

**5TH MEETING OF THE HYDROGRAPHIC SERVICES AND STANDARDS COMMITTEE  
Shanghai, China, 5-8 November 2013**

**Information Paper**

**Status Report on IHO Publications on Standards, Specifications and Guidelines**

<b>Submitted by:</b>	IHB
<b>Executive summary:</b>	This document provides a brief description of the status of all IHO publications on standards, specifications and guidelines, under HSSC responsibility, as of October 2013.
<b>Related Documents:</b>	Docs. IHO Resolution 2/2007 as amended; HSSC4-INF1; HSSC5-05.1A; HSSC5-05.1B; HSSC5-05.3B rev1; HSSC5-06.1A; HSSC5-07.2B.
<b>Related Projects</b>	None.

### **Background**

1. As in previous years, a report on the current status of IHO publications under HSSC's responsibility is provided to HSSC-5, further drawing attention to the edition in force for each publication and to any plan for a new edition. The report is at Annex A.

### **Analysis**

2. Since HSSC-4 in September 2012, the following new editions have been published:
- *S-4 Regulations for INT Charts and IHO Chart Specifications* [English, French and Spanish]:
    - English: Edition 4.4.0 - September 2013
    - French: Edition 4.3.0 – August 2012 (released January 2013)
  - *S-11 Part B Catalogue of INT Charts* [English/French]:
    - Region D - Edition 2.0.4 - March 2013
    - Region F - Edition 2.0.4 - December 2012
    - Region G - Edition 2.0.4 - November 2012
    - Region I - Edition 2.0.7 - January 2013
    - Region J - Edition 2.0.4 - March 2013
    - Region K – Edition 2.0.7 – October 2013
    - Region M - Edition 2.0.6 - March 2013
    - Region N – Edition 2.0.0 – September 2013
  - *S-57 Appendix B.1, Annex A Use of the Object Catalogue for ENC (UOC)* [English]:
    - Edition 3.1.0 - November 2012 (released March 2013)
  - *S-65 ENC Production Guidance* [English and French]:
    - French: Edition 2.0.0 – April 2012 (released January 2013)

- S-99 *Operational Procedures for the Organization and Management of the S-100 Geospatial Information Registry* [English]:
  - Edition 1.1.0 – November 2012 (released March 2013)

3. The following new editions are being submitted to HSSC-5 for endorsement, prior to being forwarded to Member States for approval:

- S-52 *Specifications for Chart Content and Display Aspects of ECDIS* [English]
  - Draft edition 6.1.0
- S-52 Annex A *IHO ECDIS Presentation Library* [English]
  - Draft edition 4.0.0
- S-57 Appendix B.1, Annex A *Use of the Object Catalogue for ENC (UOC)* [English]:
  - Draft edition 4.0.0
- S-58 *Recommended ENC Validation Checks* [English]
  - Draft edition 5.0.0
- C-51 *A Manual on Technical Aspects of the United Nations Convention on the Law of the Sea – 1982* [English, French and Spanish]
  - English: Draft edition 5.0.0

4. The following publications are being proposed for revision:

- S-64 *IHO Test Data Sets For ECDIS* [English]
- S-66 *Facts about Electronic Charts and Carriage Requirements* [English, French and Spanish]

5. A summary of status for all publications under HSSC is provided in a table at Appendix to Annex A. Information on possible future editions has been included, mainly taken from the work plans contained in WG Chairs' reports. The table shows the gaps in French and Spanish translations.

### **Recommendations**

6. Based on the above analysis, it is recommended to:

6.1 Review the information in the “English – Next Edition” column of Appendix to Annex A and consider whether any adjustment is needed regarding the next edition dates.

6.2 Consider possible requirements and contributions for translation in French and/or Spanish.

### **Action required of HSSC**

7. The HSSC is invited to:

- a. **note** this report;
- b. **consider** the recommendations in paragraph 6, and
- c. **take** any action as appropriate.

## Annex A

### Status Report on IHO Publications on Standards, Specifications and Guidelines

- Notes: a) New editions/publications since HSSC-4 (September 2012) have been emphasized in yellow.
- b) All the standards and guidelines are subject to the amendments and approval procedures set out in IHO Resolution 2/2007 as amended unless indicated otherwise.

#### A. **STANDARDS AND SPECIFICATIONS**

##### 1. **S-4 REGULATIONS FOR INT CHARTS AND IHO CHART SPECIFICATIONS**

S-4 gives chart specifications of the IHO for compiling nautical charts, together with agreed symbols and abbreviations adopted for general use by Member States. It provides also Regulations for INT Charts. Supplemented by INT 1, INT 2 and INT 3.

Current edition: Edition 4.4.0, September 2013, English (CL 55/2013 refers). Edition 4.3.0, August 2012, available in French (CL 04/2013 refers).

Subject to Res. 2/2007, but not before the current revision cycle of S-4 Part B is completed (expected in 2014). Meanwhile, S-4 spec. B-160 continues to apply.

Associated publications:

- INT1 *Symbols, Abbreviations and Terms used on Charts*:
  - English: Edition 7, January 2011, published by Germany on behalf of the IHO;
  - French: Edition 5, January 2012, published by France on behalf of the IHO;
  - Spanish: Edition 4, December 2011, published by Spain on behalf of the IHO.

Not subject to Res. 2/2007

- INT2 *Borders, Graduations, Grids and Linear Scales*:
  - Edition 4, 2007, trilingual English/French/Spanish, published by Netherlands on behalf of the IHO.

Not subject to Res. 2/2007

- INT3 *Use of Symbols and Abbreviations*:
  - Edition 5, December 2011, English, published by UK on behalf of the IHO.

Not subject to Res. 2/2007

Responsible body: CSPCWG

##### 2. **S-11 PART A GUIDANCE FOR THE PREPARATION AND MAINTENANCE OF INTERNATIONAL CHART SCHEMES**

S-11 Part A provides directions to assist coordinators in following the principles established for INT Chart schemes.

Current edition: Edition 2.0.5, May 2012, bilingual English/French

Responsible body: CSPCWG

##### 3. **S-11 PART B CATALOGUE OF INT CHARTS**

S-11 Part B describes by means of indexes, texts and chartlets, the IHO International Chart Series at large, medium and small scales.

Current editions, bilingual English/French:

- Introduction - Edition 2.0.4 - March 2012
- 1:10 Million Scale - Edition 2.0.4 - December 2010
- Region A – Edition 2.0.4 - September 2012
- Region B – Edition 2.0.3 - April 2010
- Region C1 - Edition 2.0.4 - May 2010
- Region C2 - Edition 2.0.4 - December 2010
- **Region D - Edition 2.0.4 - March 2013**
- Region E - Edition 2.0.5 - November 2011
- **Region F - Edition 2.0.4 - December 2012**
- **Region G - Edition 2.0.4 - November 2012**
- Region H - Edition 2.0.6 - October 2011
- **Region I - Edition 2.0.7 - January 2013**
- **Region J - Edition 2.0.4 - March 2013**
- **Region K - Edition 2.0.7 - October 2013**
- Region L - Edition 2.0.4 - February 2012
- **Region M - Edition 2.0.6 - March 2013**
- **Region N – Edition 2.0.0 – September 2013**
- Annexes - Edition 2.0.3 - March 2012

Not subject to Res. 2/2007

Responsible body: IHB in liaison with INT Chart Coordinators

#### 4. **S-12 STANDARDIZATION OF LIST OF LIGHTS AND FOG SIGNALS**

S-12 provides a standardized structure for the publication of List of Lights and Fog Signals.

Current edition: 1<sup>st</sup> edition, June 2004, English and French

Responsible body: *not assigned.*

#### 5. **S-32 HYDROGRAPHIC DICTIONARY**

Provides definitions of words and terms used in hydrography and associated activities.

Current edition (not updated): 5<sup>th</sup> edition, English (1994), French (1998) and Spanish (1996).

On-line versions of the Hydrographic Dictionary (English and French) are also available on the IHO website. An on-line version in Spanish is under consideration.

Responsible body: HDWG.

#### **S-32 Appendix 1 - Glossary of ECDIS-Related Terms**

S-32, Appendix 1 provides a list of all ECDIS-related terms in use, with specific definitions. It has replaced the former S-52 Appendix 3.

Current edition: September 2007, English and Spanish.

Responsible body: HDWG.

#### 6. **S-44 IHO STANDARDS FOR HYDROGRAPHIC SURVEYS**

S-44 sets minimum standards for surveys conducted for the safety of surface navigation.

Current edition: 5<sup>th</sup> edition, February 2008, English, French (rev. 5.0.1 - 2011), Spanish and Portuguese.

Responsible body: *Not assigned*

**7. S-49 STANDARDIZATION OF MARINERS' ROUTEING GUIDES**

S-49 provides a standardized structure for the preparation and publication of Mariners' Routeing Guides.

Current edition: Edition 2.0, April 2010, English

Responsible body: CSPCWG

**8. S-52 SPECIFICATIONS FOR CHART CONTENT AND DISPLAY ASPECTS OF ECDIS**

S-52 provides specifications and guidance regarding the issuing of ENCs and their display in an ECDIS. Its Annex A forms the IHO ECDIS Presentation Library (PL).

Current edition: Edition 6.0, March 2010, English. **New edition 6.1.0 submitted to HSSC-5 for endorsement; see HSSC5-05.3B.**

Responsible body: DIPWG.

**S-52 Annex A - IHO ECDIS Presentation Library**

The Presentation Library (PresLib) provides details and procedures for implementing the display specifications contained in S-52, by decoding and symbolizing the elements of the SENC. It includes a full description of the symbol library for use in ECDIS. It is published separately on CD-Rom.

Current edition: Edition 3.4, January 2008, English. **New edition 4.0.0 submitted to HSSC-5 for endorsement; see HSSC5-05.3B.**

Ed. 3.4 of the PresLib comprises Part I (users' manual, tables and symbolisation procedures, ECDIS Chart 1, symbol plots, etc.); Part II (mariners' navigational objects); an Addendum containing a detailed description of the symbol library; and an optional digital version of the PresLib (.dai file).

S-52 and the PresLib are maintained by means of Maintenance Documents (MDs) which are produced from time to time under the authority of the DIPWG and placed on the IHO website ([www.iho.int](http://www.iho.int)). MDs contain amendments to S-52 and/or the PresLib, which are classified as "immediate" or "deferred" depending on their importance for the safety of navigation.

Since e3.4 of the PresLib was published in 2008, two MDs have been issued:

- MD07 in October 2009 (contains Deferred Amendment 8 to the PresLib)
- MD08 in October 2011 (contains Deferred Amendment 9 to the PresLib)

Responsible body: DIPWG.

**S-52 Appendix 1 - Guidance on Updating the ENC**

S-52 Appendix 1 describes the process of acceptance of ENC updates in an ECDIS.

Current edition: Edition 4.0.0, April 2012, English.

Responsible body: *Not assigned.*

**9. S-57 IHO TRANSFER STANDARD FOR DIGITAL HYDROGRAPHIC DATA**

S-57 describes the data standard to be used for the exchange of digital hydrographic data, and for the distribution of digital hydrographic products such as the ENC to manufacturers, mariners, and other data users.

Current edition: Edition 3.1 (November 2000) plus Supplement 2 (June 2009), English. **Supplement 3 submitted to HSSC-5 for endorsement; see HSSC5-05.1A.**

Supplement 2 “*Supplementary Information for the Encoding of S-57 Edition 3.1 ENC Data*” includes the contents of Supplement 1 “*Enhancements Required to Encode S-57 Edition 3.1.1 ENC Data*” which was published in January 2007.

Responsible body: TSMAD

### **S-57 Appendix B.1 - ENC Product Specification**

This document provides a set of specifications intended to enable Hydrographic Offices to produce a consistent ENC, and manufacturers to use that data efficiently in an ECDIS that satisfies the IMO Performance Standards for ECDIS.

Current edition: Edition 2.0 (November 2000), English

Responsible body: TSMAD

### **S-57 Appendix B.1, Annex A - Use of the Object Catalogue for ENC (UOC)**

This document describes how to encode information that the cartographer considers relevant to an ENC. It specifies the conventions that must be used to encode the geometry and semantic description of each object in an ENC.

Current edition: Edition 3.1.0, November 2012, English (CL 20/2013 refers). New edition 4.0.0 submitted to HSSC-5 for endorsement; see HSSC5-05.1A.

Responsible body: TSMAD

## **10. S-58 RECOMMENDED ENC VALIDATION CHECKS**

S-58 specifies a minimum set of checks that producers of ENC validation tools need to include in their validation software. These software are used by ENC producers to ensure that ENC data are compliant with the S-57 Product Specification for ENC.

Current edition: Edition 4.2.0, February 2011, English. New edition 5.0.0 submitted to HSSC-5 for endorsement; see HSSC5-05.1A.

Responsible body: TSMAD

## **11. S-60 USER’S HANDBOOK ON DATUM TRANSFORMATIONS INVOLVING WGS 84**

Based on data and text provided by the U.S. NGA, it contains constants and formulae to relate local/regional geodetic datums to the WGS-84.

Current edition: 3rd Edition, July 2003 (Last correction August 2008), English.

Responsible body: IHB

## **12. S-61 PRODUCT SPECIFICATION FOR RASTER NAVIGATIONAL CHARTS (RNC)**

S-61 defines the minimum requirements of a Raster Navigational Chart (RNC) intended to fulfill the requirements of the Raster Chart Display System (RCDS) Mode of Operation, as described in the IMO Performance Standard for ECDIS.

Current edition: 1<sup>st</sup> edition, January 1999, English.

Responsible body: TSMAD.

## **13. S-62 LIST OF DATA PRODUCER CODES**

S-62 provides a list of data producer codes for IHO MS, other States and Other Organizations/Entities.

Current edition: The current edition of S-62 is generated directly from the Data Producer Code Register in the S-100 Geospatial Information Registry (see <http://registry.iho.int>), English.

Not subject to Res. 2/2007

Responsible body: IHB

#### 14. **S-63 IHO ENC DATA PROTECTION SCHEME**

S-63 describes the IHO scheme for the protection of ENC information. It defines security constructs and operating procedures that must be followed to ensure the data protection scheme is operated correctly and to provide specifications that allow participants to build compliant systems. It is intended for use by all those ECDIS manufacturers and data distributors participating in an ENC service supplying encrypted data. The IHB acts as Scheme Administrator for S-63.

Current edition: Edition 1.1.1, April 2012, English and French.

Frequently Asked Questions (FAQ) related to S-63 are answered on the IHO website ([www.ihoint.org](http://www.ihoint.org) > ENCs & ECDIS > ENC Data Protection > S-63 FAQ).

Responsible body: DPSWG

#### 15. **S-64 IHO TEST DATA SETS FOR ECDIS**

S-64 contains sample ENC data and updates, as well as the associated graphical representations of the ECDIS display. S-64 also includes sample RNC data in the two formats in use by Member States, i.e. HCRF (ARCS) and BSB. These test data are intended for use in conjunction with the IEC 61174 – the test specifications for ECDIS certification/type approval.

Current edition: Edition 2.0.0, May 2012, English. **New edition 3.0.0 under preparation; see HSSC5-05.1A.**

Responsible body: TSMAD.

#### 16. **S-65 ENC PRODUCTION GUIDANCE**

S-65 provides a guide to the production, maintenance and distribution of ENCs. It offers a framework to inform HOs of the processes and requirements necessary to produce, maintain and distribute ENCs. It provides references to documentation which can support each stage of the process.

Current edition: Edition 2.0.0, April 2012, English and **French (CL 04/2013 refers).**

Responsible body: TSMAD.

#### 17. **S-66 FACTS ABOUT ELECTRONIC CHARTS AND CARRIAGE REQUIREMENTS**

S-66 is intended to inform both Maritime Administrations and mariners on the practical implementation of the IMO carriage requirements regarding ENCs and ECDIS. It is based on the information booklet “Facts about Electronic Charts and Carriage Requirements” which was developed by HOs of ICENC and PRIMAR and has since been withdrawn in favour of S-66.

Current edition: Edition 1.0.0, January 2010, English, Spanish, Japanese and Portuguese. **Revision recommended in HSSC5-07.2B.**

Responsible body: IC-ENC - PRIMAR Joint Information Working Group (JIWG), on behalf of HSSC.

**18. S-99 OPERATIONAL PROCEDURES FOR THE ORGANIZATION AND MANAGEMENT OF THE S-100 GEOSPATIAL INFORMATION REGISTRY**

S-99 describes the roles, responsibilities and procedures for operating and managing the S-100 Geospatial Information Registry and its component Registers.

Current edition: Edition 1.1.0, November 2012 (CL 20/2013 refers), English.

Responsible body: TSMAD.

**19. S-100 IHO UNIVERSAL HYDROGRAPHIC DATA MODEL**

S-100 provides a contemporary framework hydrographic geospatial data standard that can support a wide variety of hydrographic-related digital data sources, and is fully aligned with mainstream international geospatial standards, in particular the ISO 19100 series of geographic standards, thereby enabling the easier integration of hydrographic data and applications into geospatial solutions.

Current edition: Edition 1.0.0, January 2010, English. New edition 2.0.0 under preparation; see HSSC5-05.1A.

Responsible body: TSMAD.

**20. S-101 ENC PRODUCT SPECIFICATION**

S-101 is the new Electronic Navigational Chart product specification that is based on S-100 and which is being developed by TSMAD. S-101 will include machine readable feature catalogues and portrayal catalogues.

Under preparation; see HSSC5-05.1A and HSSC5-05.1B.

Responsible body: TSMAD.

**21. S-102 BATHYMETRIC SURFACE PRODUCT SPECIFICATION**

S-102 specifies a navigation surface coverage including both depth and uncertainty together with an optional tracking list of the depth changes that have been manually replaced in the surface by the hydrographer to override the statistical grid value points to ensure safety of navigation.

Current edition: Edition 1.0.0, April 2012, English.

Responsible body: TSMAD.

**B. GUIDELINES**

**22. C-17 SPATIAL DATA INFRASTRUCTURES: “THE MARINE DIMENSION” - GUIDANCE FOR HYDROGRAPHIC OFFICES**

C-17 is a procedural guide to assist national hydrographic authorities in establishing their role in Marine Spatial Data Infrastructures (MSDI). It explains the way that HOs might promote, support, and participate in Spatial Data Infrastructures (SDI), through practical advice, simple step by step processes, useful links to reference material and examples of best practice.

Current edition: Edition 1.1.0, February 2011, English.

Responsible body: MSDIWG.

**23. C-51 A MANUAL ON TECHNICAL ASPECTS OF THE UNITED NATIONS CONVENTION ON THE LAW OF THE SEA - 1982**

C-51 addresses the relationship between the Law of the Sea and the disciplines of Geodesy, Hydrography, and Geoscience. It provides an overview of a series of technical issues whose



satisfactory understanding is key element in the orderly practice of international law in the ocean environment.

Current edition: 4<sup>th</sup> edition, March 2006, English and Spanish. **New edition 5.0.0 submitted to HSSC-5 for endorsement; see HSSC5-06.1A.**

Responsible body: ABLOS.

## Appendix to Annex A

IHO Publications under HSSC Responsibility  
Summary of Status

Number	Responsibility	English Current Edition - Date	English Next Edition	French Current Edition - Date	Spanish Current Edition - Date
S-4	CSPCWG	4.4.0 – Sep 2013	4.5.0 - Aug 2014	4.3.0 – Aug 2012	--
INT 1	CSPCWG	7 – Jan 2011	8 - 2015?	5 – Jan 2012	4- Dec 2011
INT 2	CSPCWG	4 - 2007	Not planned	4 - 2007	4 - 2007
INT 3	CSPCWG	5 – Dec 2011	Not planned	--	--
S-11 Part A	CSPCWG	2.0.5 – May 2012	2014?	2.0.5 – May 2012	--
S-12	<i>Not assigned</i>	1 – Jun 2004	Not planned	1 – Jun 2004	--
S-32	HDWG	5 - 1994	Not planned <sup>1</sup>	5 - 1998	5 - 1996
S-32 Append 1	HDWG	Sep 2007	Not planned	--	Sep 2007
S-32 online	HDWG	Always current	Not applicable	Always current	--
S-44	S-44 WG (dormant)	5 – Feb 2008	Not planned	5 – Feb 2008 (rev 5.0.1 – Jun 2011)	5 – Feb 2008
S-49	CSPCWG	2.0 – Apr 2010	Not planned	--	--
S-52	DIPWG	6.0 – Mar 2010	6.1.0 - 2014	--	--
S-52 Annex A	DIPWG	3.4 – Jan 2008	4.0.0 - 2014	--	--
S-52 Append 1	<i>Not assigned</i>	4.0.0 – Apr 2012	Not planned	--	--
S-57	TSMAD	3.1 – Nov 2000	Not planned	--	--
S-57 Suppl	TSMAD	Suppl 2 – Jun 2009	Suppl 3 - 2014	--	--
S-57 Append B.1	TSMAD	2.0 – Nov 2000	Not planned	--	--
S-57 Append B.1 Annex A	TSMAD	3.1.0 – Nov 2012	4.0.0 - 2014	--	--
S-58	TSMAD	4.2.0 – Feb 2011	5.0.0 - 2014	--	--
S-60	IHB	3 – Jul 2003	Not planned	--	--
S-61	TSMAD	1 – Jan 1999	Not planned	--	--
S-62	IHB	Always current	Not applicable	--	--
S-63	DPSWG	1.1.1 – Apr 2012	2015?	1.1.1 – Apr 2012	--

<sup>1</sup> The online version was issued in 2004 (CL 13/2004 refers) and made available in wiki format in 2010 (CL 7/2010 refers). No formal decision has been taken concerning future pdf editions.

<b>Number</b>	<b>Responsibility</b>	<b>English Current Edition - Date</b>	<b>English Next Edition</b>	<b>French Current Edition - Date</b>	<b>Spanish Current Edition - Date</b>
S-64	TSMAD	2.0.0 – May 2012	3.0.0 – 2014?	--	--
S-65	TSMAD	2.0.0 – Apr 2012	Not planned	2.0.0 – Apr 2012	--
S-66	IC-ENC - Primar JIWG	1.0.0 – Jan 2010	2014?	--	1.0.0 – Jan 2010
S-99	TSMAD	1.1.0 – Nov 2012	Not planned	--	--
S-100	TSMAD	1.0.0 – Jan 2010	2.0.0 – 2014?	--	--
S-101	TSMAD	--	1.0.0 – 2014?	--	--
S-102	TSMAD	1.0.0 – Apr 2012	Not planned	--	--
C-17	MSDIWG	1.1.0 – Feb 2011	2015?	--	--
C-51	ABLOS	4 – Mar 2006	5.0.0 - 2014	2 - 1993	4 – Mar 2006