

Regional Workshop on the development and implementation of S-100 products Turkmenbashi, Turkmenistan 3 to 5 December 2025

Contribution to the IHO Work Programme 2025

Task 3.5

Participate and contribute to the IMO work items on the modernization of the GMDSS and the development of the e-navigation implementation plan

High level summary:

- Eighteen government officials from maritime administrations and hydrographic offices attended the event from Azerbaijan, Georgia, Kazakhstan, Türkiye and Turkmenistan.
- Participants shared updates on the status of the hydrographic, navigational, and metrological services in their administrations. They discussed how to address the gaps between current capabilities and forthcoming requirements by supporting the production, dissemination, and management of S-100-compliant navigational data services and products.
- Participants gained a comprehensive understanding of S-100 requirements, dissemination of dynamic information such as navigational warnings, weather warnings and route exchange, and the interoperability of data streams essential for ECDIS.
- The workshop promotes regional cooperation and lays the groundwork for a harmonized compliance framework that supports the development and the implementation of the S-100 products amongst the Black and Caspian Seas littoral States.
- Participants gained a better understanding of the benefits of becoming an IHO Member State and were presented with the procedures for joining the Organization.

Details:

A joint initiative organized by the IMO in collaboration with the IHO and IALA highlighted technical assistance for marine navigation and outreach to the Black and Caspian Seas littoral States. The regional event raised awareness of the development and implementation of the IHO S-100 Universal Hydrographic Data Model and S-100-based products.

Eighteen government officials from maritime administrations and hydrographic offices participated, representing Azerbaijan, Georgia, Kazakhstan, Türkiye, and Turkmenistan. The IHO was represented by Technical Director Dr. John Nyberg and Assistant Director Mr. Yong BAEK.

The workshop aimed to strengthen the readiness of maritime administrations, hydrographic offices, and other information providers to support the implementation of the S-100 framework. Participants gained a comprehensive understanding of S-100 requirements, including the production, dissemination, and management of compliant navigational data services and products.

The initiative aligns with the revised Performance Standards for ECDIS adopted by the IMO Maritime Safety Committee at its 106th session (MSC.530(106)) and further updated at MSC 108. These standards introduce the phased implementation of the S-100 framework, which will become mandatory for all ECDIS equipment installed on or after 1 January 2029.

In the session on the S-100 data model and its global development, Dr. Nyberg introduced the S-100 concept, its benefits, and the latest developments in implementation, as well as the IHO's mission and the benefits of IHO membership. An IMO representative presented an overview of IMO activities and the background of maritime digitalization using S-100 as a common maritime data model for e-Navigation. IALA presented its role and the S-200 series product specifications.

Mr. BAEK delivered a training session on the S-100 product family, familiarizing participants with S-100 based data products and available resources, including product specifications and applications. Live demonstrations were also provided on the IHO security scheme application process and the procedure for obtaining a producer code.

Participants discussed S-100 product dissemination methods, including non-IP-based distribution, NAVDAT, VDES, and IP-based solutions and exchanged information on the regional status of charting activities, including ENC production, and discussions on pathways for national and regional implementation of S-100 through enhanced cooperation within the hydrographic and maritime communities.

Overall, the workshop enhanced regional cooperation, promoted harmonized communication among the participating States, and helped lay the foundation for coordinated implementation of S-100 products across the Black and Caspian Seas region.

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