

Hydrography is Much More than Just Nautical Charts for the IHO



The theme for this year's World Hydrography Day, which is also the 93rd anniversary of the establishment of the IHO, is "Hydrography - much more than just nautical charts".

The rapid growth and development of the so-called Blue Economy is making hydrography more important than ever before. The seas and oceans are now major contributors to the world economy and this is set to grow. Over 90% of the world's trade travels by sea. In addition, the seas and oceans represent a vast reservoir for food, mineral resources, energy, water, bio-medicines and infrastructure. But these potential resources are hard to exploit safely, cost effectively and sustainably without knowing the depth of the water, the shape of the seafloor and the hazards that lie below the surface. This is the importance of

hydrography - an underpinning element to every human activity that takes place in, on or under the sea.

To make the best use of the hydrographic data and information that is collected, it is imperative to make it easily available through interconnected digital geo-referenced databases. This is the reason that the IHO is revising or replacing some of its existing standards and placing an increased emphasis on assisting all its Member States to contribute to, and in many cases lead, the establishment of marine spatial data infrastructures (MSDI) at both a national and regional level. At the same time, having contemporary digital data exchange standards is also important to support the e-Navigation concept, currently being finalised by the International Maritime Organization (IMO). e-Navigation promises to become 'the maritime intranet'.

As part of its aims to make hydrographic data and information as widely used as possible, the IHO continues to work on a number of new data standards. S-100 - The IHO Universal Hydrographic Data Model - underpins this work. The S-100 base standard is derived from and compatible with the ISO 19100 geographic data standards and enables hydrographic data to be easily merged and used with other non-hydrographic geospatial data - especially in geographic information systems (GIS).

As well as the IHO, a growing number of international organisations with diverse maritime interests are now taking up S-100 as a data exchange standard, such as the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA), the Joint Technical Commission for Oceanography and Marine Meteorology (JCOMM) of the World Meteorological Organization (WMO), the Intergovernmental Oceanographic Commission (IOC) of UNESCO and the Inland ENC Harmonization Group (IEHG).

At the last meeting of the IHO's technical coordination committee - the Hydrographic Standards and Services Committee (HSSC), various proposals to develop S-100 based standards were endorsed. These were allocated titles and numbers in the S-100 series:

- IHO S-101 Electronic Navigational Chart (ENC)
- IHO S-102 Bathymetric Surface
- IHO S-103 Sub-surface Navigation
- IHO S-111 Surface currents
- IHO S-121 Maritime limits and boundaries
- IHO S-122 Marine Protected Areas
- IHO S-123 Radio Services
- IHO S-124 Navigational warnings
- IHO S-125 Navigational services
- IHO S-126 Physical Environment
- IHO S-127 Traffic Management
- IHO S-1xx Marine Services
- IHO S-1xx Digital Mariner Routeing Guide
- IHO S-1xx Harbour Infrastructure
- IHO S-1xx (Social/Political)
- IALA S-201 Aid to Navigation Information
- IALA S-20x Inter-VTS Exchange Format
- IALA S-20x Application Specific Messages
- IALA S-20x (Maritime Safety Information)
- IEHG S-401 Inland ENC
- JCOMM S-411 Sea ice
- JCOMM S-412 Met-ocean forecasts

One can see from the list above that for the IHO, hydrography really is much more than just nautical charts.

