

Eastern Atlantic Hydrographic Commission (EAtHC)
Commission hydrographique de l'Atlantique orientale

14th Conference - Cadiz (Spain) - 18-20 October 2016
 14^{ème} Conférence - Cadix (Espagne) - 18-20 octobre 2016

HSSC Report
Rapport du HSSC

As of 12 September 2016 / A jour le 12 septembre 2016

Background

1. The Hydrographic Services and Standards Committee (HSSC) is the technical steering committee of the IHO. HSSC is responsible for Programme 2 of the IHO Work Programme that addresses promoting and coordinating the development of standards, specifications and guidelines for official products and services to meet the requirements of mariners and other users of hydrographic information. The work items of the HSSC focus on developing the S-100 series of new standards while keeping the current IHO standards fit for purpose. The structure of the HSSC working groups was re-organized to reflect more clearly these two objectives. Further details are available in the HSSC section of the IHO web site at Home > Committees & WG > HSSC.

2. HSSC met twice since the 13th EAtHC Conference. This report summarizes the main outcome of these meetings and outlines the main pending issues. As shown in Annex A, only the three European members of the Commission are involved in HSSC activities. Only one member attended the HSSC meetings.

Outcome of the 6th HSSC meeting (HSSC-6)

3. HSSC-6 took place in Viña del Mar, Chile, hosted by the Chilean Navy Hydrographic and Oceanographic Service (SHOA), from 11 to 14 November 2014. The meeting, chaired by Dr Mathias Jonas (Germany), was attended by 44 representatives, from 18 Member States, the IHB, and six international organizations accredited as observers.

4. The Committee reviewed the activities, proposals, and work plans of its subordinate bodies and the decisions of other agencies and organizations affecting its work. The main outcomes are summarized in the following paragraphs.

ECDIS matters

5. The Committee:
- endorsed the draft new edition 2.0.0 of IHO publication S-100 - *Universal Hydrographic Data Model* and invited the IHB to circulate it to Member States for approval;
 - reviewed the outcome of the consultation of Member States seeking approval of the draft edition 6.1.0 of S-52 - *Specifications for Chart Content and Display Aspects of ECDIS*, draft edition 4.0.0 of the Presentation Library [Annex A to S-52], and draft edition 3.0.0 of S-64 - *IHO Test Data Sets for ECDIS* and endorsed the publication of the new editions, subject to final checks in liaison with the International Electrotechnical Committee (IEC);
 - noted that further information from ENC Producers and Regional ENC Coordinating Centres (RENC) was required prior to deciding the implementation scheme of edition 5.0.0 of S-58 - *ENC Validation Checks*;

- endorsed the new Annex C - *ENC Update Status Report* to be introduced in the future new edition 1.2.0 of IHO Publication S-63 - *IHO Data Protection Scheme* and tasked the IHB to finalize the draft new edition in liaison with the Data Protection Scheme Working Group (DPSWG) and then seek the approval of Member States; and
- approved the timescale and stages of the revision of S-66 - *Facts about electronic charts and carriage requirements* to be conducted by a dedicated project team chaired by a representative of IC-ENC.

S-100 and related activities

6. The Committee reviewed the progress in developing the next generation of standards for digital hydrographic products and services, the S-100 Universal Hydrographic Data Model and associated Product Specifications. The Committee noted with satisfaction the advances in developing the draft edition 1.0.0 of S-101 - *ENC Product Specification*, the S-100 Feature Catalogue Builder, the S-100 Portrayal Catalogue Builder, and an S-100/S-101 Viewer. The Committee commended the efforts of all contributors from IHO Member States and from industry and expressed its appreciation to the Republic of Korea for its specific support. The Committee endorsed the procedure for registering new S-100 based product specifications and agreed on the way forward to ensure the continuity of the administration of the S-100 Registry and Registers under IHO responsibility in the perspective of the retirement of the current Registry Manager planned at the end of February 2015. The Committee approved the consideration of the preparation of a new edition of S-102 - *Bathymetric Surface Product Specification* in accordance with IHO Resolution 2/2007 as amended.

e-Navigation

7. The Committee reviewed the activities of the International Maritime Organization (IMO) affecting its work, e-navigation developments in particular, and reflected them in the work plans of the relevant HSSC WG.

Restructuring of HSSC Working Groups

8. At its previous meeting in 2013, the Committee had agreed the principles for re-structuring its working groups in order to reflect the changing focus from paper to digital data based products and services, best use of limited resources, to improve its efficiency and facilitate inputs from industry and other stakeholders. The Chair Group reviewed the report of the Correspondence Group on HSSC Working Groups' Restructuring (CGHR) and the comment papers submitted to the Committee and presented consolidated proposals to the Committee which agreed on the implementation of a new structure including four new working groups (WG): S-100WG, ENC Standards Maintenance WG (ENCWG), Nautical Information Provision WG (NIPWG) and Tides, Water Level and Currents WG (TWCWG). The terms of reference of the new WG, the generic terms of reference for "project teams" and the arrangements for the transition from the current to the new structure were agreed.

9. The Committee agreed to maintain, under their current terms of reference, the Chart Standardization and Paper Chart WG, renamed the Nautical Cartography WG (NCWG), the DPSWG and the Data Quality WG (DQWG), subject to annual review and further consideration of their interactions with the new WG.

10. The Committee approved the transfer of the WG on Marine Spatial Data Infrastructures from the HSSC to the Inter-Regional Coordination Committee (IRCC) and decided to further investigate the possible establishment of a Hydrographic Surveys WG.

Hydrographic Dictionary

11. The Committee noted the recurring difficulties of the Hydrographic Dictionary WG (HDWG) in progressing its work items, due to the lack of participation. The Committee welcomed the offer made by Australia to liaise with the

chair and members of the WG in order to draft new business rules addressing relations with the S-100 Registry on the one hand, and with HSSC WG and other IHO and inter-organizational bodies on the other hand.

Outcome of the 7th HSSC meeting (HSSC-7)

12. HSSC-7 took place from 10 to 13 November in Busan, Republic of Korea, hosted by the Hydrographic Office of the Republic of Korea. The meeting was attended by 48 representatives from 20 Member States, the IHB, and six international organizations accredited as observers. A half-day IHO Stakeholders' Open Session was included in the agenda of the meeting and attracted eight additional participants who attended all or part of the HSSC sessions as invited observers.

13. The Committee reviewed the activities, proposals, and work plans of its subordinate bodies and the decisions of other organs and organizations affecting its work and decided on a number of outcomes summarized in the subsequent paragraphs. The Open Session focused on new survey techniques and crowd-sourced bathymetry and on issues related to the development and implementation of the S-100 framework.

S-100 and related activities

14. The Committee acknowledged the work of the S-100WG and welcomed the progress in developing and implementing the S-100 framework, noting:

- the publication of Edition 2.0.0 of S-100 - *IHO Universal Hydrographic Data Model*;
- the on-going preparation of supporting documents (including the S-100 interoperability specification for ECDIS, UML models, and data quality models);
- the on-going development, test and implementation of S-100 product specifications both within the IHO and within partner organizations;
- possible additional requirements related to the provision of data services and to the establishment of an S-100 domain for Additional Military Layers (AMLs).

15. The Committee welcomed in particular the announcement that most operational ice charts will be available in S-411 format by December 2015 and that the first S-411 capable commercial ECDIS is expected to enter service in mid-2016.

16. The Committee established a project team that will report to the S-100WG to consider the development of a new product specification for the display of under keel clearance management information. The Committee endorsed the revised Edition 1.1 of the S-100 Master Plan, further upgrades of the S-100 Registry and the plan to publish an extended Edition 3.0.0 of S-100 in 2017.

17. The Committee urged the IHO Member States to strengthen their support to the S-100WG and the associated project teams in order to meet the milestones of the work plan.

18. Noting the current limited expertise in the IHO concerning the portrayal of features in an S-100 based environment, the Committee tasked the NIPWG and the NCWG to investigate further portrayal issues, through the use of test bed opportunities.

19. The Committee noted the intention of the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) to submit a proposal for developing a maritime resource name scheme under the S-100 framework.

20. The Committee agreed that the IHO should take the initiative for developing further the maritime service portfolios (MSP) related to hydrographic services in the e-navigation environment.

ECDIS matters

21. The Committee acknowledged the efficient coordination between the IHO and the IEC in producing a coherent set of revised editions of the key ECDIS related standards thereby addressing the anomalies in the operation of some ECDIS.

22. The Committee tasked the ENCWG to finalize the draft revised new editions of S-58 - *ENC validation checks* and S-66 - *Facts about Electronic Charts and Carriage Requirements* for review and endorsement by correspondence during the intersessional period.

23. The Committee noted the feedback from industry on the implementation of the new editions of S-52 - *Specifications for Chart Content and Display Aspects of ECDIS* and its Annex A - *Presentation Library for ECDIS*, and agreed to consider postponing the withdrawal of the previous editions, currently planned to occur on 31 August 2016 in accordance with the timeline reported to the IMO. The Committee agreed on the benefits of holding an IHO-Industry ECDIS Forum in the context of the implementation of the revised ECDIS related standards and invited the IHB to liaise with the Secretariat of CIRM (Comité International Radio-Maritime) for the possible organization of such a forum.

24. The Committee expressed its support for the development of industry standards for software maintenance of shipborne equipment and invited the CIRM to coordinate with the ENCWG for the revision of the IHO check datasets for ECDIS and the possible introduction of an annual performance test for ECDIS.

Nautical cartography

25. The Committee endorsed the proposed changes to Edition 4.5.0 of S-4 - *Chart Specifications of the IHO* and tasked the NCWG to finalize the draft new edition 4.6.0 and forward it to the IHB which will then circulate it to IHO Member States for their consideration and approval. The Committee instructed the NCWG to develop a separate section on ENC schemes in the draft revision of S-11 Part A - *Guidance for the Preparation and Maintenance of International Chart Schemes*. The Committee invited the NCWG to address as a high priority the work item on the future of the paper chart.

Hydrographic Dictionary

26. The Committee requested the Hydrographic Dictionary Working Group to investigate options and associated resource requirements and timeline to produce and maintain a reference edition of S-32 - *Hydrographic Dictionary*. The S-100WG was tasked to specify its requirements regarding definitions included in the S-100 Registry.

Consideration of the need to establish a Hydrographic Surveys Working Group

27. The Committee considered the mixed responses from the Member States on the need to establish a Hydrographic Surveys Working Group, following the consultation initiated at its previous meeting. The Committee decided to establish a Project Team to investigate further the need for HSSC activities related to hydrographic surveys, define the scope and the possible tasks that may be considered in that respect and propose recommendations at the next HSSC meeting (HSSC-8).

Preparation of the IHO Assembly in 2017

28. The HSSC Chair Group was tasked to prepare the contribution of the Committee to the revision of the IHO Strategic Plan and the preparation of the next pluriannual IHO Work Programme in accordance with the IHO Resolution on the planning cycle.

Relations with Stakeholders

29. The Committee acknowledged that the relations with stakeholders are a strategic issue to be considered by the HSSC Chair Group in its contribution to the revision of the IHO Strategic Plan. The Committee noted the areas of common interest between the IHO and the International Cable Protection Committee (ICPC), and welcomed the possible contribution through the ICPC of bathymetric data to the IHO Data Centre for Digital Bathymetry, in the context of the development of trusted crowd-sourced bathymetry. The Committee supported the proposal of the ICPC to develop a Memorandum of Understanding between the IHO and the ICPC (see IHO CLs 85/2015 & 18/2016).

Pending issues

30. A number of work items have been affected by the limited expertise available in the relevant working groups. This situation hampered progress in addressing in particular portrayal and data protection issues related to the development of the S-100 framework. It also caused further delays in revising Edition 5.0.0 of IHO Publication S-58 - *ENC Validation Checks* on which the implementation of mandatory checks to ensure that ENCs do not contain any critical errors depends. Insufficient technical expertise may also cause errors to go undetected in the new versions of standards, all the more so as technical standards become more and more complex.

31. The lack of resources explains also why there are a significant number of technical standards available in only one of the official languages of the IHO. Following Decision No. 2 of the 5th Extraordinary International Hydrographic Conference, IHO Resolution 12/1962 as amended states that *“The language(s) of other IHO reference documents, guidelines and standards shall be at least one of the official languages decided on a case by case basis in the IHO Work Programme, taking into account the intended use of the document, the resources of the Bureau and the assistance offered by Member States.”*

32. Traditionally, the HSSC has met near the end of the year. The establishment of the Council in 2017 and the implementation of the three-year planning cycle will require that HSSC meets in the first semester in order for the Committee to meet the timeline for submitting proposals through the Council. Subject to the outcome of HSSC-8, it is expected that the change of date will intervene in 2018.

Action Requested of EAthC

33. EAthC Members are invited to:

- **Note** this report;
- **Consider** supporting HSSC activities in which they are not yet involved;
- **Provide** their comments regarding possible requirements and contributions for translation of IHO technical standards into French and/or Spanish;
- **Take any other actions** as considered appropriate.

Annex A

Involvement of EAthC members in HSSC activities

Member States HSSC entities / events	Cameroon	France	Morocco	Nigeria	Portugal	Spain
HSSC Contact list		X			X	X
HSSC-6		X				
HSSC-7		X				
S-100WG		X			X	
ENCWG		X			X	
NCWG		X				X
NIPWG		X				X
DPSWG		X				
DQWG		X				
TWCWG		X (Chair)			X	X
HDWG		X (Chair)				X
ABLOS						