

8th IHO-CSPCWG Meeting

8th IHO-CSPCWG Meeting Turku, Finland, 29 November – 2 December 2011

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REPORT: (Note: The paragraph numbering is the same as in the agenda, although the order of taking the items was not exactly followed).

1. Welcome, Introductions and Administrative Arrangements

Docs: CSPCWG8-01A List of documents
CSPCWG8-01B List of meeting participants and WG members

Mikko Hovi (FI) read a message of welcome from Rainer Mustaniemi, director of the Hydrographic Office at the Finnish Transport Agency.

The participants introduced themselves, some of whom were attending their first WG meeting. A list of meeting participants is at ANNEX C. The Chairman commented that there was a good representation from other WGs, which is useful.

The Chairman had received apologies from South Africa and New Zealand.

The Chairman outlined his plans for the meeting and thanked the Finnish Transport Agency for hosting CSPCWG8. He also thanked members for attending and referred to the many advantages of face-to-face meetings, while acknowledging the cost and therefore the need to make good use of the opportunities to make progress.

He mentioned that there have been several changes to individual national representatives during the year and advised WG members to update their personal email lists accordingly, from the membership list on the IHO website, which is updated whenever changes occur. Turkey is the latest MS to join the WG.

He advised that he would seek consensus from discussions, with one vote per MS should a vote be required. He stated that the record of the meeting would focus on main points, proposals and actions; full detailed minutes would not be taken.

2. Approval of Agenda

Docs: CSPCWG8-02A rev10 Agenda

The WG approved the agenda. The Chairman reserved the right to postpone discussion on some lower priority items if necessary to ensure more important items were sufficiently discussed. He also advised that the record of last year's meeting had been subjected to review at the time it was produced and could therefore be taken as read. The meeting accepted this.

ACTION 1: Secretary to send late papers to IHB (M Huet) to add to CSPCWG8 documents on website: 08.3A; 08.7A; 08.10A; 08.18A; 14.2A; INF8.

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3. Status of Actions from CSPCWG7

Docs: CSPCWG8-03A rev3 Status of actions from CSPCWG7

Very good progress had been made with the 30 actions from CSPCWG7 (December 2010). The following points were noted:

CSPCWG7 Action 1-3 It was agreed to replace these three 'standing' actions with equivalent actions from WG8 (see new Actions 2-4 below).

CSPCWG7 Action 4 No further national documents on ENC scheming had been received since the last meeting. Nevertheless, the Chairman would be progressing the original CHRIS20 action on ENC scheming guidance during the coming year, initially by correspondence with RCG/ICCWG Coordinators (Work Plan item B.3 refers).

CSPCWG7 Actions 9, 10, 12, 13, 16, 18, 19 and 23: All these actions are in hand (WG Letter 07/2011 refers) and will be progressed to a conclusion by correspondence.

CSPCWG7 Actions 11 and 15: (INT1 producers to remove the example in N26 and to include application of C33 to reed beds, including a version over blue tint, in new edition of INT1). These changes have been included by DE in the 2011 Edition of INT1. The ES and FR versions are in progress and will include these changes.

CSPCWG7 Action 17: (Secretary to draft clarifications to specifications B-470 and B-494 for use of solid magenta flare). This action was absorbed into agenda item 8.5 for further discussion at this meeting.

CSPCWG7 Action 21: (All to advise the WG (via the Secretary) of any further feedback received and the results of any trials conducted into the use of colour on charts). None had been reported and the action was closed.

CSPCWG7 Action 28: (DE to further develop ideas for reducing INT1 section K). This has been revived as agenda item 11.1 for the current meeting.

All other actions had been completed. None of the existing actions were carried forward.

New actions arising:

CSPCWG8 ACTION 2: Secretary to produce draft report of CSPCWG8 by end of December 2011, for participants to approve.

CSPCWG8 ACTION 3: All WG members to make early bids for travel budget to CSPCWG9; advise Chairman if any difficulties.

CSPCWG8 ACTION 4: All WG members to note agenda items for CSPCWG9 throughout the year (and forward to Secretary as they arise).

4. Relationship with HSSC

4.1. Report from HSSC3

*Docs: CSPCWG8-04.1A
CSPCWG8-04.1B*

CSPCWG report to HSSC3

*Report from HSSC3 - Notes by CSPCWG
Chairman*

The Chairman, P Jones (UK) briefed the meeting on his attendance at HSSC3, in accordance with his notes.

He also mentioned that he had attended the biennial International Cartographic Association Conference in Paris, of which SHOM (FR) was a co-sponsor. There had

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been a wide range of cartographic subjects covered.

4.2. Report from DIPWG

Docs: CSPCWG8-04.2A Report to CSPCWG8 on DIPWG activities

The Vice Chairman J Wootton (AU) briefed the meeting on the activities of the DIPWG, in accordance with his report. The following additional information was noted during the discussion:

- M Huet (IHB) confirmed that Maintenance Document 8 has been published.
- J Wootton stated that the issue concerning the use of NEWOBJ for V-AIS had not, in the event, been raised at HSSC3. During a brief discussion, the Chairman commented that CSPCWG had pre-empted IMO decisions about the approved use of V-AIS because V-AIS is already in use in some parts of the world and the need to include on charts may already exist. An IALA correspondence group, chaired by Japan, has also been established to consider V-AIS. IALA are planning to convene another V-AIS workshop (in early 2013?).
- J Wootton anticipated that the correspondence group established for enhanced aid to navigation symbology will recommend discarding the option of simplified symbology on ECDIS.
- HSSC3 had given approval for the new edition of S-52.

The Chairman commented that increasing use of ECDIS was resulting in more user feedback about presentation issues with ENC. He also noted that a lot of the DIPWG considerations arose out of new symbology developed by CSPCWG, which had considered not just the detail of symbology but the underlying requirements and principles, regardless of display format.

4.3. Report from TSMADWG

Docs: CSPCWG8-04.3A Report to CSPCWG8 on TSMADWG activities

J Wootton briefed the meeting on the activities of the TSMADWG, in accordance with his report. He added that:

- The joint TSMAD/IALA workshop had led to wider acceptance within IALA and IMO of S-100 as a base geospatial standard for E-Navigation.
- S-102 (Bathymetric Surface Product Specification) has been approved by HSSC3; the first S-100-based PS.
- S-57 UOC Edition 3 has now been published.
- The ECDIS test card has been published by CL68/2011 and a lot of feedback has already been received.
- S-101 will be a phased development: the first phase is the cloning of S-57; subsequent phases will deal with new functionality.

4.4. Report from HDWG

Docs: CSPCWG8-04.4A Report to CSPCWG8 on HDWG activities

J Wootton briefed the meeting on the activities of the HDWG, in accordance with his report (the first HDWG report to CSPCWG). Additionally, he advised that Steve Shipman (HDWG Secretary) would be retiring next May. He stated that Edition 5 of S-32 had not been removed from the IHO website because it contains index numbers still relevant to S-57. However, as it is no longer maintained, he recommended that

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reference should always be made to the 'WIKI' version which is fully up to date. A French language version also exists, but unfortunately is not yet linked to the English version. A Spanish language version is planned but not yet progressed due to a lack of resources.

The new and revised definitions proposed to HSSC3 (document HSSC3-05.9A) would now be circulated to IHO MS for approval; a CL is expected soon. There followed significant debate about the proposed definitions for Elevation, Height and Altitude, which are proposed to be amended to provide a clear distinction. This has been done mainly to provide a clear distinction between the terms as defined in the IHO S-100 Geospatial Information Registry in order to remove ambiguity, but it was suggested that such a distinction may not be valid for paper charts and in general usage. UK and AU agreed to write separate papers outlining the two sides of the debate, in consultation with chairmen HDWG and TWLWG; these would be forwarded to IHB to consider for inclusion as an annex from CSPCWG to the planned CL.

Some of the other proposed definitions were also discussed, with points raised that WG members might consider relaying to their home offices for consideration in responding to the CL.

The meeting also decided that the HDWG should be asked to consider updating the first (unchanged) definition of Nautical Chart.

Thanks were expressed to Jeff Wootton for his three reports and the excellent work he does in liaising between these various technical WG.

ACTION 5: AU & UK to produce papers explaining the pros and cons of the definitions for Elevation, Height and Altitude proposed by HDWG (not more than one side A4 each, by end 2011). To include graphic derived from UOC. HDWG & TWLWG Chairs to be consulted. Ideally to be included as Annex to IHO CL (delayed if necessary)

ACTION 6: WG members to advise their respective HOs on response to HDWG proposed definitions CL

ACTION 7: WG to propose update to S-32 Nautical Chart definition 1: Sec to draft for circulation to WG Members

5. Terms of Reference

Docs: CSPCWG8-05A rev1 CSPCWG TOR

No changes were required to the CSPCWG Terms of Reference.

The Chairman commented that all RHCs are represented on the CSPCWG, fulfilling TOR 4f.

He also reminded the meeting that elections for Chairman and Vice Chairman of CSPCWG will be required at the first meeting convened after the 2012 (XVIII) International Hydrographic Conference, in accordance with TOR 4c.

6. CSPCWG procedures

Docs: CSPCWG8-06A CSPCWG Procedures

Minor changes were suggested:

- A paragraph is required to state that the Secretary should send copies of any changes to S-4 (including minor editorial changes) to FR and ES, to facilitate translation.

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- Paragraph 4.10 should be amended to state that new editions of INT1 (not NMs) should be announced on the IHO Homepage 'News' column (instead of by a 'banner', which no longer exists).

ACTION 8: Sec to add a requirement to copy any editorial and clarification changes to S-4 to FR and ES

ACTION 9: Sec to amend 4.10: amend 'banner' to 'IHO News' and relate to NE of INT1, rather than NMs

7. CSPCWG work plan

7.1. Summary of progress **(Sec)**

Docs: CSPCWG8-07A Work Plan updated for HSSC3

The Secretary briefed the meeting on progress with items on the work plan (substantive discussion was deferred to Agenda Item 13). A considerable amount of progress had been achieved during the past 12 months, with a number of items completed and reported to HSSC3; these would now be removed from the work plan. Most other items are in progress. A New Edition of INT3 would be published in December 2011 (a copy was available to view).

The Chairman thanked everyone for their effective contributions over the past year.

M Huet (IHB) advised that the IHO work programme references listed on the covering page of the work plan will change following IHC XVIII (April 2012).

8. Chart content:

8.1. Depiction of marine farm areas **(AU)**

Docs: CSPCWG8-08.1A Depiction of marine farm areas

J Wootton explained the background to his paper on the depiction of marine farms and tabled a charted example of very extensive marine farm areas in the approaches to a port. The meeting considered his proposed symbol and a possible alternative suggested by I Tellefsen (NO); the AU suggestion was preferred by the meeting. The proposed guidance for S-4 was also accepted, with the addition of a sentence proposed by A Heath-Coleman (Secretary) to cover the case when it would be necessary to clarify on which side of the limit the farm lay: 'If only part of the limit can be shown on the chart, then the larger K48.2 symbol should additionally be inserted in the area'. It was decided that the new line style is intuitive; therefore, there is no requirement for a NM to update INT1, but it should be included at next edition.

ACTION 10: Sec to draft amendment to S-4 for limit of marine farms (based on AU proposal), with additional sentence.

8.2. Power for Aids to Navigation **(AU)**

Docs: CSPCWG8-08.2A Power Source Indication for Aids to Navigation

The meeting agreed that adding a reference to the power source for lights on paper charts is inappropriate, because of chart clutter. Additionally, it is unlikely to be sufficiently useful to the mariner to justify the effort of gathering and maintaining the data in order to include the information in other publications such as List of Lights and ENC. J Wootton will also raise this issue with TSMADWG.

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8.3. Safety zones **(BR)**

Docs: CSPCWG8-08.3A New symbol for FPSO/Tanker/Tug set

R Ribeiro da Silva (BR) explained that FPSO are a special case in UNCLOS, in that the 500m safety zone also applies to attached tankers and tugs, and swings with them. The meeting agreed that the symbol proposed by BR is insufficiently intuitive to justify a separate symbol from the moored storage tanker symbol L17, especially as all three elements are not always present. However, the abbreviation FPSO should be adopted as an INT abbreviation and always added to indicate the function, with a chart note added explaining the extent and variability of the associated safety zone. There is a need to do further research into FSO and FSU, whether these are still relevant to modern oil/gas exploitation. [After meeting note: FSU and FSO do still exist within the oil/gas industry].

ACTION 11: Sec to draft amendment to S-4 B-445.5 for FPSO safety zones. FPSO, FSO and FSU to be added to list of INT abbreviations at B-122.1 and in INT1.

8.4. Danish Navy trials on chart colours **(DK)**

N Graasbøl-Schmidt (DK) reported that no report of Danish Navy trials on chart colours had been rendered. However, as users of Greenlandic charts have reported a problem with the yellow used on Danish charts, KMS may review all its chart colours.

8.5. Coloured light flares **(Sec)**

Docs: CSPCWG8-08.5A Coloured Light Flares

In consideration of the various questions detailed in the paper, the meeting decided that:

- Charts falling by scale under S-4 Part C specifications would be omitted from the multicoloured style.
- Magenta should be specified for light flares on platforms and for Aero navigation lights.
- Multiple coloured flares should be used when two or more separate and different coloured lights are depicted at a single light star.
- Light flares should be omitted if coloured arcs are shown on light sectors.
- Where coloured circles are placed around all-round lights, the diameter should not be related to the range of the lights.

Unusual lights which do not conform well to the guidance should be explained by a charted note. (The example of J4655 was considered by the meeting.)

UK asked if any other HOs give advice to mariners on how to update their charts for multicoloured sectors; no WG members were aware of such advice.

ACTION 12: Sec to amend S-4 guidance on lights on multicoloured charts:

- two different lights charted in same position to have separate flares
- if coloured sector arcs shown, there should be no flare

ACTION 13: INT1 producers to add example of all-round light with circle to INT1 at next edition.

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8.6. Major lights: any change required to definition/symbols (UK)

Docs: CSPCWG8-08.6A *Major lights: any change required to definitions/symbols*
CSPCWG8-08.6B *Copy of TSMAD22/DIPWG3-08.3A rev1*

J Wootton explained that the DIPWG decision to define major lights as those with a range of 10M is intended solely to drive the ENC presentation of such lights; it is not intended to be the basis for a wider definition of major lights. Nevertheless, there was some evidence that light ranges were tending to be reduced, which may require further consideration on whether a change is required to the generally accepted convention that a major light has a range of 15M or more. 'Major' could be a subjective term, varying according to scale and navigational situation. There is a need for further investigation, after which the subject should be continued by correspondence.

ACTION 14: Sec to research further the issue of 'major' lights and, if required, propose any changes to S-4 and INT1 by correspondence.

8.7. Generalization of depths on Norway charts (NO)

Docs: CSPCWG8-08.7A *Generalization of Depths on Norway Charts*

I Tellefsen (NO) explained Norway's practice of omitting decimetres from soundings on second and smaller scale charts. This caused some surprise to members of the WG, who considered this might (in their own waters) cause issues with the harbour authorities and confusion with users. No action was suggested but NO was invited to review its practice.

8.8. Submarine Cables issued by NM (UK)

Docs: CSPCWG8-08.8A *Submarine Cables issued by NM*

It emerged that practices differ between HO's (although most filter positions for NM purposes). Some offices provide a long list of positions (up to 14 pages quoted as an example) in order to clear their liability, but do not necessarily expect chart users to update their charts in conformity. This does mean that chart bases are updated, so that mariners buying new charts, especially those produced by print on demand (POD), would have the full cable depicted.

8.9. Maintained / Dredged areas (AU)

Docs: CSPCWG8-08.9A *Maintained dredged areas*

J Wootton suggested that there is a need to provide better explanation of the three entries for dredged areas and channels in INT1 (I21-23) and improve guidance in S-4. It emerged that practice in the use of these symbols varies widely, including the interpretation of the meaning of 'maintained'. In some cases, the use of a fairway symbol with controlling depth may be more appropriate.

ACTION 15: AU & UK to work up proposal to clarify terms of dredged/maintained area symbols in INT1 and, if required, S-4.

8.10. Submerged or floating tunnels (NO)

Docs: CSPCWG8-08.10A *Submerged or floating tunnels*

I Tellefsen briefed the meeting on plans that had been made in Norway some years ago to build tunnels suspended in the water column. However, none had been built in Norway and there was no knowledge of any elsewhere, so it was decided that there is currently no need to design a symbol.

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8.11. Safe clearance heights (SE, US)

Docs: CSPCWG8-08.11A Using vertical clearance in black versus magenta for overhead cables
CSPCWG8-08.11B Physical and Safe Clearance Heights of overhead Cables

Considerable differences emerged about the understanding of 'safe vertical clearance' and the practices in different HOs are very variable. For example: AU do not chart clearances under power cables unless it is an authoritative safe clearance, as they consider a charted physical clearance under power cables may encourage mariners to pass under with minimal clearance and so risk electrocution; CA avoids charting 'safe' clearances for liability reasons; FI removes the flashes because they chart the 'safe' clearance under all cables, not just power lines. It became clear that there is a need to improve the guidance in S-4. One issue to clarify is that the D26 symbol is intended solely for safety from electrical discharge under power cables; safety margins to cover such things as cable sag due to weather conditions should be regarded as physical clearance and therefore charted in black (D27). Whatever improved guidance is agreed should then be carried forward into clearer explanations of the symbols in INT1 (at D26 and the graphic at H20).

ACTION 16: Chairman and Sec to clarify guidance on safe clearances when revising B-380

8.12. Zone of Confidence (ZOC) diagrams / new surveyed areas (JP)

Docs: CSPCWG8-08.12A Depiction of Limits of Adequately Surveyed Area

T Kanazawa (JP) explained the work that Japan has done to charts following resurveying in the aftermath of the March 2011 tsunami. It had become clear that there is a need to indicate clearly on charts which areas have been surveyed since the tsunami. Consequently, JP had surrounded the area of new survey with a dotted magenta line (with accompanying explanatory note) and blue shading on the Source/ZOC Diagram. JP now proposed the dotted symbol should be adopted for international use. Various other possibilities were considered by the meeting, such as highlighting the area as a fairway with grey tint, or changing all old soundings to upright (to indicate areas of unreliability). However, the meeting concluded that none of these served and agreed that the proposed magenta line could be used, always with an explanatory note on the charts, in 'after disaster' circumstances. Although this usage should be explained in S-4 (possible locations B-417, B-439, B-600), it was agreed that it should not be included in INT1, as that might encourage wider use of the line style by compilers (eg to highlight better surveys on the face of the chart generally) and thereby undermine its specific value.

It was considered that there was no need for any changes for ENC, as the CATZOC 'stars' should be sufficient guidance for the mariner.

The meeting agreed that blue tint was inappropriate for highlighting the area on the Source/ZOC diagram, as blue is generally associated with shallow water. Grey tint may be better, if considered necessary. It was also noted that 'D' meaning large depth anomalies may be expected, would be a more appropriate ZOC category than 'U' for unassessed. It was suggested that the TSMAD and DQ WGs should also consider this subject.

ACTION 17: Sec to draft a proposal for S-4 (but not INT1) for dotted magenta line for 'after disaster' use.

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ACTION 18: Record of discussion and all papers to be advised to DQWG, by Sec and all WG members with contacts in DQWG.

ACTION 19: JP to consider presenting the subject at TSMAD

8.13. Contouring by Automatic Generation tools **(CA)**

Docs: CSPCWG8-08.13A Contouring by Automatic Generation tools

This item resulted in an interesting exchange of experiences using various computer-assisted solutions for generating bathymetric information on charts. It was considered that the current specifications on contours allow sufficient latitude without needing adjustment.

8.14. Submerged posts and piles **(US)**

This item was deferred for this year.

8.15. River line symbol **(NZ)**

Docs: CSPCWG8-08.15A River line symbol

The meeting agreed that tapering rivers is no longer appropriate with modern digital compilation tools. This change will be made during the current revision of S-4 B-300. The Chairman drew FR's attention to their study of 'length of coastline' (HSSC3-03C refers) in case changed practice could impact measurements.

8.16. Cliff symbol **(NZ)**

Docs: CSPCWG8-08.16A Cliff symbol

Various different styles of computer-generated cliff and steep coast symbols are in use. There was a difference of opinion on whether it is useful to distinguish between cliff (near vertical) and steeply sloping coastline. However, it was noted that these two different features may appear quite differently on radar images. There is also the consideration of S-57 encoding for ENC. Consideration would be given to clarifying this in the current revision of S-4 B-300.

8.17. Land tint behind title, etc **(NZ)**

Docs: CSPCWG8-08.17A Land Tint behind Title, Tidal Tables and Scales

It was not considered that the colour of tint behind title areas was important to the user. However, no other offices currently follow NZ's practice of windowing-out tint. It was decided that the wording in the draft version of B-300 already circulated should stand.

8.18. Maximum authorized draughts **(FI)**

Docs: CSPCWG8-08.18A Maximum authorized draughts

M Hovi explained the national requirements for charting fairways in Finland, which included a 'maximum authorized draft', which in fact is not a maximum as it can be exceeded in defined circumstances. These circumstances include the requirement to chart a 'swept' depth (which is actually not swept mechanically) and centreline tracks. Various suggestions were made for how to comply both with the Finnish regulations and S-4 specifications: the minimum depth could be more correctly shown by M18 (S-4 B-434.5a) while the maximum draught could be shown by the depth between chevrons (S-4 B-434.5b). It was also decided that the second of these should be included in INT1 (as in UK's INT1-equivalent, 5011).

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ACTION 20: INT1 producers to include additional example of fairway, with maximum authorized draught in INT1 M18 (similar to UK's depiction in 5011)

8.19. Recording stations (DK)

Docs: CSPCWG8-08.19A Depiction of recording stations

N Graasbøl-Schmidt explained that the recording stations which DK wished to chart are really too small a feature to be charted by an obstruction symbol, with legend ODAS (in accordance with S-4 B-448.4). Other nations have similar recording stations, but not all charted them. Some HOs simply list them in (T)NMs, which can be easily updated when the features are moved or removed. Another possibility considered was a foul symbol (#); however, while this is appropriate to the feature, it would not be inserted by NM and may be too transient a feature to include at new edition. The (T)NM option seemed more appropriate, but it was recognized that while drawing attention to the existence of recording stations may give some protection against the possibility of damage due to anchoring or trawling, conversely it may increase the risk of theft. On balance, it was considered that there is no need to take NM action or to include in nautical charts.

ACTION 21: Sec to add advice about recording stations to S-4, as a clarification. AU to supply Sec with some draft words for clarifying the nature of obstructions at B-422.9.

8.20. Danish national symbols (DK)

Docs: CSPCWG8-08.20A Adopting Danish national symbols as international symbols

The meeting considered whether various DK national symbols should be adopted as INT symbols:

Disused village. Not to be adopted. Considered not to be intuitive and other options are available, eg: use a building symbol + text legend 'Ru', 'Ref' or '(abandoned)', or equivalent.

Mooring ring. Not to be adopted. The INT abbreviation 'Lndg' may be suitable.

Dot in lieu of light star. Not to be adopted. This had already been rejected by CSPCWG during the review of S-4 B-470.5, where this option used to be included but 'not recommended.' The small light star should be used.

Colour-filled beacons. This option is already covered by S-4 B-455.4.

8.21. Upright soundings (DK)

Docs: CSPCWG8-08.21A Enhancement of the distinction between new and old soundings (sloped/upright)

N Graasbøl-Schmidt explained that DK had only recently started to use upright soundings to differentiate old and new soundings. They had now received user feedback that this was inadequate differentiation. The meeting confirmed that DK had correctly followed the guidance but noted that this device showed the lowest user understanding in the DQWG questionnaire (see INF2). J Wootton advised that one device which could help is to use a clearly sparser sounding selection in areas of upright soundings.

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9. S-4

9.1. Amend GPS to GNSS in S-4: proposal from Iceland (**Chairman**)

Docs: CSPCWG8-09.1A Clarification of S-4: Use of abbreviations 'GNSS' and 'GPS'

The proposals in the paper were approved. HDWG have proposed to include a definition of GNSS in S-32. It should also be added to INT1 as an INT abbreviation.

ACTION 22: Sec to amend S-4 as paper for GNSS in lieu of GPS, where appropriate, as a clarification.

ACTION 23: INT1 producers and Sec to add GNSS as INT abbreviation in INT1 and S-4 B-122.1.

9.2. Update on progress with revision of S-4 Section B-300 (**Secretary**)

Docs: CSPCWG8-09.2A Progress with revision of S-4 Section B-300

The Chairman updated the meeting on progress with the review of S-4 B-300. This had been divided into two parts (work items A5.1 & A5.2), the first of which had been circulated with feedback received. The second part was currently being progressed. The WG gave the following advice on a few points to help the drafting work:

Roads in port areas. There were mixed views on whether roads layouts should be charted. US and CA had received customer feedback that roads should be charted and they may be useful from a logistical point of view. However, on the other side of the argument: this does require resources; they are rarely subject to maintenance; today it is easy for the user to obtain a basic road map from the internet. CA pointed out that a road layout can help to distinguish whether lights are street lights or navigation lights. It was also agreed that the '1 mile' guidance is unnecessary and should be removed.

Cliffs, steep coast. See discussion at 8.16.

Slips and ramps. These should be distinguished by a legend, if required.

Form lines (with shading). No WG members still use form lines with shading, although some use un-numbered contours to give an indication of relief.

Trees. The Chairman and Sec were tasked to consider whether the number of specific tree symbols should be reduced, but not necessarily remove them all.

Canals. The wording of TR 4/1919 should be incorporated as a 'may', not a 'must'.

Helipads. There should be a symbol (H in circle) for a heliport (but not a helipad).

Buddhist temple. The alternative  symbol option for a Buddhist temple should be made obsolete. (Note, there is no ENC equivalent).

Panoramic views. There is no longer a requirement for a specification for panoramic views.

9.3. Paper chart sizes (**UK**)

Docs: CSPCWG8-09.3A Paper size for printing charts

It was decided that a CL should be issued inviting MS to update their entries in S-11 Part A Annex B.

ACTION 24: Sec to draft CL inviting MS to advise IHB of any changes to their printing capacities in S-11 Part A Annex B.

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9.4. Units in S-4 as specified in ISO 31 **(FR)**

Docs: CSPCWG8-09.4A Units and figures

The meeting decided that leaving a space between numerical values and the associated unit symbol (or abbreviation), in accordance with ISO 80 000, would not be appropriate on charts, because of space limitations and the possibility of breaking the link between the two parts. Also, it is preferable to keep S-4 in accordance with charting practice to avoid confusion. A statement should be added at S-4 B-120.2 (bullet 3) to explain the exception. However, as this ISO standard may affect other IHO publications, FR was invited to raise the matter at HSSC.

ACTION 25: Sec to add clarification to S-4 B-120.2 (3rd bullet) that this is an exception to ISO 80 000.

ACTION 26: FR to raise the issue of ISO 80 000 compliance with HSSC (for other IHO publications).

9.5. Printing of plans on the back of charts **(UK)**

Docs: CSPCWG8-09.5A Printing plans on the back of charts

In addition to the reasons stated in the paper, printing plans on both sides of a chart is close to impossible for Print on Demand. The two WG members who currently print plans on the reverse confirmed that they have decided to end the practice. It was agreed that S-4 should make this clear, in accordance with the suggestions in the paper.

ACTION 27: Sec to add explicit guidance in S-4 to not print plans on back of charts as proposed in paper as a clarification. There should be a new clause 'd' at A-202.1, rather than adding to clause 'c'.

9.6. Chart purpose/minimum content **(Chairman)**

Docs: CSPCWG8-09.6A Copy of HSSC3-05.5B: CSPCWG proposed addition to S-4

The statement on the primary purpose of nautical charts drafted by CSPCWG had been approved by HSSC3 (with a minor change) to be added to S-4 as a clarification.

ACTION 28: Sec to add new clause B-100.4 to S-4 as clarification, as approved by HSSC3

9.7. Berthing ENC: consequences for SNC/S-4? **(Chairman)**

Docs: CSPCWG8-09.7A Berthing (large-scale) ENCs: consequences for SNC / S-4?

The meeting decided this was out of scope for CSPCWG.

9.8. S-4 as a standard: how is its application to be monitored? **(Chairman)**

Docs: CSPCWG8-09.8A CSPCWG's technical 'standards': should their application be monitored?

This item prompted an interesting discussion, but no outcomes for CSPCWG to take forward at this time.

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10. Other CSPCWG publications

10.1. S-11 Part A

No review of S-11 Part A is currently required. However, see note about the opportunity to update Annex B at item 9.3.

M Huet (IHB) gave a presentation on the development of an Antarctic GIS being developed in IHB which will include the following layers: INT charts; ENC; Surveys; Geographic Names; Tidal records; Scientific stations and possibly others. It is expected to be operational in 2012. The PowerPoint is available under 'Presentations' in the meeting documents on the IHO website. Similar GIS could be developed for other regions and maintained by regional ICCWG (INT Chart) Coordinators, to replace the existing S-11 Part B; if this happens, Annex C of Part A may need updating. SE suggested it would be helpful to be able to select paper chart outputs by usage bands.

10.2. S-49

No review of S-49 is currently required, but it is possible that the planned preparation of Arctic MRG may result in a need to update S-49 (see INF4).

11. INT 1 / 2 / 3

11.1. Restructure of INT1 Section K (DE)

Docs: CSPCWG8-11.1A New structure for INT 1 sections K (and L)

The meeting recognized that this idea has merit, although some concern was expressed about the possibility of removing the symbols K28 and K29. J Wootton suggested that the description for the proposed new K4 and K5 symbols could be changed from 'Obstruction' to the more generic 'Danger' as used in K1.

ACTION 29: INT1 subWG to consider reorganizing INT1 Sections K & L (and subsequently other sections) to remove composite symbols, ready for next round of INT1 new editions

11.2. INT1 references register (Vice Chairman)

The concept of using the S-100 registry to register INT1 references was demonstrated by J Wootton. This would enable keeping track of used INT1 references to avoid inadvertent reuse. Typical registers can be seen on the IHO website in the 'Publications download' section, in the 'IHO Registry' link (below S-100). He considered at present it would be too difficult to include actual symbols (a portrayal register for INT1 symbols), but a 'feature type' list would additionally allow the including of some data about the symbols, such as 'disposal' dates.

ACTION 30: Chairman to take advice from UKHO colleagues on practicalities of populating an INT1 references register

11.3. ENC symbols: paper guides (US, UK)

Docs: CSPCWG8-11.3A The development of a United States Combined Paper Chart and ECDIS Chart No.1

R Heeley (US-NOAA) updated the meeting on progress with the 12th edition of US Chart 1, which will include ECDIS display symbols alongside INT1 symbols, in landscape format. This is expected to be published during 2012. It is intended that

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this publication will be made available to the IHO community and WG members were invited to comment on the completed draft, when available.

P Jones (UK) also advised the meeting that UKHO is working on a new publication, also planned for 2012, to show only ECDIS display symbols and their descriptions. This would be a companion publication to GB5011, rather than a combined publication.

S Spohn (DE) advised that they have a similar document for internal use.

ACTION 31: US to distribute draft 12th edition of US Chart 1 to WG members (via Sec) for comments.

12. Lessons learned from Marine Incidents

Although no examples were discussed, it was decided that it was useful to keep this as a standing agenda item.

13. Review of Actions and Work Plan

13.1. Actions

The Secretary summarised a draft list of agreed actions for information. [This is now refined and issued as part of this meeting report.]

13.2. Work plan

Completed items reported to HSSC3 will be removed from the work plan. Remaining items will have end dates adjusted as necessary. New items will be added, as appropriate, arising out of this meeting. The Chair and Secretary will update the plan for new items, priorities and timescales and circulate with the report of the meeting, for comment.

ACTION 32: Chair and Secretary to populate the work plan with new items and adjust priorities and dates as appropriate and circulate with the meeting report.

13.3. Items to bring to attention of HSSC

No items were identified for CSPCWG to bring to the attention of HSSC. However, note FR action at 9.4.

14. Any Other Business

14.1. SE update on outcomes from using ENC data from other nations to update charts (CSPCWG6 action 35 carried forward) **(SE)**
Docs: CSPCWG8-14.1A Update on outcomes from using ENC data from other nations to update paper charts

M Wallhagen (SE) updated the meeting on the implementation of the plan to use ENC to update paper charts of neighbouring HO's waters, within the Nordic region. In general, this is working well and possibilities exist for extending the practice into other areas. J Wootton commended this work and recommended a similar presentation should be made to TSMAD, as this work will be useful in developing a transfer standard. S Spohn requested that consideration should be given to a mechanism for extending the area as soon as possible.

ACTION 33: SE or FI to give a similar presentation on exchange of ENC data to TSMADWG

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14.2. Award winning Norwegian charts (**NO**)

Docs: CSPCWG8-14.2A Award winning Norwegian charts

I Tellefsen tabled two NO charts which had won prestigious International Cartographic Association (ICA) awards. FR also received a second prize from ICA at the last conference held in Paris.

14.3. Presentation by ESRI

C Greene presented information about the Ocean Base map project he has been working on. A PowerPoint is available under 'Presentations' in the meeting documents on the IHO website.

14.4. Presentation by Jeppesen

J Hornby presented information about Jeppesen's project to develop a print on demand system for the Norwegian Hydrographic Service. A PowerPoint is available under 'Presentations' in the meeting documents on the IHO website.

14.5. Reports from WG members (including non-attendees)

No reports had been received.

14.6. INF papers:

INF1: Annual report to the IHO for 2010 (Extracts)

The full reports are available from IHB.

INF2: Quality indicators: work of DQWG

The DQWG questionnaire had been developed by a Masters degree student (Sam Harper UKHO). Approximately 80 questions had been answered by more than 600 respondents creating a rich and representative dataset for analysis. S Harper had done some analysis of the data, which had been presented to DQWG5 (Nov 11); M Huet was able to present the same PowerPoint slides to the CSPCWG meeting, The PowerPoint is available under 'Presentations' in the meeting documents on the IHO website. Many of the questions were concerned with the user's understanding of data quality information on charts; initial analysis appears to show that some (such as upright soundings) are not well understood. DQWG had asked CSPCWG to further analyse the raw data and consider the impact on existing indicators. The Chairman suggested that WG members should consider whether their HO should involve themselves with the DQWG, which is currently rather small.

ACTION 34: Chairman and Secretary to consider DQWG questionnaire in more detail and advise WG members of the best way to take forward the requests from DQWG.

INF3: QR Code Enabled Nautical Charts

The paper was for information only and not discussed. [After meeting note: FR has included a QR code on the new edition of INT 1 which gives a link to find the digital file.]

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INF4: Notes from Arctic Regional Hydrographic Commission

In addition to the items covered in the paper, M Huet advised that the boundary between NSHC Region D and the new Arctic RHC Region N would be set at latitude 69°N.

J Wootton mentioned that TSMAD are considering the question of displaying charts of polar regions on ECDIS, because of the different projections which must be used.

INF5: New Presentation of Q130.1 & Q130.3 in the US Chart No. 1, Ed 12

Positive comments were made about the US proposed changes to Q130.

ACTION 35: All WG members to provide any comments on US proposals for improving Q130 to Colby Harmon (Chairman DIPWG) and INT1 subWG officers by end March 2012

INF6: Sound signals: aid to navigation or hazard warning?

O Parvillers (FR) commented that French authorities were also downgrading fog signals. However, J Barone (US-NGA) considered that they are still useful as an AtoN. R Ribeiro da Silva also commented that this is particularly the case if GPS is unavailable. J Wootton wondered how mariners could tell whether a fog horn was from another vessel if they are not charted.

INF7: Definition of Direction Lights

S Spohn and M Wallhagen confirmed that DE and SE considered 3° to be the maximum width of a Direction light leading sector. J Wootton commented that AU would like a clearer definition, as some local authorities were requesting AU to chart all sector lights as Dir. O Parvillers commented that the 'narrowness' of the sector varies with distance from the light.

ACTION 36: Sec to further research into defining Dir lights, in consultation with IALA and HDWG

INF8: Arc pointers

The Chairman read some advice and questions from H Milner, UK's lights expert, in response to paper INF8:

- This is not a navigation light and it is slightly offset from the actual AtoN. It does however "point" to the AtoN.
- In a LL this could be a column 8 remarks entry, eg: "Marked by a green Arc-Pointer".
- The proposed black arc around the light is not supported as it could be confused for an Obscured sector. Instead I would propose the symbol below (improved a bit). (The pointing arrow could also be of the appropriate colour and the thickness of the arrow tail could taper towards the light.)



- Is there a standard colour for all Arc-Pointers?
- Will the colour of the Arc-Pointer vary from place to place depending on the

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background lights?

- Does the Arc-Pointer take the colour of the AtoN it is pointing at?
- If the AtoN is multi-coloured, what colour will be used?

The meeting considered it would be useful for the mariner, on seeing the arc, to know which charted light was being highlighted. The preference was for a text legend (in parenthesis) next to the light description, rather than a new symbol. Also, at this time, it is still on trial and one example is known to the group.

ACTION 37: Sec to further research into Arc-pointer, and any other methods of making light positions more visible, and suggest options to CSPCWG.

15. Date, duration and venue of next meeting

The participants agreed that regular (approximately annual) meetings of CSPCWG are valuable for progressing business efficiently.

The duration of 3 full days for discussions was agreed.

The participants agreed that the next meeting should be in week commencing 12 November 2012.

Baeksoo Kim (KR) on behalf of KHOA offered to host the next meeting and the invitation was gladly accepted.

WG members are reminded to note items for the next meeting throughout the year (and advise the Secretary) – see Action 4.

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Annex A to CSPCWG8 Record

8th IHO-CSPCWG Meeting Turku, Finland, 29 November – 2 December 2011

AGENDA

1. **Welcome, Introductions and Administrative Arrangements**
Docs: CSPCWG8-01Arev3 List of documents
CSPCWG8-01B List of meeting participants and WG members
2. **Approval of Agenda**
Docs: CSPCWG8-02A rev10 Agenda
3. **Status of Actions from CSPCWG7**
Docs: CSPCWG8-03A rev3 Status of actions from CSPCWG7
4. **Relationship with HSSC**
 - 4.1. Notes from HSSC3 (**Chairman**)
 - 4.2. Report from DIPWG (**Vice Chairman**)
 - 4.3. Report from TSMAD (**Vice Chairman**)
 - 4.4. Report from HDWG (**Vice Chairman**)
Docs: CSPCWG8-04.1A CSPCWG report to HSSC3
CSPCWG8-04.1B Report from HSSC3 - Notes by CSPCWG Chairman
CSPCWG8-04.2A Report to CSPCWG8 on DIPWG activities
CSPCWG8-04.3A Report to CSPCWG8 on TSMADWG activities
CSPCWG8-04.4A Report to CSPCWG8 on HDWG activities
5. **Terms of Reference**
Docs: CSPCWG8-05A rev1 CSPCWG Terms of Reference
6. **CSPCWG procedures**
Docs: CSPCWG8-06A CSPCWG Procedures
7. **CSPCWG work plan**
 - 7.1. Summary of progress (**Sec**)
Docs: CSPCWG8-07A Work Plan updated for HSSC3
8. **Chart content:**
 - 8.1. Depiction of marine farm areas (**AU**)
Docs: CSPCWG8-08.1A Depiction of marine farm areas
 - 8.2. Power for Aids to Navigation (**AU**)
Docs: CSPCWG8-08.2A Power Source Indication for Aids to Navigation
 - 8.3. Safety zones (**BR**)
Docs: CSPCWG8-08.3A New symbol for FPSO/Tanker/Tug set
 - 8.4. Danish Navy trials on chart colours (**DK**)
 - 8.5. Coloured light flares (**Sec**)
Docs: CSPCWG8-08.5A Coloured Light Flares
 - 8.6. Major lights: any change required to definition/symbols (**UK**)
Docs: CSPCWG8-08.6A Major lights: any change required to definitions/symbols
CSPCWG8-08.6B Copy of TSMAD22/DIPWG3-08.3A rev1
 - 8.7. Generalization of depths on Norway charts (**NO**)

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- Docs: CSPCWG8-08.7A *Generalization of Depths on Norway Charts*
- 8.8. Submarine Cables issued by NM **(UK)**
Docs: CSPCWG8-08.8A *Submarine Cables issued by NM*
- 8.9. Maintained / Dredged areas **(AU)**
Docs: CSPCWG8-08.9A *Maintained dredged areas*
- 8.10. Submerged or floating tunnels **(NO)**
Docs: CSPCWG8-08.10A *Submerged or floating tunnels*
- 8.11. Safe clearance heights **(SE, US)**
Docs: CSPCWG8-08.11A *Using vertical clearance in black versus
magenta for overhead cables*
CSPCWG8-08.11B *Physical and Safe Clearance Heights of
Overhead Cables*
- 8.12. Zone of Confidence (ZOC) diagrams / new surveyed areas **(JP)**
Docs: CSPCWG8-08.12A *Depiction of Limits of Adequately Surveyed
Area*
- 8.13. Contouring by Automatic Generation tools **(CA)**
Docs: CSPCWG8-08.13A *Contouring by Automatic Generation tools*
- 8.14. Submerged posts and piles **(US)**
This item was withdrawn
- 8.15. River line symbol **(NZ)**
Docs: CSPCWG8-08.15A *River line symbol*
- 8.16. Cliff symbol **(NZ)**
Docs: CSPCWG8-08.16A *Cliff symbol*
- 8.17. Land tint behind title, etc **(NZ)**
Docs: CSPCWG8-08.17A *Land Tint behind Title, Tidal Tables and
Scales*
- 8.18. Maximum authorized draughts **(FI)**
Docs: CSPCWG8-08.18A *Maximum authorized draughts*
- 8.19. Recording stations **(DK)**
Docs: CSPCWG8-08.19A *Depiction of recording stations*
- 8.20. Danish national symbols **(DK)**
Docs: CSPCWG8-08.20A *Adopting Danish national symbols as
international symbols*
- 8.21. Upright soundings **(DK)**
Docs: CSPCWG8-08.21A *Enhancement of the distinction between
new and old soundings (sloped/upright)*
- 9. S-4**
- 9.1. Amend GPS to GNSS in S-4: proposal from Iceland **(Chairman)**
Docs: CSPCWG8-09.1A *Clarification of S-4: Use of abbreviations
'GNSS' and 'GPS'*
- 9.2. Update on progress with revision of S-4 Section B-300 **(Chairman)**
Docs: CSPCWG8-09.2A *Progress with revision of S-4 Section B-300*
- 9.3. Paper chart sizes **(UK)**
Docs: CSPCWG8-09.3A *Paper size for printing charts*
- 9.4. Units in S-4 as specified in ISO 31 **(FR)**
Docs: CSPCWG8-09.4A *Units and figures*
- 9.5. Printing of plans on the back of charts **(UK)**
Docs: CSPCWG8-09.5A *Printing plans on the back of charts*

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- 9.6. Chart purpose/minimum content **(Chairman)**
Docs: CSPCWG8-09.6A Copy of HSSC3-05.5B: CSPCWG proposed addition to S-4
- 9.7. Berthing ENC: consequences for SNC/S-4? **(Chairman)**
Docs: CSPCWG8-09.7A Berthing (large-scale) ENCs: consequences for SNC / S-4?
- 9.8. S-4 as a standard: how is its application to be monitored? **(Chairman)**
Docs: CSPCWG8-09.8A CSPCWG's technical 'standards': should their application be monitored?

10. Other CSPCWG publications

- 10.1. S-11 Part A
10.2. S-49

11. INT 1 / 2 / 3

- 11.1. Restructure of INT1 Section K **(DE)**
Docs: CSPCWG8-11.1A rev1 New structure for INT 1 sections K (and L)
- 11.2. INT1 references registry **(Vice Chairman)**
- 11.3. ENC symbols: paper guides **(US, UK)**
Docs: CSPCWG8-11.3A The development of a United States Combined Paper Chart and ECDIS Chart No.1

12. Lessons learned from Marine Incidents

13. Review of Actions and Work Plan

- 13.1. Actions
13.2. New items for Work Plan
13.3. Priorities
13.4. Timescales for tasks
13.5. Items to bring to attention of HSSC

14. Any Other Business

- 14.1. SE update on outcomes from using ENC data from other nations to update charts (CSPCWG6 action 35 carried forward) **(SE)**
Docs: CSPCWG8-14.1A Update on outcomes from using ENC data from other nations to update paper charts
- 14.2. Award winning Norwegian charts **(NO)**
Docs: CSPCWG8-14.2A Award winning Norwegian charts
- 14.3. Presentation by ESRI
PowerPoint presentation available
- 14.4. Presentation by Jeppesen
PowerPoint presentation available
- 14.5. Reports from WG members (including non-attendees)
- 14.6. INF papers:
INF1: Annual report to the IHO for 2010 (Extracts)
INF2: Summary of Results from the DQWG Questionnaire to Mariners
INF3: QR Code Enabled Nautical Charts
INF4: Notes from Arctic Regional Hydrographic Commission
INF5: New Presentation of Q130.1 & Q130.3 in the US Chart No. 1, Edition 12
INF6: Sound signals: aid to navigation or hazard warning?
INF7: Definition of Direction Lights
INF8: Arc-pointer

15. Date, duration and venue of next meeting

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Annex B to CSPCWG8 Record

8th IHO-CSPCWG Meeting Turku, Finland, 29 November – 2 December 2011

Documents list

CSPCWG8-01A rev3	List of documents
CSPCWG8-01B	List of meeting participants and WG members
CSPCWG8-02A rev11	Agenda
CSPCWG8-03A rev3	Status of actions from CSPCWG8
CSPCWG8-04.1A	CSPCWG report to HSSC3
CSPCWG8-04.1B	Report from HSSC3 - Notes by CSPCWG Chairman
CSPCWG8-04.2A	Report to CSPCWG8 on DIPWG activities
CSPCWG8-04.3A	Report to CSPCWG8 on TSMADWG activities
CSPCWG8-04.4A	Report to CSPCWG8 on HDWG activities
CSPCWG8-05A rev1	CSPCWG TOR
CSPCWG8-06A	CSPCWG Procedures
CSPCWG8-07A	Work Plan updated for HSSC3
CSPCWG8-08.1A	Depiction of marine farm areas
CSPCWG8-08.2A	Power Source Indication for Aids to Navigation
CSPCWG8-08.3A	New symbol for FPSO/Tanker/Tug set
CSPCWG8-08.5A	Coloured Light Flares
CSPCWG8-08.6A	Major lights: any change required to definitions/symbols
CSPCWG8-08.6B	Copy of TSMAD22/DIPWG3-08.3A rev1
CSPCWG8-08.7A	Generalization of Depths on Norway Charts
CSPCWG8-08.8A	Submarine Cables issued by NM
CSPCWG8-08.9A	Maintained dredged areas
CSPCWG8-08.10A	Submerged or floating tunnels
CSPCWG8-08.11A	Using vertical clearance in black versus magenta for overhead cables
CSPCWG8-08.11B	Physical and Safe Clearance Heights of Overhead Cables
CSPCWG8-08.12A	Depiction of Limits of Adequately Surveyed Area
CSPCWG8-08.13A	Contouring by Automatic Generation tools
CSPCWG8-08.15A	River line symbol
CSPCWG8-08.16A	Cliff symbol
CSPCWG8-08.17A	Land Tint behind Title, Tidal Tables and Scales
CSPCWG8-08.18A	Maximum authorized draughts
CSPCWG8-08.19A	Depiction of recording stations
CSPCWG8-08.20A	Adopting Danish national symbols as international symbols
CSPCWG8-08.21A	Enhancement of the distinction between new and old soundings (sloped/upright)
CSPCWG8-09.1A	Clarification of S-4: Use of abbreviations 'GNSS' and 'GPS'
CSPCWG8-09.2A	Progress with revision of S-4 Section B-300
CSPCWG8-09.3A	Paper size for printing charts
CSPCWG8-09.4A	Units and figures
CSPCWG8-09.5A	Printing plans on the back of charts

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CSPCWG8-09.6A Copy of HSSC3-05.5B: CSPCWG proposed addition to S-4
CSPCWG8-09.7A Berthing (large-scale) ENC's: consequences for SNC / S-4?
CSPCWG8-09.8A CSPCWG's technical 'standards': should their application
be monitored?

CSPCWG8-11.1A rev1 New structure for INT 1 sections K (and L)
CSPCWG8-11.3A The development of a United States Combined Paper
Chart and ECDIS Chart No.1

CSPCWG8-14.1A Update on outcomes from using ENC data from other
nations to update paper charts
CSPCWG8-14.2A Award winning Norwegian charts

INF1: Annual report to the IHO for 2010 (Extracts)

INF2: Summary of Results from the DQWG Questionnaire to Mariners

INF3: QR Code Enabled Nautical Charts

INF4: Notes from Arctic Regional Hydrographic Commission

INF5: New Presentation of Q130.1 & Q130.3 in the US Chart No. 1, Edition 12

INF6: Sound signals: aid to navigation or hazard warning?

INF7: Definition of Direction Lights

INF8: Arc-pointer

8th IHO-CSPCWG Meeting

Annex C to CSPCWG8 Record

8th IHO-CSPCWG MEETING Turku, Finland, 29 Nov – 02 Dec 2011

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17 IHO Member States + 2 industry observers. 27 individuals in total.

8th IHO-CSPCWG Meeting

Annex D to CSPCWG8 Record

8th IHO-CSPCWG Meeting Turku, Finland, 29 November – 2 December 2011

ACTIONS

No	Agenda ref	Action	Delegate	Status
1	2	Secretary to send late papers to IHB (M Huet) to add to CSPCWG8 documents on website: 08.3A; 08.7A; 08.10A; 08.18A; 14.2A; INF8.	Sec	Completed
2	3	Secretary to produce draft report of CSPCWG8 by end of December 2011, for participants to approve.	Sec	Completed
3	3	All WG members to make early bids for travel budget to CSPCWG9; advise Chairman if any difficulties.	All WG members	
4	3	All WG members to note agenda items for CSPCWG9 throughout the year (and forward to Secretary as they arise).	All WG members	
5	4.4	AU & UK to produce papers explaining the pros and cons of the definitions for Elevation, Height and Altitude proposed by HDWG (not more than one side A4 each, by end 2011). To include graphic derived from UOC. HDWG & TWLWG Chairs to be consulted. Ideally to be included as Annex to IHO CL (delayed if necessary)	AU, Sec, IHB	
6	4.4	WG members to advise their respective HOs on response to HDWG proposed definitions CL	All WG members	
7	4.4	WG to propose update to S-32 Nautical Chart definition 1: Sec to draft for circulation to WG Members	Sec	
8	6	Sec to add a requirement to copy any editorial and clarification changes to S-4 to FR and ES	Sec	
9	6	Sec to amend 4.10: amend 'banner' to 'IHO News' and relate to NE of INT1, rather than NMs	Sec	
10	8.1	Sec to draft amendment to S-4 for limit of marine farms (based on AU proposal), with additional sentence.	Sec	
11	8.3	Sec to draft amendment to S-4 B-445.5 for FPSO safety zones. FPSO, FSO and FSU to be added to list of INT abbreviations at B-122.1 and in INT1.	Sec, INT1 producers	

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No	Agenda ref	Action	Delegate	Status
12	8.5	Sec to amend S-4 guidance on lights on multicoloured charts: <ul style="list-style-type: none"> • two different lights charted in same position to have separate flares • if coloured sector arcs shown, there should be no flare 	Sec	
13	8.5	INT1 producers to add example of all-round light with circle to INT1 at next edition.	INT1 producers	
14	8.6	Sec to research further the issue of 'major' lights and, if required, propose any changes to S-4 and INT1 by correspondence.	Sec	
15	8.9	AU & UK to work up proposal to clarify terms of dredged/maintained area symbols in INT1 and, if required, S-4.	AU, UK	
16	8.11	Chairman and Sec to clarify guidance on safe clearances when revising B-380	Chair, Sec	
17	8.12	Draft a proposal for S-4 (but not INT1) for dotted magenta line for 'after disaster' use	Sec	
18	8.12	Record of discussion and all papers to be advised to DQWG, by Sec and all WG members with contacts in DQWG	Sec and all WG members with reps on DQWG	
19	8.12	JP to consider presenting the subject at TSMAD	JP	
20	8.18	INT1 producers to include additional example of fairway, with maximum authorized draught in INT1 M18 (similar to UK's depiction in 5011)	INT1 producers	
21	8.19	Sec to add advice about recording stations to S-4, as a clarification. AU to supply Sec with some draft words for clarifying the nature of obstructions at B-422.9	AU, Sec	
22	9.1	Sec to amend S-4 as paper for GNSS in lieu of GPS, where appropriate, as a clarification	Sec	
23	9.1	INT1 producers and Sec to add GNSS as INT abbreviation in INT1 and S-4 B-122.1	INT1 producers, Sec	
24	9.3	Sec to Draft CL inviting MS to advise IHB of any changes to their printing capacities in S-11 Part A Annex B	Sec	

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No	Agenda ref	Action	Delegate	Status
25	9.4	Sec to add clarification to S-4 B-120.2 (3 rd bullet) that this is an exception to ISO 80 000	Sec	
26	9.4	FR to raise the issue of ISO 80 000 compliance with HSSC (for other IHO publications)	FR	
27	9.5	Sec to add explicit guidance in S-4 to not print plans on back of charts as proposed in paper as a clarification. There should be a new clause 'd' at A-202.1, rather than adding to clause 'c'.	Sec	
28	9.6	Sec to add new clause B-100.4 to S-4 as clarification, as approved by HSSC3	Sec	
29	11.1	INT1 subWG to consider reorganizing INT1 Sections K & L (and subsequently other sections) to remove composite symbols, ready for next round of INT1 new editions	INT1 subWG	
30	11.2	Chair to take advice from UKHO colleagues on practicalities of populating an INT1 references register	Chair	
31	11.3	US to distribute draft 12 th edition of US Chart 1 to WG members (via Sec) for comments	US	
32	13	Chair and Secretary to populate the work plan with new items and adjust priorities and dates as appropriate and circulate with the meeting report	Chair/Sec	
33	14.1	SE or FI to give a similar presentation on exchange of ENC data to TSMAD	SE or FI	
34	INF2	Chairman and Secretary to consider DQWG questionnaire in more detail and advise WG members of the best way to take forward the requests from DQWG	Chair/Sec	
35	INF5	All WG members to provide any comments on US proposals for improving Q130 to Colby Harmon (Chairman DIPWG) and INT1 subWG officers by end March 2012	All WG members	
36	INF7	Sec to further research into defining Dir lights, in consultation with IALA and HDWG	Sec	
37	INF8	Sec to further research into Arc-pointer, and any other methods of making light positions more visible, and suggest options to CSPCWG.	Sec	

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Annex E to CSPCWG8 Record

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CSPCWG Work Plan (updated following CSPCWG8)

- *Objectives, Tasks and Work Items are pursued in accordance with IHO Work Programme 2008-2012, Programme 3 (Techniques and Standards Coordination and Support):*
 - *Element 3.1 Meetings of Working Groups:*
 - *Task 3.1.3 Chart Standardization and Paper Chart Working Group*
 - *Element 3.3 Nautical Cartography. In particular:*
 - *Task 3.3.1 Nautical publications*
 - *Task 3.3.5 INT Chart Series*
- *The focus is on maintaining and enhancing the cartographic standards in paper charts to suit the needs of the modern mariner in support of safe navigation and protection of the marine environment, whilst drawing together, wherever possible, common issues of paper/electronic charting.*
- *As a Plan it will and should evolve; accordingly, contributions from WG members and others are welcomed at any time.*

CSPCWG Tasks

- A Revise, develop and maintain Publication S-4 'Chart Specifications of the IHO & Regulations of the IHO for INT Charts' (IHO T3.3.1 refers)
- B Revise, develop and maintain Publication S-11 Part A 'Guidance for the Preparation and Maintenance of INT Chart schemes' (IHO T3.3.1 & T3.3.5 refer)
- D Development of new (and revised) symbology (IHO T3.3.1 refers)
- E Maintenance of S-4 supplementary publications INT 1, 2 & 3 (IHO T3.3.1 refers)
- F Revise, develop and maintain S-49 'Recommendations concerning Mariners' Routing Guides' (IHO T3.3.1 refers)

Some updating of IHO task numbers will be required, once approved at IHC.

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Task	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	H	Next iteration	2010	2012	O	Sec CSPCWG	S-4 / B-300	WG Ltr 3/11
A.5.2	Revise S-4 Part B Section 340-390	M	WG Letter	2011	2012	O	Sec CSPCWG	S-4 / B-300	Draft in prep
A.6	Revise S-4 Part B Section 500	L	Completion of A.5	2012	2013	P	Sec CSPCWG	S-4 / B-500	Start after A.5
A.10	Remote sensed shoal depth guidance	M	Implement WG responses to Ltr 7/11	2011	2012	O	Sec CSPCWG	S-4	WG7-08.11 & Action 18. WG Ltr 7/11
B.3	Develop guidelines for preparation & maintenance of small / medium scale ENC schemes.	H		2009	2012	O	Chair CSPCWG	S-11 / S-65 ?	CHRIS Action 20/24 and HSSC3
D.23	'Development' dredged depths	M	Implement WG responses to Ltr 7/11	2009	2012	O	Sec CSPCWG	S-4	WG7-INF3 & Action 19. WG Ltr 7/11
D.26	Diving prohibited	M	Implement WG responses to Ltr 7/11	2011	2012	O	Sec CSPCWG	S-4, INT 1	CSPCWG7-08.8 & Action 16. Based on SE national symbol
D 27	Revise guidance on Marine Farm limits	H		2011	2012		Sec CSPCWG		CSPCWG8-08.1A & Action 10
D 28	Revise guidance on FPSO safety zones	M		2011	2012		Sec CSPCWG		CSPCWG8-08.3A & Action 11
D 29	Clarify guidance on safe vertical clearances	M		2011	2012		Sec CSPCWG		CSPCWG8-08.11A & B and Action 16

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D 30	Guidance for post-disaster highlighting of new surveys	M		2011	2012		Sec CSPCWG		CSPCWG8-08.12A & Action 17
D 31	Analysis of DQWG user questionnaire on quality indicators & symbols	M		2012		P	Chair CSPCWG	S-4, INT 1	CSPCWG8 INF 2 & Action 34
E.1	Maintain official INT 1s		Next editions planned: ES 2011, FR 2012			O O	DE: S Spohn FR: O Parvillers ES: A Guitart	INT 1	English version 2011 (Ed 7) French version 2006 (Ed 4) Spanish version 2007 (Ed 3)
E.4	Symbols for vacant entries in INT 1	L	Review when revision of S-4 completed			P	Sec CSPCWG	INT 1, S-4 part B	
E.6	Maintain INT 3			2011	2011	C	Sec CSPCWG	INT 3	New edition 08/12/11
E7	Clarify guidance on dredged/maintained areas	M		2011	2012		Sec CSPCWG		CSPCWG8-08.9A & Action 15
E8	Reorganize INT1 to exclude composite symbols	L	Next round of NEs of INT1			P	INT1 subWG		CSPCWG8-11.1A & Action 29

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CSPCWG Meetings (IHO T3.1.3 refers)

Date	Location	Activity
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	?, Rep of Korea	CSPGWG 9

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Annex F to CSPCWG8 Record

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LIST OF ACRONYMS AND ABBREVIATIONS USED AT CSPCWG8

AtoN	Aid to navigation
AU	Australia
BR	Brazil
CA	Canada
CATZOC	Category of Zone of Confidence
CHRIS	Committee on Hydrographic Requirements for Information Systems
CL	Circular Letter (of IHO)
CSPCWG	Chart Standardization and Paper Chart WG (of HSSC)
DE	Germany
DIPWG	Digital Information Portrayal Working Group (of HSSC)
Dir	Direction (light)
DK	Denmark
doc	CSPCWG7 document or paper associated with the meeting
DQWG	Data Quality Working Group
ECDIS	Electronic Chart Display and Information System
ENC	Electronic Navigational Chart
ES	Spain
ESRI	Environmental Systems Research Institute
FI	Finland
FPSO	Floating Production, Storage and Offtake
FR	France
FSO	Floating Storage and Offtake
FSU	Floating Storage Unit
GB	United Kingdom of Great Britain and Northern Ireland
GIS	Geographic Information System
GNSS	Global Navigation Satellite System
GPS	Global Positioning System
HDWG	Hydrographic Dictionary Working Group (of HSSC)
HO	Hydrographic Office
HSSC	Hydrographic Standards and Services Committee (of IHO)
IALA	International Association of Marine Aids to Navigation and Lighthouse Authorities
ICA	International Cartographic Association
ICCWG	International Chart Coordination Working Group
IHB	International Hydrographic Bureau
IHC	International Hydrographic Conference
IHO	International Hydrographic Organization
IMO	International Maritime Organization
INF	Information paper
INT	International
INT1	Symbols, Abbreviations, Terms used on Charts

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INT2	Borders, Graduations, Grids and Linear Scales
INT3	Use of Symbols and Abbreviations - standard reference chart
ISO	International Organization for Standardization
JP	Japan
KMS	Kort & Matrikelstyrelsen (Danish Hydrographic Office)
KR	Republic of Korea
LL	Lists of Lights
Lndg	Landing place
MRG	Mariners' Routeing Guide
MS	Member State (of IHO)
NGA	National Geospatial-Intelligence Agency (USA)
NE	New edition
NL	Netherlands
NM	Notice to Mariners
NO	Norway
NOAA	National Oceanic and Atmospheric Administration (USA)
NZ	New Zealand
POD	Print on Demand
PPT	PowerPoint
QR	Quick Response (codes)
RCG	Regional Charting Group
Ref	Refuge
rev	Revision
RHC	Regional Hydrographic Commission
Ru, ru	Ruin, ruined
S-4	Chart Specifications of the IHO and Regulations for International (INT) Charts
S-32	Hydrographic Dictionary
S-49	Guidance for Mariners' Routeing Guides
S-57	IHO Transfer Standard for Digital Hydrographic Data
S-100	IHO Geospatial Standard for Hydrographic data
S-101	ENC Product Specification (currently draft)
S-102	Bathymetric Surface Product Specification
SANHO	South African Navy Hydrographic Office
SE	Sweden
Sec	Secretary (of CSPCWG)
SHOM	Service Hydrographique et Océanographique de la Marine (French Hydrographic Office)
SNC	Standard Nautical Chart
(T)NM	Temporary Notice to Mariners
TOR	Terms of reference
TR	Technical Resolution (of the IHO) – see M-3
TSMADWG	Transfer Standard Maintenance and Application Development Working Group (of HSSC)
TWLWG	Tidal and Water Level Working Group
UK	United Kingdom of Great Britain and Northern Ireland
UOC	Use of Object Catalogue

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US	United States of America
V-AIS	Virtual aid to navigation based on the Automatic Identification System
WG	Working Group (of IHO)
WIKI	A website that allows the easy creation and editing of any number of interlinked web pages via a web browser
ZOC	Zone of Confidence