14TH NORTH INDIAN OCEAN HYDROGRAPHIC COMMISSION CONFERENCE 26 - 28 FEBRUARY 2014

HYDROGRAPHIC DEPARTMENT, ROYAL THAI NAVY, BANGKOK, THAILAND

Minute of Meeting

Agenda 1: Opening

- 1 Admiral Narong Pipattanasai, Commander in Chief of the Royal Thai Navy welcomed all participants to Bangkok, Thailand. The list of participants appears as Document NIOHC14_01. He recognized the importance of Hydrographic Service through 2014 World Hydrography Day's theme: "Hydrography Much More Than Just Nautical Charts", which is the proud of hydrographic community as the wide-ranging aspects of contributions toward the world development. He wished a prosperous outcome and success of the Conference and a pleasant stay of the participants in Bangkok. The speech appears as Annex A.
- Vice Admiral Witoon Tantigun, Director General of the Hydrographic Department, Royal Thai Navy (HDRTN), and the Chairman of the North Indian Hydrographic Commission (NIOHC) welcomed all participants to the Hydrographic Department. He thanked all participants for their effort to attend the Conference with essential commitments that prevent attendance of some member states and invited organizations. He addressed that the annual Conference is a vital forum for the Commission to review, update, develop and coordinate the regional strategies, policies and work programs and to share experiences, encourage mutual assistance and strengthen relationships, aiming at enhancing the safety of navigation in the region. He then emphasized and recognized the transitional era of world navigation involving ECDIS and ENCs, and also significance of capacity building where the industrial sectors play an important role in contribution. The speech appears as Annex B.
- 3 Rear Admiral Mustafa Iptes, International Hydrographic Bureau (IHB) Director greeted all participants and thanked the host for the delightful arrangement of the Conference. He recognized the importance of the 16 RHCs as the bodies under the IRCC through their coordination and cooperation activities. NIOHC is one among other located at the strategic area of world trade thus communication among MSs for better relations in the community as always existed is encouragingly appreciated; the presence of associate MSs like Egypt and Seychelles were witnessed. He touched on the IHO status quo such as IHO Convention, CB Fund, etc. and thanked for all contributions made by MSs and relevant bodies.

Agenda 2: Administrative Arrangements

4 The secretariat informed the Conference about logistic information and the program of the Conference, including the relevant venues to the Conference. The logistic information appears as Documents NIOHC14_02.

Agenda 3: Approval of Agenda and Timetable

The secretariat displayed the Tentative Agenda to the Conference for reviewing. IHB proposed to change the leads of Agenda Items 10 to IHB. In respond to the proposed change of the lead to the Agenda Item 12.7, Chair informed that the Agenda will be responsible by GEBCO as planned as the GEBCO President will be able to attend and give the presentation on the morning of 28th February 2014.

- 6 India suggested including MSI topic into the Agenda preferably prior to the Country Reports Agenda Item.
- 7 In response to Pakistan's suggestion to include the S-11 Updates by INT Chart Coordinator into the Agenda, Chair informed that the issue had been arranged for discussion under the Agenda Item 9.1.
- 8 The Agenda was adopted with above amendments. The Program of the Conference had been amended and adopted accordingly. The Adopted Agenda and the Conference Program appear as Documents NIOHC14_03a and Document NIOHC14_03b, respectively.

Agenda 4: List of Documents

9 Chairman reviewed the List of Documents displayed to the Conference on the screen and informed the availability of these documents on the IHO website. IHO offered that any document not yet posted on the IHO website would be welcomed during the Conference. The List of Documents appears as Document NIOHC14_04.

Agenda 5: 13th NIOHC Minutes Approval

10 As displayed in the screen, the Chairman asked the Conference to review and propose any amendment to the 13th NIOHC Minutes. No amendment was proposed and the 13th NIOHC Minutes was approved by the Conference. The approved 13th NIOHC Minutes appears as Document NIOHC14_05.

Agenda 6: 13th NIOHC Action List Review

- 11 Chairman reviewed the 13th NIOHC Action List (Document NIOHC14_06) as followed:
- 11.1 Encouraging non-MSs for membership: this action is an ongoing process and will be covered under Agenda Item 7 by IHB.
- 11.2 Updating S-11: this action will be presented under Agenda Item 9.1 by INT Chart Coordinator.
- 11.3 Submitting revised CBSC Proposals: this action will be presented under Agenda Item 9.2 by Capacity Building Coordinator.
- 11.4 MS to update C-55 regularly: this action is an ongoing process and will be covered under Agenda Item 7. Chair allowed IHB to cover this Agenda Item right away as requested. IHB presented the current status updates of C-55 by showing the latest updated information of the countries in the region. India queried as if the updates seemed to be delayed considering the submission of India in June 2013 and with incorrect information contained. In response, he said that the information is the latest which updated in February 2014. He added that the incorrect information will be certainly corrected and the future submission might be submitted directly to the IHB Director (RAdm Mustafa Iptes), if necessary.
- 11.5 IHB further presented the outcome of IHB visit to Maldives and Seychelles. He highlighted that the IHB visit to Maldives was well received. He shared that Maldives is one of the high potential countries to become full member of the IHO. The briefing on the importance, roles, and activities of hydrography was given. Considering their strong willingness, the IHB viewed that encouraging their participation in the NIOHC and the IHO activities will be beneficial to either party. He informed that the visit to Seychelles had not been yet possible due to the time constraint.

- 11.6 Including VIMSAS as Agenda Item at 14th NIOHC Conference: the Conference agreed as Chair reiterated the unable attendance of IMO representative to the Conference and suggested to defer the topic to the next Conference.
- 11.7 Including RENC presentation in 14th NIOHC: this action will be discussed under Agenda Item 12.1 by PRIMAR.
- 11.8 Including WEND-WG presentation in 14th NIOHC: this action will be discussed under Agenda Item 12.2 by IHB.

Agenda 7: IHO Report

- 12 IHB presented the status of new IHO MS. He highlighted the waiting list of approval of applicant MSs which are Brunei Darussalam, Georgia, and Vietnam and encouraged MSs in the region not yet given their approval to take action accordingly. He added that IHB stands ready to assist in every possible diplomatic way to facilitate the process. Aforementioned MSs were suggested requesting their need of assistance thereof to the IHB where IHB will issue the cover letters to both HO and the Ministry of Foreign Affair of the country such HO belongs.
- 13 IHB further informed about the status of approval of amendments to the IHO Convention. He invited the 4 countries in the region including Egypt, India, Myanmar, and Thailand to accelerate the process where possible as the current number of approval, 39 of 48 required, has remained unchanged for some years.
- Noting some inconsistencies of S-11 updates from India, IHB Director said that he will be more careful with checking the correctness of the documents before uploading onto the website. He encouraged MSs to continue supporting India as the INT Coordinator of the region by regularly providing the IHB with S-11 updates.
- 15 Bangladesh queried about the incorrect information on the C-55 status in which they submitted the latest updates in 2013 but the status showed 2009. In response, IHB reiterated the IHB care to the correctness and being up-to-date of the documents.
- 16 IHB continued on the IHO GIS Database issue where the detail was provided. The same detail will be circulated through IHO CLs presumably by next week.
- 17 Other issues including WHD theme and celebrations, 5th EIHC, IHR, CB Program, and sustainability of IHO Work Program were introduced to the Conference which could be found on the IHB Report or Document NIOHC14_07a.
- 18 At reiteration of the important issues reported by the IHB, Chair queried about the IHO GIS Database. IHB responded that the IHO GIS Database will cover the yearbook and C-55 and the database will be completed later this year.
- 19 Important issues as the outcomes of the IRCC5 related to the region, e.g. update of new ENC Catalogue, Hydrographic Boundary Proposal, extensively-discussed new surveying technologies such as SDB, etc. have been reviewed and highlighted. The complete list of the HSSC5 outcomes can be found in the IHO CL 64/2013.
- 20 Important issues as the outcomes of HSSC5 have been reviewed. The highlight was made to the S-100 publication and its series as the transitional era from paper to electronic navigation is in the play along with the S-100 based products.
- 21 After reiteration of the important issues of IRCC and HSSC by the Chair, the IHB Director emphasized the workloads carrying out by the IHB secretariat as a result of the rising and recognizing in hydrographic activities. In this regard, he saw no any measure other than relying on the MS and community contribution and support via, especially

proposals and comments when seeking, or the volunteer in some Working Groups and Sub-Committees.

- 22 IHB reported on the activities of the IHO WWNWS-SC meeting. The report appears as Document NIOHC14_07b. He reported that IMO MSC approved the revisions to Resolutions A.705 (17) on the Promulgation of MSI, A.706 (17) on the World-Wide Navigation Warning Service and the Iridium mobile satellite system. He mentioned the GMDSS Master Plan Annexes 7 and 8, the responsibility for updates and IMO NAV issues regarding the consolidated final draft policy on the use of AIS aids to navigation, the policy on the use of AIS aids to navigation and the amended guidelines for the presentation of navigational-related symbols, terms and abbreviations.
- 23 India presented on the NAVAREA VIII. The presentation appears as Document NIOHC14_07c. In response to the IHB about communication with Maldives, India informed that the communication with Maldives is with slow progress.

Agenda 8: National Reports

- 24 MSs alphabetically reported their activities regarding hydrographic works and services and related activities over the past year.
- 25 The report of Bangladesh appears as Document NIOHC14_08a. Bangladesh highlighted the requirements of effective CB program, Cat 'A' Hydrographic course and other training facilities from India, detail training on ENC production and in-depth training on Multibeam data management and processing. As proposed by India to discuss the CB issue, Chair clarified that all CB issues shall be covered under Agenda Item 9.2.
- 26 IHB appreciated the WHD celebration activities reported by Bangladesh and stated that this kind of activity from other MSs is very welcomed. He added that the CB proposal is a clear view of Center for Training in India as a hub of the region.
- 27 The report of Egypt appears as Document NIOHC14_08b. IHB appreciated the presence of Egyptian representative at the Conference as well as the increasing involvement of Egypt to the IHO activities.
- 28 The report of India appears as Document NIOHC14_08c. As queried by Thailand, India shared that the AUV is mounted with MBES and side scan sonar, etc. The AUV is now in operation starting 2013
- 29 The report of Myanmar appears as Document NIOHC14_08d. Myanmar stressed a need for capacity building either training courses, on job training or technical visit. According to the report, IHB clarified that achieving the S-44 standard data survey by relying primarily on MBES might not be the case whilst other supporting techniques may be implemented. UK urged Myanmar to pursue on the Nippon Foundation Scholarship regardless of repeating submissions of application. The opportunity will extend by increasing the number of seats of students in the near future.
- 30 The report of Pakistan appears as Document NIOHC14_08e. Pakistan emphasized on a need for building capacities in mid and advance level in hydrography and oceanography and further suggested that overlapping of INT chart/ENC between adjacent member states be resolved through relevant INT Coordinators.
- 31 Saudi Arabia was not present but kindly submitted the report which appears as Document NIOHC14 08f.
- 32 The report of Sri Lanka appears as Document NIOHC14_08g. Sri Lanka has an urgent need for MBES capability and ENC production and maintenance capability.

These include on the job training in MBES and ENC as well as CAT A in hydrography and training on Bathymetric Data Derived from Satellite Technology. Also, IHB added the outcome from a technical visit to Sri Lanka in January 2014 and suggested Sri Lanka to follow up on recommendations resulted from the IHO technical visit which request more support and involvement from NARA in hydrographic activities carried out by NHO.

- 33 The report of Thailand appears as Document NIOHC14_08h.
- The Report of UK appears as Document NIOHC14_08i. In response to Thailand's query, UK clarified that the existing e-nautical publications are not in the S-100 format.
- 35 As suggested by India to look at the CB requests Chair recommended that all CB issues shall be covered under Agenda Item 9.2
- 36 In response to the query by the IHB, UK informed that the Maritime Security Charts were developed in recognition of the stress of navigation by adding extra layer of information for the commercial shipping to be aware. The coverage area of Maritime Security Charts as shown i.e. Q6112 Karachi to Hong Kong and Q6113 Andaman Islands to Torres Strait. IHB added that the project shall be beneficial to the shipping companies.
- 37 Jeppesen representative stated that part of the content of MSC are also available as dynamic products.
- 38 UK shared that the history of MSC originating due in part to the piracy circumstances in Somalia where paper of essential information needed to be known by mariners was annexed to the charts.
- 39 India viewed that since these charts covers large area, the approval of host country be considered before publishing
- 40 UK disagreed with previous comments
- India requested to state in the minutes that India disagreed with the UK statement.
- 42 IHB (Director) commented that NAVAREA Coordinator do consider to have this information included with maritime safety. IHB (Assistant Director) added that the content of MSC was discussed two years ago at the WWNWS-SC Meeting. It can be considered as the compilation of the information available on the internet into one document.
- 43 India insisted his different point of view.
- 44 UK expressed his gratitude towards the host countries and added that the issue was already internationally discussed within the WWNWS Sub-Committee.
- Pakistan opined that considering the prevalent environment and fear of piracy, at times piracy alarm is raised by mariners on suspicions and therefore, data of NAVAREA may not reflect real facts as regard to actual piracy incidents. This may be the reason of the need of official consent of adjacent MS.
- 46 In response to the Chair's query on possibility of communicating with the host countries as suggested by India, UK stated that coordination via WWNWS Sub-Committee would be more preferable.
- 47 IHB commented that this should be the case where Working Groups should coordinate concerning with the emerging issues. He viewed this chart as the multi tasking chart which serves various kinds of user. He concluded that participation in WGs could be of beneficial in terms of getting updated with ongoing issues.
- 48 The report of Australia appears as Document NIOHC14_08j.

- 49 France was not present but kindly submitted the report which appears as Document NIOHC14_08k.
- 50 The report of Oman appears as Document NIOHC14_08l.
- 51 The report of Mauritius appears as Document NIOHC14_08m.

Agenda 9: NIOHC Committees, WGs, and Commission Representative Reports

- 9.1 North Indian Ocean International Charting Coordination Working Group (NICCWG) (update on S-11 Status)
- Chair invited the NICCWG representative (India) to update the Conference with current status of S-11. After cross checking with the IHB, he concluded that this Agenda could be skipped with satisfactory updates along the Conference and move on to the next agenda. He highlighted the issue concerning ENC Scheme (Document NIOHC14_09a) to be followed up: 1 Sri Lanka 2 Bangladesh 3 Pakistan informed INT Coordinator Region J that ENCs of INT 751 (Bombay to Masqat) and INT -7019 (Karachi to Ras Al-Hadd) covering shipping route of Arabian sea have been prepared and will be submitted to Region I Coordinator. India informed that chart 21 covering the same area as INT 751 is already published and available since 2004. India was not aware that the same chart under INT 751 is being allocated for the same chart by Region I. India as the Coordinator of Region J recommended that the issue be taken up with IHB for resolution.
- In reference with the above paragraph, the INT Charts of Bangladesh Nos. 7427, 7428, and 7429 were adopted in the 14th NIOHC Conference. INT Chart Coordinator of the region will verify the INT Chart numbers and send them for final approval to the IHO; subsequently the S-11 will be updated accordingly.

9.2 Capacity Building

- 54 NIOHC CB Coordinator (Mr Jeff Bryant) gave an overview of the CB activities ongoing in the region and the IHO. CB is not only the strategic objective of the IHO but also of everyone's. He referred to the 18th IHC in 2012 where the CBSC was tasked to review the CB Strategy which was developed more than 10 years ago. The outcome of brainstorming of CBSC Chair and RHC CB Coordinators has become the Subcommittee's TOR since its last meeting in Wollongong, Australia in 2013 which has already been forwarded for approval. The Conference was noted that after reviewing with the CB stakeholder meeting in Monaco next week, the reviewed CB Strategy will be brought for discussion at the upcoming 5th EIHC.
- 55 IHB presented additional CB related information. The statistic of CB Fund along with number of trainees attending CB Courses, CB Provision, and Technical Visits from 2005 2012 was demonstrated to the Conference. The CB presentation together with statistic information appears as Document NIOHC14_09b.
- In view of more education and training in need, he stressed that CB Fund needs further raise. At present, the source of CB Fund includes IHO budget, contribution from Japan, ROK, Nippon Foundation, and some other philanthropic organizations. One objective of hydrography among others is protecting the environment; CB Fund, thus, can be allocated to cover activities where non-MSs of IHO could be involved as well.
- 57 In terms of evolution, annual CB Fund has gone from low amount in 2003 to more than half a million Euros in recent years involving approximately 800 participants from over 60 countries.

- 58 For the year 2014, he stated that the Cat A Master of Science in Hydrography Survey has recruited 3 students out of 6 required which might be viewed as causing by the short notice of the program. Whilst the Cat B Cartography Course hosted by the UKHO and funded by the Nippon Foundation has well progression, it is expectedly continued to at least 3 years ahead. Noting the present situation, both CB Fund and number of applicants, including CB Proposals could be encouragingly raised.
- 59 Chair thanked the IHB for an effort put forward to seeking the CB Fund and reiterated the need of CB programs in the region as declared by MSs.
- Regional CB Coordinator presented the NIOHC CB Update. 4 topics of NIOHC CB update were presented including 2013 completed activities, 2013 2017 NIOHC CB Plan, 2014 endorsed activities, and 2015 proposed activities. In 2013, technical visit to Sri Lanka was paid and the Advance Chart Production training course was also conducted in Sri Lanka. The CB Coordinator informed the Conference that the annual review of the 5-year plan would be conducted at the NIOHC Conference. There are 3 out of 4 activities of 2014 which are 2 CARIS ENC Production courses and the MSI Training course. The Conference noted that the Development of a Regional MSDI Workshop was not fully supported. 5 courses of 2015 were proposed, including 2 courses on CARIS Technical training, ENC Production and QA course, MBES Training Opportunity, and Law of the Sea Workshop.
- Bangladesh commented that the Law of the Sea Workshop was an input from the last 13th NIOHC Minutes. This LoS course is not a priority for the MSs. The MBES and ENC Training are more important for the MSs. India proposed to the CB coordinator for consideration that selected module of some courses may be conducted in the region as this could save some budget and could extend the number of courses. Furthermore, India suggested sea riding opportunity should be included whenever possible.
- 62 IHB Director stated that IHB supports any kind of resource, program, and proposal. He drew the delegates' attention to the CB Procedures on the IHO website.
- Thailand shared that, as the case of EAHC, the capacity of the lower level of personnel will be built up through the EAHC Basic course, either in cartography or survey. For example, non-commission officers or the newcomers entering to replace the retired, the EAHC Basic Course will be applied for them. As for the case of Thailand which is suffering from the lack of personnel due to the promotion of early retired project of the government, the concept answers the need well. These trained personnel will go through the normal track of development. At the top of the pyramid, the course for training the trainers is awaiting. He introduced the Training, Research, and Development Center, TRDC as the training hub of the region which was set up in 2013, administratively based in ROK.

Continued discussion on 28th February 2014

- Oman volunteered to host the MSI course for 2014. IIC Technologies kindly provided venue and facilities to support MBES course for 2015. Pakistan proposed Tides and Water Level course. The Conference agreed that the tide and Water Level course will replace LoS course for 2015 and could be held together with other regions. Chair requested the CB Coordinator to include the Tides and Water Level course into the 2015 CB Program.
- Pakistan suggested that NIOHC and RSAHC may jointly undertake MSI course for both NAVAREA 8 and 9 to be more cost effective. Bangladesh requested for a course on Tides under CB Programme in any of the RHC. IHB recommended Bangladesh to join TWLWG.

Agenda 10 : Crowd Sourced Bathymetry

- 66 IHB presented on the CSB. The presentation appears as Document NIOHC14_10. He gave an overview of the lack of sufficient survey data in most parts of the world's oceans and seas which is the reason for the need of CSB, which is not new area in hydrography but initiative. The data coverage in the Mediterranean Sea, the Caribbean Sea, and the Persian Gulf where the CATZOC by UK shows that most of the areas fall into lower level of the survey standards, was demonstrated as the supporting factor of the need of CSB. Example BA Charts were used by the mariners and still need more data. He pointed out the need of IHO initiative among ready facilities, such as a key player, data logger, is obtainable at low cost and the trials and assessments gave satisfactorily acceptable outcomes.
- 67 IHB agreed with UK's view that the application use of CSB by GEBCO would be highly beneficial.
- 68 In response to Jeppesen's query, IHB clarified that the DCDB is now hold as freely available data for non-commercial and academic use. For commercial usage royalties payment is a consideration.
- 69 In response to IIC Technologies' query, the IHB replied that the practice is definitely not complying with the IHO S-44 Standard but the data is intended for use for risk analysis and route planning in data sparse areas.
- 70 The IHB Director added that the issue proposed by France and USA will be discussed at the next EIHC5 where the draft guideline and policies will be reviewed.

Agenda 11 : IMO Overview Updates

- 71 IHB briefed the Conference on the IMO overview update which appears as Document NIOHC14_11. The Conference was informed about the completion of reorganization of the IMO sub-committees, where the major significance to the IHO, new Sub-committee on Navigation, Communication, and Search and Rescue (NCSR) has been formed as a result of amalgamating 2 previous Sub-committees.
- 72 He further informed about the IMO's Mandatory Audit Scheme, coming into effect from 2016, where IHO MSs can find the guidance covering hydrographic matters via IHO CL10/2006. The IHO S-100 has been confirmed as the data standard to support enavigation architecture. The definition of e-navigation concept under the IMO development has also been defined. IHB encouraged MSs to engage with the works of IMO.
- In response to Jeppesen's concern on the e-navigation matters within the next 5 years, the IHB Director replied that in the maritime community the relation between IHO and IMO, also IALA and IOC is excellent bearing the attendance of IHO representatives to the IMO meetings and seminars.

Agenda 12 : Any Other Matters

12.1 RENC Presentation

74 IC-ENCs and PRIMAR representatives, jointly presented the RENC matters to the Conference. In their presentation the RENC concept including the definition aspects, organization, product distribution, members RENC data coverage was introduced. In addition, the benefits of joining with RENC and RENC Cooperation were enumerated. The RENC presentation appears as Document NIOHC14_12a. In response to the IIC Technologies' representative's query, they replied that the project is ongoing in PRIMAR and hope to have the distribution solution within 2014.

75 IHB added that IHO CL 05/2012 provided detailed information on the 2 RENCs. He stated that RENC, developed under the WEND Principles, should be the beneficial platform for facilitating distribution and reducing expenditure of HOs' product distribution, and ensuring and supporting better quality of ENCs. MSs are invited to consult with the IHO website for more detail.

12.2 WENDWG Presentation

76 IHB Director referred to the WENDWG report presented to the 18th IHC and the Actions from the 5thIRCC Meeting in Australia last year. The WENDWG report appears as Document NIOHC14_12b. He highlighted two important issues including the proposal for the definition of the cartographic boundaries and the revision of the WEND guidelines to address gap and overlap issues in ENC coverage. Accordingly, he invited NIOHC MSs to consider the issues and respond to the IHO CL04/2014 and 06/2014 by the datelines. He also encouraged NIOHC MSs to follow the WENDWG activities from a WENDWG website and an IRCC website.

12.3 IALA and IALA World-Wide Academy

77 Radm. Jean Charles Leclair, Dean of the IALA World – Wide Academy, presented on the IALA and the IALA World-Wide Academy Overview. He shared to the Conference that the transitional attempt from present status as NGO to the IGO of IALA will be proposed to the upcoming Assembly in May, in Spain. The activities of IALA World-Wide Academy since its inauguration in 2012, including joint capacity building and training activities, were also shared. Audiences were invited to visit the IALA and IALA WWA websites for further information. The presentation appears as Document NIOHC14_12c.

12.4 Industry Presentation

12.4.1 Capacity building and tools

78 SevenCs representative presented on the Capacity Building and Tools. She touched on the company's history and then introduced various currently available tools such as ENC Contour Generator, ENC Optimizer, ENC Analyzer, and ENC Encryptor to the Conference. The SevenCs capacity building program and its past activities are also shared. The presentation appears as Document NIOHC14_12d.

12.4.2 Development of e-Navigation

79 Jeppesen representative presented on the E-Navigation Concept and Test Beds. In his presentation, key aspects of e-navigation together with the vision in terms of trend in display of navigation related information on ECDIS were visualized. The e-navigation integration concept was thus introduced. The example of e-navigation and cases of test beds were also shared. The presentation appears as Document NIOHC14_12e.

12.4.3 Development on "Service Level Management" of CIRM

80 CIRM Representative (Jeppesen) presented on the SLM (Service Lifecycle Management) Concept. The concept is also supported by IHO and resulted in join submission to IMO NCSR1. In the presentation, the conceptualized idea of SLM, the related action from HSSC5, and the concept of SQA for e-navigation were introduced. The presentation appears as Document NIOHC14 12f.

12.4.4 Implementing the S-100 Standard and Product Specifications

CARIS representative presented on the Implementing the S-100 Standard and Product Specifications. Various aspects on the evolution of S-100 including its product specifications and their implementation as well as the industry trend in implementing

these publications were addressed. The presentation appears as Document NIOHC14_12g.

12.4.5 Capacity Building Update in the NIOHC Region

81 IIC Technologies representative presented on Capacity Building Update in the NIOHC Region. He introduced IIC Technologies & IIC Academy, and provided a brief of the progress of 2011-2014 Capacity Building and 2015 Multibeam Course. Its details appear as Document NIOHC14 12h.

12.4.6 ArcGIS: Charting new value to your data

82 ESRI representative presented on ArcGIS: Charting new value to your data. He focused on evolution of GIS concepts, and the development of ArcGIS platforms and applications in conjunction with the advances in information technology. Its details appear as Document NIOHC14_12i.

12.5 GEBCO Presentation

- Chairman of Guiding Committee of GEBCO presented on GEBCO and its relevant activities to NIOHC. He provided the overview of the GEBCO history, organization, etc. He also presented the short clip of GEBCO, followed by an explanation on GEBCO in the Indian Ocean, IOBC and its importance. He requested for the support to improve the quality of the GEBCO global grid inter alia Indian Ocean. The CB initiatives and activities supported by Nippon Foundation were mentioned. He explained theoretically the relation between the water surface and the elevation and the compositions of the ocean floor. The presentation appears as Document NIOHC14 12i.
- 84 Vice Chair expressed his appreciation toward the activity leading to acknowledgement of sea feature names by school children in Ireland. In terms of education spectrum it is highly valued. In reply, Chairman of GGC said that he is keen to provide such education to the children globally as well as in the case in Indian Ocean to prevent misunderstanding of the flat and smooth sea floor perception of the children.
- 85 IHB Director supported and appreciated GEBCO presentation and activities as the important body working under the auspices of the IHO and IOC. IHO supports financially and administratively the GEBCO Program. 11th year of GEBCO Ocean Mapping Project is announced by IHO CL no. 13/2014 and invited MSs nominating to the course.
- NIOHC agreed to make minor amendments of the Statutes to ensure consistency. Article 1 e) now should read "At the conclusion of the Conference the Vice Chairman for the next Conference shall be elected and shall take up his duties within four months following the Conference. In the normal course of events the Vice Chairman will succeed as the Chairman within four months from the end of the Conference".

Agenda 13: Approval of Minutes of Meeting

87 The conference reviewed the draft Minutes of Meeting. The approved Minutes of Meeting appears as Document NIOHC14 13.

Agenda 14: Handing over of Chairmanship to United Kingdom

88 Chairman thanked all member states, including WGs and CB Coordinator for all cooperation and support over the year of honorable Chairmanship of NIOHC. He officially handed over the Chairmanship to United Kingdom.

Agenda 15: Election of the NIOHC Vice Chairman

89 Bangladesh was elected as a new Vice Chairman of NIOHC.

Agenda 16: Next NIOHC Conference Date and Venue

90 The next Conference will be held in Masqat, Oman, tentatively on 16 -18 March 2015.

Agenda 17 : Close of Conference

91 Chairman (Thailand) closed the Conference and appreciated the participation and contribution by MSs and observers.

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OPENING ADDRESS

BY

THE COMMANDER IN CHIEF OF THE ROYAL THAI NAVY

Distinguished Delegates, Ladies and Gentlemen:

It gives me a great honour to preside over the opening ceremony of the 14th NIOHC Conference.

How delighted I am to see member states of the NIOHC, representatives from the IHO, colleague partners and friends from the commercial sector attending today's Conference with us. On behalf of the host country and that of the Royal Thai Navy, I welcome you all to Bangkok, capital of the Kingdom of Thailand.

With our recognition of the importance of hydrographic service, as the meaning shown through the World Hydrography Day's theme this year, "Hydrography – Much More Than Just Nautical Charts", I am sure that we are very proud of our works, especially the contributions we have made to the wide-ranging aspects of our world development.

Finally, I am confident that with contribution of everyone in this room, this forum of Regional Hydrographic Commission of the North Indian Ocean will achieve a prosperous outcome as integral part of the contribution to the world hydrographic services.

May I take this opportunity to wish you all success and a pleasant stay in Bangkok. Thank you.

WELCOMING ADDRESS BY THE NIOHC CHAIRMAN

Good morning everyone, on behalf of the Director General of the Hydrographic Department of the Royal Thai Navy, the Chairman of NIOHC, and that the host of this Conference, it is indeed an honor for me to see all of you here. Please allow me to formally welcome you all again to our Department. I would like to thank distinguished delegates from IHB, NIOHC members, associated members and observers for your effort to attend this Conference. But I am afraid that delegates from France, Malaysia, Maldives, Saudi Arabia and IMO could not be with us today. Rear Admiral Tom Karsten, UK National Hydrographer will join us tomorrow and Mr Shin Tani, Chair of GEBCO could join us on Friday.

This Conference which is scheduled to take place annually is a vital forum for the Commission to review, update, develop and coordinate the regional strategies, policies and work programs primarily to enhance the safety of navigation in the region. It is also a platform for all of us to share experiences, encourage mutual assistance and strengthen relationships. And furthermore it is the auspicious occasion where the current chairman would hand over the chairmanship to the next chairman.

Since 2008, mandatory ECDIS carriage requirements have been a catalyst for change in navigation, especially from paper-based periods to digital-based era. Therefore, there has been an urgent need for us to cooperate in ENC production, harmonization, coverage and distribution, which are all clearly reflected in our Agenda of the Conference. Building the hydrographic capacities which is essential not only for enhancing safety of navigation but also raising awareness of significance of hydrography will be also our major topic of discussion and Industrial sectors who have contributed to the success in building the hydrographic capacities kindly offer in this Conference to present their roles and progress in this area of activities.

Before I end, I would like to thank you all again to attend this Conference and wish you all a happy time throughout your stay.

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