

15TH MEETING OF THE IHO INTER-REGIONAL COORDINATION COMMITTEE (IRCC-15)
Tokyo, Japan, 12-14 June

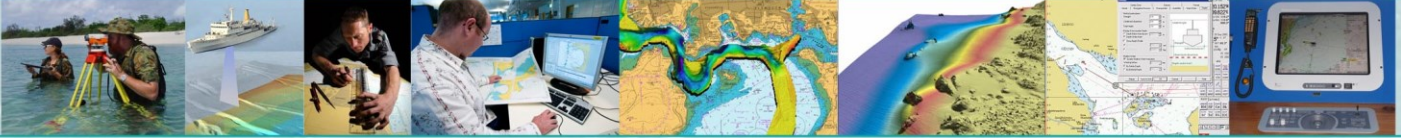
Contribution to the IHO Work Programme 2023	
Task 3.1.1	Organize, prepare and report annual meetings of the Inter-Regional Coordination Committee (IRCC)

The 15th meeting of the Inter-Regional Coordination Committee (IRCC-15) was held in Tokyo, Japan, from 12 to 14 June 2023, hosted by the Japan Coast Guard Hydrographic and Oceanographic Department (JHOD). The meeting was chaired by Mr Thomas Dehling (Germany) and attended by 47 in person participants from 19 Member States. The IHO Secretariat was represented by Director Luigi Sinapi and Assistant Director Leonel Manteigas.

Dr Masayuki Fujita, Chief Hydrographer of Japan, provided a welcome speech in which he expressed the honour of hosting this important event. He remarked that Hydrography supports the foundation data and information for the implementation of our respective mission and vision, and support cooperation and partnership with stakeholders. The importance of IRCC is further growing in promoting regional cooperation and safe navigation, and advancing regional hydrographic services. He enhanced the important items in the agenda of this meeting after the 3rd Session of the IHO Assembly.

IRCC Chair, Mr Thomas Dehling, provided the IRCC report, highlighting the activities since IRCC 14 and the excellent cooperation between IRCC and HSSC and the respective subordinate bodies. A particular focus on the 3rd Session of IHO Assembly's Decisions affecting IRCC was made. In particular, on Decision 20 – Establish a Project Team under IRCC to explore the establishment of reliable alternative funding for activities related to Capacity Building and GEBCO. IRCC will be also involved in reviewing the IHO Strategic Plan and the 9 Strategic Performance Indicators (SPI) allocated to IRCC, the figures of which will be provided by the end of each year for updating the IHO Publication P7 - IHO Annual Report.

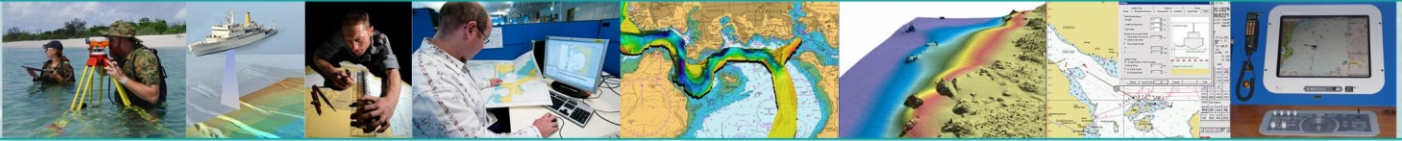
On behalf of the IHO Member States and IHO Secretariat, Director Luigi Sinapi delivered the IHO Secretariat Report, expressing gratitude to the JHOD for hosting such an important IHO meeting and the preceding IBSC46 and CBSC21 meetings. He highlighted that the IRCC represents, within the world's Hydrographic Community and together with the IHO Assembly, the only other real opportunity to discuss the regional realities, issues and initiatives of common interest in the fields of Hydrography, Nautical Cartography, Capacity Building, Ocean Mapping and many others, identifying the best and most appropriate approach to be applied at regional and global levels. In the IHO Secretariat's report he highlighted the outcomes of the 3rd Session of the IHO Assembly, the initial information on the incoming 7th IHO Council and the most important achievements in IHO outreach and new IHO projects.



Participants at IRCC15

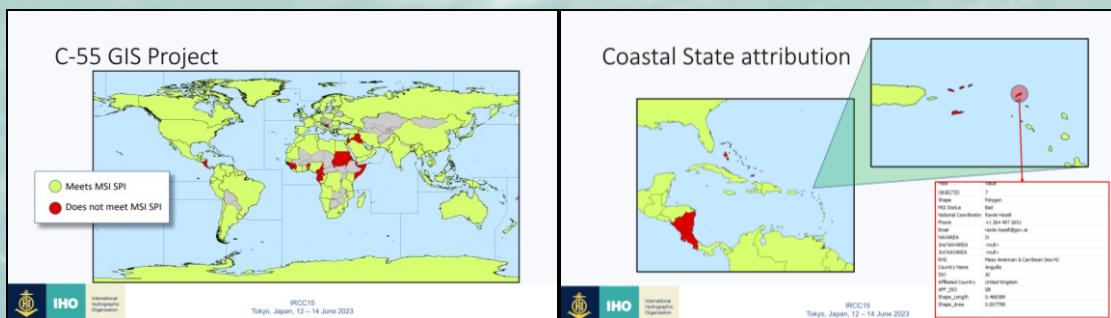
The HSSC Vice-Chair presented the progress on the S-100 Implementation Roadmap and on the S-100 product specifications. HSSC is focused on the “Phase 1 - Navigational Route Monitoring Mode” Product Specifications to be operational by October/November 2024. IHO will report to IMO NCSR the progress of Product Specifications against the S-100 implementation roadmap, as well as expected coverage of S-100 products once they start to become available. HSSC approved Ed. 1.0.0 of S-68 – Guidelines and recommendations for hydrographic offices for the allocation of CATZOC/QOBD (Quality of Bathymetry Data) values from survey data for initial implementation, testing and evaluation, and Ed 1.0.0 of B-13 - Guidance to Satellite Derived Bathymetry. HSSC tasked NCWG to work on S-11 Part A, Section 200, to incorporate S-101 Scheming Guidelines. HSSC discussed the paper provided by Germany on the effects of amended paper chart production practice, similarly discussed at IMO MSC 107, and tasked NCWG to make an impact study and develop a standard for NtM (XML) if appropriate. HSSC approved ToRs for the establishment of the S-100 Infrastructure Centre Establishment Project Team (ICE PT) under HSSC (following Decision A3/14). An ISO Cell was set up after HSSC13 to experiment with the application of ISO 9001 in the development of S-101 Product Specifications. On this, HSSC invited IRCC to consider mirroring such an ISO Cell on S-101 via the RHCs. HSSC endorsed the proposal from the UK for the IHO to consider the creation of a new award, more inclusive than the Medal of Prince Albert 1st, recognising once a year a champion of hydrography across HSSC and IRCC (WGs, SCs and PTs). IRCC also supported the proposal to consider the creation of a new award, to be presented to C-7.

The RHC and HCA Chairs (and those speaking on behalf of those chairs not present at the meeting) focused their reports on the most important regional key achievements, key findings and lessons learned, and then on the proposals to bring to IRCC’s attention. The main concerns were related to the need of collaboration and coordination in the implementation of the S-100 Roadmap, the need to increase the Capacity Building activities at regional level, as well as the lack of participation in the RHCs’ activities and meetings and data collection in



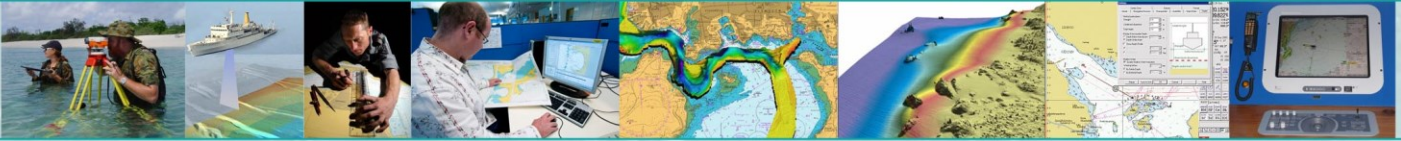
remote locations. Good progress in the inter-regional cooperation and successful partnership with industry and international stakeholders, especially in the field of Capacity Building and the implementation of new technology, were noted and discussed. RHC Chairs were requested to discuss how HO's can assume a geo-coordinating role to help ensure provision of data on a regional level, and to open the debate on RHCs' future engagement in climate change related activities in reference to the IHO Strategic Goal 3.

The Sub-Committee on the World-Wide Navigational Warning Service (WWNWS-SC) Chair informed on the last WWNWS14 meeting, which was also a joint meeting with WMO Worldwide Met-Ocean Information Warning Service, focused on S-124 progress and Iridium SafetyCast Implementation. During the meeting, a Space Activities Working Group and a Task Team on Volcanic Activity were established. He provided feedback on IHO SPI 3.1.1 (target 90%) assigned to WWNWS. Overall, for 2022, the WWNWS assessed Coastal States MSI capacity to be 87%. The SPI is measured yearly, based on the navigational warnings issued and on the MSI support provided by NAVAREAs. WWNWS is working in cooperation with CBSC on a C-55 GIS project, considering the States having MSI capacity and meeting the MSI SPI, and those not having such capacity and not meeting the MSI SPI. The presented demo on the C-55 GIS project will be evaluated to be incorporated into the INTogIS III. On Iridium SafetyCast Implementation, WWNWS agreed that the use of all IMO RMSSs should be mandatory, showing those NAVAREAs already fully implementing the Iridium SafetyCast system, as well as those still in trial and those that have not yet implemented the system. Two courses on MSI were conducted in 2022. S-124, Edition 1.0.0 is ready for submission for approval. NCSR10 approved the joint IMO/IHO/WMO Manual on Maritime Safety Information.



C-55 GIS project presented by WWNWS

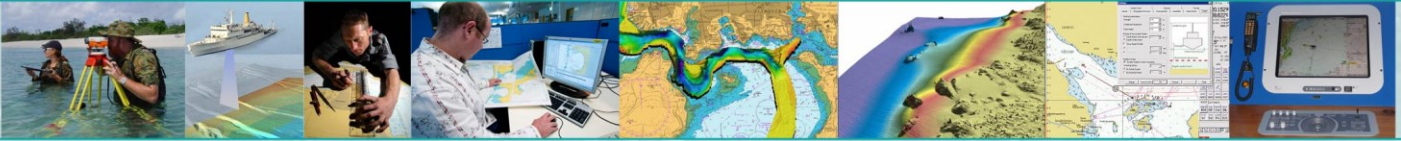
The Capacity Building Sub-Committee (CBSC) Chair presented the CB Work Programme (CBWP), the significant impact of the COVID-19 pandemic on the CB activities, the new projects launched lately (e-Learning Center and EWH), Proposal 3.5 to the 3rd Assembly and the C-55 improvements. The Chair highlighted the generous financial external contribution to Capacity Building coming from the Republic of Korea, Japan through the Nippon Foundation and Canada, and the related initiatives/projects funded with those contributions. The CB funds situation available for 2023 and 2024 was also presented, highlighting once again the core strategic role of Capacity Building in Hydrography. With reference to the e-Learning center, the



Project Team completed the Guidelines with the proposed composition of the Steering Committee. The CBSC endorsed the Guidelines and IRCC approved them, asking the IHO Secretariat to inform, via an IHO CL, that the e-Learning center is fully operational and call for the establishment of the Steering Committee, in line with the indications provided in the Guidelines. On C-55, the PT progressed on the new edition of the IHO C-55 publication, highlighting that the C-55 PT developed a solution for survey status in countries based on CATZOC provided via the RENCS directly to the IHO Secretariat. For non-navigational purposes, data from Seabed2030 can support annual regional and global reporting including Areas Beyond National Jurisdiction (ABNJ). CBSC welcomed Proposal 3.5 to the 3rd Assembly, requesting that CBSC is involved, but highlighting that the task-force should consist of members with the appropriate skills. Finally, a way-ahead for the EWH project was presented by Canada on behalf of the IHO Secretariat, IRCC, CBSC and Canada, proposing how the project could evolve into a programme and the possible ways to support, financially and in-kind, the programme. The way-ahead will be reported from IRCC Chair to Council at C-7 for decisions. The IHO Secretariat was finally asked to issue a questionnaire on gender balance via Circular Letter every 3 years.

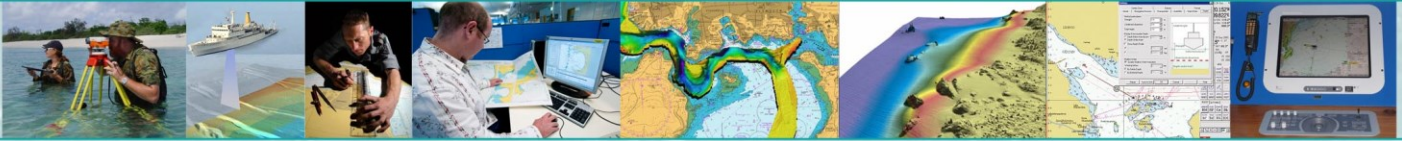
The Worldwide ENC Database Working Group (WENDWG) Chair reported on achievements of the WENDWG in the last few years, focusing on the transition from pure S-57 focus to S-100 world. The WG completed a WEND-100 Product and Service Matrix using the UN-Integrated Geospatial Information Framework pathway principles to assist RHCs and MS, through the application of basic UN-GGIM check-list and good practices applied to S-100 Products and Services. This approach is aimed at identifying the key issues and critical paths to be considered for healthy product lifecycle, noting that not all future S-100 based products services can or will be provided by every Hydrographic Office. Responses to the Matrix were received from 8 of the RHCs resulting in an average total score of 45.85. The WG considered the WEND-100 Principles and S-1xx Implementation Guidelines to be in “maintenance mode” and included them as part of the regular agenda to consider updates as S-100 Products and Services mature. WENDWG Chair thanked KHOA for leading the INTOGIS III development, noting its importance for sharing S-100 product coverage into the future, encouraging submission of S-128 datasets for use in INTOGIS, and thanked NGA for the updates on NGA World Port Index and Global Maritime Traffic Density Service. On the regional S-100 coordinator’s role, some RHCs requested more guidance on what the role entails, An amendment to include Section 300 in S-11 Part A to describe the Coordinator responsibilities was considered. Some progress was made on measuring the SPI 1.3.1 via a first run of the WEND IGIF Products and Services Matrix that has been completed.

The Marine Spatial Data Infrastructures Working Group (MSDIWG) Chair reported on the progress on the IHO Strategic Plan Target 2.1 - Build a portal to support and promote regional and international cooperation in marine spatial data infrastructures - and, Target 2.3 - Apply UN shared guiding principles for geospatial information management - , S-100 framework, the Digital Twins (DT), and the FAIR principles and UN-GGIM IGIF-Hydro) from a MSDI perspective. On DITTO (Digital Twins of The Ocean), MSDIs are evolving from a data infrastructure to a knowledge infrastructure and enabling and benefiting from DT would be one of the many ways MSDIs would drive marine knowledge. The MSDI Chair mentioned the importance of the RHC MSDI Ambassadors to promote MSDI and help MS prepare national



reports with respect to MSDI status. The MSDI WG embarked on an update of the C-17 publication. The updates were deemed significant enough to entail an Edition 3.0.0. with the two most notable, a cookbook for HOs on not only establishing MSDIs but also advancing existing MSDIs and addressing all levels of MSDI maturity - *leaving no one behind*. This gives newly established MSDIs a chance to keep abreast of future trends and to adopt the latest advances in technologies, standards and practices; and secondly an “IGIF-aligned MSDI implementation”, explaining the bridge between the MSDI 4 pillars to the UN-GGIM IGIF 9 strategic pathways. The updated publication will also provide information how HOs can apply these frameworks such that MSDIs can be integrated with the larger geospatial ecosystem, in line with the IHO Strategic Goals 2021 - 2026, to address many of the environmental challenges, climate change and sustainable development, and increase safety and efficiency of port-to-port navigation with integrated marine spatial data. IRCC approved the MSDI WG Terms of Reference version 2.0, and endorsed C-17 Ed. 3.0.0, requesting the IHO Secretariat, in accordance with Resolution 2/2007 as amended, to issue a Circular Letter seeking for the approval of the IHO MS. Finally and in accordance with A-3 Decision 8 point c), IRCC tasked MSDI to not invest into another portal, but to focus on the existing global thematic layers already available on the INTogIS and, if new potential global thematic layers are identified in addition to those potential ones listed into the PRO 1.2 approved by A-3, they should be brought to the attention of IRCC for the approval by the Council.

The IHO-EU Network Working Group (IENWG) reported on the MoU signed in 2012 by the European Commission and the IHO, which ensures a continuing liaison in areas of common interest. The 10th anniversary meeting of the EC and IHO in 2022 valued the contributions of the EU HOs and outlined prospects. The latest IENWG13 meeting was organised on the occasion of the annual European Maritime Days (EMD) of the European Commission DG MARE and focused on global issues concerning the blue economy, the marine environment, the maritime security and ways of moving forward. IENWG and DG MARE discussed new opportunities for collaboration, covering also EU policies of interest for the IHO, projects and strategy. Information on some EU projects (EU study on marine data collection coherence, re-use of environment public data applied to marine knowledge, Inspire - European Spatial Data Infrastructure for the purposes of EU environmental policies and Maritime Spatial Planning was provided and shared, highlighting the interoperability with data and IHO standards. The EU countries' contribution to GEBCO interoperability between EMODnet, the IHO DCDB and the IHO and IOC GEBCO was also discussed. Finally, a discussion on the review of the strategy and the way-forward for the IENWG took place at the IENWG13, highlighting Maritime policies in order to continue to monitor and influence the EU policies, the development of the S-100 hydrographic products and services, in order to promote them across the European Commission (to make good use of for the purposes of blue economy, marine safety, climate change, protection of marine areas and biodiversity), the IHO Capacity Building programme, in order to promote the development of programmes for the hydrographic capacity in the EU, and outside EU in particular for safe sea lines with East Asia and Africa, in connection with IRCC initiatives to extend CB funds, and finally the data collection, in order to develop common acquisition campaigns of bathymetric data in the EU maritime basins. The involvement of the IHO secretariat was recognized as an asset for the promotion of activities at high level in the EU Commission.



IHO 1st IENWG meeting on the occasion of the EMD

International Hydrographic Organization

- Annual venue on global issues concerning the blue economy, the marine environment, the maritime security and ways of moving forward.
- IENWG members attended and some participated in workshops

Joint workshop
Benefiting from Maritime Data to Drive Marine Innovation

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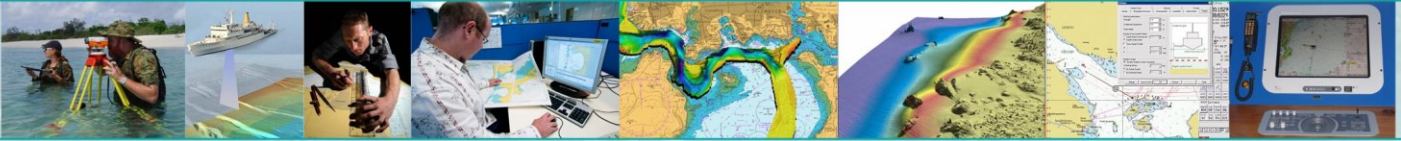
EMD 2023 Exhibition
European Digital Twin of the Ocean
24 & 25 May 2023
Tokyo, Japan, 12-14 June 2023

EMD
EUROPEAN MARITIME DAY
Brest
24-25 May 2023
Workshop 13: The EU as a Maritime Security Actor in the Gulf of Guinea & in the Indo-Pacific

European Maritime Day – 24-25 May 2023, Brest (France)

The FIG/IHO/ICA International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers (IBSC) Chair reported that at the IBSC45 meeting in 2022, 13 submissions were received with only 3 initially recognized, but after the intersessional review all 13 were recognized. At this year's IBSC46 11 submissions were received. 1 submission was recognized and for the remaining 10, whilst 3 submissions were not recognized, the Board offered 8 inter-sessional revisions. The Board decided to develop a pathway to recognize Subjects of the S-5 Standards S5A & S5B in addition to the recognition of full programmes. IBSC worked on the review of the IBSC Standards and maintenance of IBSC Publications. Ms Cecilia Cortina (Mexico), currently attending the University of New Hampshire - Nippon Foundation/ GEBCO programme alumna, joined the Meeting as an intern supported by Nippon Foundation/GEBCO within the EWH project. The Board discussed the need to update the Standards and potentially create a new standard for Marine Spatial Data Professionals. During the discussion the need to liaise with other stakeholders, in particular the IHO MSDIWG, to make an informed decision on the way forward on this subject was considered necessary. IBSC also agreed that the increasing number of inadequate submissions cause additional workload to the Board, and a second annual inter-sessional meeting is required in 2023 to finalize reviews of the inadequate submissions, but mainly to progress on the revision of the standards and the recognition of Subjects. The future engagement of IBSC with the IHO e-Learning Center was also discussed. IRCC tasked the IBSC in liaison with the IHO Secretariat to organize an online workshop to provide clarifications on the submissions to the Board.

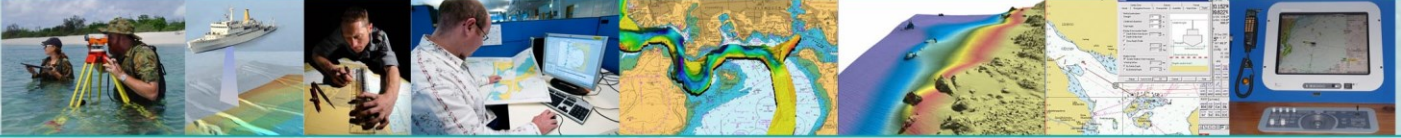
The Crowdsourced Bathymetry Working Group (CSBWG) Chair reported on the last meeting and on the achievements of CSBWG and DCDB. Following the publication of B-12 Ed 3.0.0,



CSBWG13 focused on a critical review of the group's operating mandate, as set out in the ToRs and RoPs. The new version of CSBWG ToR was approved by IRCC. CSB has reached a level of maturity and is picking up momentum rapidly, assisting in a change in the way many Member States view CSB. CSB is working on designing a work plan and determining their direction forward, reviewing the evidence, work-shopping a strategy and agreeing with the outcome. An important point is to investigate and promote ways to increase data contributions and incentives to take active part in the CSB initiative, also investigating ways to foster and facilitate data providers, increase data contributors and identify incentives on how and why mariners should become involved. A CSB Pointstore Dashboard is under development and the DCDB is formatted into a database schema and will then go through a data ingest pipeline to get archived and published. DCDB will continue to support the GEBCO Gazetteer and KHOA Beta-Gazetteer interoperation, developing a modern user interface. DCDB reported on SPIs 3.2.1 and 3.2.2 in a way that allows better understanding on the evolution on the amount of data and number of contributors to DCDB who are not Hydrographic Offices. Nearly 30 surveys from the ARHC region were added to the DCDB database since June 2022. For the next reports, DCDB would cooperate with RHCs to produce annual regional breakdowns of data holdings as part of SPI reporting. The MoU signed between IHO and NOAA to reaffirm NOAA's relationship and commitment to Ocean data was also mentioned. IRCC tasked the CSBWG in liaison with the IHO Secretariat to organize an online workshop on the benefit of Crowdsourced Bathymetry and how to expand data contribution to DCDB.

The GEBCO Guiding Committee Chair reported on the organization of the next GEBCO meetings in 2023 (Principality of Monaco) and 2024 (Fiji). A new IHO appointed GGC member joined GGC in 2022 for a mandate of 5 years. GGC has been working on the celebrations of GEBCO 120th years of ocean discovery, a new GEBCO strategy, a GEBCO Code of Conduct, a GEBCO Governance review, including the GEBCO organigramme with all the relations codified and the next steps for the approval of the new GEBCO governance. The high activity and intense cooperation with Seabed2030 was highlighted. A new GEBCO Sub-Committee on Education and Training was established. The main activities of the 5 GEBCO Sub-Committees were presented, with focus on outreach, including the presentation of the new 2023 GEBCO map during the IHO Assembly in May 2023 in the presence of H.S.H. Prince Albert II. IRCC endorsed the GEBCO Code of Conduct.

The IRCC Vice-Chair presented on the Proposal 3.5 - Establish an ad-hoc Project Team under IRCC to explore the establishment of reliable alternative funding for activities related to Capacity Building and GEBCO (see A-3 Decision 20). The PT composition was discussed, as well as the team's timeline and objectives. The possible available opportunities such as an ENC surcharge, voluntary contributions and approaches to Development Banks were presented, with aim to provide additional Capacity Building opportunities and Standards development. With reference to UNGGIM, the important tool for engaging with the Development Banks via the IGIF-Hydro was also discussed. IRCC established a scoping Team under the leadership of Dr John Nyberg to investigate potential additional sources of funding and the Team's objectives for the following presentation to C-7.



A paper from Germany on “Effects of amended paper chart production practice” was presented to IRCC (the same paper was presented by Germany to HSSC at HSSC15 meeting). The IRCC acknowledged the work being done at the HSSC in supporting Safety of Navigation for non-ECDIS mandated vessels (small commercial, fishing, leisure, etc) to allow for the transition from paper nautical charts via the provision of digital maritime data for these users. IRCC encouraged RHCs to invite Hydrographic Offices to consider the regulatory environment for non-ECDIS mandated vessels within national, regional and global discussions on this topic. IRCC requested HSSC to direct the NCWG to liaise directly with WWNWS with regards to the future of the paper chart production and the impact on navigational warnings.

The IRCC re-elected Mr Thomas Dehling as IRCC Chair and elected Dr Jennifer Jenks as IRCC Vice-Chair for the next 3 years by unanimity.

The next IRCC meeting is planned to be held on 10-12 June 2024 in Galapagos (Ecuador). Following meetings will be held in Nigeria (May/June 2025), Peru (May/June 2026) and Australia or New Zealand (May/June 2027 – Venue TBD).