WWNWS | WWNWS16/1/6
Meeting 16 | [14th August 2024]
Agenda Item [1.6]

Outcomes from HSSC16 and IRCC16

Submitted by Chair, WWNWS

SUMMARY

Executive Summary:	This document contains the relevant outcomes from the 16th meeting of the IHO's Inter-Regional Coordination Committee and the 16th meeting of the Hydrographic Services and Standards Committee.
Action to be taken:	Paragraph 6
Related documents:	C8-4.2A, IRCC16 Bulleting Report, HSSC16 Bulletin Report, HSSC16-07C, HSSC16-07F, IRCC16-07B

1. Background

1.1. The 16th meeting of the Hydrographic Services and Standards Committee (HSSC) took place in Tokyo, Japan from 27-31 May 2024.

1.2. The 16th meeting of the Inter-Regional Coordination Committee (IRCC) took place in Santa Cruz Island – Galapagos, Ecuador from 10-12 June 2024.

2. HSSC 16 Outcomes

2.1. There were considerable data distribution discussions during the meeting with particular interest in Secure Exchange and Communication (SECOM) of S-100 based products and services. While S-100 data distribution still needs further testing and consideration, SECOM has presented itself as the most likely means for the secure transfer of S-100 based services. Additionally, the Committee engaged in a discussion on the allowance of System ENC (SENC) delivery for S-100. An Electronic Chart Display and Information System (ECDIS) will convert the ENC and its updates into its own native SENC format. The SENC format is optimised by the ECDIS manufacturer for the correct and efficient display of the ENC information. The majority of IHO MS agreed that SENC delivery is not needed for S-100 and that it may impact the ability to deliver digital signatures from the hydrographic office through the supply chain to the ECDIS.

2.2. The Committee agreed to request that the IHO Council recognise the St. Lawrence River as an "IHO Canada Sea Trial Area" along with the possibility to identify additional official areas around the world. Canada agreed to share data for the St. Lawrence Sea area free of charge for 6 months for testing purposes. With the operational versions of the Phase 1 S-100 product specifications moving towards implementation, a more structured testing and experimentation approach for their validation, involving all the stakeholders has been agreed upon, building on the work of the ISO 9001 cell.

2.3. **Document HSSC16-07C — S-124 Data Dissemination issues related to e-navigation.**

2.4. The paper addressed the status of Maritime Service No 5 in terms of e-navigation and the dissemination of Maritime Safety Information after the World Radio Conference 2023. It noted the MSI dissemination systems information transmission options identified by IMO MSC.1/Circ.1645 (16 May 2022) and it predicted that MSC.1/Circ.1645 would be updated to include NAVDAT in the near future.

2.5. The paper highlighted that radio frequencies are required to disseminate MSI and these frequencies are protected by a regulatory framework that ensures every vessel can receive the broadcasted MSI. Therefore, a system can only be listed in the Radio Regulations App 15 if it has a primary allocation and no other regular allocated system can interfere with them.

2.6. As MSI is part of the GMDSS, a new transmission method can only be implemented in the GMDSS structure by modifying the Radio Regulations. This modification can only be carried out by a World Radio Conference (WRC). WRC will only add MSI provision by S-124 data as an Agenda Item if it is confirmed by the IMO that work is initiated to implement MSI provision by S-124 into the IMO framework. The application for a new IMO work item has to be applied at the Maritime Safety Committee by an IMO Member State. If agreed, IMO MSC will add the work item to the work schedule of the NCSR Subcommittee for further deliberation.

2.7. **Document HSSC16-07F — Comment on S-124 data dissemination issues related to e-navigation by the Chair of the IHO World-Wide Navigational Warning Service.**

2.8. The paper addressed NAVDAT and VDES as potential new dissemination methods and the challenges that remain for each. The paper noted that IMO and IHO Member States responsible for the provision of navigational warnings are wary about implementing any new dissemination method without addressing implementation concerns, specifically those listed in the roadmap detailed in NCSR 10/WP.7.

2.9. It noted that MSC 108 was expected to adopt the draft resolution MSC.530(106)/Rev.1 on ECDIS performance standards submitted by NCSR 10 (NCSR 10/22 Annex 4). In Appendix 1 of that resolution, in the Reference Documents section, it lists the international organizations that have developed technical standards and specifications for use in conjunction with that standard. Specifically, it noted IEC Publication 63173-2, Maritime Navigation and Radiocommunication Equipment and Systems – Data Interface – Part 2: Secure Communication Between Ship and Shore.

2.10. IEC 63173-2:2022 details the scope of secure communication between ship and shore (SECOM). SECOM provides technical interoperability, where the same service interface is used for exchanging the information regardless of its operational use, up to the level of exchanging information securely online. Although designed for IHO S-100 based products, SECOM is technically payload agnostic and applicable for other types of data.

2.11. Communication between SECOM information services for data exchange relies on IP-based web services. The "last mile" between a SECOM information service and the end-user application is not defined in the IEC specification, thus the communication technology between the vendor API and a ship/shore system can be non-IP based as well as IP based.

2.12. The result of the adoption of the draft resolution MSC.530(106)/Rev.1 at MSC 108 is that the IMO will acknowledge the requirement for use of a broadband and IP-based connection to the S-100 ECDIS when it approves route exchange via SECOM.

3. **IRCC16 Outcomes**
   3.1. **Document IRCC16-07B — Report of the Word-Wide Navigational Warning Service Sub-Committee (WWNWS-SC)**
   3.2. The paper summarized the outcomes from the 15th meeting of the WWNWS and highlighted the NAVAREA Self Assessments, the Document Review Working Group, S-124, Iridium and Inmarsat updates, Space Activity Working Group, Task Team on Volcanic Activity and Safety of Marine Navigation, the report from the International Maritime Bureau Piracy Centre (IMB PRC), MSI documentation, MSI Capacity Building, and the IHO Strategic Performance indicator for MSI capacity.
   3.3. Overall, for 2023, the WWNWS assessed that 89.6% of coastal states had the capacity to provide MSI, up from 87% in 2022. The report noted that the definition that the WWNWS uses to assess coastal state capacity may need to be amended to include both “the capability” and “a measure to determine if they should provide MSI (or in the future, S-124) to the NAVAREA Coordinator”.
   3.4. The accompanying WWNWS presentation covered the outcomes from WWNWS15, IHO WWNWS Strategic Performance Indicator and how that relates to C-55, Iridium SafetyCast Implementation, Capacity building, an update on S-124, the new MSI document review schedule, and actions requested of the IRCC.
   3.5. The WWNWS list one action in its report: Encourage relevant Member States to implement all IMO recognized mobile satellite services.
   3.6. The IRCC suggested that the WWNWS consider developing additional actions in the future that might contribute to better coordination.
   3.7. **IRCC Outcomes**
   3.8. Chairs from the Regional Hydrographic Commissions (RHC) and Hydrographic Commission of Antarctica (HCA) focused their reports on the most important key achievements, key findings and lessons learned. The following were the main topics discussed:
      3.8.1. Harmonized development and implementation of S-100 products and services including all socio-economic benefits (e.g. Decarbonization, Voyage Optimization, Green Corridors and other Green/sustainable initiatives).
      3.8.2. Acceleration of the progress in the readiness of S-100 data migration through several ways such as exchange technology, experience, workshop and seminar between member states.
      3.8.3. Additional resource allocations to be found in order to start S-101 and S-102 production and how to better serve Sub-ECDIS customers with reliable, affordable and easy to access digital navigational products.
      3.8.4. Challenges with S-101 scheming and the possible high workload during the dual fuel period due to parallel production of both S-57 and S-101 ENCs.
      3.8.5. Implementation of the development of hydrographic survey technology and synchronization of nautical charts in the future.
      3.8.6. Limited sharing of data with DCDB and GEBCO.
      3.8.7. Limited funds available to the Capacity Building programme proved that strengthening collaboration across RHCs is very beneficial for cooperation amongst coastal states,
      3.8.8. Technical Visits and High-Level Technical Visits are extremely relevant to leverage hydrographic and cartographic activities in coastal states
      3.8.9. Substantial achievement for enhancing gender balance in hydrography in some RHCs.
      3.8.10. Arctic’s remoteness, vastness and ice-infested waters make it challenging to map the seabed, whilst in Antarctica, the activities of the Hydrographic

Commission of Antarctica (HCA) need to be focused on the impact of climate change too.

3.8.11. On the last day of the meeting, the Committee divided into three groups to discuss the revision of the IHO Strategic Plan 2021-2026 and how to improve it. Each group sent their summaries to the IRCC Chair to include in the report. Some suggestions included using plain language for each goal to make them understandable by all MS and collaborators; modify goal 1 so it will serve as a better tool to drive engagement and funding opportunities; describe the full benefits of S-100 and not just the S-101 chart; adapt to the needs of IMO, regulators, and industry; add a target under goal 1 - improve engagement with other organizations - IMO, IALA, WMO (all nautical products); and under goal 3, include traditional and non-traditional partners - IOC, but also IMO, UALA, WMO, and academia.

3.9. **There was one action for the WWNWS at IRCC16:** The IRCC Chair and WWNWS Chair will coordinate and send a letter to the specific RHCs where there is a need to implement IMO recognized mobile satellite services for MSI transmission to encourage relevant Member States to do so.

4. IRCC 17 report format

4.1. For the WWNWS-SC's report to the 17th meeting of the IRCC, it will focus and report on the following:

4.1.1. Meetings held during the reporting period

4.1.2. Work Program

4.1.2.1. Highlight the important issues and activities during the reporting period.

4.1.3. Progress on IRCC Action Items

4.1.4. Problems Encountered

4.1.4.1. Highlight any issues with resources, funding, participation, et cetera

4.1.5. Any Other Items of Note

4.1.6. Conclusions and Recommended Actions

4.1.6.1. Identify any conclusions drawn from the report.

4.1.6.2. Identify any actions recommended by the reporting body.

4.1.7. Justification and Impacts

4.1.7.1. Justification for any proposed actions or recommendations. This should include:

4.1.7.2. Identifying the benefits which would accrue from any proposed action.

4.1.7.3. Identifying any resource implications resulting from the recommendations, such as the number of working group sessions, expertise, need for expert consultants, funding, et cetera.

4.1.7.4. Identifying which IRCC body is essential to completing any proposed new work items.

4.1.7.5. Identifying proposed priorities for new work items.

4.1.7.6. The date when any proposed new work item is expected to be completed.

4.1.7.7. Any related activities that may impact on a proposed work item or decision.

5. Next IRCC and HSSC meetings

5.1. The 17th meeting of IHO IRCC will be 3-5 June 2025 in Monaco.

5.2. The 17th meeting of IHO HSSC will be 5-9 May 2025 in Stavanger, Norway.

6. Actions requested

6.1. Develop a draft WWNWS workplan for 2024-2025
6.2. Note the report.