid for.

19. The EAtHC MS benefited from activities under the IHO CB Work Programme (CBWP). In 2017, the region benefited from Technical Visits to Gambia and Cabo Verde, HydroMOWCA follow-up study and an e-learning experimentation. In 2018, visits to training centres (ongoing activity) were conducted, a Regional Awareness Seminar on Maritime Geospatial Knowledge was organized and a second phase of the HydroMOWCA is scheduled. In 2019 there will be technical visits to Togo, Gambia and Congo, and the continuation of the regional training centre visits. The region will also benefit from e-learning activities for MSI and for survey specifications, followed by a MSI / Hydrographic Risk Assessment / Survey Specifications Workshop.

20. **Recommendations.** EAtHC members are invited to identify opportunities in national or regional funding agencies to incorporate hydrographic development in the broader projects supporting developing countries.

Crowdsourced Bathymetry

21. In accordance with Decision 8 of the EIHC5, IRCC7 established the Crowdsourced Bathymetry Working Group (CSBWG) to provide guidelines on the collection and use of crowdsourced bathymetry. Member States and other interested parties were invited to nominate representatives to participate in the CSBWG (see IHO CL 42/2015). The CSBWG has developed the draft IHO publication B-12 – IHO Guideline on Crowdsourced Bathymetry, which has completed extensive stakeholder and IHO Member State consultation. Edition 1.0.0 was presented to IRCC10 for endorsement, prior to submission to IHO Council-2 and IHO Member State approval, it is hoped the publication will have a formal publication date of 1 January 2019. Work has commenced on the draft of Edition 2.0.0, taking into account a number of topics, for which additional time and investigation were identified as being required; additionally as a result of Decision C-1/31 IRCC10 endorsed to enlarge the scope of the tasking of the CSBWG, the CSBWG drafted revised ToRs.

22. The web-based interface portal to the IHO Data Center for Digital Bathymetry, hosted by the USA in Boulder, Colorado, as part of its commitment to the system of World Data Centres, is being upgraded to be compatible with the crowdsourced bathymetry concept. This will enable an IHO-led CSB infrastructure to be established and promoted in the IMO and across the wider maritime community.

23. **Recommendations.** EAtHC members are invited to identify further potential sources of bathymetric measurements and survey data providers to be facilitate the further completion of the DCDB data holdings.

GEBCO support through Seabed 2030

24. The Nippon Foundation (NF)-GEBCO Seabed 2030 project builds on more than 100 years of GEBCO history; the project has established regional connections to all corners of the World and benefits from the human network of ocean mapping capacity built over 14 years through The Nippon Foundation – University of New Hampshire (UNH) training project. 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. The project will champion, develop and nurture the technical and human capacity to complete

this task by 2030.

25. Seabed 2030 has established a network of 4 regional centres. Each centre focuses on discovering, gathering and assembling all available bathymetric data from their region to produce regional datasets and resulting products. The Atlantic and Indian Oceans are covered by the center located at the Lamont Doherty Earth Observatory (LDEO). 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.

26. **Recommendations.** EAtHC members are invited to consider the future invitation of Seabed 2030 project representatives to EAtHC meetings to discuss options for deepened cooperation and support.

IHO GIS and Databases

27. Work has continued on the development of the IHO GIS which is composed of two main parts:

- a country information database, and
- a regional information database.

28. The country information database has been progressively upgraded to include additional administrative information and facilitate the maintenance of the IHO Yearbook (IHO Publication P-5) and related lists posted on the IHO website. Countries in the EAtHC Region are invited to review their entry in the Yearbook on an annual basis and provide the IHO Secretariat with the appropriate updates or report no change. The status of updates in the IHO Country Information Database concerning the EAtHC Countries, including those provided for C-55, is as follows:

Country	P-5 –Yearbook Last update received	C-55 Last update received
Benin	21/06/2018	30/06/2017
Cabo Verde	07/06/2017	10/05/2016
Cameroon	16/02/2017	30/06/2017
Congo		30/06/2017
Côte d'Ivoire	27/04/2017	30/06/2017
Democratic Republic of the Congo	08/02/2017	01/01/2004
Equatorial Guinea	-	30/06/2017
France	23/08/2016	30/06/2017
Gabon	-	30/06/2017
Gambia	-	30/06/2017
Ghana	-	31/05/2017
Guinea	-	30/06/2017
Guinea-Bissau	-	10/05/2016
Liberia	-	01/05/2004
Mauritania	-	30/06/2017
Morocco	06/10/2017	30/06/2017
Nigeria	11/01/2018	16/05/2007
Portugal	16/11/2016	07/06/2017
Sao Tome and Principe	-	03/05/2016

Country	P-5 – Yearbook Last update received	C-55 Last update received
Senegal	-	30/06/2017
Sierra Leone	-	-
Spain	21/10/2016	25/09/2014
Togo	-	30/06/2017

29. An Esri-based GIS solution is being implemented to develop further the regional information database. This will enable access to various layers of information through the IHO website and through cloud-based on-line GIS options. The IHO ENC Catalogue and the IHO GIS for Antarctica have been transferred to this new environment.

30. Work has continued on developing a GIS database application to support C-55 - Status of Hydrographic Surveying and Charting Worldwide and the work of the IHO. In response to the request to complement C-55 composite data (percentage of areas adequately surveyed / requiring re-survey / not surveyed) with CATZOC information (see IHO CL 52/2015), CATZOC data was provided by PRIMAR - on behalf of IC-ENC, PRIMAR and Canada, Singapore, Sweden and Thailand. Useful options for visualizing the data in the IHO C-55 GIS are being investigated. CBSC16 has established the C-55RPT to investigate, among others, how to harmonize the use of CATZOC in C-55.

31. **Recommendations.** Countries in the EAtHC 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.

Preparation of the next meeting of the IHO Council

32. The second meeting of the IHO Council is scheduled to take place in London, UK, from 9 to 11 October 2018. The preparation of this meeting is now completed, in liaison with the host country. 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 was 9 July 2018, while comments on proposals to be included in the Red Book for the Council were accepted until 31 July 2018. All proposals, comments and INF-paper are compiled in the Red Book and made available in the first half of August 2018.

IHO Outreach

33. World Hydrography Day: Taking into account the discussions at the first IHO Council meeting held in Monaco in October 2017, the theme of the World Hydrography Day for 2018, as announced by IHO CL 03/2018, is:

“Bathymetry – the foundation for sustainable seas, oceans and waterways”

34. As part of the report on the proposed Work Programme 2018 at the 1st Council, the Secretary-General introduced the priorities, which he had defined with the associated issues and risks, for Work Programme 1 (Corporate Affairs). One of the priorities was to plan and start a complete overhaul of the IHO website including incorporation of GIS-services.

35. The Secretariat conducted an internal workshop in December 2017, to assess the deficiencies of the IHO website in place, the up-to-dateness of the underlying technology and future requirements. The workshop resulted into a comprehensive list of topics to be addressed by an overhaul of the IHO website. In the course of the workshop it turned out that the reshape should not be limited to the establishment of a newsfeed mechanism, to the website structure and design only. Instead, a holistic approach covering IHO’s corporate design of all media channels in digital and print was concluded as the appropriate scope of action. Further and more detailed information will be presented at the second IHO Council in London in October.

36. It was concluded further that the current IHO communication strategy is completely lacking the provision of social media. The Secretariat therefore gladly accepted the temporary secondment of the social

media expert through NOAA (USA) to assist the future set up and maintenance of such a component.

International Hydrographic Review

37. 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. EAtHC is represented by Mr Olumide Omotoso (Nigeria/NPA).

38. Papers for consideration for publication in the IHR should be forwarded directly to the editor (ihreview@iho.int, copy to ian.halls1@defence.gov.au). The deadlines are:

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

39. The IHO Secretariat has been working 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, the first phase of the project now provides access to volumes from 1963 to 2015. They can be found at: <https://journals.lib.unb.ca/index.php/ihr>.

40. Based on the considerations raised in the course of the communication overhaul discussions, the Secretariat proposes a digital revamp of the International Hydrographic Review (IHR). First consultations were held with the Editor in Chief of the IHR, Mr Ian Halls. The following principal changes are proposed jointly:

- Design and building new separate website www.ihr.iho.int using the new corporate design.
- Design the International Hydrographic Review as online publication and printable version (PoD).
- Facilitate technical options to create customized topical compilations from the digital repository of IHR articles for pdf-download and print.

41. Further and more detailed information will be presented at the second IHO Council meeting in London in October for endorsement.

42. **Recommendations.** EAtHC Members are invited to submit papers for publication in the IHR.

Action Requested of EAtHC:

- a) **Note** this report
- b) **Consider** the recommendations on Council/Assembly interactions as presented in **Paragraph 6**
- c) **Consider** the recommendations on Charting as presented in **Paragraph 15**
- d) **Consider** the recommendations on MSI as presented in **Paragraph 17**
- e) **Consider** the recommendations on Capacity Building in **Paragraph 20**
- f) **Consider** the recommendations on Crowd Sourced Bathymetry in **Paragraph 23**
- g) **Consider** the recommendations on Seabed 2030 collaboration in **Paragraph 26**
- h) **Review** entries related to IHO C-55 and P-5 (Yearbook) at least annually (**Paragraph 31**)
- i) **Consider** submitting papers for publication in the International Hydrographic Review (**Paragraph 42**)
- j) **Take any other actions** as considered appropriate