

Workshop on Enhancing Safety of Navigation with Maritime Digitalization

Intercity Hotel, Daejeon City, Republic of Korea, 9 – 11 July

Contribution to the IHO Work Programme 2024	
Task 1.1.15	Maintain relationships with other international and observer organizations when their agendas have relevance to the programme of the IHO.

The 2024 Joint Capacity Building Asia-Pacific workshop on Enhancing Safety of Navigation with Maritime Digitalization was held in the Intercity Hotel, Daejeon City, Republic of Korea (ROK) from 9 to 11 July 2024. The Workshop was hosted by the Ministry of Oceans and Fisheries of Republic of Korea and co-organized by IMO, IHO, IALA and Republic of Korea. The IHO Secretariat was represented by the Assistant Director Leonel Manteigas.



Participants of the “Workshop on Enhancing Safety of Navigation with Maritime Digitalization” – Figure 1

The workshop had 44 participants. In addition to the representatives from the Ministry of Oceans and Fisheries and several other organizations from research institutes and the industry of Republic of Korea as well as the representatives of IMO, IHO and IALA, 16 participants from 8 countries participated at the Workshop.

The Workshop was opened by Mr. Seong-yong CHOI, Director General of Maritime Affairs and Safety Policy Bureau, Ministry of Oceans and Fisheries, (MOF), who welcomed the participants and highlighted the importance of the digitalization, expressing the wish that the workshop could promote the maritime mobilization and digitalization and contribute to share the experiences and developments on those areas. IALA Deputy Secretary-General, IHO Assistant Director and IMO Technical Officer completed the opening ceremony thanking the Republic of Korea for the organization of this important event for the international maritime community.

The Workshop was composed of seven sessions. On the second Session dedicated to the “Update from International Organizations”, IHO Assistant Director Leonel Manteigas delivered a presentation on the topic “IHO capacity building contribute to the safety of navigation and

maritime digitalization”, providing an overview of the IHO, with focus on hydrography and its importance to the safety of navigation, the IHO Capacity Building programme and its phases, the transition from S-57 to the S-100 products, the education opportunities offered every year and then the importance of the partnership between international organizations to improve capacity building efficiency. IALA presented its respective work programme for 2023-2027, the cooperation with other organizations and the transition from NGO to an IGO, that will commence in August 2024. IMO presented updates on the modernization of the GMDSS, the Digital Navigational Data System, e-navigation, and digital VHF.



Mr. Seong-yong CHOI, Director General of Maritime Affairs and Safety Policy Bureau, Ministry of Oceans and Fisheries (ROK) addressing the Workshop – Figure 2

Session three was dedicated to “Sharing Digital Experiences”, with three of the four presentations related to the S-100 data model. This session was chaired by IHO Assistant Director Leonel Manteigas who also delivered a presentation on the “S-100 contribution to the safety and efficiency of navigation and maritime digitalization” focused on the S-100 implementation roadmap and the respective benefits of the S-100 data model. In this session there was an update on the S-100 from the Korea Hydrographic Research Agency with a status of the ENC’s in Korea, the Korean Sea Navi, a system for small non-SOLAS vessels and an overview and the projects on S-100 as well as the future plans. IALA presented on “IALA S-200 testbed, training and sea trial” with the respective role on the S-200 development, the publications and product specifications, the findings from S-201 preliminary exercise, the sea trial on S-124/S-125, the S-200 Pilot training of last February and the 2nd IALA-IHO Joint workshop on S-100/S-200 development. The session was closed by a presentation on the “Maritime Connectivity Platform” from AIVeNautics with the respective concept and working structure.



IHO Assistant Director Leonel Manteigas presenting at the session “Update from International Organizations” – Figure 3

Two important sessions were dedicated to the topic “Digitalization in participating countries” with presentations from Bangladesh, Cambodia, Malaysia, Indonesia, Philippines, Sri Lanka, Timor-Leste and Viet Nam, informing the participants on the last developments and concerns about national projects on the maritime sector.

The session dedicated to Maritime Mobility included two presentations from the Korea Research Institute of Ships and Ocean Engineering (KRISO). One was related to “Maritime digitalization” with Eco-friendly and autonomous ships and the digitalization in maritime, introducing some technological trends such as the SMART-Navigation and related R&D activities, as well as the Global Maritime Digital Route Testbed project in ROK. The second was dedicated to the “Maritime Autonomous Surface Ships (MASS)” with the concept and global trends, providing examples of several global projects related to the respective development and the outline of the Korea Autonomous Surface Ship (KASS) project. This session included also a presentation on the “Korea GHG reduction effort” with the Eco-Friendly Ship concept and the respective changes in the maritime industry from HD Hyundai marine solution.

In the end of the Workshop, it was agreed that important topics were discussed including significant transformations progressing in some areas, such as the Maritime Autonomous Surface Ships and the e-Navigation that require the adaptation of structures, data, information and products to support them. The S-100 data model is a huge challenge, involving IHO, IMO, IALA, IOC, WMO and others. The Workshop also provided an important opportunity to receive updated information about the situation, challenges and projects of some countries, and a significant opportunity for networking. Considering the success and importance of this workshops, ROK expressed the intention to continue with this initiative in the coming years.

The workshop ended with the closing remarks provided by the representatives of IALA, IHO, IMO and Republic of Korea (MOF).

Two technical tours were included in the Workshop, with visits to the Korea Research Institute of Ships and Ocean Engineering (KRISO), the MASS Operation Test Center and the Hyundai Heavy Industries.



Visit to the MASS Operation Test Center – Figure 4