

8th Meeting of the Hydrographic Services and Standards Committee
14-18 November 2016, IHB, Monaco

Report of the Nautical Cartography Working Group (NCWG)

Submitted by:	Chairman, NCWG
Related Documents:	IHO Circular Letter 25/2016 (8th Meeting of the HSSC)
Related Projects:	Not applicable

Chair:	Mr Mikko Hovi, Finland
Vice-Chair:	Vacant
Secretary:	Mr Andrew Heath-Coleman, UK
Member States:	Australia, Brazil, Canada, Colombia, Denmark, Egypt, Finland, France, Germany, Greece, India, Indonesia, Iran, Italy, Japan, Korea (Rep of), Latvia, Netherlands, New Zealand, Norway, Pakistan, Russia, South Africa, Spain, Sweden, Turkey, Ukraine, UK, USA (=29)
Expert Contributor Organizations:	IHB, CBSC/ICA, Esri, Jeppesen Marine
<i>see Annex A for full details</i>	

1 Meetings Held During the Reporting Period and Planned

- 1.1 NCWG2 – 26-28 April 2016, IHB, Monaco. The meeting was held back-to-back with a workshop¹ for INT Chart/ENC Co-ordinators on 25 April 2016. The full record of this meeting can be found on the NCWG page of the IHO web site.
- 1.2 NCWG3 – 16-19 May 2017, Redlands, CA, USA
- 1.3 No meeting of the INT1 Sub-Working Group has been held during the reporting period. No meeting of the INT1 Sub-Working Group is planned before NCWG3 in May 2017.

2 NCWG Executive

- 2.1 The retirement from the UKHO in March 2016 of Mr Nick Webb created a vacancy of the NCWG Vice-Chair position. There were no volunteers to fill the position at NCWG2, however a further request to the Working Group (NCWG Letter 03/2016 refers) resulted in the election of Mr Mikko Hovi (Finland) as Vice-Chair. Following the retirement from the AHS in September 2016 of the NCWG Chair, Mr Jeff Wootton, Mr Hovi has assumed the position of Chair of the Working Group. As at HSSC8, the executive of the NCWG is:

Chair: Mikko Hovi
Vice Chair: vacant
Secretary: Andrew Heath-Coleman

¹ IHO CL 64/2015 refers.

3 NCWG Terms of Reference

- 3.1 The NCWG Terms of Reference as approved at HSSC7 were adopted by the Working Group at NCWG2, with a minor clarification agreed at paragraph 4c. The Terms of Reference for the NCWG are included at Annex B.

4 Work Programme

The programme is based on the priorities assigned within the detailed Work Plan (Annex C refers). Since HSSC7, the principal activities have been:

4.1 S-4 Chart Specifications of the IHO and Regulations for International (INT) Charts

- 4.1.1 Edition 4.6.0, April 2016, has been approved by MS and published. IHO CL 92/2015 and 15/2016 refer.
- 4.1.2 It is proposed that a further revision, Edition 4.7.0, be approved by the HSSC to proceed to IHO member States for adoption. This version includes all changes approved by the NCWG since the publication of Edition 4.6.0. Proposed revisions are included in Paper HSSC8-05.5B for consideration of the HSSC; all changes considered to be clarifications to S-4 will also be included in the full draft version to be prepared for submission to IHO Member States.
- 4.1.3 Additional revisions and clarifications to S-4 are currently being discussed by the Working Group. The record of discussions, related actions and items in the NCWG Work Plan can be found in the NCWG2 Record on the NCWG page of the IHO web site. Emerging requirements for charting currently being discussed by the Working Group include (but are not restricted to):
- Portrayal of depth quality indicators for bathymetry (ECDIS);
 - Portrayal of newly modelled concepts/features in S-101.

4.2 S-4 supplementary publications INT 1, INT 2 & INT 3

- 4.2.1 INT1 *Symbols, Abbreviations and Terms used on Charts*. There are three official language versions of INT1. Revisions of the English, Spanish and French language versions have been published within the reporting period. Their current status is:
- Spanish language version published by ES/IHM: Edition 5, November 2015.
 - French language version published by FR/SHOM: Edition 6, 2016.
 - English language version published by DE/BSH: Edition 8, July 2015.

The efforts of IHM, SHOM and BSH and their collaboration through the NCWG INT1 Sub-Working Group (under the coordination of Mr Andrew Heath-Coleman) are acknowledged in developing these revisions.

- 4.2.2 INT2 *Borders, Graduations, Grids and Linear Scales*. There are no current plans for a revision of Edition 4, 2007, published by NL.
- 4.2.3 INT3 *Use of Symbols and Abbreviations*. There are no current plans for a revision of Edition 5, 2011, published by UK, for at least the next two years. Discussions at NCWG2 (agenda item 11.5 refers) indicated that UKHO can no longer print INT3 on two sides, and would no longer be providing printed versions of INT3 on request. However, UK has indicated that they will continue to maintain INT3 as PDF on the IHO web site for Hydrographic Offices to print themselves as required.

4.3 S-11 Part A Guidance for the Preparation and Maintenance of International Chart Schemes

- 4.3.1 Current status is Edition 2.0.5, published May 2012. A draft revision was prepared, in collaboration with NSEHWG and engagement with the WENDWG, to develop and incorporate guidance on the preparation and maintenance of ENC schemes (in pursuance

of Work Plan item B.3). The draft was submitted to HSSC7 for consideration, and it was determined that more work was required to restructure the draft to separate out the guidance for INT (paper) Chart schemes and ENC schemes (action HSSC7/22 refers).

4.3.2 A revised draft was prepared by the NCWG Chair and Secretary and submitted to NCWG2 for discussion (agenda item 10.1 refers). A further revision of the draft based on the discussions at NCWG2 was discussed by correspondence (NCWG Letter 06/2016 refers) and a final draft has been prepared for approval of HSSC as paper HSSC8-05.5C.

4.3.3 Other items of note discussed by the NCWG in preparation of the revised S-11 Part A include:

- Current S-11 Part A, Annexes A and B: It is suggested that this information (relating to printer nations and paper sizes) should be retained, however these Annexes should be moved to S-11 Part B – Section 100.
- To be consistent with other IHO Specifications; and on the assumption that the Annexes will be moved to S-11 Part B, it is suggested that this version of S-11 Part A should not be bi-lingual. Separate versions of the document should be published in English and French.

4.4 Lessons learned from Marine Incidents

4.4.1 There were no marine incidents brought to the attention of the Working Group during the reporting period, however it was agreed that this would remain a standing agenda item for NCWG meetings.

5 **Progress on HSSC Action Items**

5.1 Action HSSC7/18: *NCWG to compile portrayal requirements relating to product specifications in general as part of its programme of work*: Discussed at NCWG2 under agenda item 4.1. A small correspondence group was formed (Chair and US) to draft a checklist of factors to be considered in regard to ECDIS and INS portrayal and interoperability when developing S-100 based Product Specifications (for instance reserved colours; display priority).

5.2 Action HSSC7/20: *For S-122, and assuming that sufficient information is available, NIPWG, in liaison with NCWG and S-100WG, to make use of test beds opportunities (e-navigation projects as appropriate)*: Discussed at NCWG2 under agenda item 4.1. The decision of the Working Group was that the NCWG would be engaged in “design and specification” of ECDIS symbols, while other HSSC Working Groups such as S-100WG and ENCWG would be responsible for the creation of the actual digital symbol file and ECDIS testing. It was agreed that, if possible, initial liaison should take place at the NIPWG Workshop on Visualization of Nautical Information at University of New Hampshire, USA (22-26 May 2017).

5.3 Action HSSC7/21: *NCWG to announce the potential vacancy for Vice-Chair in its call for the NCWG2 meeting*: Done.

5.4 Action HSSC7/22: *NCWG to re-consider S-11 Part A for addressing ENC scheming issues in a separate section and submit a new draft to HSSC*: Done (refer clause 4.3 above).

5.5 Action HSSC7/40: *NIPWG and NCWG to consider improvements to current IHO specifications or other actions which could facilitate the implementation of the provisions of the Polar Code related to charting issues (Part I-B, Additional Guidance to Chapter 9 (Safety of Navigation) refers)*: Done (NCWG2 agenda item 9.3 refers). It was determined that the provisions of the Polar Code are already covered adequately in S-4 and its supplementary publications.

6 **Problems Encountered**

6.1 Ongoing resource stretch at participating HOs.

- 6.2 Retirement during 2016 of both the Chair and Vice-Chair of the Working Group, which may impact on the continuity of outstanding actions from NCWG2 and the composition of Sub-Working/Correspondence Groups.

7 Any Other Items of Note for Consideration of HSSC

7.1 The Future of the Paper Chart

- 7.1.1 A half day discussion session on issues that may impact the future of the paper chart as a primary navigation tool was held at the conclusion of NCWG2. The departing Working Group Chair took an action from this discussion to collate all the factors discussed to date into a discussion paper for consideration of the Correspondence Group and submission to HSSC8. Unfortunately, this action has not been completed due to time constraints, however it is hoped that the former Chair can continue to progress this action in the coming months.

7.2 Use of English for Notices to Mariners

- 7.2.1 IHB has received complaints from Ships Chandlers that some countries only publish NMs in their native language. The outcome of discussions on this at NCWG2 determined that a reminder should be issued to Member States that Notices to Mariners should also be issued in English, in compliance with S-4 clauses B-631.4 and B-510.4 and IMO SOLAS Regulation 14. It is suggested that this reminder should be included in the IHO CL reporting on the outcome of HSSC8.

7.3 Basic quality assurance check list for review of INT charts

- 7.3.1 IHB has developed a basic INT Chart Checklist for Regional ICCWG/INT Chart Coordinators. The checklist was reviewed at NCWG2 and finalised by correspondence (NCWG2 agenda item 10.2 refers). Progress on the development of the checklist was reported to IRCC8. The checklist has been distributed to the Coordinators and they have been asked to provide their feedback on the experimentation of the check-list by 31 March 2017.

7.4 INT1 Symbol Repository

- 7.4.1 It was suggested at NCWG2 (agenda item 11.4 refers) that a symbol library for the production of INT1 and similar documents for emerging HOs; and for database providers, would be useful. UK is consulting as to whether they can make the vector versions of the symbols used in S-4 available for such a repository, which could be implemented as a Domain within the Portrayal Register in the IHO GI Registry.

8 Any Other Items of Note for Information of HSSC

8.1 The activity of NCWG continues at a high level:

- The volume of detailed input to NCWG's work is extensive and thanks are recorded to all contributor MS' representatives.
- NCWG has the highest MS participation of any HSSC WG and this is matched by a very high level of active participation in its meetings and deliberations. (The latest two meetings of the WG have been attended by 17 and 18 MS, plus industry representatives and IHB/ADCS. WG correspondence routinely receives considered responses from more than 20 participants.) I interpret this to be a continuing indicator of the relevance and value to each participating MS

- 8.2 Advice and guidance continues to be exchanged with S-100WG, ENCWG, NIPWG and DQWG as required, enhancing the collaboration between the WGs. The NCWG Chair continued to provide perspectives and liaison across NCWG, S-100WG, ENCWG, NIPWG and HDWG and advice on the technical consequences of decisions for each, although liaison with the HDWG has been negligible.

- 8.3 NCWG discussions are progressing regarding greater 'cross-format' engagement and maintaining and supporting the continued relevance of nautical cartography.

- 8.4 The NCWG Executive continues to provide responses to a variety of miscellaneous enquirers. This includes providing advice to ICCWG/RCG coordinators and to individual MS on charting matters and the application of IHO specifications and standards.

9 Conclusions and Recommended Actions

- 9.1 HSSC8 is invited to endorse the continued activity of the WG under its Terms of Reference at Annex B.
- 9.2 HSSC8 is invited to approve the Work Plan as submitted at Annex C. This Work Plan was formally reviewed in detail at NCWG2, April 2016 and has been updated in the version at Annex C. Note particularly new Items A26-28, B4, D36-38 and E10. Following any direction or guidance from HSSC8, this will be subject to further review and revision at NCWG3, May 2017.
- 9.3 HSSC8 is invited to approve the revisions to S-4 Edition 4.6.0 as submitted at paper HSSC8-05.5B; and approve the submission of Edition 4.7.0 to IHO Member States for publication.
- 9.4 HSSC8 is invited to approve the draft revision of S-11 Part A as included in paper HSSC8-05.5C for submission to IHO Member States for publication.

10 Justifications and Impacts

- 10.1 Justification for the continued activity of the WG is to fulfil the remit of its Terms of Reference which includes:
- Improving the standardization and currency of nautical charts (in accordance with SOLAS V (2002, regulation 9));
 - Improving the guidance provided to nautical chart compilers, whatever the product's format, including support for 'Capacity Building';
 - Improving the interface and, where feasible, commonality of presentation between physical and digital chart products, whilst acknowledging their inherent differences.
- 10.2 The principal impact is the resource commitments of participating HOs.

11 Action Required of HSSC

The HSSC is invited to:

- **Note** this report;
- **Endorse** the continued activity of the WG;
- **Approve** the Work Plan at Annex C;
- **Approve** the proposed revisions to S-4 Edition 4.6.0 at paper HSSC8-05.5B; and submission of Edition 4.7.0 to IHO Member States via IHO CL for approval to publish;
- **Approve** the draft revision of S-11 Part A as included in paper HSSC8-05.5C for submission to IHO Member States for publication;
- **Agree** to move the current S-11 Part A Annexes to S-11 Part B, and publish separate English and French versions of S-11 Part A.

Annexes

- A. Membership of NCWG (at 09 September 2016)
- B. NCWG Terms of Reference
- C. NCWG Work Plan

MEMBERSHIP OF NCWG

(at 09 September 2016)

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NCWG Terms of Reference**NAUTICAL CARTOGRAPHY WORKING GROUP (NCWG)**

(as currently included on the IHO web site (NOTE: Changes related to the establishment of the IHO Secretariat are shown in red; minor editorial change agreed by the NCWG is shown in blue))

- Ref: 1) 1st HSSC Meeting (Singapore, October 2009)
 2) 4th HSSC Meeting (Taunton, United Kingdom, September 2012)
 3) 6th HSSC Meeting (Viña del Mar, Chile, November 2014) (name change only)
 3) 6th HSSC Meeting (Viña del Mar, Chile, November 2014) (name change only)
 4) 7th HSSC Meeting (Busan, Republic of Korea, November 2015)
 5) 2nd NCWG Meeting (IHB, April 2016)
 6) IHO CL 41/2016 – Date of Entry Into Force of the Amendments to the Convention on the IHO and its Supporting Basic Documents

1. **Objectives**

- a) To provide expert and authoritative advice and guidance to relevant IHO bodies and non-IHO entities on the concepts of nautical cartography, including
- (i) Its application to nautical charts existing in any physical or digital form;
 - (ii) The development of specifications for symbolization of any data required to be displayed on nautical charts;
 - (iii) The integration of the nautical chart and other cartographic products for e-Navigation. This includes resolving portrayal issues related to the simultaneous display of a nautical chart in combination with navigational information and non-navigational information within an integrated navigation system.
- b) To provide expertise to the International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers (IBSC) on the standards of competence for cartographers when deemed necessary.
- c) To monitor the development of other relevant international standards.

2. **Authority**

This WG is a subsidiary of the Hydrographic Services and Standards Committee (HSSC). Its work is subject to HSSC approval.

3. **Composition and Chair**

- a) The WG shall comprise representatives of IHO Member States (MS), Expert Contributors (EC), observers from accredited Non-Governmental International Organizations (NGIO), and a representative of the **IHO Secretariat**. A membership list shall be maintained and posted on the IHO website.
- b) The Chair will monitor membership to ensure that each Regional Hydrographic Commission is invited to be represented on the WG.
- c) EC membership is open to entities and organizations that can provide a relevant and constructive contribution to the work of the WG.
- d) The Chair and Vice-Chair shall each be a representative of a MS. The election of the Chair and Vice-Chair shall be decided at the first meeting after each ordinary session of the International Hydrographic **Assembly (IHA)** and shall be determined by vote of the MS present and voting.

- e) A Secretary should be appointed to ensure the smooth running of WG business; to administer consultation and collation of members' views; and may act as Editor of the WG's publications. The position is normally filled by a member of the WG.
- f) If the Chair is unable to carry out the duties of the office, the Vice-Chair shall act as the Chair with the same powers and duties. If the position of Chair or Vice-Chair becomes vacant during the period between two ordinary sessions of the **Assembly** an election should be conducted at the next meeting of the Working Group or by correspondence.
- g) ECs shall seek approval of membership from the Chair.
- h) EC membership may be withdrawn if a majority of the MS represented in the WG agrees that an EC's continued participation is irrelevant or unconstructive to the work of the WG.
- i) All members shall inform the Chair in advance of their intention to attend meetings of the WG.
- j) In the event that a large number of EC members seek to attend a meeting, the Chair may restrict attendance by inviting ECs to act through one or more collective representatives.

4. **Procedures**

- a) The WG's main tasks are listed at (1) above and are amplified here:
 - (i) Keep under continuous review the IHO publication S-4 'Regulations of the IHO for International (INT) Charts and Chart Specifications of the IHO', in order to advise the HSSC on their updating, design and format and the portrayal of symbols. Note: S-4 is supplemented by:
 - INT 1 'Symbols, Abbreviations and Terms used on Charts'
 - INT 2 'Borders, Graduation, Grids and Linear Scales'
 - INT 3 'Use of Symbols and Abbreviations'
 These supplementary documents are maintained by individual MS, under the supervision of NCWG.
 - (ii) Advise the HSSC on suggestions put forward by MS to update S-4, in accordance with IHO Specification B-160, with the goal of achieving the maximum possible adherence by MS to the Regulations and Specifications.
 - (iii) Keep under continuous review S-11 Part A 'Guidance for the Preparation and Maintenance of International Chart Schemes' in order to advise the HSSC on its updating.
 - (iv) Advise the **IHO Secretariat** and Regional Hydrographic Commissions, as appropriate, on the work of International Charting Coordination Working Groups (ICCWG) or Regional Charting Groups (RCG) in order to promote the production of international (INT) charts.
 - (v) Offer advice based on the WG experience to ICCWG/RCG and individual MS, on chart schemes and cartographic work, in order to strongly encourage adherence to IHO charting specifications.
- b) The WG should work by correspondence, teleconferences, group meetings, workshops or symposia. The WG should meet about once a year. When meetings are scheduled, and in order to allow any WG submissions and reports to be submitted to HSSC on time, WG meetings should not normally occur later than nine weeks before a meeting of the HSSC.

- c) Decisions shall generally be made by consensus. If votes are required on issues or to endorse proposals presented to the WG, only MS may cast a vote. Votes at meetings shall be on the basis of one vote per MS represented at the meeting. Votes by correspondence shall be on the basis of one vote per **responding** MS represented in the WG.
- d) The date and venue of WG meetings shall normally be announced by the Chair at least six months in advance.
- e) The draft record of meetings shall be distributed by the Chair (or the secretary) within six weeks of the end of meetings and participants' comments should be returned within three weeks of the date of despatch. Final minutes of meetings should be posted on the IHO website within three months after a meeting.
- f) Sub-working groups and project teams may be created by the WG or proposed to HSSC to undertake detailed work on specific topics. The terms of reference and rules of procedure of the sub-working groups and project teams are determined or proposed by the WG as appropriate.
- g) The WG will maintain close liaison with other HSSC WGs, particularly the ENCWG, NIPWG and S-100WG, and other groups developing and maintaining S-100 based products. The WG should liaise also with other IHO bodies, international organizations and industry, as appropriate and as instructed by HSSC.
- h) The WG should prepare annually a report on its activities and a rolling two-year work plan, including expected time frame.

NCWG Work Plan
September 2016
(Updated following NCWG2)

- *Objectives, Tasks and Work Items are pursued in accordance with IHO Work Programme 2013-2017, Programme 2 (Services and Standards):*
 - *Element 2.3. Nautical Cartography:*
 - *Task 2.3.1 Conduct annual meetings of relevant HSSC WGs dealing with nautical cartography.*
 - *Task 2.3.2 Maintain and extend the relevant IHO standards, specifications and publications.*

- *The focus is on maintaining and enhancing cartographic standards and specifications for nautical charts to suit the needs of the modern mariner in support of safe navigation and protection of the marine environment.*

- *As a Plan it will and should evolve; accordingly, contributions from WG members and others are welcomed at any time.*

NCWG Tasks

 - A Maintain and extend Publication S-4 'Chart Specifications of the IHO & Regulations of the IHO for INT Charts' (IHO Task 2.3.2)
 - B Maintain and extend Publication S-11 Part A 'Guidance for the Preparation and Maintenance of INT Chart schemes' (IHO Task 2.3.2)
 - D Development of new (and revised) symbology (IHO Task 2.3.2)
 - E Maintenance of S-4 supplementary publications INT 1, 2 & 3 (IHO Task 2.3.2)
 - G Conduct meetings of NCWG (IHO Task 2.3.1)

Tasks and numbers from IHC XVIII Conf.18/Rep/01 and updated in accordance with EIHC-5 document CONF.EX5/REP.04 - Annex B - Appendix 1.

No	Work item	Priority H-high M-medium L-low	Next Milestone	Start Date	End Date	Status P-Planned O-Ongoing C-Completed	Contact Person(s)	Affected Pubs/Standard	Remarks
A.11	Clarify guidance on dredged/maintained areas	M	Report to HSSC8 and remove.	2011	2016	C	Sec NCWG	S-4, INT1	CSPCWG9 Action 43 CSPCWG10 Action 10 WG Ltrs 09 & 13/14 Included in S-4 4.6.0
A13	Provide guidance on charting maximum authorized draught	M	Report to HSSC8 and remove.	2012	2016	C	Sec NCWG	S-4, INT1	Draft guidance approved by WG. CSPCWG10 Action 12. WG Ltrs 09 & 13/14 – see 09/14 for changes to specs; NCWG1 Agenda 08.3; NCWG1 Action 17; WG Ltrs 02 & 08/2015. Included in S-4 4.6.0
A16	Consideration of the 'future of the paper chart'	H	Report progress to NCWG before advising HSSC8 of outcome	2014	2017	O	Chair NCWG		CSPCWG10 Action 36 NCWG1 Action 54 Meeting following NCWG2
A17	Provide guidance on charting wind farms under construction at sea	M	Report to HSSC8 and remove.	2014	2016	C	Sec NCWG	S-4 B-445	CSPCWG10 Action 20 WG Ltrs 10 & 14/2014 Included in S-4 4.6.0
A18	Provide guidance on charting covered berths	M	Report to HSSC8 and remove.	2014	2016	C	Sec NCWG	S-4 B-300	CSPCWG10 Action 21 WG Ltrs 10 & 14/2014 NCWG1 Action 15; WG Ltr 04/2015 Included in S-4 4.6.0
A19	Provide additional guidance on charting AIS where on most AtoN in region	M	Report to HSSC8 and remove.	2014	2016	C	Sec NCWG	S-4 B-489	CSPCWG10 Action 28 WG Ltrs 10 & 14/2014 Included in S-4 4.6.0
A20	Provide guidance on use of QR codes	M	Report to HSSC8 and remove.	2014	2016	C	Sec NCWG	S-4 B-243	CSPCWG10 Action 38 WG Ltrs 11/2014 & 01/2015 Included in S-4 4.6.0

A21	Provide guidance on adding reminder about T & P NMs on charts	M	Report to HSSC8 and remove.	2014	2016	C	Sec NCWG	S-4 B-252	CSPCWG10 Action 41 WG Ltrs 11/2014 & 01/2015 Included in S-4 4.6.0
A23	Specify “consistency” of charted information between paper charts and corresponding ENC’s	M	Report to HSSC8 and remove.	2015	2016	C	Sec NCWG	S-4 Part B Sections 100 and 600	NCWG1 Action 43 WG Ltrs 03 and 10/2015 Included in S-4 4.6.0
A24	Provide guidance on the use of seals of non- IHO members on INT charts	M	Clarification to prevent non-HO seals and logos being included on INT charts	2014	2017	O	Sec NCWG	S-4	HSSC6-05.5C & F refer NCWG1 Action 46 WG Ltrs 02 & 08/2015 Included in S-4 4.6.0 NCWG2 Action 36, further clarification needed
A25	Buildings above the water	M	Report to HSSC8 and remove.	2015	2016	C	Sec NCWG	S-4	NCWG1 Action 29 WG Ltr 04/2015 Included in S-4 4.6.0
A26	Portrayal subWG	H	Initiate subWG and decide protocol for considering portrayal requirements	2016		O	Chair NCWG		HSSC7 Action 18 NCWG2 Actions 5, 22, 30-32
A27	Provide guidance on charting Sub-surface floating pipelines	M	HSSC8 approval	2016	2017	O	Sec NCWG	S-4	NCWG Ltrs 05, 09/2016
A28	Future of S-4		After A16 reported to HSSC8			P	Chair NCWG	S-4	NCWG2 Agenda Item 13.2
B3	Develop guidelines for preparation & maintenance of small / medium scale ENC schemes.	H	Prepare new draft for submission to HSSC8	2009	2017	O	Sec/Chair NCWG IHB	S-11A	HSSC7 Action 22 NCWG2 Action 37
B4	Prepare a “basic quality assurance check-list template” for use by INT Chart Coordinators/ICCWG in support of the review of new INT charts.	M	Feedback from coordinators due 31/03/2017	2016	2017	O	IHB Chair/Sec NCWG		IHO CL 64/2015 NCWG2 Actions 38, 39

D32.4	Reinstate (simplified) symbol for light vessels	M	Report to HSSC8 and remove.	2012	2016	C	Sec NCWG	S-4 / B-474, INT1	CSPCWG9 Action 18; CSPCWG10 Action 16 NCWG1 Action 34 Included in S-4 4.6.0
D35	Dangerous cargo berth	M	Report to HSSC8 and remove.	2014	2016	C	Sec NCWG	S4 / B-300	CSPCWG10 Action 18 WG Ltrs 10 & 14/2014 Included in S-4 4.6.0
D36	User activated AtoN	M	HSSC8 approval	2015	2017	O	Sec NCWG	S-4, INT1	NCWG2 Action 10 NCWG Ltrs 05, 09/2016
D37	Seagrass	M	HSSC8 approval	2016	2017	O	Sec NCWG	S-4, INT1	NCWG2 Action 23, 24 NCWG Ltrs 05, 09/2016
D38	Bubbler	M	HSSC8 approval	2016	2017	O	Sec NCWG	S-4, INT1	NCWG2 Action 43, 44 NCWG Ltrs 05, 09/2016
E.1	Maintain official INT 1s		Planning for next editions by INT1 sub-WG			O	DE: S Spohn FR: S Guillou ES: F. Yanguas	INT 1	English version 2015 (Ed 8) French version 2016 (Ed 6) Spanish version 2015(Ed 5)
E.4	Symbols for vacant entries in INT 1	L	Add INT abbrs. Fm(s) to S-4 B-122.1. Remove agreed vacant entries and populate B48 & F29.2 next editions INT1.	2016	2019?	O	Sec NCWG INT1subWG	INT 1, S-4 part B	NCWG1 Action 14 NCWG2 Actions 41-44
E8	Reorganize INT1 to exclude composite symbols	L	Report redundancy to HSSC8 and remove			P	INT1 sub-WG	INT1	Not to be progressed at present; use CSPCWG10-11.2A when progressed. NCWG2: Remove (redundant)
E9	Develop new section V for INT1 for 'data quality'	M	Draft to WG	2014	2017	O	Chair NCWG	INT1	CSPCWG10 Action 35
E10	Symbol library	L		2016	?	O	Sec NCWG US (C Harmon)	S-4, INT1	NCWG Actions 45, 46

* Allowing for approval via HSSC (in accordance with Resolution 2/2007) before MS and publication.

G. CSPCWG Meetings (IHO T2.3.1 refers)

Date	Location	Meeting	Date	Location	Meeting
03-05 Nov 04	IHB, Monaco	CSPCWG 1	29 Nov–02 Dec 11	Turku, Finland	CSPCWG 8
19-21 Oct 05	IHB, Monaco	CSPCWG 2	13-16 Nov 12	Seoul, Rep of Korea	CSPCWG 9
22-24 Nov 06	IHB, Monaco	CSPCWG 3	21-24 Jan 2014	Wellington, New Zealand	CSPCWG 10
13-15 Nov 07	IHB, Monaco	CSPCWG 4	28-30 April 2015	Rostock, Germany	CSPCWG 11/NCWG1
18-21 Nov 08	Sydney, Australia	CSPCWG 5	26-29 April 2016	IHB, Monaco	NCWG2
01-03 Dec 09	IHB, Monaco	CSPCWG 6	16-19 May 2017	Redlands, USA	NCWG3
23-26 Nov 10	Simon's Town, S Africa	CSPCWG 7			

Chair (to 08 September 2016): Jeff Wootton (AU)

Chair (from 08 September 2016): Mikko Hovi (FI)

Vice Chair (to 31 March 2016): Nick Webb (UK)

Vice Chair (from 07 July 2016 to 08 September 2016): Mikko Hovi (FI)

Vice Chair (from 08 September 2016): [vacant](#)

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