



## 18th NORTH INDIAN OCEAN HYDROGRAPHIC COMMISSION CONFERENCE



Goa, India  
9 – 12 April 2018

### Report of the IHO Secretariat

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

#### Status of Membership of the IHO

1. Seychelles has been 88<sup>th</sup> member of the IHO during the report period. The IHO Secretariat continues its campaign to recruit new member States to the IHO.

#### Suspended Member States

2. In 1 January 2018 the Dominican Republic, which had been suspended since 1983, was reinstated as Member State. Serbia and Congo remain suspended. IHO Secretariat is working with these states to expedite their return to full membership as soon as possible, as is the case for a number of other Member States who have fallen behind on payments of their annual subscription.

#### Regional Applications for Membership of the IHO

3. The non-IHO Member States of the NIOHC region need to be encouraged to become IHO member. Jordan, Maldives and Sudan are considered as potential member states of the IHO in the future.

4. The IHO Secretariat, in cooperation with the Department of External Relations of the Government of Monaco, stands ready to assist, through diplomatic or other channels, for membership of the IHO of non-member States in the North Indian Ocean region.

5. The IHO Secretariat, in consultation with individual Member State representatives, also briefs relevant diplomatic missions in order to raise the profile of the respective national hydrographic service and the importance of hydrography.

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

6. India, as Chair of the International Charting Committee Working Group (ICCWG) for Region J, is responsible to provide regular updates to S-11 Part B - Catalogue of INT Charts. The status of the INT chart scheme for region J is contained in Edition 3.0.0 of S-11 Part B which was made available in January 2017. According to the S-11 Part B Web Catalogue, there are 172 INT charts (and/or plans) in the scheme, of which 144 have been published (84%). I would encourage member states to continue to support the India, as INT coordinator, in providing the IHO Secretariat with regular updates to S-11.

7. The report of the NIOHC ENC Scheme was not received by the WENDWG8 meeting held in March 2018. There is a need, at the IHO level, to know what the plans are in this charting region, so appropriate recommendations to fix the issues (including those affecting adjacent areas).

8. Early January 2018, the IHO Secretariat informed the Chart Coordinators that the project INTOGIS Phase II was underway, thanks to the outstanding support provided by KHOA (Republic of Korea). For more information, see Documents available on the WENDWG-8 webpage. Since the publication of Ed. 3.1.0 of S-11 Part A, INTOGIS Phase II aims to provide a very useful scheming tool, putting together ENC and INT charts. 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).

9. The elimination of overlapping ENC data that are navigationally significant is one of the main objective 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*).

10. All NIOHC region Member States are also 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**

11. The level of activity of the IHO Capacity Building (CB) Programme relatively 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 IHO 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.

12. NIOHC member States are encouraged to nominate suitable candidates for long term CB courses which are follows:

- The IHO - Nippon Foundation CHART (Cartography, Hydrography and Related Training) Project that provides CAT B training in Marine Cartography and Data Assessment at the UKHO, and is funded by the Nippon Foundation.

- CAT A Hydrography Master Program at the USM, in the USA funded by the ROK.

- New CAT B Hydrographic Survey Program at the KHOA, in Busan, ROK funded by the ROK.

### **Crowdsourced Bathymetry**

13. 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 (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 will be presented

to IRCC10 for endorsement, prior to submission to IHO Council-2 and IHO member States for approval. It is considered that 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 to enlarging the scope of the tasking of the CSBWG, the CSBWG drafted revised ToRs for submission to IRCC10.

14. 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.

### **GEBCO Project**

15. The General Bathymetric Chart of the Oceans (GEBCO) Project is a joint programme that is executed under the governance of the IHO and the IOC and directed by a Guiding Committee. GEBCO is the only long-term international project with a mandate to map the ocean floor. Through the work of its organs (Technical Sub-Committee on Ocean Mapping (TSCOM), a Sub-Committee on Undersea Feature Names (SCUFN), a Sub-Committee on Regional Undersea Mapping (SCRUM)), GEBCO produces and makes available a range of bathymetric data sets and products, including gridded bathymetric data sets, the GEBCO Digital Atlas, the GEBCO world map, the GEBCO Gazetteer of Undersea Feature Names. GEBCO maintains a comprehensive website at <http://www.gebco.net>. NIOHC member States are encouraged to support GEBCO activities and also nominate suitable candidates to the GEBCO Training Programme leading to a Graduate Certificate in Ocean Bathymetry at the University of New Hampshire, USA.

### **Seabed 2030 Project**

16. Seabed 2030 is a new global project within the IHO-IOC GEBCO framework with the focused goal of producing the definitive, high-resolution bathymetric map of the entire World Ocean by the year 2030. The Nippon Foundation will contribute US\$ 18.5 million for the first ten years of the project. The aspiration is for Seabed 2030 to compile all available and newly collected bathymetric data into a high quality, high resolution digital model of the ocean floor and to promote international efforts to collect new data. The project seeks to encourage the data collectors and data managers of governmental, academic and private interests to work together to improve the quality of publicly-available grids of the ocean floor. This project is focused on the goal of compiling a high-resolution, openly available, Digital Bathymetric Model (DBM). This DBM should efficiently provide bathymetric information at an improved resolution to end users. The Seabed 2030 project has potential to create partnerships and cooperation between interested parties, significantly improving our understanding of the sea floor and empower sustainable ocean management in the coming century. NIOHC member States are also encouraged to support the Seabed-2030 Project.

### **IHO GIS and Databases**

17. 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.

18. 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 NIOHC 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

19. 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.

20. 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.

### **Preparation of the next meeting of the IHO Council**

21. The main outcomes of the 1st meeting of the IHO Council were reported in IHO CL 55/2017.

22. 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 has started, 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 is 9 July 2018, while comments on proposals to be included in the Red Book for the Council will be expected by 31 July 2018.

### **IHO Outreach**

23. World Hydrography Day.

Taking into account the discussions at the 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*

24. Member States have been invited to forward as soon as possible to the IHO Secretariat any material that is created in support of national WHD-2017 celebrations for

posting on the IHO website. This will enable the widest possible dissemination of publicity and support material for the event.

25. International Hydrographic Review (IHR). The IHR provides an ideal opportunity for Regional Hydrographic Commissions and Member States to publicise technical and other achievements in the region. An editorial board comprising a representative from each region has been established. Papers for consideration for publication in the IHR should be forwarded directly to the editor ([ihreview@iho.int](mailto:ihreview@iho.int), copy to [ian.halls1@defence.au.gov](mailto:ian.halls1@defence.au.gov)). The deadlines are:

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

### **Action Requested of NIOHC Member States**

1. Note this report
2. Provide continuous updates to S-11 Part B, through India as coordinator for INT Region J
3. Review entries in IHO Publications C-55 and P-5 (Year Book) at least annually.
4. Provide continuous updates to S-11 Part B for INT Region J through the INTtoGIS tool and implement the procedure depicted in IHO CL 64/2015 for the review and monitoring of INT charts.
5. Report to the IHO Secretariat on the status and description of the ENC schemes in the Region J.
6. Consider submitting papers for publication in the IH Review.
7. Take any other actions as considered appropriate.