



REGIONAL HYDROGRAPHIC COMMISSION

North Indian Ocean Hydrographic Commission Report to IRCC8

1. Chair

Chair: Rear Admiral Mohammad Makbul Hossain (Bangladesh)

Vice-Chair: Egypt

2. Membership

Members: Bangladesh, Egypt, India, Myanmar, Pakistan, Saudi Arabia, Sri Lanka, Thailand and United Kingdom.

Associate Members: Australia, France, Oman, Mauritius, Seychelles and USA.

Observer: Malaysia

3. Conferences

Last Conference: 16th NIOHC, 14-16 March 2016, Chittagong, Bangladesh

Next Conference: 17th NIOHC, TBD March 2017, Alexandria, Egypt

4. Current NIOHC Working Groups

- a. **North Indian Ocean ICCWG (NICCWG).** Coordination of INT charting and ENC coverage within the NIOHC region are ongoing.
- b. **Capacity Building.** Capacity building activities since IRCC7 are appended below:
 - MBES Processing training courses were conducted at Chittagong, Bangladesh from 12 to 16 April 2015 and at Colombo, Sri Lanka from 06 to 10 April 2015.
 - 'Introduction to MBES Operations' course was conducted at Visakhapatnam, India from 09 to 13 February 2015 in conjunction with IIC Academy, India, where Bangladesh, Egypt, Seychelles, Mauritius, Myanmar and Oman participated.

- ENC QA training course was funded but could not be delivered in 2015. To maximize resources, this course will be conducted in conjunction with RSAHC at Abu Dhabi, UAE in September 2016.
- Introduction to MSDI & Data Management course will be held at Visakhapatnam, India from 20 to 24 June 2016 in conjunction with IIC Academy, India.

5. Status of IRCC Actions (Relevant for the NIOHC)

No	IRCC7 Actions	Status	Remarks
IRCC7/01	Encourage the approval of pending applications for IHO membership	<i>Completed. Member States were encouraged</i>	<i>Covered under agenda item 5.1 IHB Report at NIOHC16.</i>
IRCC7/02	Continue to engage pending applicants in their region to encourage the ratification of the IHO Convention	<i>Completed. Member States were encouraged</i>	<i>Covered under agenda item 5.1 IHB report at NIOHC16.</i>
IRCC7/03	Consider the participation of stakeholders at the RHC conferences	<i>Completed. Stakeholders and industry participants were invited to 16th NIOHC Conference at Chittagong, Bangladesh.</i>	<i>CARIS, Fugro LADS Corporation Pty Ltd, Kongsberg Maritime, Jeppesen, SevenCs GmbH, PRIMAR and IIC Technologies Ltd were in attendance and enhanced the depth of the conference.</i>
IRCC7/04	Continue to engage suspended MS in their region to encourage their re-admission to the IHO	<i>Completed. Member States were encouraged</i>	<i>Covered under agenda item 5.1 IHB report at NIOHC16.</i>
IRCC7/05	Provide the IRCC Chair with progress reports on the relevant tasks in the IHO 2015 Work Programme	<i>Provided</i>	
IRCC7/07	Provide to the IRCC Chair the estimated values of SPIs and agreed WPIs as of 31 December 2015 and target values for 31 December 2017, complemented by the comments on the difficulties encountered and suggestions for a way forward	<i>Provided</i>	
IRCC7/08	Invite GEBCO Guiding Committee /Bathymetric Regional Project Chairs to attend corresponding RHCs meetings, aiming at strengthening collaboration with a priority on improving high	<i>Completed</i>	<i>GEBCO attended in the 16th NIOHC Conference.</i>

	resolution shallow water bathymetry at the regional level.		
IRCC7/09	Encourage MSs and representatives of industry and academia to promote and to work together to ensure that the best possible use is made of Satellite Derived Bathymetry.	<i>Completed</i>	<i>Discussed under the agenda item 13 - Satellite Derived Bathymetry.</i>
IRCC7/15	Provide material to the IHB to promote the achievements of IRCC bodies.	<i>Ongoing</i>	<i>MSs were requested to submit suitable material to IHB.</i>
IRCC7/17	Encourage National Hydrographers to invest in English language training in order to increase the chances of their candidates being selected to Cat A and Cat B training courses delivered in English.	<i>Completed</i>	<i>Discussed in the 16th NIOHC Conference under the agenda item 7.2 – NIOHC capacity building.</i>
IRCC7/18	Facilitate resolution of important inconsistencies between paper charts and ENC's and between ENC's from different producers as identified by the RENCs or otherwise.	<i>Completed</i>	<i>Discussed in the 16th NIOHC Conference under the agenda item 17.5 – presentation by industrial participant SevenCs</i>
IRCC7/26	Report to IRCC on the status of the RHC procedures for selecting their respective representatives to the council.	<i>Completed</i>	<i>Exhaustive discussion took place in the 16th NIOHC Conference under agenda item 4.1. The details of this issue is included in the report.</i>
IRCC7/27	To task: a) New Chart Producer Nations to provide first edition INT chart to Regional INT Chart Coordinator (ICCWG) for review as soon as convenient during the production cycle; b) INT Chart Coordinators/ICCWGs to manage the review of the first edition INT charts produced by new INT Chart Producer Nations to check their compliance with IHO standards, provide feedback to the Producer and to report progress to the next RHC meeting; c) All INT Chart Producer Nations to provide first edition INT charts to Regional INT Chart Coordinator 3	<i>Completed</i>	<i>Detail discussion took place in the NICCWG meeting held in the 16th NIOHC Conference. All INT Chart Producer Nations and INT Chart Coordinator for region J are tasked accordingly.</i>

	<p>months prior to very RHC meeting to enable Regional INT Chart Coordinator to validate current INT chart Scheme;</p> <p>d) All editions of INT charts submitted under section a) and b) to be subsequently transferred to the IHB to be included in the IHB reference collection for internal use; and e) Member States to provide an update of the list of on-line chart catalogues, either directly or systematically when updating the Yearbook.</p>		
IRCC7/48	Consider nominating regional representatives on the MSDIWG.	<i>Completed. Member States were encouraged</i>	<i>Covered under agenda item 5.1 IHB report at NIOHC16.</i>
IRCC7/53	Remind HO's of the standing request to provide GEBCO with access to existing shallow water bathymetric data, at whatever resolution is permissible by the country and to report progress to IRCC.	<i>Completed</i>	<i>The issue was discussed under the agenda item 8.1 GEBCO and 12 – Crowd Sourced Bathymetry.</i>

6. Agenda Items of 16th NIOHC Conference

The full agenda items are placed in the NIOHC page on the IHO website. Some important agenda items are appended below:

Procedures for Selecting NIOHC Representatives to the IHO Council. An exhaustive discussion took place. MS revised the draft procedures for NIOHC representation to the IHO Council.

IHO/IHB Matters. This includes IHB report, NIOHC report to IRCC7, IRCC7 report, WEND-WG report, HSSC7 report, status of hydrographic surveying and nautical charting worldwide C-55 and marine spatial data infrastructure. These topics were beneficial in updating all MS on the wider activities of the IHO and encouraging participation of the MSs on different WGs of IHO.

Towards Data Centricity / e-Navigation to Recognise its Importance to the Mariner and Future Hydrographic Products. Data centricity and e-Navigation are not the same thing. Maritime data is an asset for multipurpose use, just not to produce a product. E-navigation is required for maritime information. There is a lack of coordination among the maritime services, that's why there is a need of regional solution. E-Navigation is one of the IMO's work programmes as a new concept. There is a utilization of e-Navigation study works under the IMO. IHO also contributes and supports e-Navigation. IALA is also heavily involved on e-Navigation studies. MS agreed to keep this as an agenda for next meeting.

Experience in Dealing with Maritime Disasters in relation with IHO Guidelines. Detail discussion held on the subject. Member States agreed that NIOHC Chair will take leading role as per IHO guideline to coordinate with IHB and concerned country, when some disasters occur in the region.

Crowd-Sourced Bathymetry. IHB provided a verbal summary on Crowd-Sourced Bathymetry (CSB). For bathymetric mapping projects, IHO has initiated a collaborative project to enable qualified mariners and professionally manned vessels to collect 'crowd-sourced bathymetry'. Ultimately, enhanced IHO Data Centre for Digital Bathymetry (DCDB) infrastructure and interface will allow the public to upload, search for, display and download bathymetric data via a web-based interface. The data will be kept in the DCDB as it is. It is up to users; GEBCO, Hydrographic offices, and mariners to utilize the data for their purposes. In this way, fundamental data map DCDB will be the world-referenced bathymetric data set. CSB is not intended for navigation unless quality check by hydrographic offices. They will review, appreciate in planning on basic risk assessment and have a general depth idea in a particular area for official investigation purposes. Finally, it was urged to collect bathymetric data wherever and whenever possible and to release data held in archives, at lower resolution if necessary. It became evident that all data are not appropriate for charting but all data are of use to somebody in some way. Member States agreed to have an agenda item on Crowd Sourced Bathymetry in the next conference.

Bangladesh's Experiences of Surveying and Charting in a Dynamic River Environment. A paper was presented on the topic at the conference. In the presentation, the problems of hydrographic survey in the dynamic coast came up. Some unique characteristics and phenomenon of the coast in terms of tide, tidal stream, salinity, temperature, turbidity, monsoon effect, shallow & indented coast, shifting of channel, cyclone effect, presence of fishing fleet and inaccessibility to the coastal area were elaborately discussed. It was opined that due to these characteristics of the coastal water the hydrographic surveying tasks are more challenging in this area and different from other parts of the world. It provided a research work on how these characteristics have effect on hydrographic survey operations and on the performance of equipment. At the end, the author approached to the problems and possible remedies. This paper is uploaded in NIOHC webpage.

7. NIOHC Cooperation with other Organizations

At the 16th NIOHC Conference in Chittagong, Bangladesh delegates from GEBCO and industrial Participants (CARIS, Kongsberg Maritime, Jeppesen, PRIMAR, IIC Technologies, SevenCs, Fugro LADS Corporation) were in attendance and enhanced the depth of the conference.

8. Conclusion

All nine MSs and a total of 46 delegates attended the 16th NIOHC Conference. The three days conference had been indeed highly interactive and educative for all delegates. The

enthusiastic participation by all the distinguished guests was very encouraging. The conference was very successful and could achieve desired objectives. It is quite evident that NIOHC is an effective platform for cooperation and coordination of hydrographic activities, capacity building, maritime safety, E-Navigation, production of nautical chart, technical assistance and training support.

9. Achievements and Lessons Learned

A lot of progress is being made in regard to the capacity building for becoming self-sufficient, yet the MS need to get more fund from CBSC and/or regional countries' training support for hydrographic capability development, in particular for ENC production.

During the conference it was realized that ICCWG meeting needs a full day for discussion. INT Chart production is increasing in both coverage and currency also.

Finally, it was felt that the coordination and communication amongst the member states increased in manifolds.

10. Actions Required from the IRCC

The IRCC is invited to:

- Note this report;
- Encourage more communication between ICCWG coordinators.

Rear Admiral Mohammad Makbul Hossain
NIOHC Chair