



**22<sup>nd</sup> Meeting of the  
North Indian Ocean Hydrographic Commission NIOHC 22  
Hybrid, 13 – 15 February 2023  
Draft Minutes**



Documents pertaining to the meeting are available and can be downloaded from the NIOHC 22 document page of the IHO website.

Full list of participants can be found in the List of Participants on NIOHC 22 document page of the IHO website.

**Day 1**

**1 Official Opening Session**

**1.1 Addressed by Indonesian Chief of Hydrographer** – VADM Nurhidayat delivered his opening speech by welcoming all the delegates to the meeting held in Yogyakarta, he emphasized on the mutual cooperation built by NIOHC member states to always pay attention to continue the establishment of regional ENC coordination by conducting the joint hydrographic survey in high priority survey areas in the region.

**1.2 Opening Remarks by the IHO Director** - Mr. Abri Kampfer (Director IHO) emphasized the importance of the implementation of IHO S-100 in the near future. He then encourages all member states of NIOHC to actively participate in IHO working groups in order to implement the IHO S-100 products as the S-100 will legally be operated by January 1<sup>st</sup> 2026. The IHO member states are strongly required to uphold the spirit of working together in this region. Finally, he thanked the organizers and welcomed all participants to NIOHC 22<sup>nd</sup> Meeting and looked forward to a fruitful outcome.

**2. Administrative Arrangements** - The Chair invited the master of ceremony to briefly explain the administrative arrangements for both face-to-face and VTC meeting, as well as encouraging all participants to report any administration issues to the NIOHC Secretariat.

**3. Approval of Agenda and Time Table** - The Chair opened the forum for comments and amendments regarding the time table. All the Member States and Associate Member States approved the draft agenda.

**4. Approval of 21<sup>st</sup> NIOHC Minutes** - The Chair made the 21<sup>st</sup> NIOHC Minutes available on the shared screen for open discussion and approval by all delegates. The Minutes of Meeting of the 21<sup>st</sup> Meeting of NIOHC is also available on the IHO web site and all participants expressed their consent on the contents of the Minutes of the previous meeting.

**5. Review of 21<sup>st</sup> NIOHC Actions List** - The Chair stated 21<sup>st</sup> 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. The following table indicates the present status of the action list of 21<sup>st</sup> NIOHC Meeting.

NO	AGENDA ITEM	ACTION	ACTION BY	DEADLINE	STATUS
1	5 (from 2019)	Encourage NIOHC states to make currently held data Publicly available and discover.	All	Ongoing	Open
2	5 (from 2019)	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 and the URLs	Member States	Ongoing	Open
3	5 (from 2019)	IALA and IHO Secretariat - to investigate possibility of joint visit to Somalia with IMO support, if possible, by next meeting	IALA and IHO Secretariat	NIOHC-21	Open
4	7.1 (from 2020)	Encourage Non-IHO member states in NIOHC region (Djibouti, Eritrea, Jordan, Maldives, Somalia, Yemen and Sudan) to becoming members of NIOHC and IHO.	All	Ongoing	Open
5	7.1 (from 2020)	Encourage to submit papers for publication in the International Hydrographic Review.	All	Ongoing	Open
6	7.1 (from 2020)	Encourage to review national legislation to remove barriers restricting CSB activities within maritime jurisdiction	All	Ongoing	Open
7	7.2 (from 2020)	Encourage to contribute to a future joint activity of interested parties in the development phase of a revised definition of Hydrographic Interest & inform MS when Hydrographic Interest WG ready for participation	India	C-5, C-6	Open
8	7.5 (from 2020)	Encourage to follow the finalization of the WEND100 principles through the active participation at the WENDWG	All	C-5, C-6	Open
9	7.5 (from 2020)	Check the quality of the information available in INTtoGIS II for the Region J and report any discrepancies	India / All Members	Ongoing	Open
10	7.8 (from 2020)	To ensure percentage of survey coverage do not exceed 100% in C-55 records	All	31 Dec 2021 ongoing	Recommended to be closed
11	9 (from 2020)	Provide any update/change to their position in relation with the CSB questionnaire to IHO Secretariat (IHO CL 21/2020)	All	Ongoing	Open
12	9 (from 2020)	Regional coordinators to act as a point of contact for CSB/Seabed 2030 and to raise the profile of data gather and provision within their respective Region.	India/ All Members	Ongoing	Open

NO	AGENDA ITEM	ACTION	ACTION BY	DEADLINE	STATUS
13	9 (from 2020)	Extend the role of Charting Regional Coordinators for the implementation of the S-100 Implementation Roadmap	India	Ongoing	Open
14	9 (from 2020)	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	NAVAREA Coordinators "I" & "J"	Ongoing	Open
15	9 (from 2020)	Encourage all Member States to actively contribute with new data to GEBCO and promote discussion on sharing existing data	Chair	Ongoing	Open
16	9 (from 2020)	Include the measurement of the SPI attributed by IRCC in annual NIOHC Work Plan	Chair	NIOHC-21	Open
17	9 (from 2020)	Continue inviting Seabed 2030 project representatives to the future NIOHC meetings to discuss options for deepened cooperation and support.	Chair	Ongoing	Open
18	11.2 (from 2020)	Encourage to participate in Empowering Women in Hydrography project	Chair	Ongoing	Open
19	11.2 (from 2020)	Inform CB coordinator of any regional CB opportunities to include in CBSC calendar	All/ CB Coordinator	Ongoing	Open
20	14 (from 2020)	National coordinators to improve provision of navigational warning information and share updated contact details with respective NAVAREA coordinators	All Members	Ongoing	Open
21	15 (from 2020)	MSDI WG - To present regional MSDI report to NIOHC 21	All Members	Ongoing	Open
22	17 (from 2020)	To include proposal for S-57 to S-100 course in the NIOHC work plan for 2023	CB Coordinator	Ongoing	Open
23	18 (from 2020)	Mauritius request for full membership	All	NIOHC-22	Open
24	6.1 (from 2022)	NIOHC is invited to encourage and propose to the IHO Secretariat High Level Visits to those states not yet IHO Member States.	Chair	Ongoing	Open
25	6.1 (from 2022)	NIOHC is invited to continue on the implementation of the IHO Strategic Plan and support IRCC in identifying measures and values to	Chair	Ongoing	Open

NO	AGENDA ITEM	ACTION	ACTION BY	DEADLINE	STATUS
		measure those SPI of regional interest allocated to IRCC, in accordance with IRCC14 List of Actions, Decisions and Recommendations to RHCs.			
26	6.1 (from 2022)	Countries in the NIOHC Region are invited to review their entry in the IHO Yearbook and C-55 and to provide IHO Secretariat with the appropriate updates or to report no change	Chair	Ongoing	Open
27	6.1 (from 2022)	NIOHC members are invited to submit papers for publication in the IHR	Chair	Ongoing	Open
28	6.2 (from 2022)	Facilitates the development of UN-GGIM Integrated Geospatial Information Framework (IGIF) compliant assessments of S-1xx top priority products	Chair	Ongoing	Open
29	6.2 (from 2022)	Appoint S-1xx Coordinator which roles is to be established in the RHCs either as separate from the Chart Coordinator or as an additional duty of the coordinator. The position would be responsible for considering the progress and coordination of S-1xx products as they become available	Chair	Ongoing	Discussed in NICCWG. A Working Group of all INT producers of Region J to be formed under Chairmanship of INT Chart Coordinator Area J(India)Open
30	6.3 (from 2022)	Encourage MS to actively support the development of priority PS of S-100	All	Ongoing	Open
31	6.3 (from 2022)	Encourage MS to achieve substantial coverage of S-101 by 2026.	All	Ongoing	Open
32	9.1 (from 2022)	NIOHC MS to provide comment/feedback on CPENC process	All	NIOHC-22	Open
33	9.1 (from 2022)	NIOHC MS to participate in Seabed 2030	All	Ongoing	Open
34	9.1 (from 2022)	NIOHC MS to participate in OGC Pilot	All	Ongoing	Open
35	11.1 (from 2022)	NICCWG Chair Encourage MS to share their ENC and Chart plans/schemes	INT Chart producers	NIOHC-22	Open
36	11.1 (from 2022)	NICCWG Coordinator encourage MS to Consider S-100 Coordinator for NIOHC	All	NIOHC-22	Open

NO	AGENDA ITEM	ACTION	ACTION BY	DEADLINE	STATUS
37	11.1 (from 2022)	NICCWG Coordinator encourage MS to Consider formation of S-100 WG for NIOHC	All	NIOHC-22	Agenda 6.2 Open
38	11.2 (from 2022)	Inform the CB Coordinator of any regional CB opportunities to include in CBSC Calendar	Chair/All	31 January 2023	Open
39	11.2 (from 2022)	Technical Visit on Identified Coastal States	NIOHC CB Coordinator	2023	Open
40	11.2 (from 2022)	MBES Processing Course on Identified Coastal States	NIOHC CB Coordinator	2023	Open
41	11.2 (from 2022)	Seminar on Raising Awareness of Hydrography on Identified Coastal States	NIOHC CB Coordinator	2023	Open
42	11.2 (from 2022)	S-100 Processing Course on Identified Coastal States	NIOHC CB Coordinator	2023	Open
43	11.3 (from 2022)	MSDIWG Coordinator Inviting member states to join MSDIWG	All	NIOHC-22	Open
44	11.3 (from 2022)	MSDIWG Coordinator proposed to select New Chairman and Vice Chair for the group as per ToR	Chair/All	NIOHC-22	Open
45	11.3 (from 2022)	MSDIWG Coordinator encourages member states to provide present MSDI state report before 6 weeks to next NIOHC meeting	All	6 weeks before NIOHC-22	Open
46	11.3 (from 2022)	MSDIWG Coordinator encourages member states to consider and update the WG on any MSDI activity in the NIOHC region	Chair/All	NIOHC-22	Open
47	15 (from 2022)	RHC are encouraged to increase the collaboration with the Data Quality WG and to try to find candidates for the vacancy of the Chair and Secretary positions.	All	NIOHC-22	Open
48	15 (from 2022)	RHC to discuss how HO's can assume a geo-coordinating role to help ensure provision of data on a regional level.	All	Ongoing	Open
49	15 (from 2022)	RHC to start or proceed with the debate on how the climate change related activities can be further investigated and what can be the role of the IHO.	All	NIOHC-22	Open
<b>ACTION ARAISING FROM NIOHC-22</b>					
50	5	MS to consider the nomination of officer bearers for the position vacancy of DQWG vice chair and secretary.	Chair/All	ASAP	Open

NO	AGENDA ITEM	ACTION	ACTION BY	DEADLINE	STATUS
51	7	MS to consider providing their CATZOC values - through the RENC's or IHO Secretariat and MS to support the IHO Secretariat in the process of measuring SPI 1.2.2.	All	1 <sup>st</sup> of April 2023	Open
52	7	MS to note the updated version 2.0 of the S-100 Implementation Roadmap, and the version 1.0 of the Guidelines on the Implementation of the WEND-100 Principles.	All	Ongoing	Open
53	7	MS 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).	All	Ongoing	Open
54	9.2	To inform the CB Coordinator of any further CB Requests by end of February 2023 for submission of funding for 2024	Chair/All	28 February 2023 (before technical visit)	Open
55	9.2	UK to confirm the availability of the online course at convenience	UKHO	TBD	Open
56	14	To conduct workshop preparing for Hydrographic Leadership Program for NIOHC	UKHO	TBD	Open
57	15.1	To conduct a VTC meeting to discuss the subject that will be presented to the IHO Council to support both the regional capacity building program and technical assistance especially for S-100 series conversion and MSDI.	Chair	TBD	Open
58	16	Date and venue for NIOHC-23 meeting	Thailand	June 2024	Open

## 6. Group Photo

7. **IHO Secretariat report** - IHO Director, Mr. Abri Kampfer presented IHO Secretariat report. He stated that the report of IHO Secretariat has been uploaded on the IHO website. On date, The IHO membership still stands at 98. Based on CL 44/2022 informed that Vanuatu was reinstated with MS rights from November 2022. Unfortunately, Serbia and Syria remain suspended.

IHO Director mentioned about the main outcome from 6<sup>th</sup> meeting of IHO Council as well as 3<sup>rd</sup> IHO Assembly, namely: IHO Work Programme and Budget for 2023 approved

and the three-year Work Programme and Budget 2024–2026 endorsed; goal 1 and its Targets in the IHO Strategic Plan should have the highest priority in the 2023–2026 Work Programme; to develop guidelines for the automated production of paper charts meeting S-4 chart minimum content requirements from S-101 ENC data; the council approved version 1.0 of the Guidelines on the Implementation of the WEND-100 Principles.

He then recommended that NIOHC members are invited to continue on the implementation of the IHO Strategic Plan and support IRCC in identifying measures and values to measure those SPI of regional interest allocated to IRCC, and to consider providing their CATZOC values - through the RENCs, to support the IHO Secretariat in the process of measuring SPI 1.2.2. NIOHC members to note the updated version 2.0 of the S-100 Implementation Roadmap, and the version 1.0 of the Guidelines on the Implementation of the WEND-100 Principles, with particular attention to the creation of a new role of S-100 Services Coordinator or the expansion of the role of Regional Chart Coordinator to include S-1xx products. NIOHC is invited to declare the identity of the State/s selected to occupy the first 20 seats on the Council that are allocated on a regional basis.

The IHO Member States should respect the IMO Resolution on Performance Standards for ECDIS and the in-force dates (1 January 2026 with a transition phase until 1 January 2029). Furthermore, The Dual Fuel Concept document to be approved by IHO Members at A-3 in May 2023.

For the 3<sup>rd</sup> session of IHO Assembly which will be held on 2 to 5 May 2023, NIOCH members are encouraged to register their delegations online and to follow up the updates. Regarding the GEBCO Seabed 2030 project, Nippon Foundation GEBCO-Seabed 2030 project was endorsed as an Action of UN Decade of Ocean Science for Sustainable Development. Global mapping coverage now stands at 23.4% (June 2022). NIOCH member states are recommended to: Consider the impacts of the increasing global societal and United Nations (UN) driven need to complete the picture of the seafloor as well as the potential benefits to individual coastal States, make data freely available for inclusion in the DCDB and the widest possible use, in accordance with IHO Resolution 1/2017, consider to review national legislation to remove barriers restricting CSB activities within their waters.

To support The IHO GIS and Databases, NIOHC member states are recommended 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).

As announced with IHO CL 01/2023, the theme for WHD 2023 is “Hydrography - underpinning the digital twin of the ocean”. The digital twin of the ocean aims to develop a consistent, high-resolution, multidimensional and near real-time virtual representation of the ocean that could make ocean knowledge open-access, available to citizens, scientists and policy makers around the world, and provide a platform for global cooperation.

Through IHO CL 03/2022, since 5 January 2022, the IHR has a new editor Dr Patrick Westfeld from Germany; IHR volumes from the entire collections (1923 to 2018) are available online <https://journals.lib.unb.ca/index.php/ihr>. NIOHC Members are invited to submit papers for publication in the IHR

**8. National Reports (Members)** - The Chair invited each Member State to present a summary of their national report to the plenary in following order.

## Member States

8.1. Bangladesh – No comments

8.2. Egypt - Indonesia questioned about how The Egyptian HO determined the line spacing between submarine cables, who is responsible for the survey, how the data is used for updating charts. Egypt responded that they divide the team in to two groups: Geophysics group and Hydrographic group whilst the technique of soundings is: MBES, Magneto, and SBP. Additionally, IHO director expressed his appreciation towards excellent participation of the Egyptian HO in the working group. This appreciation is also delivered to all MS.

8.3. India – Indonesia expressed that the information India put on their warning service website is a great move made by India. Indonesia will try to adopt that method in the office.

8.4. Indonesia - Pakistan questioned about the strategies to quickly deploy a rapid hydrographic survey after natural disasters such as earthquake. Indonesia responded that a responsive hydrographic survey should be conducted by deploying a rapid survey team which collaborates with stakeholders in order to mitigate the impact of the natural disasters.

Bangladesh questioned about what the platforms utilized to respond the emergence of a new island resulted by the earthquake and how long it took to undertake it. Indonesia responded that the platform used in the rapid survey was Survey Motor Boat (SMB) done in one day.

Egypt questioned what satellite is used for SDB. Indonesia responded Indonesia uses Sentinel-2 for SDB. For SDB we should have insitu data for validation to get a more accurate result of SDB.

8.5. Myanmar - Absent

8.6. Pakistan - Bangladesh questioned about how Pakistan deals with the challenge of being appointed as the national hydrographic office of the country, and since Pakistan has joined the Category B course hydrographic programme in Indonesia, how the Pakistani candidate managed to deal with the language used in the programme.

Pakistan answered, the challenge from being PNHD to getting a status of National Hydrographic Office vide Government of Pakistan notified in July 2022 is that the small community in Pakistan has become the challenge as they need to have qualified human resources in order to conduct standardized hydrographic surveys. Pakistan expects to join and conduct capacity building collaborated with national and international stakeholders so that Pakistan could manage to deal with the issue. Pakistan this year plans to focus on how other agencies conduct their surveys to meet the IHO standards. Regarding Pakistan's participation in Indonesia Category B course, the language used is Bahasa Indonesia but there's no issue because the candidate should take Bahasa Indonesia course for 3 months prior to the Cat B course programme. Moreover, UKHO showed appreciation to Pakistan for updating that all



NAVAREA IX warnings are made available on website and for concerning about climate change.

8.7. Saudi Arabia - Bangladesh questioned about how Saudi Arabia manages to cover all waters by only having 3 survey platforms and if it is difficult to conduct the survey with catamaran vessel as sometimes surveyors must face high sea state on the ocean. Saudi Arabia responded that they have collaborated with many stakeholders and third parties in order to achieve their survey targets and the catamaran is only used for hydrographic training.

Indonesia questioned about how to connect land and sea information in establishing the digital information. Saudi Arabia responded that there is different procedure for processing the information of land and sea. However Saudi Arabia collaborates with Geospatial agencies to work on this matter.

Bangladesh questioned about How Saudi Arabia work and solve challenges with only in-house capabilities without any help from 3<sup>rd</sup> parties. Saudi Arabia responded that they still need to collaborate with other parties to help overcome the issue to achieve the survey targets.

8.8. Sri Lanka - Bangladesh offered a fully funded Category B course that is open for international participants inclusive only for military started on 19 March 2023. Indonesia asked if Sri Lanka has experience in identifying features using MBES in deep water and any experience about receiving data from other parties. Sri Lanka at the moment only has Single Beam Echosounder and has never received data from other agencies.

8.9. Thailand - IHO Director expressed his appreciation about how Thailand managed the conversion from S-57 to S-101 and suggested Thailand to focus on learning the S-65 and other IHO standard publications to assist them on the conversion process.

8.10. United Kingdom - Bangladesh questioned about S-100 that their hydrographic community is still lack of resources on how to conduct the S-100 conversion and how The UK will provide the S-100 conversion courses. The UK responded that at the moment, The UK has been developing the S-100 conversion courses and planned to not only teach on how to make the products but also how to maintain and disseminate the products. Indonesia expects to join in the S-100 capacity building programmes organized by the UKHO. The UK has always welcomed the member states to join in the courses conducted by the UK

**NICCWG Meeting Led by India.** In order to make the INT charts, Indonesia suggested for the adjacent countries who have areas overlapping each other to work together to generate an international nautical chart on the particular area. Furthermore, Indonesia questioned if NICCWG has the term of reference.

**END OF DAY 01**

## 9. NIOHC Committees and Working Groups

**9.1 NIOHC International Chart Coordination Working Group (NICCWG)** - The Chair invited the Chair of NICCWG VADM Adhir Arora of India to present on the outcome of NICCWG meeting held on 22<sup>nd</sup> August 2022. The Chair of NICCWG asked all MS to give input regarding the report on NICCWG meeting that they already presented on the previous day. Bangladesh and Oman expressed their agreement followed by all MS.

**9.2 NIOHC Capacity Building Coordinator Report (NIOHC-CB)** - The Chair invited Lucy Fieldhouse, the IHO CB Coordinator, to give a presentation. First of all, she elaborated on project groups update regarding CBSC20, followed by CBSC20 Project Group Update including gap analysis between the IHO CB strategy and IHO Strategic Plan conducted; Inclusion of mission/vision statements & amending and updating of terms; Review and development of M2 Figure 1 Phases of Capability to include Phase 0 for Hydrographic Governance (figure will also be added to the Strategy once complete); Addition of 5<sup>th</sup> step to the existing 4 step process of CB (Awareness, Assessment, Analysis, Action) to measure effectiveness of CB assistance through monitoring and evaluation.

Second of all, she briefly explained about the empowering women in Hydrography followed by activities to date, including internship at the IHO (EWH Outreach), 3 internship with the IBSC, 3 opportunities for at-Sea experience with NOAA, and the MOU between Canada and the IHO was finalised securing the funded 3-year programme as well as development of mentoring scheme. Additionally, the deadline for the upcoming NOAA at sea experience applications will be on 28 February 2023. The detail can be found on the EWH page on the IHO website.

Third of all, she explained about 2023 Activities under NIOHC 3 Year Work Plan which are technical visits, Seminar on Raising Awareness of Hydrography, MBES Processing Course, and S-100 Processing Course and also advanced training course namely 20<sup>th</sup> Graduate Certificate Programme in Ocean Bathymetry and IHO- Nippon Foundation GEOMAC Project CAT B Cartography – hosted by UKHO. She also emphasized on the deadline for CB activities requests.

Furthermore, she described about the proposed 2024 submissions for NIOHC states which are technical visits, Hydrographic Awareness Seminar, MSI Course, S-10X Awareness, MSDI & Database Management.

Ultimately, CB Coordinator requested to NIOHC MS to note the report, inform the CB Coordinator of any regional CB opportunities may arise to include in CBSC Calendar, as well as inform the CB Coordinator of any further CB Requests by end of February 2023 for submission of funding for 2024.

In respond to the presentation, the UKHO gave additional update about S-100 online training course held on 27<sup>th</sup> March to 10<sup>th</sup> April 2023. The course is not released yet, but soon it will be open for all member states with all detail information. There is going to be online course and will be limited to approximately 30 participants for each course.

IHO Director expressed his appreciation for the excellent initiative made by The UKHO and encouraged all member states to apply and join in the training provided by the UK.

Indonesia expressed that CB is useful and crucial for overcoming the gap issue between the IHO member states, with that opportunity, NIOHC MS are recommended to propose the CB subject by considering the issue priority of each MS to give input in the IHO CB subject or model. CB Coordinator responded that they have been trying to compile all the input for their material establishment for capacity building, CB Coordinator provide assistance via email for all MS for correspondences to see how each MS would like to improve their capabilities.

Bangladesh suggested CB Coordinator to hold seminars to open discussion regarding the material improvement for CB.

IHO Director mentioned that these CB programmes are for some reasons limited due to the funding, then he proposed to all MS to assist each other for the betterment in the region. The CB coordinator then encouraged all MS to give them input and advice regarding the funding so that the opportunities could be increased.

## **8. National Report**

### **8.11 Associate Member**

**8.11.1 Australia** – Bangladesh commented that the hydrographic community in this region still struggles about the challenge of S-100 conversion, it would be great solution if Australia provides training course on the S-100 conversion. Australia responded that they are now still trying to compile information and engaging on capacity building programmes to understand about how to later provide the training for the other member states.

Indonesia expects to send more officers to study in Australia, other than that, Indonesia will be sending their women personnel to join on board in Australian Survey Vessel for Indonesia-Australia Joint Survey in order to support Empowering Women in Hydrography.

**8.11.2 France** – Bangladesh expects to learn about how France overcomes the challenge in CSB practice. France responded that they would submit their CSB to DCDB IHO for the assessment and validity.

**8.11.3 Oman** – No comment

**8.11.4 USA** – Absent

### **8.12 Observer**

## **10. Industry Presentation**

## **11. Relevant International Organizations Reports**

**11.2 IC-ENC Report** – The Chair invited representative from IC-ENC, RADM Rhett Hatcher to give a presentation. Firstly, he elaborated on the introduction of IC-ENC itself, as well as technical conferences held by it. Secondly, he explained about

developing Production Support, Validation, Distribution & Revenue Management services for S-101 ENC (and Conversion Readiness Service (S-57 to S-101), S-102 - Bathymetric Surface Product, S-104 - Water Level Information for Surface Navigation, S-111 - Surface Currents, S-122 - Marine Protected Areas, and S-128 - Catalogue.

## 12. Maritime Safety and the Worldwide Navigational Warning Service

**12.1 NAVAREA VIII** - The Chair invited representative from India to give a report for NAVAREA VIII. He started his VTC presentation by introducing NAVAREA VIII to the audience, followed by several breakdowns in the area. In addition, he explained about NAVTEX coverage and national coordinators as well as newly recognized mobile satellite services by MSI providers. Finally, he described the future plans and contact numbers in the NAVAREA VIII.

The CB coordinator encouraged all MS to actively participate in the MSI training which will be held this year.

**12.2 NAVAREA IX** - The Chair invited representative from Pakistan to give a report for NAVAREA IX. He started his presentation by introducing NAVAREA IX to the audience, followed by mechanism of MSIs transmission in the area. Then, he explained about successful connection in the last 3 years. After that, he described that they had an External Contingency Agreement with NAVAREA VII (South Africa). IHO Director and Capacity Building Coordinator responded that it's been an improvement by NAVAREA IX coordinated by Pakistan for the past 3 years for ensuring and being very consistent in maintaining the connections in the region.

- 13. Regional Issues/ Challenges.** Oman mentioned that they are having issue in contacting UAE, hence, Oman requested The UKHO to help with this issue. Indonesia presented about Pushidrosal Roadmap of S-100 implementation. *Comments:* Bangladesh suggested to share the tips on how to tackle the challenges on the conversion process. Indonesia responded that we should build a professional team who are expert in S-65 and S-101 to be able to deal with the conversion process and manufacture the digitalization complying the IHO standard. IC ENC is a good platform to give knowledge and best practice for converting from S-57 to S-100.

IHO Director expressed his appreciation for Indonesia to share the experience with the forum and congratulated Indonesia for starting to work on the conversion. He suggested to always work together and to participate in trials and testing in order to receive feedbacks for the development during the process.

- 14. Any Other Business.** Indonesia proposed that hydrographic leadership program held in SWPHC to be applied in NIOHC as it is important for young generation in hydrography. Australia and The UK agreed that the programme could be applied in NIOHC region and expecting that the programme could be transferred and improved in other regions. Based on the supportive response from Australia and the UK, Indonesia proposed if NIOHC Leadership Program can be put in the Regional Capacity Building Program. The UK suggested that NIOHC should conduct a workshop instead of creating a working group that focuses on the establishment of the regional leadership programme.

**END OF DAY 02****Day 3**

**15. NIOHC input to IHO meetings (Closed Session)** - The Chair invited Member States to discuss relevant points and comment on the subject

**15.1 7th IHO Council considerations** – The Chair invited India, being the NIOHC representative to IHO Council, to comment on the point.

Bangladesh and Pakistan mentioned that it is very important to hold the meeting through VTC and face-to-face to discuss the important issue in the region including the capacity building as the hydrographic community in NIOHC needs to assist each other for the S-100 conversion and MSDI.

IHO Director mentioned that there are 4 countries nominated to be representative of NIOHC in the IHO council which are India, Bangladesh, Sri Lanka, and Myanmar. However, India mentioned that they are willing to continue on representing NIOHC in the IHO council, therefore the Chair of NIOHC should report to the IHO Secretariat to note that India is extending to be the representative.

Indonesia, Egypt, Thailand, Saudi Arabia, Pakistan and Bangladesh suggested to conduct another VTC meeting for discussing the material of S-100 matter to be presented to the IHO council. Supporting the idea, Sri Lanka mentioned that they need assistance for the development of S-100 series. Australia mentioned that the challenge is the requirement to understand about what should be done first before starting the S-100 project. The CB will help the MS understand about technical aspects of the S-100 conversion and MSDI. Hence, the collaborations are highly expected to overcome this matter. Moreover, The UK agreed and would technically contribute to the discussion and the working group. France agreed that there should be another meeting to discuss the subject brought to the Council, especially to support the S-100 roadmap of each MS and MSDI. India explained several points to be input to the next IHO Council which are the progress of S-100 that includes the S-57 to S-101 conversion among NIOHC MS, assistance in MSDI work, and India as the representative will help manage the working group.

IHO Director emphasized that the regional capacity building in this region is under the responsibility of NIOHC, then it is recommended that NIOHC to have an extensive in charge working group supporting the preparation of the capacity building in the region. Moreover, Indonesia suggested the chair to give mandate to the MS for the online meeting preparing for the subject to be brought to the council.

**15.2 NIOHC Report to IRCC15** - The Chair invited participants to give comments and provide inputs in order to include them in NIOHC report to IRCC 15. IHO Director emphasized that IRCC is preceding the IHO council, then the outcomes of the IRCC meeting should be included in the subject that will be presented in the IHO council. Indonesia suggested to have a prior discussion about the list of actions before the IRCC meeting.

**16. Date and Venue of the next meeting** - The Chair opened the floor to Member States to propose date and venue for next meeting. Then Thailand offered to host the meeting of NIOHC-23 in June 2024, the exact date is to be confirmed.

**17. Approval of the Action List** – The draft of list of actions was made available to all participants and the Chair requested the delegates to give comments. After the discussion, the list of actions arising from NIOHC-22 has finally been made.

**18. Closing Remarks from the Chair** – The current status of Indonesia as Chair of NIOHC will end this year, however the next chair and vice chair of NIOHC (for 2023-2025) have been determined. Thailand will be the next chair and Bangladesh will be the next vice chair.

Finally, The Chair appreciated all participants and supporting committee for their valuable contribution to NIOHC-22. He further elaborated on the productive discussions to promote connectivity towards mutual goals. In addition, He stated that it is important to be aware of recent updates among the members in order to deepen the collaboration in the region.

**END.**

**Nurhidayat,**  
Vice Admiral, Indonesian Navy  
Chief Hydrographer  
March 2023

NO	JABATAN	PARAF	TANGGAL
1	Wadanpushidrosal		
2	Asopssurta Danpushidrosal		3-3-2023
3	Aspamkersamtas Danpushidrosal		02 .03 .23
4	Kasetum Pushidrosal		

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