



**20th Meeting of the North Indian Ocean
Hydrographic Commission
NIOHC 20
VTC, 13-15 July 2021
Draft Minutes**



Documents pertaining to the meeting are available and can be downloaded from the NIOHC 20 document page of the IHO website.

Full list of participants can be found in the List of Participants on NIOHC 20 document page of the IHO website.

Day 1

1 Official Opening Session

1.1 Key note Address by the Chairman- Rear Admiral YN Jayarathna, (Chair) formally opened the 20th Meeting of the NIOHC and warmly welcomed all participants for the VTC event. The Chair expressed his regrets on not conducting NIOHC 20 meeting physically at Colombo, Sri Lanka in 2020 and in 2021 as anticipated due to COVID-19 pandemic concerns. Further, he elaborated on the vital role NIOHC plays in terms of navigational products and hydrographic surveys in the region and highlighted the need for working collaboratively towards creating a complete map of the world oceans to support national and regional development activities, identify uncharted features, fill gaps where data is scarce etc, by releasing CSB data in to the public domain. Finally, the Chair conveyed his sincere gratitude to all participants of the meeting.

1.2 Opening Remarks by the IHO Director- Mr. Abri Kampfer (Director IHO) delivered the opening remarks highlighting the important role RHCs have to play regionally with special emphasis on technical, cooperative and collaborative functions of RHCs. Further, emphasised on the importance of working together for the benefits of nations leaving all the political divisions aside as practiced previously. During the speech, he elaborated on the IHO 100th anniversary celebration under the theme of **“One hundred years of international cooperation in hydrography”**. Finally, he welcomed all participants to NIOHC 20 and looked forward for a successful meeting.

2. Administrative Arrangements- The Chair briefly explained the administrative arrangements for the VTC meeting and encouraged all participants to raise any admin issues with the NIOHC Secretariat.

3. Approval of Agenda and Time Table- The Chair stated that the draft agenda for the meeting is already uploaded to the IHO web site and opened forum for comments and amendments. All the Member States and Associate Member States in attendance approved the draft agenda. Associate Members, Australia and Seychelles were absent for the meeting.

4. Approval of 19th NIOHC Minutes- The Chair stated the availability of the Minutes of the 19th Meeting in NIOHC page of the IHO web site and all participants expressed their consent on the contents of the Minutes of the previous meeting.

5. Review of 19th NIOHC Actions List- The Chair stated 19th NIOHC action list already circulated and requested for comments / any matter to be discussed at the forum. The Chair noted that some action points will be discussed in detail under specific subject headings during the progress of the meeting and concluded the agenda point with the approval of the participants. Following table indicates the present status of the action list of 19th NIOHC Meeting with comments from Member States included.

No.	Agenda Item	Action	Action By	Deadline	Status	New Status
1	5 (from 2019 actions)	Investigate ways to encourage engagement with Jordan, Maldives and Sudan to progress towards their becoming members of NIOHC and IHO.	Chair	Ongoing	Ongoing	Item closed and new action initiated with including all non-IHO member countries in the region.
2	5 (from 2019 actions)	Member States are encouraged to participate in IHO meetings (IRCC, HSSC, WEND-WG & MSDIWG etc).	All	Ongoing	Ongoing	All of the aforementioned IHO meetings have had participants from within the NIOHC MS. Item closed.
3	5 (from 2019 actions)	Encourage NIOHC states to make ENC's available through RENC.	All	Ongoing	Ongoing	UK indicated they have actively undertaken this through IC-ENC. Item remain ongoing.
4	5 (from 2019 actions)	Encourage NIOHC Member States to make currently held data publicly available and discover.	All	Ongoing	Ongoing	Importance of sharing data highlighted at opening address. Further UK indicated their data held with National Data Archive and freely available under open government licence. Item remain ongoing.
5	5 (from 2019 actions)	Review published data and provide updates to C55 and P5 at least once a year.	All	31 Dec every year	Ongoing	Action incorporated with Agenda 7.1. Item closed.

6	5 (from 2019 actions)	Improve provision of navigational warning information from National Coordinators to NAVAREAVIII and NAVAREA IX Coordinators.	NAV AREA Coordinators	Ongoing	Ongoing	Incorporated with Agenda 14. Item closed.
7	5 (from 2019 actions)	Engage with future work of the IMO-ITU EG and GMDSS CG.	All	Ongoing	Open	No longer IRCC action. Item closed.
8	5 (from 2019 actions)	Cross check C-55 and GMDSS Master Plan Annex 7 and 8 entries to ensure harmonisation of information.	All	Ongoing	Ongoing	No longer IRCC action. Item closed.
9	5 (from 2019 actions)	Provide details of tide gauges and currents meters for inclusion in the Inventory of National Tide Gauges and Current Meters on the TWCWG page of the IHO website.	MS	Ongoing	Ongoing	UK indicated UKHO provided details to IHO TWCWG. Item remain ongoing.
10	5 (from 2019 actions)	Provide URLs to real-time online tides and currents websites for inclusion in the Actual Tides and Currents On-line Links on the TWCWG page of the IHO website.	MS	Ongoing	Ongoing	UK indicated UKHO provided URLs to IHO TWCWG. Item remain ongoing.
11	6 (from 2019 actions)	NIOHC Secretariat to work up Terms of Reference for the proposed WG. Circulate to members by end of this RHC meeting to cover in AOB.	NIOHC Secretariat	NIOHC 19 AOB	Complete	New statutes completed. Item closed.
12	7.3 (from 2019 actions)	All nations requested to investigate and articulate the challenges and dissemination of data to the mariner in the non-regulated SOLAS market and report at NIOHC 20.	All	NIOHC 20	Open	Item incorporated with national report template. UK indicated the availability of method adopted by them in UKHO national report. Item closed.

13	7.5 (from 2019 actions)	India to raise S58 checks issue at the next ENC WG.	India	Next ENC WG	Open	India had raised matter at ENCWG4 and action completed. Item closed.
14	IRCC10 action 21 (from 2019 actions)	All members to consider where Member States can support international events of relevance occurring in their country or region to liaise as necessary with IHO secretariat.	All	Ongoing	Ongoing	This no longer IRCC action. Item closed.
15	10.2 (from 2019 actions)	The Chair to arrange a dedicated agenda time on S100 development and product/ service delivery by next meeting.	Chair	NIOHC 20	Open	Action completed. Item closed.
16	10.2 (from 2019 actions)	CB Coordinator/All to form a CB subcommittee for NIOHC to better inform capacity building activity within the NIOHC region by next meeting.	CB Coordin ator/ All	NIOHC 20	Open	Action completed. Item closed.
17	10.2 (from 2019 actions)	CB Coordinator/ India to develop a paper to present to Council/IRCC/CBSC reflecting concerns regarding allocation of IHO Capacity Building resource /funds.	CB Coordin ator/All	Jun-19	Open	Action completed. Item closed.
18	13 (from 2019 actions)	Egypt requested to engage with maritime safety authority to confirm most expeditious means are being utilised for transmission of maritime safety information ASAP.	Egypt	ASAP	Open	Egypt confirmed action taken to ensure timely dissemination of all MSI. Item closed.
19	13 (from 2019 actions)	IALA and IHO Secretariat to investigate possibility of joint visit to Somalia with IMO support if possible by next meeting.	IALA and IHO Secr etari at	NIOHC 20	Open	IALA indicated continue to pursue a joint IHO, IMO & IALA Mission to Somalia. Item remain ongoing.

20	24 (from 2019 actions)	The Chair to generate a template for HADR contact details and share with MS to populate with a time line of two months to complete.	Chair	May-19	Open	Template distributed among MS. Item remain ongoing.
21	24 (from 2019 actions)	The Chair to raise this NIOHC discussion and recommendations (Maritime Disaster in Relation with IHO guidelines) at next IRCC.	Chair	Next IRCC	Open	Action completed. Item closed.
22	24 (from 2019 actions)	India to raise the importance of hydrographic services in HADR at the next Council meeting recommending that suitable visibility for this important element is included in IHO documentation.	India	Council 3	Open	India indicated they will raise the matter at Council 5. Item remain ongoing.
23	28 (from 2019 actions)	Statutes WG to decide who will be the Chair of the Working Group and inform the Secretary.	Statutes WG	July 2019	Open	NIOHC statutes completed. Item closed.
24	28 (from 2019 actions)	SWG Chair to report on findings to next NIOHC meeting.	SWG Chair	NIOHC 20	Open	Action completed. Item closed.

6. Statutes of the NIOHC – The Chair inquired whether any participant would like to propose any amendment to the existing statutes. There were no comments and statutes were approved. Further, the Chair noted that revised statutes will be discussed under agenda point 11.3.

7. IHO Matters

7.1 IHO Secretariat report - IHO Director, Mr. Abri Kampfer, presented IHO Secretariat report and stated IHO report already uploaded to NIOHC web page. Initially he briefed about status of IHO membership including new IHO member countries and expressed necessity of encouraging Non- IHO Members in the region towards becoming IHO members. Further, stated that IHO Secretariat in cooperation with Government of Monaco stands ready to assist Non- IHO Members in the NIOHC region to obtain membership. Later, he explained about the IHO centenary celebration programme conducted as hybrid event due to current COVID-19 pandemic. In addition, UK indicated they continue to liaise with countries which UKHO act as PCA and accordingly, Jordan participated NIOHC 20. India indicated as per their request, Maldives is in attendance for the NIOHC 20 meeting.

No.	Agenda Item	Action	Action By	Deadline	Status
8	7.1	Encourage Non- IHO Members in NIOHC region (Djibouti, Eritrea, Jordan, Maldives, Somalia, Yemen and Sudan) to become members of NIOHC and IHO.	All	Ongoing	Open

In addition, the Chair encouraged NIOHC members to consider submitting papers for IHR and expressed necessity of removing barriers in national legislation restricting CSB activities.

No.	Agenda Item	Action	Action By	Deadline	Status
9	7.1	Encourage to submit papers for publication in the IHR.	All	Ongoing	Open
10	7.1	Encourage to review national legislation to remove barriers restricting CSB activities within maritime jurisdiction.	All	Ongoing	Open

7.2 IHO C4 Report (4th IHO Council report) - Outcome of the 4th IHO Council was then briefed by the Director IHO including the important decisions taken. He explained about decision on future of S-23 and establishment of S-130 project. Moreover, he invited NIOHC Member States to nominate expert contributors to participate in the events. Later, he explained on present progress of revision of the definition of Hydrographic Interest and invited Member States to consider active contribution towards the effort.

No.	Agenda Item	Action	Action By	Deadline	Status
11	7.2	Nominate participants for establishment of S-130 Project Team to develop the Product Specification and the resulting data set.	Chair/ All	15 August 2021	Open

12	7.2	Encourage to contribute to a future joint activity of interested parties in the development phase of a revised definition of Hydrographic Interest & India to inform Member States when Hydrographic Interest WG ready for participation.	All/India	C-5,C-6	Open
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IHO Director invited NIOHC members to contribute to the implementation of the strategic developments in the future paper chart and share practical experiences gained in the parallel production of S-57 and S-101 ENC's. Further, stated IHO secretariat encourages Member States to contribute to expand production of S-100 based products including future quality maintenance and distribution procedures.

No.	Agenda Item	Action	Action By	Deadline	Status
13	7.2	Proactively contribute to the implementation of the strategic development in future paper chart layout and production	All/India	C-5,C-6	Open
14	7.2	Share practical experiences gained with the parallel production of S -57 and S - 101 ENC's including their use for streamline paper chart production with IHO Secretariat.	All/India	C-5,C-6	Open
15	7.2	Proactively contribute to the expanded production of S - 100 based products and all considerations in view of the future quality maintenance and distribution procedures.	All/India	C-5,C-6	Open

7.3 IHO A2 Report (2nd IHO Assembly report) - IHO Director briefed on the outcome of the 2nd IHO Assembly (A-2) and decisions taken during the event including the approval of the revised Strategic Plan, the Work Programme and Budget of the Organization. Also, invited NIOHC to adopt respective instruments to comply with IHO resolution 2/1997 (Establishment of Regional Hydrographic Commissions) as amended by A-2.

No.	Agenda Item	Action	Action By	Deadline	Status
16	7.3	Comply with the recommendations of the IHO Resolution 2/1997 as amended by A.2.(Establishment of Regional Hydrographic Commissions)	Chair	NIOHC 21	New statues incorporated with IHO Resolution 2/1997.

7.4 IRCC13 Report (Inter Regional Coordination Committee 13 report)

- IHO Director later conducted a verbal briefing on the outcome of the IRCC 13 meeting and explained on S-100 implementation plan, strategic issues on S-100 like dual fuel concept, requirement of governing document for parallel production of S-57 & S-100 and inputs received from RHC Chairs. Further, indicated list of actions, decision and recommendations relevant to the event is uploaded to the IRCC page of the IHO web site.

7.5 WENDWG-11 Report (Worldwide ENC Database –Working Group)

- IHO Director presented on the outcome of the WEND WG 11 meeting and indicated that it was mainly focused on WEND-100, development of guidelines for transition from S-57 to S-100 and guidelines on how WEND-100 effect on S-1XX products. Further, elaborated on KHOA's proposal on new INTToGIS III which use S-128 (Catalogue of Nautical Products) to cover the S-1XX products and S-101 ENC scheming guidelines.

No.	Agenda Item	Action	Action By	Deadline	Status
17	7.5	Encourage to follow the finalization of the WEND100 principles through the active participation at the WENDWG.	All/India	C-5,C-6	Open
18	7.5	Check the quality of the information available in INTToGIS III for the Region J and report any discrepancies.	All/India	Ongoing	Open

Further, he explained on development of questionnaire for ENC producers on High Density ENC's (HD ENC) production released vide IHO CL 26/2021 and encouraged Member States to provide feedback for aforementioned CL.

No.	Agenda Item	Action	Action By	Deadline	Status
19	7.5	Encourage members to provide feedback to IHO CL 26/2021 - Survey on the Production of High Density ENC's (HD ENC's).	All	30-Sep-21	Open

7.6 HSSC-13 Reports (Hydrographic Services and Standards Committee 13 report) - IHO Director presented on the outcome of the HSSC, mainly elaborating on S-100 implementation road map including S-100 product specifications development and timeline. In addition, mentioned on HSSC recommendations on the report of future of paper chart and importance of ENC scheming whilst maintaining INT chart production as necessary. The progress of NIPWG, NCWG and Project Team on S-130 (Polygonal Demarcations of Global Sea Areas) was extensively discussed. Establishment of Hydrographic Surveys WG (HSWG) and Project Team on Maritime Autonomous Surface Ships (MASS) were also briefed to the participants. Later, ECDIS anomalies observed by ENC WG were also explained to meeting and encouraged implementing recommendations given by ENC WG.

7.7 IHO Year book P-5 - IHO director described on IHO Yearbook (P-5), stated present status available in IHO secretariat report and encouraged Member States to update P-5 annually.

7.8 Status of Hydrographic Surveying and Nautical Charting Worldwide C-55 - Director IHO provided an update on landfall and coastal charting coverage of the NIOHC region and presented on charting coverage less than 200m depth. He indicated there are considerable amount of area to be surveyed in the region. He also pointed out charting coverage of some countries exceeds 100% due erroneous data and indicated necessity of amending the same. Egypt stated they have submitted C-55 documents as per above and not yet uploaded in the web. IHO Director stated that he will update it accordingly.

No.	Agenda Item	Action	Action By	Deadline	Status
20	7.8	To ensure percentage of survey coverage do not exceed 100% in C-55 record	All	31-Dec-2021	Open

7.9 Marine Spatial Data Infrastructure (MSDI) - Director IHO presented on the outcome of MSDI WG 12 and described on the focus areas of the meeting including draft Work Plan 2021-2024, IHO-Singapore Innovation and Technology Laboratory and use of S-100 with relation to MSDI/MSP.

7.10 General Bathymetric Chart of the Oceans (GEBCO) - IHO Director briefly explained on importance and present status of General Bathymetric Chart of the Oceans (GEBCO).

8. Actions arising from HSSC 13 - The Chair highlighted there were no HSSC actions that specifically related to RHCs and requested Member States to make comments, if any. Later, IHO Director explained on key recommendations of HSSC 13 to the forum. No actions were raised by the forum.

9. Actions and recommendations arising from IRCC 13 - The Chair mentioned that the actions and recommendations of IRCC 13 are already uploaded to the NIOHC web and opened forum for discussion. Director IHO stated presentation on key recommendations and decisions are also uploaded to the web. There were no comments from the forum and following are the salient points raised during IRCC 13 pertaining to NIOHC region.

No.	Agenda Item	Action	Action By	Deadline	Status
21	9	Encourage focus on ENC schemes considering IHO Resolutions and Standards for any continuing INT chart production.	Chair	Ongoing	Open
22	9	Provide any update/change to their position in relation with the CSB questionnaire to IHO Secretariat (IHO CL 21/2020).	All	Ongoing	Open
23	9	Regional Coordinators to act as the Point of Contact for CSB/Seabed 2030 and to raise the profile of data gathered and provision within their respective region.	All/India	Ongoing	India indicated they act as the Point of Contact for CSB 2030 activities as Regional Coordinator. Open.
24	9	Extend the role of Charting Regional Coordinators for the implementation of the S-100 Implementation Roadmap.	India	Ongoing	Open
25	9	Plan at least one face-to-face meeting between the 2nd and the 3rd sessions of the IHO Assembly.	Chair	A-3	Open
26	9	Apply Resolution 1/2005 in case of disasters occurred to support the affected States.	All	Ongoing	Open

27	9	Relevant Member States to report to the IMO Secretariat and the Chair of the EGC Coordinating Panel on the progress and status of implementation of newly recognized mobile satellite services by MSI providers.	NAVAR EA Coordinators 'I' & 'J'	Ongoing	Open
28	9	Encouraged to engage with the IHO Secretariat when preparing submissions for programme recognition through IBSC.	Chair	Ongoing	Open
29	9	Encourage all Member States to actively contribute with new data to GEBCO and promote discussion on sharing existing data.	Chair	Ongoing	Open
30	9	Contribute to increase the cooperation between Hydrographic Offices' & Natural Source Regulators and reduce permitting requirements for transits through EEZs of the countries.	All	Ongoing	Open
31	9	Include the measurement of the SPI attributed by IRCC in annual NIOHC Work Plan.	Chair	NIOHC 21	Open
32	9	Continue inviting Seabed 2030 project representatives to the future NIOHC meetings to discuss options for deepened cooperation and support.	Chair	Ongoing	Open

END OF DAY 01

Day 2

Prior commencement of the day's proceedings, the Chair stated the draft list of participants have been uploaded to the NIOHC web and requested all delegates to inform on any corrections required.

10. National Reports - The Chair invited each Member State to present a summary of their national report to the plenary and Member States and Associate Members presented in following order.

10.1 Member States

A. Bangladesh - India inquired about the procedure to obtain

charts produced by Bangladesh. Bangladesh stated that UKHO is publishing chart on behalf of them and charts shall be obtained through them for which UKHO gave the confirmation.

- B. Egypt - No comments
- C. India - No comments
- D. Indonesia - No comments
- E. Myanmar - No comments
- F. Pakistan - No comments
- G. Saudi Arabia - No comments
- H. Sri Lanka - No comments
- I. Thailand - No comments

J. United Kingdom - The Republic of Mauritius informed the meeting that it had submitted a written statement on the report of the United Kingdom. The Chair acknowledged the receipt of the statement and informed matter will be discussed under Agenda Item 18.

10.2 Associate Member States

- K. Australia - Absent.
- L. France - No comments
- M. Mauritius - No comments
- N. Oman - No comments
- O. Seychelles - Absent
- P. USA - No comments

11. NIOHC Committees and Working Groups

11.1 NIOHC International Chart Coordination Working Group (NICCWG) - The Chair invited the Chair NICCWG VAdm Vinay Badhwar of India to present on the outcome of NICCWG meeting held on 12th July 2021. The Chair - NICCWG summarized the agenda points raised by Bangladesh as follows.

- a. Updating of S 11 and IHO web catalogue with respect to Bangladesh INT Charts.
- b. Resolution of ENC cell IN231BBN which had been documented and agreed to resolve bilaterally.

Further, the Chair NICCWG stated that, Pakistan has raised old issue

of INT Chart 751 and this has been going on since 2013. Further, he described that matter had to solve through Area 'I' and Area 'J' INT Chart Coordinators. India made the following statement on the matter.

“India does not recognize this allocation since it was done not following the consultative process as documented by IHO for INT Chart production, and does not repeat and do not recognize this allocation because 50% of the chart was in Area 'J' and contains considerable amount of Indian data and neither India nor the Area 'J' Coordinator were consulted despite of Pakistan also member in this Hydrographic Commission”

Then Pakistan stated that, India being Coordinator for Area 'J', delegated the responsibility for production of INT Chart 751 to Pakistan in 1994 and Pakistan making charts since 2003 and subsequently producing the ENC too. The Chair noted the matter and advised to keep on engaging between two countries to resolve this issue in liaison with respective INT Chart Coordinators.

11.2 North Indian Ocean Hydrographic Commission Capacity Building

- The Chair invited the North Indian Ocean Hydrographic Commission Capacity Building Coordinator Ms. Lucy Fieldhouse to present NIOHC CB report. Ms Lucy briefly explained the outcome of CBSC 19 meeting. Further, elaborated on 3-year CB plan for NIOHC region including technical visit to Somalia, MSI Training Course and Seminar on Raising Awareness of Hydrography during NIOHC 21, MBES Processing Course, S-10X awareness and MSI Training Course. Later, explained on lack of IHO funding for Capacity Building activities due to the impact of COVID-19 pandemic. She elaborated on current progress on IHO Empowering Women in Hydrography (EWH) initiatives and encouraged Member States to take part in this initiative.

No.	Agenda Item	Action	Action By	Deadline	Status
33	11.2	Participate in Empowering Women in Hydrography project.	All	Ongoing	Open

CB Coordinator further requested Member States to inform any regional CB opportunities to include in CBSC Calendar, approve the 2021-2023 Work Plan and inform the CB Coordinator of any further CB requests by January 2022 for submission for funding for 2023. The Chair informed participants to raise any comments/ suggestions regarding the planned CB activities and no comments were raised.

No.	Agenda Item	Action	Action By	Deadline	Status
34	11.2	Inform CB Coordinator of any regional CB opportunities to include in CBSC Calendar.	All/ CB Coordinator	Ongoing	Open

11.3 North Indian Ocean Hydrographic Commission - Statutes Working

Group (NIOHC-SWG) - The Chair invited the Interim Chair NIOHC- SWG to present SWG report. Interim Chair NIOHC-SWG, Mr. Tim Lewis, briefly explained about the background, which leads to establishment of SWG. Further, elaborated on main considerations during the process such as length of tenure of the Chair, revision of existing text in line with the Secretarial terminology and general updates to reflect IHO resolution 2/1997 as amended by A-2. Then he thanked India, Egypt and Thailand for submitting views during the revision process.

The Chair thanked the Interim Chair NIOHC-SWG for his efforts towards finalizing new statutes and opened the floor for Member States to comment. India thanked Mr. Tim and stated they prefer continuation of one-year tenure to give fair opportunity for all members considering the number of Member States. The Chair decided to go for a vote for the tenure of NIOHC Chair. India & Myanmar opted for one-year tenure whereas remaining Member States opted for 2 years tenure. Based on the results Member States agreed for 02 years tenure for NIOHC-Chairmanship. Subsequently all the Member States agreed on the draft NIOHC statutes dated 15th July 2021 with all relevant amendments and accepted the document as the statute of the NIOHC. Later, the SWG was dissolved with the consent of the Member States.

12. Relevant International Organization Reports

12.1 International Association of Lighthouse Authorities (IALA). - The item postponed to next day as per request by the presenter.

12.2 Regional ENC Coordination Centre (RENC) - Mr. James Harper from IC-ENC presented IC-ENC report and elaborated about overview of IC_ENC including new services in the S 100 era and new services in support of non-ECDIS craft. France inquired about the kind of support given by the IC-ENC for S 100 production and training. Mr. James Harper described about learning management system and ENC validation training programme conducted by IC_ENC.

13. Industry Presentations

Fugro- Mrs. Talia Sherrard presented on Fugro covering contribution for hydrographic operations with their products, specially Blue Shadow Autonomous and Unscrewed Surface Vessel (USV) and how they have improved digitalization of data with the integration of various assets available with them with a limited time frame. Further, she elaborated on their 08 no's of remote operational centres which operate continuously to obtain collected data within few hours.

13.1 iXblue – Mr. David Vincentelli presented iXblue presentation covering use of offshore remotely operated survey platforms for hydrographic operations. The presentation is available on the NIOHC document page of the IHO website.

13.3 SevenCs- Mr. Loh Yee Wei presented “Validation of S-100 based products”. He highlighted not only validation checks need to be conducted at single-product level (standalone S-101, S-102 etc), but also other

interoperability checks for S-10x products are required (eg S-101 with S-102). This will allow the next generation S-100 ECDIS to support a variety of products and operate in a seamless way. Independent data validation, separate from the production software, must transform from being an isolated procedure into an integrated one. The presentation is available on the NIOHC document page of the IHO website.

14. Maritime Safety and the World Wide Navigational Warnings Service

The NAVAREA-VIII Coordinator (India) described on status of MSI in area of responsibility as well as problems encountered such as not receiving follow up reports for NAVAREA cancellation in time and updating of contact details of National Coordinators. Further proposed to conduct MSI training for Member States through IHO CB programmes to raise awareness.

The NAVAREA-IX Coordinator (Pakistan) presented on status of MSI in area of responsibility and elaborated on present procedures adopted by them in dissemination of MSI. The Chair opened the floor to clarify the matters related to NAVAREA VIII and NAVAREA IX and no comments raised by the participants.

No.	Agenda Item	Action	Action By	Deadline	Status
35	14	National Coordinators to improve provision of navigational warning information and share updated contact details with respective NAVAREA Coordinators.	All	Ongoing	Open

END OF DAY 02

Day 3

On commencement of day three, the Chair stated agenda number 12.1 postponed in previous day and invited IALA representative to conduct presentation on IALA.

12.1 International Association of Lighthouse Authorities (IALA) - Mr. Omar Eriksson presented the report on IALA and explained how IALA activities are taking place around the world including CB activities. Then he briefly explained transformation of IALA into an Inter – Governmental Organization (IGO). France elaborated on the importance of this initiative and encouraged Member States participation in conversion of IALA as Inter Governmental Organization and ratification of the IALA Convention. The Chair supported the comment by France.

15. Regional SDI/MSDI/MSP requirements - The Chair stated that regional SDI/MSDI/MSP requirements shall be a permanent agenda point of NIOHC as per IRCC 12 actions and opened floor for all Member States to express their

views. Mr. Tim Lewis from UKHO stated that the some of the RHCs have been already established with MSDIWG in their respective regions and briefly explained need of forming a MSDI Working Group for the region. Whilst explaining the benefits, he suggested establishing a MSDIWG.

The Chair opened the floor for views and all Member States agreed to establish a MSDIWG. Then, the Chair invited Member States to volunteer for the Chair- MSDIWG. In the absence of volunteers, the Chair indicated Sri Lanka would assume the Chair role. Egypt, India, UK and USA agreed to contribute as members of the MSDIWG. Mr. Tim Lewis from UKHO agreed to draft Terms of Reference and Rules of Procedure for the WG.

No.	Agenda Item	Action	Action By	Deadline	Status
36	15	MSDI WG to present regional MSDI report to NIOHC 21	Chair MSDIWG	NIOHC 2021	Open

16. Submission of Articles to International Hydrographic Review (IHR) -

The Chair invited NIOHC Coordinator to IHR (India) to present on IHR report. India elaborated on importance of submitting articles to IHR and procedure to adopt. The IHO Director thanked India for leading the region for publication of hydrography articles, journals and other materials as well as encouraged Member States to write academically on hydrographic aspects.

17. S-100 Developments & Products/Services - The Chair mentioned that this will become a permanent agenda point in future and all Member States to note about the already published Road Map to develop S-100. The Chair opened the floor for Member States to discuss their observations and comments. Mr. Pierre-Yves Dupuy from France shared the experience in “implementation of S-100 at SHOM” with the approval of the Chair and provided participants an overview about how France is looking forward on implementation of S-100.

NIOHC CB Coordinator, Ms. Lucy Fieldhouse, stated that next year funded hydrographic awareness seminar will focus on S-100 and agreed to include proposal of S-57 to S-100 course in the NIOHC Work Plan 2023.

No.	Agenda Item	Action	Action By	Deadline	Status
37	17	To focus on S-100 during the funded seminar in 2022.	CB Coordinator	Ongoing	Open
38	17	To include proposal for S-57 to S-100 course in the NIOHC Work Plan for 2023.	CB Coordinator	Ongoing	Open

18. Mauritius request for full membership – The Chair opened the floor to discuss the matter on the Mauritius request for full membership and indicated that relevant documents have been already circulated among Member States. Mauritius stated that it fulfils all the requirements for full membership as per Article 2-a of the Statutes of NIOHC and urged the meeting to endorse its request.

At this occasion, the Chair emphasised on technical and consultative nature of the organisation all we represent. The Director IHO also commented that IHO deals only with technical aspects and provides technical consultation on hydrography. Further, he mentioned that IHO does not express any view on competing claims of territorial boundaries. Also, noted that Mauritius already has membership of other Hydrographic Commissions. Finally, he stated that it is required to strictly follow the Statutes of NIOHC to resolve this matter.

While agreeing that the NIOHC is a technical organization, Mauritius pointed out that in the light of the authoritative determinations of the International Court of Justice (ICJ) and ITLOS, it is very clear that the Chagos Archipelago forms a part of the territory of Mauritius and is not a disputed territory, as claimed by Director IHO. Further, Mauritius stated that as per UN General Assembly Resolution 73/295, all regional, international and intergovernmental organizations are required to recognize the Chagos Archipelago as a forming part of the territory of Mauritius and act accordingly. Mauritius stressed that this was not an issue of international politics as suggested by the IHO Director, but a matter of compliance with international law. Mauritius believes that despite being a technical organization, NIOHC is bound to comply with international law. Mauritius further stated that its request for full membership of the NIOHC is justifiable and urged Member States to endorse that request.

India stated that they fully agree with Mauritius claim for full membership. Indonesia supported the statement of India. Noting the final remarks made by Mauritius, IHO Director pointed out that the diplomatic initiatives are still going on as mentioned. Therefore, he urged from the Commission to hold the decision until completion of diplomatic efforts and to decide based on outcome of such efforts. At this juncture, Professor Sands of Mauritius stated that Mauritius fulfils all the requirements to be a full member as per the Statutes of NIOHC and that UN General Assembly Resolution 73/295 directed all international and regional organizations to recognize that the Chagos Archipelago forms a part of the territory of Mauritius. He added that pursuant to that resolution, the United Nations had amended its maps to depict the Chagos Archipelago as part of the territory of Mauritius. Hence, the NIOHC should take forthwith a decision on the request of Mauritius for full membership. In reply, the UK stated that to the extent that Mauritius' purported eligibility for full membership of NIOHC relies on its claim that the British Indian Ocean Territory (BIOT) (also referred to as the Chagos Archipelago) forms a part of its territory, the UK cannot endorse its application. The UK has no doubt about its sovereignty over the territory of BIOT, which has been under continuous British sovereignty since 1814. The UK strongly refutes Mauritius' claim that BIOT is a part of Mauritius.

In response to the UK's statement, Mauritius observed that if the NIOHC were to accept the UK's claim, it would be in breach of international law. It also pointed out that there were no ongoing diplomatic initiatives as claimed by the IHO Director nor was any required as it is clear under international law that the Chagos Archipelago forms a part of the territory of Mauritius and that ITLOS had ruled that Mauritius is the coastal State in respect of the Chagos Archipelago.

India proposed the Chair to consider silence of the other States as an agreement towards the Mauritius claim. Commenting on the Indian proposal, IHO Director explained that it is unfair to consider silence as a supportive remark. Also, it is more appropriate to solve this issue in a forum with subject related diplomats rather than discussing it in a forum of technical experts. UK also supported the IHO

statement and asked to obtain other Member States concern also.

Mauritius observed that on the basis of the contention of the IHO Director, it was difficult to understand how the UK could continue to be a full member of the NIOHC on the basis of a mere assertion while Mauritius was being denied such a status despite International Courts' rulings which make clear that the Chagos Archipelago forms a part of its territory.

The Chair opened the floor for views and in the absence of comments, the Chair concluded that the Agenda item 18 on the Mauritius Full Membership of NIOHC will be carried forward to the NIOHC 21 due to insufficient feedback from Member States to come in to a decision.

No.	Agenda Item	Action	Action By	Deadline	Status
39	18	Mauritius request for full membership.	All	NIOHC 21	Open

19. CSB & Seabed 2030 initiatives - NIOHC Coordinator for CSB and Seabed 2030 (India) presented on regional CSB and Seabed 2030 initiatives and mentioned that data sharing is entirely based on their individual interests/willingness and in accordance with national policy. The Chair opened the floor for comments and Mr. Tim Lewis from UKHO presented an example on how South African Navy has provided data loggers for data collection and their plan to consider providing spare loggers to Coast Guard ships in Seychelles. Also, he described on the importance of Member State participation in the initiative. In reply, the Chair mentioned that he is also in agreement with the comment and encouraged Member States to contribute towards CSB & Seabed 2030 initiatives.

20. NIOHC input to IHO meetings (Closed Session) (Chair) – Drawing the attention to the NIOHC letter on inputs for IHO meetings dated 14th June 2021, the Chair invited Member States to discuss relevant points and comment on the subject.

20.1 5th IHO Council considerations - The Chair invited India, being the NIOHC representative to IHO Council, to comment on the point. India explained on the discussion took place on “revision of definition for Hydrographic Interest” and requested Member States to submit their opinion on Hydrographic Interest in order to provide it to the next IHO Council.

20.2 NIOHC Report to IRCC14 - The Chair invited participants to comment and provide inputs in order to include them in NIOHC report to IRCC 14. Mr. Tim Lewis from UK mentioned the necessity of informing establishment of NIOHC MSDIWG.

21. Any Other Business

The Chair stated that this is the last NIOHC meeting of Vice Admiral Vinay Badhwar, Chief Hydrographer to the Government of India and invited all Member States to express their farewell wishes to outgoing CH of India. All MS extended wishes to CH of India for good health, wellbeing and success in all future endeavours. Addressing the forum, Vice Admiral Vinay Badhwar highlighted that there was a considerable change in methods and technology used in hydrography during the last four decades and explained on initiatives of termination of use of paper charts and rapid expansion of use of ENC's taking place. Autonomous Vehicles and Artificial Intelligence have become part of hydrography. Seabed 2030 is the latest target in achieving goals towards sustainable use of the sea. Finally, Admiral Badhwar stated that he will retire from the service on 30th September 2021 and wished everyone a successful future.

Under the same agenda point, Pakistan briefed on history of INT Chart 751 and production of INT Chart 751 allocated by India in 1994. However, India has produced ENC, having same coordinates of INT Chart 751 in 2003.

The issue is to be resolved through Area I & J ICCWG coordinators (India and IR of Iran) as decided during NIOHC 15 Meeting. Pakistan wrote a letter to Islamic Republic of Iran in April 2016 and gave a proposal to resolve the issue. Iran wrote a letter to India on 12 April 2017 and gave a proposal to India for resolving the issue of INT Chart 751. Reply of India is still awaiting. Therefore, India may reply to Iran so that the long outstanding issue of INT Chart 751 can be resolved amicably.

Moreover, Pakistan stated as the India has violated WEND principle and produced ENC of Indian local chart (IN 21) covering the same area as INT Chart 751, the ENC of Indian local chart (IN 21) may be held over in ADC till the cross coverage issue of INT 751 is resolved.

Later, Bangladesh pointed out that they require Capacity Building opportunities especially on transition from S-57 to S-100.

Commenting on the issue raised by Thailand on previous day, India emphasised the need of following the Statutes on membership issues. In reply, Thailand explained that they studied the matter extensively and no impediment exists for them to continue as a full member of NIOHC. At this juncture, the Interim Chair of the SWG enlightened the forum that no specific change made to the relevant article of the amended Statutes.

22. Approval of the Action List - Draft action list was made available to all participants and the Chair requested for comments. As no comments made, the Chair agreed with the suggestion of US in uploading draft action list in the NIOHC page of the IHO web site facilitating participants to make further comments and suggest amendments with a deadline.

23. Date and Venue of the next meeting - The Chair opened the floor for Member States to propose date and venue for next meeting. Further, he mentioned that date and venue for next meeting can be remained flexible considering the pandemic situation in the region and opted the next Chair to decide on the matter.

24. Election of Chair and Vice Chair – The Chair mentioned as per Statutes, present Vice Chair (Indonesia) shall become the next Chair and Indonesia agreed to take over as the new NIOHC Chair. All members agreed to accept Indonesia as the new Chair. Then, the Chair sought nominations for Vice Chairmanship. As there

were no nominees, UK suggested to allocate few days to finalise since it needs to follow certain formalities prior making such decisions. The Chair agreed with the comment made by UKHO and requested Member States to indicate suggestions to NIOHC Secretariat early.

25. Concluding Remarks by the Chair - The Chair stated that all members were benefited in many aspects through sharing/updating knowledge during the plenary and thanked Director IHO for valuable support rendered to Sri Lanka to make this event a success. Further, thanked all Members, Associated Members, International Organizations, Industry participants and those who supported his efforts during his tenure as the Chair of NIOHC. Finally, the Chair extended warm wishes to the elected Chair for successful tenure.

26. Meeting Closure - The Chair presented the NIOHC flag symbolically to the elected Chair of NIOHC in virtual mode and stated that flag will be despatched in appropriate manner. Addressing the forum, the elected Chair, VAdm Agung Prasetiawan of Indonesia, thanked all for electing him and requested the support of all concerned during his tenure. With that, the Chair officially declared the closure of the 20th Meeting of the North Indian Ocean Hydrographic Commission.

END.