

## SOUTH WEST ATLANTIC HYDROGRAPHIC COMMISSION

14<sup>th</sup> Meeting, Niterói, BRAZIL, March 9 and 10 2020

### Report of the IHO Secretariat

<b>Submitted by:</b>	Secretariat of the IHO
<b>Executive Summary:</b>	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. The IHO membership stands at 93. After the last SWAtHC13 meeting held in April 2019, Guyana, Solomon Islands, Republic of Ghana and Samoa acceded to the IHO Convention. Unfortunately Democratic Republic of the Congo, 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.

### IHO Council Activities

3. The third meeting of the IHO Council (C-3) took place from 15 to 17 October 2019 at the IHO Secretariat in Monaco. Summary report of the 3<sup>rd</sup> Meeting of the IHO Council is available at the IHO web site. Additional details are available in document: CHAtSO14-03B Council Report

### Preparation of the Second IHO Assembly

4. The 2<sup>nd</sup> IHO Assembly is scheduled to take place from 21 to 24 April 2020. The announcement and draft agenda of the A-2 (See Assembly Circular Letter-01) and some additional ACLs have already been issued 2 (See Assembly Circular Letter-15 and 16). The IHO Work Programme and budget including for the next 3 years (2021-2023) will also be reviewed and approved by the Assembly.

### INT Chart and ENC Production Coordination - Region C1

5. Uruguay, as Chair of the SWAtHC Planning Committee for Region C1, is responsible to provide regular updates to S-11 Part B - Catalogue of INT Charts. SWAtHC members are invited to check their individual entries and provide updated information as appropriate. 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).

6. Considering that INTtoGIS II online services, commissioned on 2 January 2020, represent a major

step forward in the management of ENC Schemes and other INT Charts, it has been decided that all regional databases will be designated Ed. 4.0.0, January 2020. The procedure to maintain and update the regional databases for ENC Schemes (and INT Charts if needed) remain the same as for INTToGIS I.

7. The report of the SWAtHC ENC Scheme will be reviewed by the WENDWG10 meeting to be held in April 2020 in Monaco.

8. At its 14th meeting in Monaco (5-8 February 2019), the Data Quality Working Group discussed best practices on how CATZOC values should be 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 SWPHC ENC Producers provide their guidelines to the DQWG.

9 All SWAtHC Member States are invited to provide the IHO Secretariat with regular updates to C-55 on at least an annual basis. The IHO Secretariat would be grateful for delegates to forward up-dated information to the Secretariat at [info@iho.int](mailto:info@iho.int) or via mail.

### Capacity Building Programme

10. The level of 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 872 832 Euros, 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.

11. Capt Luiz Claudio Fonseca (Brazil) is the SWAtHC CB Coordinator for planning and implementing the regional CB activities.

12. Mr Jose Pedro DOMINGUEZ VILORIA (Uruguay) attended the Training for Trainers Programme in Basic Hydrography, sponsored by the Republic of Korea (8-19 July 2019).

13. A call for applications was issued in CL 09/2020 for the Category "B" training in Geospatial Marine Analysis and Cartography (GEOMAC) Project, to be held at the UKHO, Taunton, UK, from 1 September to 18 December 2020 and sponsored by the Nippon Foundation. Member States are invited to provide their nominations by 6 April 2020.

14. **Recommendation.** SWAtHC members are invited to continue being active for CB activities for short technical courses and long-term education programs.

### Crowdsourced Bathymetry

15. 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 IHO publication B-12 – IHO Guideline on Crowdsourced Bathymetry. Edition 2.0.0 was circulated under IHO CL 11/19 and its approval was announced in IHO CL 28/2019. Replies to Annex B of IHO CL 11/2019 have been analysed and a table of coastal states indicating positive support for the activity within all or parts of their waters of national jurisdiction has been generated and updated (See CL 47/2019 and CL 06/2020). Member States may advise the Secretary General at any time of any change to their originally stated position.

16. 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.

### 17. **Recommendations.**

SWAtHC 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**

18. 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) ocean mapping training project. Through Seabed 2030, GEBCO's role is recognized and reinforced as the authoritative international initiative for mapping the World Ocean, from the coasts to the deepest trenches.

19. 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 Baltic Sea is covered by the Arctic and North Pacific Ocean Regional Center located at the Stockholm University. 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.

20. GEBCO released the GEBCO 2019 grid in March. Based on the variable resolution coverage, which was recently calculated and takes into account current technology capabilities, the cover has increased from 6% in the 2014 grid to 15% in the current grid. Most of this increase has been achieved through the release of previous survey data, which had not been placed in the public domain and was not available to GEBCO. The 2019 grid does also include the data gathered by the two contracts in the search for MH370, which have been released by the Australian authorities.

21. **Recommendations.** SWAtHC members are invited to consider the future invitation of Seabed 2030 project representatives to SWAtHC meetings to discuss options for deepened cooperation and support. SWAtHC members are also encouraged to make more detailed and comprehensive seabed data available.

### **IHO GIS and Databases**

22. 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.

23. 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 SWAtHC 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.

24. 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.

25. 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.

26. The IHO Secretariat has developed an online form to allow Member States to input data to the Yearbook and to C-55. The online forms also allow Member States to vote in response to CLs.

27. **Recommendations.** 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**

### World Hydrography Day

28. The theme for 2019 is “*Hydrographic information driving marine knowledge*”. This theme was intended to stress the eminent role of hydrographic data in combination with information provided by adjacent maritime domains and advertises the benefits of making hydrographic data accessible to the widest possible audience for use that goes well beyond safety of navigation.

29. At the third IHO Council meeting in October 2019, the Secretary General proposed the theme for WHD 2020 as follows: “*Hydrography - enabling autonomous technologies*”. The theme highlights the role of hydrography in various dimensions: For the conduct of hydrographic survey itself by means of autonomously acting sensor carriers such as autonomous surface vehicles (ASV), autonomous underwater vehicles (AUV) and flying drones to carry Lidar equipment. The second important field is to pave the way for the expected development of safe, secure and environmentally sound Maritime Autonomous Surface Ships (MASS) operations under the auspices of the IMO which will definitely rely on qualified hydrographic information.

30. Following comprehensive redesign, the IHO website, including GIS-services was renewed on 1 January 2020. The new website, which would have versions in both English and French, would have a functional but creative design that paid respect to tradition and was fit for modern technology. The IHO emblem had also been slightly modified and in effect as of 21 June 2019.

### **IHO Centenary Celebrations (IHO-100)**

32. The years 2019 and 2021 will be important in the history of the International Hydrographic Organization. 2019 will mark the centenary of the 1<sup>st</sup> International Hydrographic Conference, which was held in London in 1919 and 2021 will be the centenary of the establishment of the International Hydrographic Bureau (IHB) in 1921 in Monaco as precursor of the modern IHO.

32. The IHO Secretariat has already undertaken the preparations for the centenary celebrations of the International Hydrographic Organization ranging from 2019 to 2021 as important milestones of the IHO. In this respect, it is planned to organize workshops, exhibitions, outreach events and similar activities from 2019 to 2021, either independently or jointly with sister institutions and agencies. *The “peak-of-the-peak” will be World Hydrography Day (WHD) on 21 June 2021.* There will also be an opportunity to present IHO’s achievements at the United Nations General Assembly in September 2021 and at the IMO Assembly in November 2021.

33. The main activities scheduled for the IHO centenary celebrations, coordinated by the IHO

Secretariat are/were as follows (CL 32/2017 refers):

- To hold an exhibition on "Historical Nautical Charts and Mediterranean". This event, which was held at the Monaco Yacht Club from 1 to 13 April 2019, was a resounding success.
- To organize an international Symposium on "A Historical Approach for Measurements and Protection of Oceans and World Waters". This event was held at the Oceanographic Museum of Monaco from 20 to 21 June 2019 (in conjunction with the World Hydrography Day)
- To highlight the centenary celebrations as part of the media and press-campaign associated the Council meetings in 2019 and 2021.
- To organize a half day special session on IHO-100 at the 2nd Session of the IHO Assembly(A-2) in April 2020.
- To prepare, publish and distribute an IHO Prestige Book on "100 Years of International Cooperation in Hydrography".
- To hold the 2021 World Hydrography Day in Monaco in conjunction with IRCC13, CBSC19 and a CB/IBSC Seminar.
- The centenary events could also be linked with the United Nations Decade of Ocean Science for Sustainable Development (2021-2030) which has been coordinated by the IOC of UNESCO.

### International Hydrographic Review

34. 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. Capt Nickolás Roscher is member of IHR Board representing SWATHC.

35. Papers for consideration for publication in the IHR should be forwarded directly to the editor (ihreview@iho.int, copy to *Brian.Connon@usm.edu*). The deadlines are:

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

36. The IHO Secretariat 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 (1923 to 2018) are available online at: <https://journals.lib.unb.ca/index.php/ihr>.

37. **Recommendations.** SWATHC Members are invited to submit papers for publication in the IHR.

### Action 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 and nominate a new representative at the Editorial Board for the region
- e) **Take any other actions** as considered appropriate.



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