

5th Meeting of the Hydrographic Services and Standards Committee  
5-8 November 2013, Shanghai, China

**Report of CSPCWG to HSSC5**  
**Chart Standardization and Paper Chart Working Group**

**Submitted by:** Chairman, CSPCWG  
**Related Documents:** IHO Circular Letter 31/2013 (5th Meeting of the HSSC)  
**Related Projects:** not applicable

**Chair:** Peter Jones, UK  
**Vice Chair:** Jeff Wootton, Australia  
**Secretary:** Andrew Heath-Coleman, UK  
**Member States:** Australia, Brazil, Canada, Chile, Colombia, Denmark, 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** M Huet, IHB  
**Organisations:** ESRI, Jeppesen Marine, KESTI

*See Annex A for full details of membership*

## 1. Meetings

- 1.1 CSPCWG9, 13-16 November 2012, held in Seoul, Republic of Korea.
- 1.2 Planned: CSPCWG10, 21-24 January 2014, to be held in Wellington, New Zealand; CSPCWG11, April 2015, Rostock, Germany.
- 1.3 INT1 sub-WG, 10-11 July 2013, held in Cadiz, Spain.
- 1.4 Following CSPCWG9, the WG's officers conducted a survey of the meeting's participants to obtain feedback in a spirit of continuous improvement.

## 2. Election of Officers

In accordance with its terms of reference, CSPCWG appointed its chair and vice-chair at its first meeting (CSPCWG9) after IH Conference.

## 3. Work Programme

The programme is based on the priorities assigned within the detailed Work Plan (Annex B refers). Since HSSC4, the principal activities have been:

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

- 3.1.1 Edition 4.3.0, August 2012, was reported to HSSC4. IHO CL81/2012, 16 August 2012 refers.
- 3.1.2 A further revision, Edition 4.4.0, is published September 2013 (IHO CL, dated September 2013 to be issued). This includes:
- A complete revision of Part B Section 300 (*Topography*) as approved by Member States (IHO CL 03/2013 and 43/2013 refer)
  - A new specification on the portrayal of 'After Disaster' surveys (IHO CL 02/2013 and 42/2013 refer; noting also CL94/2012 *IHO Response to disasters*)
  - A new specification on the portrayal of a 'Generic magenta light flare on multicoloured charts' (IHO CL 05/2013 and 44/2013 refer) and associated clarifications on portrayal of lights on multicoloured charts
  - Numerous clarifications of charting practice resulting from discussions within CSPCWG including: the re-allocation of INT chart numbers for polar regions and special charts, obsolete or obsolescent symbols, positioning of symbols, usage of line and text styles, use of WGS84 Datum, 'uncharted islands' guidance (after AU's experiences with 'Sandy Island'), underwater volcanic action, the naming of routeing measures, cables and pipelines, FPSO safety zones, marine farms, disused lighthouses, toroidal-shaped buoys
  - The clarification regarding the use of WGS84 Datum is the subject of paper HSSC5-05.5C.
- 3.1.3 Part B Section 500 (*Text: language, numbers, names, type styles*) is currently under active revision, for review by MS shortly. This is the final section of Part B to undergo a complete review and modernisation.

3.2 S-4 supplementary publications INT 1, INT 2 & INT 3:

3.2.1 INT1 *Symbols, Abbreviations and Terms used on Charts*. There are three official language versions of INT1. No revisions have been published within the reporting period. Their current status is:

- Spanish language version published by ES/IHM: Edition 4, October 2011
- French language version published by FR/SHOM: Edition 5, 2012
- English language version published by DE/BSH: Edition 7, January 2011.

The INT1 sub-WG met in Cadiz, July 2013, to progress a maintenance and standardisation review in respect of prospective revised editions.

3.2.2 INT2 *Borders, Graduations, Grids and Linear Scales*. There are no current plans for a revision of Edition 4, 2007, published by NL.

3.2.3 INT3 *Use of Symbols and Abbreviations*. There are no current plans for a revision of Edition 5, 2011, published by UK.

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

Its current status is Edition 2.0.5, published May 2012. A draft revision is actively in preparation, in collaboration with NSEHWG, to develop and incorporate guidance on the preparation and maintenance of ENC schemes (in pursuance of Work Plan item B.3).

3.4 S-49 Standardization of Mariners' Routing Guides

There are no current plans for a revision of Edition 2, 2010.

3.5 Chart specifications, symbols and abbreviations

The following new and revised symbols and specifications are currently under consideration:

- best practice principles in the order of updating nautical charts and attaining 'vertical consistency' (S-4 B-100)
- The charting of bathymetry (e.g. representation of the limits of surveys, use of 'danger line', maximum draught and minimum depth) and aids to navigation (including radio-activated light and sound signals).

3.6 Data Quality

Following DQWG's extensive questionnaire to mariners on data quality indicators, CSPCWG continue to reference this resource when considering portrayal issues (e.g. questioning the value of existing paper chart quality indicators, appropriately communicating 'uncertainty' in INT1 symbols).

**4. Progress on HSSC Action Items**

HSSC Action 4/03: *Contributions for the 2012 period to be provided by HSSC WG Chairs (Performance Indicators no 2 and 3)...by 31 January 2013.* Provided in January 2013: done.

HSSC4/35: *HDWG to review the approved definitions of Altitude, Elevation and Height, in light of HSSC4-05.9B.* Correspondence in support of HDWG action.

**5. Problems Encountered**

5.1 Ongoing resource stretch at participating HOs.

**6. Any Other Items of Note**

6.1 The activity of CSPCWG continues at a high level:

- The volume of detailed input to CSPCWG's work is extensive and thanks are recorded to all contributor MS' representatives.
- CSPCWG 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 15 and 17 MS, plus industry representatives and IHB/ADCS. WG correspondence routinely receives considered responses from >20 participants.) I interpret this to be an indicator of the relevance and value to each participating MS. This is supported by the feedback survey conducted following CSPCWG9 (1.3 above refers) and also by the fact that MS remain supportive of the WG when personnel change (e.g. the reporting period has seen the retirement from service of 'founding' WG and ex-CSC members Maarten de Graaf NL and Malcolm Nelson ZA).

- Further, a good level of MS' response is received from the wider IHO membership in reply to IHO Circular Letters generated from CSPCWG work.
- 6.2 Advice and guidance continues to be exchanged with DIPWG, DQWG and TSMAD as required, enhancing the collaboration between the WGs. AU's representative and WG vice-chair (Jeff Wootton) is invaluable in providing perspectives and liaison across CSPCWG, DIPWG, HDWG and TSMAD and in advising on the technical consequences of decisions for each.
- 6.3 Looking forward, future work envisages greater 'cross-format' engagement and maintaining and supporting the continued relevance of nautical cartography, including the future of the paper chart. This was explicitly included in the agenda and actions of CSPCWG9. Accordingly, the name of CSPCWG has been reviewed (CSPCWG9 action 54 and WG letters 09 and 10/2013) and is the subject of a separate paper at HSSC5-05.5B.
- 6.4 Chairman and Secretary continue 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.

## **7. Conclusions and Recommended Actions**

- 7.1 HSSC5 is invited to endorse the continued activity of the WG under its current Terms of Reference.
- 7.2 HSSC5 is invited to approve the Work Plan as submitted at Annex B. This Work Plan was formally reviewed in detail at CSPCWG9, November 2012 and has been updated in the version at Annex B. Following any direction or guidance from HSSC5, this will be subject to further review and revision at CSPCWG10, January 2014.

## **8. Justification and Impacts**

- 8.1 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 paper and digital chart products, whilst acknowledging their inherent differences.
- 8.2 The principal impact is the resource commitments of participating HOs.

## **9. 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 B.

## **Annexes:**

- A. Membership of CSPCWG (at 2 September 2013)
- B. CSPCWG Work Plan

## ANNEX A

**MEMBERSHIP OF CSPCWG**  
(at 2 September 2013)

<b>Member State</b>	<b>Name</b>	<b>Email</b>
Australia	Mr Jeff WOOTTON ( <b>Vice-Chairman</b> )	<a href="mailto:jeff.wootton@defence.gov.au">jeff.wootton@defence.gov.au</a>
Brazil	Lt Cdr SEBASTIÃO Simões de Oliveira Lt Cdr Vicente BARROSO Junior	<a href="mailto:sebastiao@chm.mar.mil.br">sebastiao@chm.mar.mil.br</a> <a href="mailto:barroso@chm.mar.mil.br">barroso@chm.mar.mil.br</a>
Canada	Mr David PRINCE	<a href="mailto:Dave.Prince@dfo-mpo.gc.ca">Dave.Prince@dfo-mpo.gc.ca</a>
Chile	Lt Cdr Osvaldo MORALES	<a href="mailto:hidrografia@shoa.cl">hidrografia@shoa.cl</a>
Colombia	SJ Jair Rodriguez Ayala	<a href="mailto:JRodriguezAyala@dimar.mil.com">JRodriguezAyala@dimar.mil.com</a>
Denmark	Ms Nina GRAASBØL-SCHMIDT	<a href="mailto:ng@kms.dk">ng@kms.dk</a>
Finland	Mr Mikko HOVI	<a href="mailto:mikko.hovi@fta.fi">mikko.hovi@fta.fi</a>
France	Mr Serge LANNUZEL	<a href="mailto:serge.lannuzel@shom.fr">serge.lannuzel@shom.fr</a>
Germany	Ms Sylvia SPOHN	<a href="mailto:sylvia.spohn@bsh.de">sylvia.spohn@bsh.de</a>
Greece	Mr Alexis HADJANTONIOU	<a href="mailto:dcd_hnhs@navy.mil.gr">dcd_hnhs@navy.mil.gr</a>
India	Dr BK RAMPRASAD	<a href="mailto:inho@dataone.in">inho@dataone.in</a>
Indonesia	Captain SAMIYONO	<a href="mailto:samiyono@dishidros.go.id">samiyono@dishidros.go.id</a> or <a href="mailto:samiyono@yahoo.com">samiyono@yahoo.com</a>
Iran	Mr Ahmad PARHIZI Mr Saeid PARIZI	<a href="mailto:aparhizi@pmo.ir">aparhizi@pmo.ir</a> <a href="mailto:parizi@pmo.ir">parizi@pmo.ir</a>
Italy	Mrs Manuela MILLI	<a href="mailto:Manuela.milli@marina.difesa.it">Manuela.milli@marina.difesa.it</a>
Japan	Mr Tetsuichiro YABUKI (contact via Mr Kazufumi MATSUMOTO)	<a href="mailto:chart@jodc.go.jp">chart@jodc.go.jp</a> <a href="mailto:ico@jodc.go.jp">ico@jodc.go.jp</a>
Korea (Rep of)	KHOA (Korea Hydrographic and Oceanographic Administration) (contact via Mr Jae Yon LEE)	<a href="mailto:infokhoa@korea.kr">infokhoa@korea.kr</a> <a href="mailto:JLee0921@korea.kr">JLee0921@korea.kr</a>
Latvia	Mr Mikus RANKA	<a href="mailto:Mikus.Ranka@lhd.lv">Mikus.Ranka@lhd.lv</a>
Netherlands	Mr Ben TIMMERMAN	<a href="mailto:B.Timmerman@mindef.nl">B.Timmerman@mindef.nl</a>
New Zealand	Miss Jennifer RYAN	<a href="mailto:jryan@linz.govt.nz">jryan@linz.govt.nz</a>
Norway	Mrs Inger TELLEFSEN	<a href="mailto:inger.tellefsen@kartverket.no">inger.tellefsen@kartverket.no</a>
Pakistan	Lt Cdr Fayyaz ul Hassan BHATTI	<a href="mailto:hydropk@paknavy.gov.pk">hydropk@paknavy.gov.pk</a>
Russia	Lyudmilla NIKITINA	<a href="mailto:main@gunio.ru">main@gunio.ru</a>
South Africa	Mr Sydney OSBORNE	<a href="mailto:hydrosan@iafrica.com">hydrosan@iafrica.com</a>
Spain	Cdr Álvaro GUITART	<a href="mailto:ihmesp@fn.mde.es">ihmesp@fn.mde.es</a>
Sweden	Mr Magnus WALLHAGEN	<a href="mailto:Magnus.Wallhagen@sjofartsverket.se">Magnus.Wallhagen@sjofartsverket.se</a>
Turkey	Lt Ümit GÖRÜR	<a href="mailto:ugorur@shodb.gov.tr">ugorur@shodb.gov.tr</a>
Ukraine	Mr Oleg MARCHENKO	<a href="mailto:chart_dpt@charts.gov.ua">chart_dpt@charts.gov.ua</a>
United Kingdom	Mr Peter JONES ( <b>Chairman</b> )	<a href="mailto:peter.jones@ukho.gov.uk">peter.jones@ukho.gov.uk</a>
United Kingdom	Mr Andrew HEATH-COLEMAN ( <b>Secretary</b> )	<a href="mailto:andrew.coleman@ukho.gov.uk">andrew.coleman@ukho.gov.uk</a>
USA (NOAA)	Mr Robert HEELEY	<a href="mailto:robert.heeley@noaa.gov">robert.heeley@noaa.gov</a>
USA (NGA)	Miss Jacqueline BARONE	<a href="mailto:Jacqueline.barone@nga.mil">Jacqueline.barone@nga.mil</a>
IHB	Mr Michel HUET	<a href="mailto:adcs@iho.int">adcs@iho.int</a>
<b>Industry Observers</b>		
ESRI	Ms Patricia (Trish) SHEATSLEY	<a href="mailto:PSheatsley@esri.com">PSheatsley@esri.com</a>
Jeppesen	Justin HORNBY	<a href="mailto:Justin.Hornby@jeppesen.com">Justin.Hornby@jeppesen.com</a>
KESTI	Mr Gigab HA	<a href="mailto:ggha@kesti.co.kr">ggha@kesti.co.kr</a>

CSPCWG Work Plan

September 2013

(updated following CSPCWG9 and subsequent activity)

- *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.*

*CSPCWG 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 refers)
- B Maintain and extend Publication S-11 Part A 'Guidance for the Preparation and Maintenance of INT Chart schemes' (IHO Task 2.3.2 refers)
- D Development of new (and revised) symbology (IHO Task 2.3.2 refers)
- E Maintenance of S-4 supplementary publications INT 1, 2 & 3 (IHO Task 2.3.2 refers)
- F Revise, develop and maintain S-49 'Recommendations concerning Mariners' Routeing Guides' (IHO Task 2.3.2 refers)
- G Conduct annual meetings of CSPCWG (IHO Task 2.3.1 refers)

Tasks and numbers from IHC XVIII Conf.18/Rep/01

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.5.1	Revise S-4 Part B Section 300-330			2010	2013	C		S-4 / B-300	Edition 4.4.0 published Sep 2013
A.5.2	Revise S-4 Part B Section 340-390			2011	2013	C		S-4 / B-300	Edition 4.4.0 published Sep 2013
A.6	Revise S-4 Part B Section 500	M	IHO CL for M/S approval	2012	2014	O	Sec CSPCWG	S-4 / B-500	Final draft in preparation
A.11	Clarify guidance on dredged/maintained areas	M	WG Ltr	2011	2014	O	Sec CSPCWG	S-4, INT1?	CSPCWG9 Action 43
A.12	Provide guidance on charting toroidal shaped buoys			2012	2013	C		S-4 / B-462.5	Edition 4.4.0 published Sep 2013
A13	Provide guidance on charting maximum authorized draught	M	Draft to WG	2012	2014	O			CSPCWG9 Action 36
A14	Provide guidance on updating large scale charts first	M	IHO CL for M/S approval	2012	2014	O	Sec CSPCWG	S-4 / B-100.5	CSPCWG9 Action 46
A15	Provide guidance on charting underwater volcanic activity			2012	2013	C		S-4 / B-355.1 & 428.4	Edition 4.4.0 published Sep 2013
A16	Initiate consideration of the 'future of the paper chart'	M	Discussion paper by AU / CA / SE CSPCWG reps	2013		P	Vice chair CSPCWG	tbd	CSPCWG9 Action 53
B.3	Develop guidelines for preparation & maintenance of small / medium scale ENC schemes.	H	NSEHWG review	2009	2014	O	Chair CSPCWG	S-11 (or S-65?)	Draft by NSEHWG; keep WENDWGTF engaged
D 27	Revise guidance on Marine Farm limits			2011	2013	C		S-4 / B-447.6, INT1	Edition 4.4.0 published Sep 2013
D 28	Revise guidance on FPSO safety zones			2011	2013	C		S-4 / B-445.6	Edition 4.4.0 published Sep 2013

D 29	Clarify guidance on safe vertical clearances			2011	2013	C		S-4 / section B-300	Edition 4.4.0 published Sep 2013
D 30	Guidance for post-disaster highlighting of new surveys			2011	2013	C		S-4 / B-293.8, 297.2, 417.8	Edition 4.4.0 published Sep 2013
D 31	Analysis of DQWG user questionnaire on quality indicators & symbols			2012	2013	C		S-4, INT 1	Analysis of paper chart DQ indicators completed at CSPCWG9 CSPCWG9 Actions 28 & 31: dedicated INT1 section for further discussion at CSPCWG10 Also note IHO CL51/2013
D32.1	Lights: Major lights, Direction lights, Highlighting	M	IHO CL for M/S approval	2012	2014	O	Sec CSPCWG	S-4 / section B-470	CSPCWG9 Actions 10, 12 & 17
D32.2	Lights: Interrupted lights	M	Advice from IALA	2012	2014	O	Sec CSPCWG	S-4 / section B-470	CSPCWG9 Action 13
D32.3	Lights: Generic light flare					C		S-4 / B-470.4.a	Edition 4.4.0 published Sep 2013
D32.4	Lights: Reinstate (simplified) symbol for light vessels	M	CSPCWG10	2012	2014	O	Sec CSPCWG	S-4 / B-474, INT1	CSPCWG9 Action 18; paper to CSPCWG10
D33	Footbridges / bridges on small scale charts			2012	2013	C		S-4 / B-300	Edition 4.4.0 published Sep 2013
E.1	Maintain official INT 1s		Planning for next editions by INT1 sub-WG (following Cadiz meeting July 2013)	2013	~2015	O	DE: S Spohn FR: S Lannuzel ES: A Guitart	INT 1	English version 2011 (Ed 7) French version 2012 (Ed 5) Spanish version 2011 (Ed 4)
E.4	Symbols for vacant entries in INT 1	L	Review when A6 completed	2014		P	Sec CSPCWG	INT 1, S-4 part B	INT1 sub-WG to review
E8	Reorganize INT1 to exclude composite symbols	L	CSPCWG10	2013	2014	O	INT1 sub-WG	INT1	Dependent on outcome of CSPCWG9 Action 31



### **G. CSPCWG Meetings (IHO T2.3.1 refers)**

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

Chairman: Peter JONES (UK)

Vice Chairman: Jeff Wootton (AU)

Secretary: Andrew Heath-Coleman (UK)

Email: [peter.jones@ukho.gov.uk](mailto:peter.jones@ukho.gov.uk)

Email: [jeff.wootton@defence.gov.au](mailto:jeff.wootton@defence.gov.au)

Email: [andrew.coleman@ukho.gov.uk](mailto:andrew.coleman@ukho.gov.uk)