

11th CSPCWG-1st NCWG MEETING
Rostock, Germany 27-30 April 2015

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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: CSPCWG11-01A rev2 List of documents
CSPCWG11-01B rev4 List of meeting participants and WG members

A list of meeting participants is at ANNEX C. This is one of the highest attended meetings of this group, demonstrating the value sending organizations place on it. Apologies had been received from the Hydrographic Office representatives of Greece, Italy, Japan, New Zealand, South Africa, Turkey and Ukraine. Rob Heeley of US (NOAA) also sent late apologies, being unable to attend due to ill health.

Dr Mathias Jonas (Vice President of the BSH and Chair HSSC) extended a warm welcome to the CSPCWG (now renamed NCWG) and wished us a successful meeting.

Jeff Wootton (AU – Chair) responded by thanking BSH for their hospitality, especially to Sylvia Spohn (DE and host) and BSH staff for all the logistical work in setting up the meeting.

Chair outlined his plans for the meeting. He commented that this particular meeting marked the beginning of an expansion of focus for the Working Group. This is reflected in the change of name approved by HSSC, as proposed by the group, in recognition of a need to widen our perspective and as demonstrated in some of the submitted papers.

He also thanked members for attending, 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.

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.

The participants introduced themselves, some of whom were attending their first WG meeting (refer Annex C).

2. Approval of Agenda

Docs: CSPCWG11-02A rev2 Agenda

The WG approved the agenda (refer Annex A). The Chair reserved the right to postpone discussion on

some lower priority items if necessary to ensure more important items were sufficiently discussed and would take some papers with common subjects together. He explained that the agenda order did not reflect any priority. He also advised that the record of last year's meeting had been subjected to comment at the time it was produced and could therefore be taken as read. The meeting accepted this. Yves Guillam (IHB) suggested that items 9.6 and 13.1 should be addressed together, which was noted.

3. Status of Actions from CSPCWG10

Docs: CSPCWG11-03A Status of actions from CSPCWG10

Jeff Wootton (AU - Chair) updated the meeting on the two actions which had been carried forward from CSPCWG9:

CSPCWG9 Action 22. This is now with the S-100WG. Guidance specific to AU ENC's has been developed and will be used to form the basis for an IHO paper regarding the dividing of regulatory and navigational restrictions. AU expects to be able to present a paper to NCWG2 on this subject. **ONGOING.**

CSPCWG9 Action 58. This action is on hold, at present. Discussions with IHO Geospatial Registry Manager required to scope requirement. **ONGOING.**

CSPCWG10 Actions. Good initial progress had been made with most of the actions from CSPCWG10 (January-February 2014), as detailed by the paper. However, many of the actions were not able to progress further, because of IHB's interpretation of IHO Resolution 2/2007, which meant that the WG decisions had not been forwarded by CL to MS for final endorsement, so that they could be included in a revision of S-4 (and where appropriate, INT1).

A Heath-Coleman (UK - Secretary) added the following:

CSPCWG10 Actions 1-3: These three actions will be replaced by equivalent actions for NCWG1. **CLOSED.**

CSPCWG10 Actions 6, 8, 16, 21, 29, 35, 36: For these, although the immediate actions may have been completed, it was necessary to have further discussion and agenda items had been allocated accordingly. New actions will be assigned as required. **COMPLETE.**

CSPCWG10 Action 12: The WG had determined (by Letters 09/2014 and 13/2014) that a new symbol for 'maximum authorized draught' is not required. **COMPLETE.**

CSPCWG10 Action 23: This amendment will be included in New Editions of INT1 in preparation. However, the two light descriptions will be retained, but marked as obsolescent. In hand with the INT1 Sub-WG. **COMPLETE.**

CSPCWG10 Action 25: Jeff Wootton requested that this action should be carried forward. See also 4.4. **CLOSED** (new action NCWG1-06).

CSPCWG10 Action 30: Jackie Barone (US-NGA) advised the meeting that this was on hold in NGA, but should not remain as an action on NCWG. **CLOSED.**

CSPCWG10 Action 32: Jeff Wootton requested that this action should be carried forward. See also 4.4. **CLOSED** (new action NCWG1-07).

CSPCWG10 Action 40: Chair advised the meeting that with the abolition of DIPWG, this item may return to NCWG. **ONGOING.**

[All other actions had been completed, although it was noted that several new or amended specifications were still waiting review by Member States.]

4. Relationship with HSSC

4.1. Notes from HSSC6 (IHB presentation/Chair)

Docs: CSPCWG11-04.1A CSPCWG Report to HSSC6 (copy of HSSC6-05.5A)

CSPCWG11-04.1B Matters from HSSC6 of interest to CSPCWG/NCWG

Chair briefed the meeting on the CSPCWG report to HSSC6 (as paper 04.1A) and then mentioned the main items from HSSC6 affecting CSPCWG (as paper 04.1B). He recommended that WG members should read the full report of HSSC6. Under 'IMO', the Secretary reminded the meeting that the discussion about AIS AtoN had been about how chart authorities should manage updating of charts where AIS transmitters were being added to AtoN on a massive scale.

Chair raised the matter of HSSC6 Action 25, which required the NIPWG to stand up a project team to develop the portrayal of data quality categories in collaboration with S-100WG and NCWG. He questioned why the lead on this had been allocated to NIPWG; apparently it was mainly due to Jens Schröder-Fürstenberg (Chair NIPWG) being present at the HSSC meeting. DE has already done some preliminary work on a decision-tree relating to data quality. Mathias Jonas (Chair HSSC) suggested that the issue had two main components: categorize and display of data quality.

ACTION NCWG1-04: Chair to discuss with Chairs NIPWG and S-100WG how HSSC6 Action 25 should be progressed. (NIPWG to stand up project team to develop the portrayal of Data Quality categories in collaboration with S-100WG and NCWG).

ACTION NCWG1-05: Chair to discuss with HSSC Chair possible confusion during discussions held at HSSC6 over the intent of NCWG Work Item A19.

4.2. Report from DIPWG (**Chair**)

Docs: CSPCWG11-04.2A Report to CSPCWG11 on DIPWG activities

Chair briefed the meeting on the activities of DIPWG (as paper). Under S-52, the meeting agreed that international abbreviations for seabed types should be used on ECDIS, rather than full text.

ACTION NCWG1-06: Chair to advise ENCWG that international abbreviations (as listed in INT1) for seabed types should be used on ECDIS, rather than full text.

4.3. Report from TSMAD (**Chair**)

Docs: CSPCWG11-04.3A Report to CSPCWG11 on TSMADWG activities

Chair briefed the meeting on the activities of TSMADWG (as summarized in the paper). He confirmed the intention to publish the revisions to S-52, S-58 and S-64 in time for alignment to enter into force concurrent with the new edition of IEC61174.

There followed a short discussion about how HSSC WGs could improve the liaison necessary in order to address emerging navigational requirements in a multi-product environment. Some suggestions included: the use of Project Teams drawn from more than one WG; back-to back meetings; formally assigning actions to other WGs; designating liaison members (who preferably serve on both WGs).

4.4. Verbal report from HDWG (**Chair**)

Chair briefed the meeting on the activities (or more accurately, inactivity) of the HDWG. He commented that its existence in current form is untenable; consequently, the HSSC has recommended that the HDWG conduct a face to face meeting during 2015 in order to develop and transition to a new set of Business Rules for the WG, and report on the progress on this transition to HSSC7.

Yves Guillam (IHB) suggested that every HSSC WG should designate a focal point for the HDWG (for NCWG, we already have Jeff Wootton (AU) in this capacity). He noted that a new secondment staff (from Peru) had been assigned at the IHB for taking forward some HDWG work. Mathias Jonas (Chair HSSC) appealed for any retired cartographers with the necessary talent to be asked to make themselves available.

Colby Harmon (US-NOAA) commented that any attempt at this stage to merge the Hydrographic Dictionary with the IHO Geospatial Information Registry would be likely to complicate and delay the on-going work on the Registry.

The Secretary advised the meeting that the retired Chair CSPCWG had written to Chair HDWG in October 2013, requesting consideration of a revised definition of 'ED', to clearly distinguish it from 'Reported'. He also informed the meeting that the Chairs of HDWG, CSPCWG and TSMADWG met in Taunton on 4 March 2014 and agreed revised definitions of Elevation and Height. He expressed surprise that no further progress seems to have been made on these actions. Chair commented that the latter had been briefly discussed at TSMAD29/DIPWG6, but it raised little interest as the recently revised definitions are consistent with ENC usage. The Secretary observed that it was lack of liaison between the TSMAD/DIPWG and CSPCWG on changing these definitions that had resulted in the need for further changes. Consequently, two new actions were agreed to take forward WG10 Actions 25 and 32:

ACTION NCWG1-07: Chair to progress the action about a revised definition for ED.

ACTION NCWG1-08: Yves Guillam to progress the action about definitions of Height and Elevation.

Note: Secretary to provide background information on these actions to Jeff and Yves.

5. Terms of Reference (Chair)

5.1. Change of name

The change of name to Nautical Charting Working Group (NCWG) had been approved by HSSC6. Consequently, the TOR are to be updated. Also, it was agreed that the meeting should now become NCWG1, from this point forward (although the meeting papers retain their CSPCWG prefix).

On a general point about the restructuring of the HSSC WGs, Mathias Jonas (Chair – HSSC) commented that part of the aim of the original suggestion to merge CSPCWG with SNPWG had been to make best use of limited resources, not because the importance of the work of CSPWG was not recognized. He acknowledged that the 27 persons present [at that time] clearly demonstrated the importance that MS attach to NCWG work and that adding the expected 15 for the first NIPWG meeting would have made the meeting unwieldy.

5.2. Proposed changes to TOR (including application of IHO Resolution 2/2007)

<i>Docs: CSPCWG11-05A</i>	<i>Existing CSPCWG TOR (from IHO website)</i>
<i>CSPCWG11-05B</i>	<i>US/UK/AU Proposal to Modify CSPCWG Terms of Reference for NCWG</i>
<i>CSPCWG11-05C</i>	<i>Annex to CSPCWG11-05B</i>

Colby Harmon (US-NOAA) presented the paper that had been jointly prepared by US, UK and AU on a draft revised TOR for NCWG. Ben Timmerman (NL) queried whether the need to standardize cartographic rules had been clearly included. Some examples of differing rules were mentioned, e.g. different rounding rules for paper charts and ENC mentioned by Trish Sheatsley (ESRI), but the meeting felt this aspect is adequately covered in the draft. Mathias Jonas (Chair – HSSC) and Yves Guillam (IHB) suggested that section 1 should be rearranged so the (c) becomes (a) as the most important and generic objective (although it was also pointed out that this would differ from the arrangements used by other WGs). The meeting accepted the draft as generally appropriate, with some minor 'tweaks' required, which Colby Harmon was invited to include and produce a revised version to be examined later in the meeting. The latest draft as finalised at the meeting is at Annex F for NCWG comment.

ACTION NCWG1-09: Colby Harmon to forward draft of TOR to NCWG Secretary to circulate to WG members for comment.

ACTION NCWG1-10: Chair to submit the revised version of NCWG TOR to HSSC7 for approval.

6. CSPCWG procedures

6.1. Changes consequent on application of IHO Resolution 2/2007 (**Chair/IHB**)

<i>Docs: CSPCWG11-06A</i>	<i>Amendments to Procedures</i>
<i>CSPCWG11-06B</i>	<i>Draft revised procedures</i>
<i>CSPCWG11-06C</i>	<i>The New S-4 Maintenance Regime and its Consequences on the Activities of the Nautical Cartography Working Group (NCWG)</i>

Chair summarised papers 06A and 06B. He stated that Res. 2/2007 had also caused problems for other HSSC WGs. Sylvia Spohn (DE) also pointed out that the delay meant that important changes already agreed by CSPCWG cannot now be included in the new editions of INT1 which are being prepared for publication later this year. Yves Guillam (IHB) explained that the IHB applied the 'rules' according to the Resolution which had the authority of MS and also advised that the 'green arrow' on the life cycle diagram had to include stakeholders other than MS for NCWG going forward to embrace not only paper charting but also electronic charting. He also advised the WG to consider the use of the "clarification" procedure offered by Res. 2/2007 as often as possible and if appropriate. There was considerable discussion and it was agreed that the present situation needs to be improved, as it causes too much delay and bureaucracy, but that returning to the 'exemption' for S-4 was also not a correct outcome. Rather, there is a wider need to address the delays caused by Res.2/2007, which also affect other WGs.

The draft Procedures (Paper 06B) were not discussed in detail but there were no suggestions to change the draft. Chair will include these draft Procedures as an Annex to the paper for HSSC7, highlighting those clauses most affected by Res.2/2007, and the implications on associated standards such as INT1. Depending on the results of discussion at HSSC7, a new draft of the NCWG detailed procedures will need to be prepared for NCWG2.

The following actions were agreed:

ACTION NCWG1-11: Secretary to prepare a revised edition of S-4 to include all changes (revisions and clarifications) already agreed by CSPCWG, ready for approval to publish at HSSC7.

ACTION NCWG1-12: Secretary to draft CL for publishing S-4 v4.6.0 for approval by HSSC7.

ACTION NCWG1-13: Chair to discuss with Chairs of other HSSC WGs the possibility of a joint submission to HSSC7 that there should be a full revision of Res. 2/2007 to the advantage of all WGs, IHB, MS and all stakeholders.

7. CSPCWG (now NCWG) work plan

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

Docs: Refer to CSPCWG11-04.1A Annex B Work Plan updated for HSSC6

The Secretary reported on updates to the Work Plan since its submission to HSSC6. The updated NCWG Work Plan is at Annex E. On Work item E4, the meeting agreed the following action:

ACTION NCWG1-14: INT1 subWG to prepare a list of vacant entries in INT1 and Chair to check whether removing them from INT1 (and retiring the number) would have any impact on other standards.

8. Chart content:

8.1. Covered berths – further considerations (**AU**)

Docs: CSPCWG11-08.1A Covered berths – further considerations

Chair presented his paper on covered berths. It was agreed that:

- covered berths utilising urban tint (grey infill) would have a black line (thinner than coastline) surrounding the building and a black line (thicker than coastline, as INT1 F13 second example) to show a detached wharf under the canopy.

- An additional paragraph is required to explain how covered berths should be charted for charts using shadow line without infill for buildings, in accordance with recommendation 1 of the paper and sketches made during discussions. An example should be shown in S-4.
- No requirement to include new entries in INT1.

ACTION NCWG1-15: Secretary to extend draft for covered berths as agreed and circulate to WG members.

8.2. Update on Radio-activated lights and fog signals **(US, CA)**

CA and US presented their differing practices for charting radio-activated aids to navigation (AtoN). The meeting considered that such systems are likely to proliferate and it would be advantageous to have a common method of charting them, including an agreed international abbreviation, which would be suitable for data-modelling and for use in digital publications.

ACTION NCWG1-16: CA/US to prepare joint proposal for specification and abbreviation for radio activated AtoN. To be circulated and forwarded to Chair NIPWG **by end June 2015.**

8.3. Bathymetry in maximum draught areas **(Chairman on behalf of IT)**

*Docs: CSPCWG11-08.3Arev1 Charting Maximum Authorized Draught in Lieu of
Bathymetry
CSPCWG11-08.3B Bathymetry in maximum draught areas*

Chair presented the papers relating to Italy's submission that it should be acceptable to show maximum draught areas without bathymetry. Although accepting that some local authorities may make it difficult for HOs by not forwarding latest survey details, the meeting concluded that maximum authorized draught must only be shown in addition to latest known bathymetry, which may be in the form of maintained dredged depths (INT1 I21) for such areas. Local authorities which do not provide actual surveys should therefore be requested to provide statements of maintained depths.

ACTION NCWG1-17: Secretary to draft clarification to specification on Maximum Authorized Draught and circulate to WG.

ACTION NCWG1-18: Chair to provide IT with a summary of the discussions, explaining why the WG consider it necessary to include latest know physical depths in maximum authorized draught areas.

8.4. Offshore accommodation vessels **(UK)**

Docs: CSPCWG11-08.4A Offshore support/accommodation vessels

Nick Webb (UK) presented the paper on offshore accommodation vessels. Andreas Andersson (SE) queried whether it is necessary or advisable to chart such vessels; these are ordinary vessels 'at anchor' and do not need to be charted (as they would be marked by navigation lights as any other vessel). In a later discussion, there was uncertainty about whether they would be: 'at anchor' (displaying navigation lights, bridge manned and with engines on stand-by); 'not under command' (different navigation lights, bridge not manned); 'moored' (no navigation lights, although presumably lit in other ways). Whichever of these may be the case, the Chair felt that we should advise how they should be charted, if it is required to chart them. The WG agreed that B-445.5 title should be amended to be more generic and a new subparagraph 'd' added to provide guidance on charting off-shore accommodation vessels using INT1 symbol L17 (moored storage tanker). It was considered that as this is only a slight widening of the use of this symbol ('for storage of people!') that this is a clarification; additionally, the INT1 term would require amendment. There may also be a need to amend the S-52 Look-up tables to display a more appropriate symbol in ECDIS. The following actions were agreed:

ACTION NCWG1-19: Secretary to draft changes to B-445.5 to provide guidance for charting offshore accommodation vessels and circulate to WG.

ACTION NCWG1-20: INT1 producers to amend term at L17 to allow for usage for offshore

accommodation vessels.

ACTION NCWG1-21: Chair to consider whether any change is required to S-52 Look-up tables for offshore accommodation vessels and investigate any necessary changes to S-57 and S-101 and advise appropriate WGs accordingly.

8.5. WW1 wrecks: UNESCO convention (UK)

Docs: CSPCWG11-08.5A 2001 UNESCO Convention – Protection of wrecks

Nick Webb (UK) presented the paper on charting WW1 wrecks. It was agreed that the UNESCO convention's protection for wrecks should not normally be included on nautical charts; it would over clutter the charts and may have the adverse effect of showing where such wrecks are to would-be exploiters. This is an issue that should be passed to the MSDIWG for consideration.

ACTION NCWG1-22: Yves Guillam to invite MSDIWG to consider the question about UNESCO convention on the protection of Underwater Cultural Heritage, especially in regard to WW1 wrecks.

8.6. Refuge area/anchorage (UK)

Docs: CSPCWG11-08.6A Refuge areas

Nick Webb (UK) presented the paper on refuge areas. The proposal was generally agreed with some minor changes to the wording proposed by Chair: '...These symbols may be adapted for other purposes or types of vessels, for example small craft, refuge area (Ref)'. The following actions were agreed:

ACTION NCWG1-23: Secretary to redraft proposal for using 'Ref' for refuge anchorage/areas, using wording suggested by Chair and circulate to WG members.

ACTION NCWG1-24: INT producers to remove 'shipwrecked' from T14. (No other changes required to INT1).

8.7. Satellite derived bathymetry (UK)

Docs: CSPCWG11-08.7A Satellite Derived Bathymetry

Nick Webb (UK) presented the paper on satellite derived bathymetry (SDB), focussing particularly on the charting aspects. Chair commented that AU had carried out a similar trial in Papua New Guinea and arrived at similar conclusions related to quality (maximum CATZOC C) and charting (no special differentiation from other bathymetry). CA is also conducting trials. Dyan Primana Sobaruddin (ID) suggested areas charted from SDB should be followed by a full survey within two years; however, the meeting recognized that, especially in remote areas, this is unlikely to happen.

The meeting agreed that no differentiation should be made between sounding symbols used for SDB and other charted bathymetry. The meeting also agreed with the analysis in the paper that SDB must not be used to disprove charted shoals, and at best should be classified as ZOC C. Yves Guillam (IHB) suggested that any guidance on portrayal aspects should be put on hold, pending outcome of DQWG considerations.

UK advised the meeting that anyone wishing to have more detail about the technical aspects of UK's trial should contact Andrew Talbot (Andrew.talbot@ukho.gov.uk).

ACTION NCWG-25: UK to provide paper on SDB to DQWG and S-44 WG (if stood up).

8.8. Moiré lights (NL)

Docs: CSPCWG11-08.8A Moiré (light) symbols

Ben Timmerman (NL) presented the paper on Moiré lights. It was agreed that Moiré lights should always be charted as a magenta triangle, in accordance with B-470.4 viii. B-475.8 is inconsistent with this and should be amended.

ACTION NCWG1-26: Secretary to remove the last sentence B-475.8 (as a clarification).

8.9. Secondary Fairways **(NL)**

Docs: CSPCWG11-08.9A Secondary Fairways

Ben Timmerman (NL) presented the paper on secondary fairways. Various other examples were viewed. UK suggested a small clarification to B-434.5, which, with minor changes, was agreed suitable for circulation.

ACTION NCWG1-27: Secretary to circulate draft clarification to B-434.5 on secondary fairways.

8.10. ATBA within TSS **(NL)**

Docs: CSPCWG11-08.10A Areas to be Avoided (ATBA) within TSS

Ben Timmerman (NL) presented the paper on ATBA within Traffic Separation Zones. The meeting viewed some examples and agreed that it is appropriate to retain tint over ATBA (where vessels should not go) but window-out tint for areas within Traffic Separation Zones where vessels may go, such as anchorage areas.

ACTION NCWG1-28: Secretary to circulate draft clarification to B-435.1c on charting ATBA and anchorages within Separation Zones.

8.11. Houses above the water **(ID)**

Docs: CSPCWG11-08.11A Symbolisation of Houses above the water

Dyan Primana Sobaruddin (ID) presented the paper on houses (generically 'Buildings') above water, likening the situation from a navigational perspective to mangrove areas (real-world intertidal area, but may show as 'solid' on radar returns). He showed some examples of different methods of depicting such areas on paper charts. He also pointed out that S-58 produces a 'logical consistency error' for showing built up areas in the water, despite it being the case that such areas exist. Chair agreed that this is an inaccurate assumption in S-58 and needs to be corrected. The meeting agreed that such areas should be charted as built up areas (by urban tint or 'shadow-line' building blocks, depending on national practice) or individual building blocks if more appropriate, in the same way as other built-up areas. In the case of using urban stipple, this should be over intertidal tint if transparency is possible. If using shadow line, then land tint would be used. The real coastline should be shown as normal in both cases and the outer limit of the built-up area delimited with a dashed line.

ACTION NCWG1-29: Secretary to draft new paragraph on 'Buildings above water' at B-370 and circulate to WG.

ACTION NCWG1-30: Chair (in consultation with ID) to prepare paper to ENCWG and S-100WG (S-101PT) to review encoding in ENC, ECDIS portrayal and logical consistency error in S-58.

8.12. Marine Protected Areas **(SNPWG)**

Docs: CSPCWG11-08.12A Portrayal of MPA features

CSPCWG11-08.12B Study of possible green colours available for MPA purposes

Jens Schröder-Fürstenberg (Chair NIPWG) presented the papers on colour for MPAs. The meeting recognized that at present, as there are not yet any test beds available for S10x data, the situation is somewhat theoretical. However, it provided an opportunity to consider how NCWG might adapt to its changing role within the revised HSSC WG structure. While it was clear that no choice of colour could be made without test beds, there would always be a need to involve the S-100WG. It was therefore decided that some members of each WG should consult to decide the best way forward. It was not clear whether this should be a 'Project Team' (PT) or just a 'Correspondence Group' (CG).

ACTION NCWG1-31: Chair NIPWG to request HSSC to set up PT/CG on MPA colours, including NIPWG, NCWG and S-100WG representatives.

ACTION NCWG1-32: Chairs NIPWG, NCWG, S-100WG to draft brief TOR for MPA colour PT/CG.

ACTION NCWG1-33: Chair NIPWG to invite Hannu Peiponen to join MPA colour PT/CG.

8.13. Light vessels – further considerations **(Chair)**

Docs: CSPCWG11-08.13A Light vessels – further considerations

CSPCWG11-08.13B Copy of IHO CL 44/1993 (PDF scan)

Chair presented the paper on further considerations for the depiction of light vessels on paper charts. Although the WG had previously agreed to restore a modified Light Vessel (LTV) symbol for paper charts, IHB Director Gilles Bessero had requested CSPCWG to consider the original reason IALA had requested using a single symbol for LtVs, LANBYs and other major floating lights. The meeting considered the details in IHO CL 44/1993 and concluded that the arguments therein are:

(a) time expired;

(b) certainly not as important as the need to use an intuitive symbol suitable for showing the LtV structure, to assist daylight navigation.

Also, in addition to the reasons previously considered, the meeting noted that LtVs are distinctive features in S-57, S-52 (ECDIS portrayal) and S-101, so it is a matter of product consistency to restore the LtV symbol for use on paper charts. Noting that the S-52 symbol still includes a star on the mast, the meeting recalled that this could be misinterpreted as an IALA special topmark and recommended that it should be removed. (It originally represented the light, to which flares were formerly attached on paper charts). The meeting concluded that the LtV symbol and associated revised specifications should be included in the next revision of S-4, without need to consult IALA.

ACTION NCWG1-34: Secretary to include revised specification and symbol for LtV in draft S-4 v4.6.0 for submission to HSSC7.

ACTION NCWG1-35: Chair to raise removal of star on LtV mast from S-52 symbol with ENCWG & S-100WG.

8.14. ENC Symbology for Virtual AIS Aids to Navigation (V-AIS AtoN) **(US)**

Docs: CSPCWG11-08.14A Proposal to Define ENC Symbology for Virtual AIS Aids to Navigation (V-AIS AtoN)

Colby Harmon (US – NOAA) presented the paper on symbology for virtual AIS aids to navigation. The meeting decided that, to be consistent with normal (S-4) convention; and to retain consistency between the ECDIS symbols and the corresponding paper chart symbols, the entire symbol should be magenta (despite the conclusions of the former DIPWG). Therefore, symbols for V-AIS in ENC should not include colour (and consequently there is no need for two versions of port and starboard lateral marks).

ACTION NCWG1-36: Colby Harmon (US – NOAA) to revise submission on ENC V-AIS symbols to ‘all magenta’ and forward to ENCWG and S100WG.

8.15. RNC and ENC Symbology for Virtual AIS Pilot Boarding and Call-in Points **(US)**

Docs: CSPCWG11-08.15A Proposal to Consider Establishing Standard RNC and ENC Symbology for Virtual AIS Pilot Boarding and Call-in Points

Colby Harmon (US-NOAA) presented the paper on symbology for Virtual AIS Pilot Boarding and Call-in (Radio-reporting) Points. The meeting was puzzled as to why any kind of AIS marking is necessary for such positions, as a vessel track should automatically show when it has arrived at the charted position. Also, there is no need for an alarm to avoid collision with a virtual object; pilot boarding points, radio reporting points (and perhaps anchor berths) are virtual by nature. Chair commented that there is a danger of introducing too much AIS clutter on charts which is of no benefit to the user. Colby was asked to research further the need for any symbol.

ACTION NCWG1-37: Colby Harmon (US – NOAA) to investigate further the concept of attaching AIS messages to pilot stations and radio-reporting points and prepare further submission to NCWG2 (if necessary).

9. S-4

9.1. Superseded NMs (NZ)

Docs: CSPCWG11-09.1A Notices to Mariners (NMs) - superseding notices

Chair presented the paper on guidance for the retention of ‘superseded’ NM numbers on behalf of NZ. The meeting confirmed that ‘superseded NMs’ should be retained in any list of NMs in the margin of the chart.

ACTION NCWG1-38: Secretary to draft clarification of S-4 text on superseded NMs for approval.

9.2. Grouping of symbols in area limits (UK)

Docs: CSPCWG11-09.2A Grouping of Symbols in Area Limits

Nick Webb (UK) presented the paper on grouping of symbols in area limits on paper charts where the limit serves multiple purposes. The meeting agreed to add a clarification about grouping symbols together in area limits, noting that guidance in S-4 should cater for the requirements of the inexperienced nautical cartographer. It was suggested to add the word ‘different’ in the suggested text (‘Where two or three **different** point symbols are embedded’) and to include a graphic example – this was approved by the meeting.

ACTION NCWG1-39: Secretary to draft clarification of S-4 text on grouping of symbols for approval.

9.3. Update on Spanish version of S-4 (ES)

Federico Yanguas Guerrero (ES) explained that ES are currently working on translating S-4 version 4.4.0 to Spanish. After this, they will translate the additional changes for version 4.5.0 and send to IHB for posting on the IHO website. They will not send version 4.4.0, as it would be made redundant too quickly to justify posting.

ACTION NCWG1-40: ES to complete translation of S-4 v4.5.0 and forward to IHB by end July 2015 (omitting v4.4.0).

ACTION NCWG1-41: Secretary to send future changes to S-4 to Yves (IHB), Stephane (FR), Federico (ES), Sylvia (DE) and Yong Baek (KR).

9.4. HSSC6 Task A22 Information overlay services (IHB/UK)

Docs: HSSC6-05.5Drev1 Relevance of information overlay services with respect to IHO standards (IHB paper)

CSPCWG11-09.4A Relevance of information overlay services with respect to IHO standards (UKHO Paper)

CSPCWG11-09.4B Consistency of information on paper charts and ENC’s (Chair paper)

CSPCWG11-09.4C U.S. Comments on Papers Submitted by the IHB, UK and the CSPCWG Chair Regarding Information Overlay Services and the Consistency of Information on Paper Charts and ENCs

WENDWG5-04B Relevance of information overlay services and their status in the global IHO ENC programme (See also draft list of actions from WENDWG5 on IHO website)

Mathias Jonas (Chair HSSC) rejoined the meeting for this item. Yves Guillam (IHB) explained the background to the IHB paper to HSSC6, drawing particular attention to the three recommendations that NCWG were tasked to consider. Mathias Jonas (Chair – HSSC) stated that it was intended that NCWG should only consider the first and second recommendations; the third was a subject for WENDWG. However, he invited the Chair to provide a paper to HSSC summarizing the general discussions about AIO mentioned below. The meeting briefly considered the French paper submitted to WENDWG5 and also the list of WEND actions related to this subject. The Chair agreed that NCWG should only consider recommendations 1-2, which relate to consistency issues (as stated in NCWG Task A22), although a minority of participants did not agree with this decision.

Nick Webb (UK) was invited to give a presentation on UK's 'Admiralty Information Overlay' (AIO), explaining its purpose, including the requirement for a world charting authority to provide a commercial service to its customers to highlight any difference between paper and digital products (which in many cases are used together). He explained the concept of Electronic Preliminary NMs (EPNM), which serve the same function as many paper (P)NMs but for the digital environment. He also explained why it is necessary to show paper (P) and (T) NMs, especially where these may not have been included on the ENC. There followed a wide ranging and robust discussion about AIO.

Chair then presented his paper 09.4B, with its recommendations for a new clause in S-4 on consistency between products and some clarifications related to (P) and (T) NMs. The meeting in general agreed with the Chair's recommendations, taking into account the US comments as submitted in paper 09.4C, with some minor reworking of the wording. It was agreed the clause on consistency should be included early in Section B-100 (B-100.6 or B-104), the words 'strongly recommended' should be changed to 'should' (in accordance with S-4's conventional wording at B-120.4) and that there should be a reference to the Use of Object Catalogue in the sections on (P) and (T) NMs.

ACTION NCWG1-42: Chair to report to HSSC7 that it was considered that HSSC6 Recommendation iii. on AIO was not within the remit of the NCWG, and referring to WENDWG5 actions 01 and 02.

ACTION NCWG1-43: Sec to circulate S-4 drafts on consistency of products to WG for comment.

9.5. NMs for Magnetic Variation (UK)

Docs: CSPCWG11-09.5A Notice to Mariners criteria – Magnetic information

Nick Webb (UK) presented the paper on including abnormal magnetic variation information in NM criteria. The meeting agreed with the proposal.

ACTION NCWG1-44: Secretary to add additional NM criteria for abnormal magnetic variation to S-4 as clarification.

9.6. The future of S-4 (discussion) (Chair)

Docs: CSPCWG11-09.6A The future of S-4 as the IHO Chart Standard

Chair presented his paper, intended to stimulate consideration of what work might be undertaken to further review S-4. The Secretary suggested that S-4 was in an old fashioned format; if major alterations are to be done to the content of S-4, it may be better first to convert it to a web-based document, with links to other IHO standards, rather than attempt to duplicate guidance from those standards into S-4. In the following discussion, it was suggested that: Part A should be a separate document; the remaining unique guidance in Part C possibly incorporated into Part B; the title of S-4 is misleading and could be improved. Yves Guillam suggested that it would be useful to establish a small Project Team to review both the future style and content of S-4 and the future activities of the NCWG (which are closely related).

ACTION NCWG1-45: Chair to expand paper on the future of S-4 and submit to HSSC7. To include proposals for future activity of NCWG and a draft TOR for a Project Team. (See also comment at 10.1)

9.7. Use of seals of non-IHO members on INT charts (Chair)

Docs: CSPCWG11-09.7A Use of seals of non-IHO members on INT charts

HSSC6-05.5C
HSSC6-05.5F

(paper submitted by Chair CSPCWG)
(paper submitted by France)

The Secretary explained the background to the submissions by Chair and FR to HSSC6 and that HSSC6 had approved the proposal of CSPCWG and the practice of France. It was now necessary to capture this within S-4. Stephane Guillou (FR) clarified that FR acted as IHO-member producer for the example chart of Togo and Benin.

UK suggested adding to B-241.2(I), as a clarification:

Note: The use of the IHO seal in charts must only be used by producers who are Member States of the IHO. Seals of non-IHO Members may be added to INT charts where the nation or organization:

- Has supplied source data upon which it can reasonably assert ownership.
- Claims copyright and /or IPR (intellectual property rights) on content.
- Has contributed some degree of quality control or quality assurance in the chart's construction.
- The nation has officially delegated its cartographic authority to the IHO member chart producer.

Some small changes to the draft were agreed.

ACTION NCWG1-46: Secretary to circulate draft clarification of S-4 text on use of non-IHO member seals on International charts for approval by WG.

10. S-11

10.1. S-11 Part A (Chair)

Docs: CSPCWG11-10.1A Work item B3: Progress on drafting guidelines for ENC schemes

WENDWG5-05C-INF1 Considering a Systemic Approach to Electronic Navigational Chart Schemes (submitted by Canada)

The Secretary explained the background to the long-standing work item on developing ENC scheming guidance for inclusion in S-11 Part A. He acknowledged the work of the North Sea ENC Harmonization WG (NSEHWG) in preparing a draft combined paper chart/ENC scheming guide to replace the current S-11 Part A (excluding its Annexes). This draft had only been very recently received, so neither Chair nor Secretary had had time to study the detail, which would be necessary, noting that NCWG still has overall responsibility for both the revision task and the document. Yves Guillam (IHB) suggested that INT Chart Coordinators should also have a chance to comment.

Chair suggested this would be an opportune time to update Annexes A and B of Part A, if the necessary information could be obtained by CL. David Prince (CA) also briefed the meeting about CA's submission to WEND, suggesting that ENCs should be schemed on a grid basis, as there is no longer any need to tie them to paper chart schemes. Yves Guillam suggested such a change may be too late for S-57 ENCs, but was a valid study moving forward to S-101 ENCS: He suggested this should also be included in the TOR for the 'Future work of NCWG PT' mentioned at 9.7.

ACTION NCWG1-47: Secretary/Chair to review NSEHWG draft S-11A against existing and also change CSPCWG to NCWG.

ACTION NCWG1-48: IHB to engage INT chart coordinators to review draft S-11A.

ACTION NCWG1-49: IHB to issue CL to acquire updating information for S-11 Part A, Annexes A and B.

10.2. S-11 Part B (IHB/KR presentations on INTogIS)

Yves Guillam (IHB) explained the need to make S-11 Part B easier and quicker to update. Martin Park (KR) gave a demonstration of a prototype system to enable this which is being developed by KR for use of

the IHB. Thanks were expressed for this interesting presentation. To view prototype, go to <http://14.35.194.138:5151/iho/main.do>

11. INT 1 / 2 / 3

11.1. Report from Secretary of INT1subWG (**Sec**)

Docs: CSPCWG11-11.1A Report of INT1subWG

The Secretary presented the INT1subWG report. The meeting advised that all possible V-AIS symbols should be included in INT1 (similar to an example shown by Ben Timmerman, but with the lateral marks combined onto one line). There would be a requirement to renumber in S-4. The continuing existence of the INT1subWG was confirmed and the members were thanked for their continuing work. The Chair commented that there is a minor amendment required in the Principles (unnecessary 'the' at 10d), but the meeting did not require any further changes. Three small changes to terms in INT1 had been agreed during the meeting.

ACTION NCWG1-50: INT1 producers to include all V-AIS IALA function symbols (similar to NL version).

ACTION NCWG1-51: INT1subWG to copy correspondence to Colby Harmon and Chair NCWG.

11.2. INT1 Section V progress: verbal report (**AU**)

Chair briefed the meeting on AU progress with preparing a new data quality section V for INT1. A small AU team has been established to develop a draft. He indicated that a fully-worked draft would be available for NCWG2.

ACTION NCWG1-52: AU to provide fully worked draft INT1 Section V to NCWG2.

12. Lessons learned from Marine Incidents

12.1. Grounding of the Deutschland in Chile 2012 (**IHB/DE**)

Docs: CSPCWG11-12.1A Grounding of the passenger ship DEUTSCHLAND in Chile near Italia Glacier on 15 January 2012 (see especially section 4)

Yves Guillam (IHB) explained the background to the grounding of the MV Deutschland and recommended WG members to read the excellent report. The report did not recommend any general action for charts and the meeting considered that navigators venturing into waters close to glaciers and charted as 'unsurveyed' (or empty of soundings) should be well aware of the dangers. However, it was considered that some advice in an associated publication, such as a mariners' handbook, might be useful. There were no NCWG actions.

12.2. Grounding of Vestas Wind (**IHB**)

Docs: refer to INF5

Yves Guillam (IHB) drew attention to the media reporting of the grounding of the Vestas Wind. He wanted to ensure that NCWG members were aware of the 'List of incidents' held by DQWG (Rogier Broekman, NL is now the coordinator). Chair explained the navigation errors that had led up to the accident and confirmed that no blame could be levelled at official charts (paper or ENC). There was therefore no action required for charts, but as there was some adverse comment in the media regarding the adequacy of charts there is a need to consider how IHO should respond to such media reports.

ACTION NCWG1-53: IHB to prepare a submission paper to the DQWG (and circulate it to NCWG Chair) on the different steps to be taken within the IHO in order to ensure that the appropriate lessons from nautical incidents are assessed and shared for the collective benefit of the IHO and its Member States.

13. Strategic direction

13.1. Future of paper charts (**AU/CA/SE**)

Docs: CSPCWG11-13.1A *The Future of the Paper Chart*

Chair presented his paper on the future of paper charts, acknowledging that it was based mainly on his notes made during the presentation given last year by the former Chair (Peter Jones). He had not had opportunity to consult with CA, SE and UK (the other WG members who had agreed to be involved, see WG10 Action 36). He asked for confirmation that they still wished to be involved in any further developments of this subject, such as setting up a Project Team, which was confirmed by all. Additionally, DE, US, IHB and ESRI all requested to be involved. [After-meeting note: NL as also asked to be involved]. Mathias Jonas (HSSC Chair) suggested that there was no need to wait for HSSC approval to begin the process and that a Correspondence Group should be set up as soon as possible to further develop the issues raised and possible options for the future direction of the paper chart as outlined in the paper.

ACTION NCWG1-54: Chair to begin the process for setting up a NCWG Correspondence Group on the future of paper charts and consequences to the work of NCWG, so that a proposal can be submitted to HSSC7.

Sylvia Spohn (DE), commenting on the suggestion that paper charts may in future be printed from ENC and therefore include S-52 symbology, requested that consequences to INT1 should be taken into consideration. It was suggested that US Chart 1 might provide a template and Colby Harmon agreed to provide a link to NCWG members.

ACTION NCWG1-55: Colby Harmon to provide link to US Chart 1 PDF to WG Members.
[After meeting note: the link is <http://www.nauticalcharts.noaa.gov/mcd/chart1/ChartNo1.pdf>]

14. Review of Actions and Work Plan (Chairman/Secretary)

14.1. Actions

The Secretary presented a draft list of actions agreed during the meeting. Some adjustments were made and a final list is at Annex C.

14.2. New items for Work Plan

One new work item was agreed: Buildings above water (see agenda item 8.11). The updated NCWG Work Plan is at Annex E.

14.3. Priorities (Note: refer to Introduction to the Consolidated HSSC Work Plan)

The Chair and Secretary were invited to decide priorities for work items out of meeting, and include in the final report at Annex E.

14.4. Timescales for tasks

The Chair and Secretary were invited to decide timescales for work items out of meeting, and include in the final report at Annex E.

ACTION NCWG1-56: Chair and Secretary to add 'Buildings above water' as a new task and review NCWG Work Plan priorities and timescales and include in NCWG1 report.

15. Any Other Business (including INF papers and reports)

15.1. Discussion on NCWG's involvement in S-8 and relations with ICA

Yves Guillam (IHB) passed on a request from the IHB Directing Committee that NCWG should consider whether they should have any involvement in setting Standards of Competence for Nautical Cartographers (IHO S-8). Noting that the members of the 'FIG/IHO/ICA International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers' (IBSC) are rather weighted towards surveying, the meeting agreed that NCWG should be available to advise the IBSC on the Nautical Cartography syllabus. This was included in the draft NCWG TOR.

ACTION NCWG1-57: IHB to ensure that IBSC is aware that NCWG is available to provide advice on nautical cartography syllabus

15.2. Information papers:

INF1: LED Lite Pipe (see associated PDF file) **(UK)**

Nick Webb (UK) presented the INF paper on the Lite Pipe. It was recognized that this may be a method of highlighting existing aids to navigation, or may become an aid to navigation in its own right. The use of the symbol for a strip light (P64) (used for comparatively low brightness fluorescent tubes) is likely to be inappropriate for such a bright light source (visible 20 NM or more). Jens Schröder-Füstenberg (NIPWG Chair) requested that NIPWG should be notified of any decision to allocate a term or international abbreviation to this light, to ensure common usage if data-modelling.

ACTION NCWG1-58: UK to contact IALA to ask for more information about the ‘Lite Pipe’ with a view to conceiving a suitable term for nautical charts and publications.

INF2: IHO Digital Reference Tool for Cartographers **(KR)**

Chair gave a presentation of the Korean produced Digital Reference Tool for Cartographers (DRTC), intended to support compilers and trainers. Martin Park (KR) confirmed that KR is confident of being able to keep all content up to date. A link to download the DRTC is available in the NCWG section of IHO website [http://www.iho.int/iho_pubs/misc/S-4_S-57UOC_KHOA/index.htm]; however, several WG members commented that their organization’s IT security system does not allow downloading such .EXE files. Chair suggested that it would be better if the DRTC could be migrated to ‘commercial off the shelf’ (COTS) software and hosted on the IHO website.

ACTION NCWG1-59: IHB to investigate the possibility of developing an IHO webservice for the Digital Reference Tool, to facilitate the access and the use by IHO MS.

INF3: Retention of experienced nautical cartographers **(AU/NZ)** *(Not received)*

This subject had been suggested by New Zealand, but unfortunately no usable material was supplied to AU in time to prepare a proper paper or presentation. NZ and AU (but possibly world-wide) are having difficulty recruiting and/or retaining nautical cartography expertise. AU and NZ intend to submit a joint paper to IRCC on this concern.

INF4: Guide flowchart construction processes mapping from a geodatabase **(MX)**

Ricardo Lopez (MX) introduced the paper on providing a diagram of a typical work flow into S-4. Chair expressed doubts whether it would be possible to construct a universally acceptable data flow, as most HOs are already well advanced (but different) in their technology. He suggested the paper could be examined by the ‘future of S-4’ Project Team.

INF5: Grounding of ‘Vestas Wind’ – links **(IHB)**

This item was dealt with as part of agenda item 12 on lessons learned from marine incidents.

INF6: Floating Tidal BlueTec Platform **(UK)**

Nick Webb (UK) introduced a discussion about the floating tidal turbine platform, expected to be deployed shortly in NL waters. He compared it to the fixed tidal turbine platform in Strangford Lough (see Admiralty chart 2159). The meeting also viewed quickly numerous other examples of renewable energy devices based on current turbines; it recognised the difficulty of deciding how to apply existing chart symbols and

specifications to each different device (and the expectation that even more differing devices will be trialled in due course). The meeting agreed that the S-4 usage 'offshore renewable energy installation' (or device) at B-445.12 could be used where a more specific symbol is not available.

ACTION NCWG1-60: Secretary to amend 'installation(s)' to 'device(s)' in S-4 B-445.12 for consistency and compactness, as a clarification.

ACTION NCWG1-61: INT1 producers to add 'Renewable energy device' to L6.

15.3. NCWG officers (IHB)

The meeting agreed by acclamation that the existing CSPCWG officers should continue as executive officers of NCWG, that is:

Chair: Jeff Wootton
ViceChair: Nick Webb
Secretary: Andrew Heath-Coleman

ACTION NCWG1-62: IHB to update NCWG web page for officers. [Post-meeting note: completed]

16. Date, duration and venue of next meeting

The date of NCWG2 was agreed to be week commencing 25 April 2016. Venue to be IHB Monaco (unless another invitation is received shortly). The meeting is expected to last 3 days (Tuesday to Thursday), but IHB to book entire week to allow setting up on Monday and a contingency of extra day Friday if needed.

ACTION NCWG1-63: IHB to book week commencing 25 April for NCWG2.

Meeting closure

Mathias Jonas stated that DE had been delighted to host the meeting and thanked the WG for being allowed to attend some sessions. He congratulated the officers on the professional conduct of the meeting and Sylvia Spohn for her competence as hostess. He expressed confidence that the WG would continue to provide a group of experts to assist the IHO in this time of transition from paper to digital charts.

The Chair thanked everyone for their attendance and input and suggested each delegate should take back thanks to their parent organizations for allowing their participation. He also thanked again the BSH for providing excellent facilities for the meeting and for their hospitality in hosting. He closed the meeting at 1226 on Thursday 30 April.

INT1subWG meeting

The INT1subWG met for a short time during Thursday afternoon, to agree some detail for the new editions of all official INT1 versions, currently in preparation. NCWG Chair, ViceChair and some other interested participants also attended.

Annex A to CSPCWG10-NCWG1 Record

Copy of CSPCWG11-02A rev4

**11th CSPCWG-1st NCWG MEETING
Rostock, Germany 27-30 April 2015**

Agenda

Monday 13:30 Photo of the Group (on the Conference Room balcony)

1. Welcome, Introductions and Administrative Arrangements

*Docs: CSPCWG11-01A rev3 List of documents
CSPCWG11-01B rev4 List of meeting participants and WG members*

2. Approval of Agenda

Docs: CSPCWG11-02A rev3 Agenda

3. Status of Actions from CSPCWG10

Docs: CSPCWG11-03A Status of actions from CSPCWG10

4. Relationship with HSSC

4.1. Notes from HSSC6 (IHB presentation/Chair)

*Docs: CSPCWG11-04.1A CSPCWG Report to HSSC6 (copy of HSSC6-05.5A)
CSPCWG11-04.1B Matters from HSSC6 of interest to CSPCWG/NCWG*

4.2. Report from DIPWG (Chair)

Docs: CSPCWG11-04.2A Report to CSPCWG11 on DIPWG activities

4.3. Report from TSMAD (Chair)

Docs: CSPCWG11-04.3A Report to CSPCWG11 on TSMADWG activities

4.4. Verbal report from HDWG (Chair)

5. Terms of Reference (Chair)

5.1. Change of name

5.2. Proposed changes to TOR (including application of IHO Resolution 2/2007)

*Docs: CSPCWG11-05A Existing CSPCWG TOR (from IHO website)
CSPCWG11-05B US/UK/AU Proposal to Modify CSPCWG Terms of Reference
for NCWG
CSPCWG11-05C Annex to CSPCWG11-05B*

6. CSPCWG procedures

6.1. Changes consequent on application of IHO Resolution 2/2007 (Chair/IHB)

*Docs: CSPCWG11-06A Amendments to Procedures
CSPCWG11-06B Draft revised procedures
CSPCWG11-06C The New S-4 Maintenance Regime and its Consequences on
the Activities of the Nautical Cartography Working Group
(NCWG)*

7. CSPCWG work plan

7.1. Summary of progress (Sec)

Docs: Refer to CSPCWG11-04.1A Annex B Work Plan updated for HSSC6

8. Chart content:

8.1. Covered berths – further considerations (AU)

Docs: CSPCWG11-08.1A Covered berths – further considerations

8.2. Update on Radio-activated lights and fog signals (US, CA)

8.3. Bathymetry in maximum draught areas (Chairman on behalf of IT)

Docs: CSPCWG11-08.3A rev1 *Charting Maximum Authorized Draught in Lieu of Bathymetry*
CSPCWG11-08.3B *Bathymetry in maximum draught areas*

- 8.4. Offshore accommodation vessels **(UK)**
Docs: CSPCWG11-08.4A *Offshore support/accommodation vessels*
- 8.5. WW1 wrecks: UNESCO convention **(UK)**
Docs: CSPCWG11-08.5A *2001 UNESCO Convention – Protection of wrecks*
- 8.6. Refuge area/anchorage **(UK)**
Docs: CSPCWG11-08.6A *Refuge areas*
- 8.7. Satellite derived bathymetry **(UK)**
Docs: CSPCWG11-08.7A *Satellite Derived Bathymetry*
- 8.8. Moiré lights **(NL)**
Docs: CSPCWG11-08.8A *Moiré (light) symbols*
- 8.9. Secondary Fairways **(NL)**
Docs: CSPCWG11-08.9A *Secondary Fairways*
- 8.10. ATBA within TSS **(NL)**
Docs: CSPCWG11-08.10A *Areas to be Avoided (ATBA) within TSS*
- 8.11. Houses above the water **(ID)**
Docs: CSPCWG11-08.11A *Symbolisation of Houses above the water*
- 8.12. Marine Protected Areas **(SNPWG)**
Docs: CSPCWG11-08.12A *Portrayal of MPA features*
CSPCWG11-08.12B *Study of possible green colours available for MPA purposes*
- 8.13. Light vessels – further considerations **(Chair)**
Docs: CSPCWG11-08.13A *Light vessels – further considerations*
CSPCWG11-08.13B *Copy of IHO CL 44-1993 (PDF scan)*
- 8.14. ENC Symbology for Virtual AIS Aids to Navigation (V-AIS AtoN) **(US)**
Docs: CSPCWG11-08.14A *Proposal to Define ENC Symbology for Virtual AIS Aids to Navigation (V-AIS AtoN)*
- 8.15. RNC and ENC Symbology for Virtual AIS Pilot Boarding and Call-in Points **(US)**
Docs: CSPCWG11-08.15A *Proposal to Consider Establishing Standard RNC and ENC Symbology for Virtual AIS Pilot Boarding and Call-in Points*

9. S-4

- 9.1. Superseded NMs **(NZ)**
Docs: CSPCWG11-09.1A *Notices to Mariners (NMs) - superseding notices*
- 9.2. Grouping of symbols in area limits **(UK)**
Docs: CSPCWG11-09.2A *Grouping of Symbols in Area Limits*
- 9.3. Update on Spanish version of S-4 **(ES)**
- 9.4. HSSC6 Task A22 Information overlay services **(IHB/UK)**
Docs: HSSC6-05.5D rev1 *Relevance of information overlay services with respect to IHO standards (IHB paper)*
CSPCWG11-09.4A *Relevance of information overlay services with respect to IHO standards (UKHO Paper)*
CSPCWG11-09.4B *Consistency of information on paper charts and ENC's (Chair paper)*
CSPCWG11-09.4C *U.S. Comments on Papers Submitted by the IHB, UK and the CSPCWG Chair Regarding Information Overlay Services and the Consistency of Information on Paper Charts and ENCs*
WENDWG5-04B *Relevance of information overlay services and their status in the global IHO ENC programme*
(See also draft list of actions from WENDWG5 on IHO website)
- 9.5. NMs for Magnetic Variation **(UK)**
Docs: CSPCWG11-09.5A *Notice to Mariners criteria – Magnetic information*
- 9.6. The future of S-4 (discussion) **(Chair)**
Docs: CSPCWG11-09.6A *The future of S-4 as the IHO Chart Standard*
- 9.7. Use of seals of non-IHO members on INT charts **(Chair)**
Docs: CSPCWG11-09.7A *Use of seals of non-IHO members on INT charts*

HSSC6-05.5C (paper submitted by Chair CSPCWG)
HSSC6-05.5F (paper submitted by France)

10. S-11

10.1. S-11 Part A (Chair)

Docs: CSPCWG11-10.1A Work item B3: Progress on drafting guidelines for ENC schemes
WENDWG5-05C-INF1 Considering a Systemic Approach to Electronic Navigational Chart Schemes (submitted by Canada)

10.2. S-11 Part B (IHB/KR presentations on INToGIS)

11. INT 1 / 2 / 3

11.1. Report from Secretary of INT1 subWG (Sec)

Docs: CSPCWG11-11.1A Report of INT1 subWG

11.2. INT1 Section V progress: verbal report (AU)

12. Lessons learned from Marine Incidents

12.1. Grounding of the Deutschland in Chile 2012 (IHB/DE)

Docs: CSPCWG11-12.1A Grounding of the passenger ship DEUTSCHLAND in Chile near Italia Glacier on 15 January 2012 (see especially section 4)

12.2. Grounding of Vestas Wind (IHB)

Docs: refer to INF5

13. Strategic direction

13.1. Future of paper charts (AU/CA/SE)

Docs: CSPCWG11-13.1A The Future of the Paper Chart

14. Review of Actions and Work Plan (Chairman/Secretary)

14.1. Actions

14.2. New items for Work Plan

14.3. Priorities (NB: refer to Introduction to the Consolidated HSSC Work Plan)

14.4. Timescales for tasks

15. Any Other Business (including INF papers and reports)

15.1. Discussion on NCWG's involvement in S-8 and relations with ICA

15.2. Information papers:

INF1: LED Lite Pipe (see associated PDF file)

INF2: IHO Digital Reference Tool for Cartographers (KR)

INF3: Retention of experienced nautical cartographers (AU/NZ) (Not submitted)

INF4: Guide flowchart construction processes mapping from a geodatabase (MX)

INF5: Grounding of 'Vestas Wind' – links (IHB)

INF6: Floating Tidal BlueTec Platform

16. Date, duration and venue of next meeting

Social Programme:

- **Monday, 27th April** 18:00 – 20:00 Coming together at BSH canteen with cheese and local wines
- **Tuesday, 28th April** 18:30 Guided city tour (1,5 hours) Hotel
Start from Radisson BLU Hotel
End at the restaurant "Alter Fritz"
- **Wednesday, 29th April** 13:30 Tour to Warnemünde with visit of maritime simulation center and dinner in a restaurant at Alter Strom "Seekiste zur Krim".

11th CSPCWG-1st NCWG MEETING
Rostock, Germany 27-30 April 2015

Documents list

CSPCWG11-01A rev3	List of documents
CSPCWG11-01B rev4	List of meeting participants and WG members
CSPCWG11-02A rev4	Agenda
CSPCWG11-03A	Status of actions from CSPCWG10
CSPCWG11-04.1A	CSPCWG report to HSSC6 (HSSC6-05.5A)
CSPCWG11-04.1B	Matters from HSSC6 of interest to CSPCWG/NCWG
CSPCWG11-04.2A	Report to CSPCWG11 on DIPWG activities
CSPCWG11.04.3A	Report to CSPCWG11 on TSMAD activities
CSPCWG11-05A	Existing CSPCWG TOR (from IHO website)
CSPCWG11-05B	US/UK/AU Proposal to Modify CSPCWG Terms of Reference for NCWG
CSPCWG11-05C	Annex to CSPCWG11-05B
CSPCWG11-06A	Amendments to WG Procedures
CSPCWG11-06B	Draft revised procedures
CSPCWG11-06C	The New S-4 Maintenance Regime and its Consequences on the Activities of the Nautical Cartography Working Group (NCWG)
CSPCWG11-08.1A	Covered berths – further considerations
CSPCWG11-08.3A rev1	Charting Maximum Authorized Draught in Lieu of Bathymetry
CSPCWG11-08.3B	Bathymetry in maximum draught areas
CSPCWG11-08.4A	Offshore support/accommodation vessels
CSPCWG11-08.5A	2001 UNESCO convention – Protection of wrecks
CSPCWG11-08.6A	Refuge areas
CSPCWG11-08.7A	Satellite derived bathymetry
CSPCWG11-08.8A	Moiré lights
CSPCWG11-08.9A	Secondary fairways
CSPCWG11-08.10A	Areas to be Avoided (ATBA) within TSS
CSPCWG11-08.11A	Symbolisation of Houses above the water
CSPCWG11-08.12A	Portrayal of MPA features
CSPCWG11-08.12B	Study of possible green colours available for MPA purposes
CSPCWG11-08.13A	Light vessels – further considerations
CSPCWG11-08.13B	Copy of IHO CL 44-1993 (NB: number not printed on PDF paper)
CSPCWG11-08.14A	Proposal to Define ENC Symbology for Virtual AIS Aids to Navigation (V-AIS AtoN)
CSPCWG11-08.15A	Proposal to Consider Establishing Standard RNC and ENC Symbology for Virtual AIS Pilot Boarding and Call-in Points
CSPCWG11-09.1A	Notices to Mariners (NMs) - superseding notices
CSPCWG11-09.2A	Grouping of symbols in area limits
HSSC6-05.5D rev1	Relevance of information overlay services with respect to IHO standards (IHB paper)
CSPCWG11-09.4A	Relevance of information overlay services with respect to IHO standards (UKHO Paper)
CSPCWG11-09.4B	Consistency of information on paper charts and ENC's (Chair paper)
CSPCWG11-09.4C	U.S. Comments on Papers Submitted by the IHB, UK and the CSPCWG Chair

	Regarding Information Overlay Services and the Consistency of Information on Paper Charts and ENCs
WENDWG5-04B	Relevance of information overlay services and their status in the global IHO ENC programme
CSPCWG11-09.5A	Notice to Mariners criteria – Magnetic information
CSPCWG11-09.6A	The future of S-4 as the IHO Chart Standard
CSPCWG11-09.7A	Use of seals of non-IHO members on INT charts
HSSC6-05.5C	(paper submitted by Chair CSPCWG)
HSSC6-05.5F	(paper submitted by France)
CSPCWG11-10.1A	Work item B3: Progress on drafting guidelines for ENC schemes
WENDWG5-05C-INF1	Considering a Systemic Approach to Electronic Navigational Chart Schemes
CSPCWG11-10.2A	PowerPoint presentation on INTtoGIS project
CSPCWG11-11.1A	Report of INT1 subWG
CSPCWG11-12.1A	Grounding of the passenger ship DEUTSCHLAND in Chile near Italia Glacier on 15 January 2012 (NB: number not printed on PDF paper)
CSPCWG11-13.1A	The Future of the Paper Chart
CSPCWG11-INF1:	LED Lite Pipe (UK)
CSPCWG11-INF2:	IHO Digital Reference Tool for Cartographers (KR)
CSPCWG11-INF3:	Retention of experienced nautical cartographers (AU/NZ) (Not submitted)
CSPCWG11-INF4:	Guide flowchart construction processes mapping from a geodatabase (MX)
CSPCWG11-INF5:	Grounding of Vestas Wind (see links on NCWG web page)
CSPCWG11-INF6:	Floating Tidal BlueTec Platform

Annex C to CSPCWG11-NCWG1 Record

11th CSPCWG-1st NCWG MEETING
Rostock, Germany 27-30 April 2015

PARTICIPANTS AT CSPCWG11

IHO Member State	Name	Email
Australia	Mr Jeff WOOTTON (Chair)	jeff.wootton@defence.gov.au
Canada	Mr David PRINCE	Dave.Prince@dfo-mpo.gc.ca
Denmark	Ms Nina GRAASBØL-SCHMIDT Mrs Berit HOLSE	ng@gst.dk bes@kms.dk
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Germany	Ms Sylvia SPOHN (Host)	sylvia.spohn@bsh.de
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Latvia	Mrs Ilona MARKUSA	ilona.markusa@lhd.lv
Mexico	Commander Manuel Ricardo LÓPEZ Cruz Lt. Eloisa PEÑA Pedraza	direccion.hidrografia.mexico@gmail.com unknown
Netherlands	Mr Ben TIMMERMAN	B.Timmerman@mindef.nl
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Russia	Igor BONAKOV	unio_main@mil.ru
Spain	Cdr Federico YANGUAS Guerrero	fyangue@fn.mde.es
Sweden	Mr Andreas (Andy) ANDERSSON Ms Anita BODIN	Andreas.Andersson@sjofartsverket.se Anita.Bodin@sjofartsverket.se
United Kingdom	Mr Nick WEBB (Vice-Chair) Mr Andrew HEATH-COLEMAN (Secretary)	nick.webb@ukho.gov.uk andrew.coleman@ukho.gov.uk
USA (NOAA)	Mr Colby HARMON	colby.harmon@noaa.gov
USA (NGA)	Miss Jacqueline BARONE	jacqueline.barone@nga.mil
Other IHO		
IHB	Mr Yves GUILLAM	adcs@iho.int
HSSC	Dr Mathias JONAS (part of meeting)	mathias.jonas@bsh.de
SNPWG/NIPWG	Mr Jens SCHRÖDER-FÜRSTENBERG	jens.schroeder-fuerstenberg@bsh.de
Industry Observers		
ESRI	Ms Patricia (Trish) SHEATSLEY	PSheatsley@esri.com
Maritime Simulation Centre (Warnemünde)	Mr Sven HERBERG (part of meeting)	sven.herberg@hs-wismar.de

28 persons. 17 Member States

Annex D to CSPCWG11-NCWG1 Record

11th CSPCWG-1st NCWG MEETING
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ACTIONS**RETAINED ACTIONS from CSPCWG9**

No	CSPCWG9 Agenda item	CSPCWG9 Action	Delegate	Status
22	8.5	WG9 22: AU to continue discussion on dividing regulatory from navigation restrictions (for S-101), keeping Secretary informed,	AU	On-going
58	14.6	WG9 58: AU to produce a sample INT1 register for next meeting.	AU	On-going

RETAINED ACTIONS from CSPCWG10

No	CSPCWG10 Agenda item	CSPCWG10 Action	Delegate	Status
40	15.4	AU to forward CSPCWG10-INF4 on Ice product specification and discuss with S-100WG.	AU	

NCWG1 ACTIONS

No	NCWG1 Agenda item	NCWG1 Action	Delegate	Status
1.	3	Secretary to produce draft report of NCWG1 by end of May 2015, for participants to approve.	Secretary	Completed
2.	3	All WG members to make early bids for travel budget to NCWG2; advise Chairman if any difficulties.	All WG members	
3.	3	All WG members to note agenda items for NCWG2 throughout the year (and forward to Secretary as they arise). Explanatory Notes may be sent before meeting calling letter.	All WG members	
4.	4.1	Chair to discuss with Chairs NIPWG and S-100WG how HSSC6 Action 25 should be progressed. (Action 25: NIPWG to stand up project team to develop the portrayal of DQ categories in collaboration with S-100WG and NCWG)	Chair	
5.	4.1	Chair to discuss with HSSC Chair possible confusion during discussions held at HSSC6 over the intent of NCWG Work Item A19.	Chair	

No	NCWG1 Agenda item	NCWG1 Action	Delegate	Status
6.	4.2	Chair to advise ENCWG that international abbreviations for seabed types should be used on ECDIS, rather than full text.	Chair	
7.	4.4	Chair to progress the action about a revised definition for ED (in place of WG10 Action 25)	Chair	
8.	4.4	Yves Guillam to research and progress the action about definitions of Height and Elevation (in place of WG10 Action 32) with HDWG	IHB	
9.	5.2	Colby to forward final draft of TOR to Sec to circulate to WG members for comment	Colby H, Secretary	Completed See Annex F
10.	5.2	Chair to submit the revised version of NCWG TOR to HSSC7 for approval.	Chair	
11.	6.1	Secretary to prepare a revised edition of S-4 to include all changes already agreed by CSPCWG, ready for approval to publish at HSSC7.	Secretary	
12.	6.1	Secretary to draft CL for publishing S-4 v4.6.0 for approval by HSSC7	Secretary	
13.	6.1	Chair to discuss with Chairs of other HSSC WGs the possibility of a joint submission to HSSC7 that there should be a full revision of Res. 2/2007 to the advantage of all WGs, IHB, MS and all stakeholders.	Chair	
14.	7	INT1subWG to prepare a list of vacant entries in INT1 and Chair to check whether removing them from INT1 (and retiring the number) would have any impact on other standards.	INT1subW, Chair	
15.	8.1	Secretary to extend S-4 draft for covered berths as agreed and circulate to WG members.	Secretary	
16.	8.2	CA and US to prepare joint proposal for specification and abbreviation for radio activated AtoN. To be circulated and forwarded to Chair NIPWG by end June 2015.	CA, US	
17.	8.3	Secretary to draft clarification to specification on Maximum Authorized Draught and circulate to WG.	Secretary	
18.	8.3	Chair to provide IT with a summary of the discussions, explaining why the WG consider it necessary to include latest know physical depths in maximum authorized draught areas.	Chair	

No	NCWG1 Agenda item	NCWG1 Action	Delegate	Status
19.	8.4	Secretary to draft changes to B-445.5 to provide guidance for charting offshore accommodation vessels and circulate to WG.	Secretary	
20.	8.4	INT1 producers to amend term at L17 to allow for usage for offshore accommodation vessels	INT1 producers	
21.	8.4	Chair to consider whether any change is required to S-52 look-up tables for offshore accommodation vessels and investigate any necessary changes to S-57 and S-101 and advise appropriate WGs accordingly.	Chair	
22.	8.5	Yves Guillam to invite MSDIWG to consider the question about UNESCO convention on the protection of Underwater Cultural Heritage, especially in regard to WW1 wrecks.	IHB	
23.	8.6	Secretary to redraft proposal for using 'Ref' for refuge anchorage/areas, using wording suggested by Chair and circulate to WG members.	Secretary	
24.	8.6	INT producers to remove 'shipwrecked' from T14. (No other changes required to INT1)	INT1 producers	
25.	8.7	UK to provide paper on SDB to DQWG and H Survey WG (if stood up).	UK	
26.	8.8	Secretary to remove the last sentence B-475.8 on colour of Moiré lights (as a clarification).	Secretary	
27.	8.9	Secretary to circulate draft clarification to B-434.5 on secondary fairways	Secretary	
28.	8.10	Secretary to circulate draft clarification to B-435.1c on charting ATBA and anchorages within Separation Zones	Secretary	
29.	8.11	Secretary to draft new paragraph on 'Buildings above water' at B-370 and circulate to WG	Secretary	
30.	8.11	Chair (in consultation with ID) to prepare paper to ENCWG and S-100WG (S101PT) to review encoding in ENC, portrayal and logical consistency error in S58.	Chair, ID	
31.	8.12	Chair NIPWG to request HSSC to set up Project Team/correspondence group on MPA colours, including NIPWG, NCWG and S100WG reps.	Chair NIPWG	
32.	8.12	Chairs NIPWG, NCWG, S-100WG to draft brief TORs for MPA colour PT/CG.	Chairs NIPWG, NCWG & ENCWG	

No	NCWG1 Agenda item	NCWG1 Action	Delegate	Status
33.	8.12	Chair NIPWG to invite Hannu Peiponen to join MPA colour PT/CG.	Chair NIPWG	
34.	8.13	Secretary to include revised specification and symbol for LtV in draft S-4 v 4.6.0 for submission to HSSC7	Secretary	
35.	8.13	Chair to raise removal of star on LtV mast from S-52 with ENCWG & S-100WG	Chair	
36.	8.14	Colby Harmon (US – NOAA) to revise submission on ENC V-AIS symbols to 'all magenta' and forward to ENCWG and S-100WG.	(US – NOAA)	
37.	8.15	Colby Harmon (US – NOAA) to investigate further the concept of attaching AIS messages to pilot stations and radio reporting points and prepare further submission to NCWG2 (if necessary).	US – NOAA	
38.	9.1	Secretary to draft clarification of S-4 text on superseded NMs for approval	Secretary	
39.	9.2	Secretary to draft clarification of S-4 text on grouping of symbols for approval	Secretary	
40.	9.3	ES to complete translation of S-4 v4.5.0 and forward to IHB by end July 2015 (omitting v4.4.0)	ES	
41.	9.3	Secretary to send future changes to S-4 to Yves, Stephane, Federico, Sylvia and Yong Baek (KR).	Secretary	
42.	9.4	Chair to report to HSSC7 that it was considered that HSSC6 Recommendation iii. on AIO was not within the remit of the NCWG, and referring to WENDWG5 actions 01 and 02.	Chair	
43.	9.4	Secretary to circulate S-4 drafts on consistency of products to WG for comment	Secretary	
44.	9.5	Secretary to add additional NM criteria for abnormal magnetic variation to S-4 as clarification	Secretary	
45.	9.6	Chair to expand paper on the future of S-4 and submit to HSSC7. To include proposals for future activity of NCWG and a draft TOR for a Project Team	Chair	
46.	9.7	Secretary to circulate draft clarification of S-4 text on use of non-IHO member seals on International charts for approval by WG	Secretary	

No	NCWG1 Agenda item	NCWG1 Action	Delegate	Status
47.	10.1	Secretary and Chair to review NSEHWG draft S-11A against existing and also change CSPCWG to NCWG	Secretary, Chair	
48.	10.1	IHB to engage INT chart coordinators to review draft S-11A	IHB	
49.	10.1	IHB to issue CL to acquire updating information for S-11 Part A, Annexes A and B	IHB	
50.	11.1	INT1 producers to include all V-AIS IALA function symbols (similar to NL version)	INT1 producers	
51.	11.1	INT1subWG to copy correspondence to Colby Harmon and Chair NCWG	INT1subWG	
52.	11.2	AU to provide fully worked draft INT1 Section V to NCWG2	AU	
53.	12.2	IHB to prepare a submission paper to the DQWG (and circulate it to NCWG Chair) on the different steps to be taken within the IHO in order to ensure that the appropriate lessons from nautical incidents are assessed and shared for the collective benefit of the IHO and its Member States.	IHB	
54.	13.1	Chair to begin process for setting up a NCWG Correspondence Group on the future of paper charts and consequences to the work of NCWG, so that a proposal can be submitted to HSSC7	Chair	
55.	13.1	Colby Harmon to provide link to US Chart 1 PDF to WG Members	Colby Harmon	Completed 05/05/2015
56.	14	Chair and Secretary to add 'Buildings above water' as a new task and review NCWG work plan priorities and timescales and include in NCWG1 report.	Chair, Secretary	Completed, see Annex E
57.	15.1	IHB to ensure that IBSC is aware that NCWG is available to provide advice on nautical cartography syllabus	IHB	
58.	15.2 INF1	UK to contact IALA to ask for more information about the 'Lite Pipe' with a view to conceiving a suitable term for nautical charts and publications	UK	
59.	15.2 INF2	IHB to investigate the possibility of developing an IHO webservice for the Digital Reference Tool, to facilitate the access and the use by IHO MS.	IHB	
60.	15.2 INF6	Secretary to amend 'installation(s)' to 'device(s)' in S-4 B-445.12 for consistency and compactness, as a clarification.	Secretary	

No	NCWG1 Agenda item	NCWG1 Action	Delegate	Status
61.	15.2 INF6	INT1 producers to add 'Renewable energy device' to L6	INT1 producers	
62.	15.3	IHB to update NCWG web page for officers	IHB	Completed
63.	16	IHB to book w/c 25 April for NCWG2	IHB	Completed

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NCWG Work Plan
September 2014

(updated following [CSPCWG11-NCWG1](#))

- 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.

- 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.

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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.6	Revise S-4 Part B Section 500	M	Publish S-4 Ed 4.5.0	2012	2014	C	Sec CSPCWG	S-4 / B-500	CL38/2014 Retain until HSSC7
A.11	Clarify guidance on dredged/maintained areas	M	HSSC/MS approval & include in next revision S-4	2011	2016	O	Sec NCWG	S-4, INT1	CSPCWG9 Action 43 CSPCWG10 Action 10 WG Ltrs 09 & 13/14
A13	Provide guidance on charting maximum authorized draught	M	WG letter for revised S-4 draft	2012	2016	O	Sec NCWG	S-4, INT1	Draft guidance approved by WG but on hold pending development of symbol, D34 refers. CSPCWG10 Action 12. WG Ltrs 09 & 13/14 – see 09/14 for changes to specs and NCWG1 Agenda 08.3
A14	Provide guidance on updating large scale charts first	M	Publish S-4 Ed 4.5.0	2012	2014	C	Sec CSPCWG	S-4 / B-100.5	CL32/2014 Retain until HSSC7
A16	Consideration of the 'future of the paper chart'	M	Set up correspondence group	2014	2016	O	Chair NCWG	tbd	CSPCWG10 Action 36 NCWG1 Action 54
A17	Provide guidance on charting wind farms under construction at sea	M	HSSC/MS approval & include in next revision S-4	2014	2016	O	Sec NCWG	S-4 B-445	CSPCWG10 Action 20 WG Ltrs 10 & 14/2014
A18	Provide guidance on charting covered berths	M	WG letter for revised S-4 draft	2014	2016	O	Sec NCWG	S-4 B-300	CSPCWG10 Action 21 WG Ltrs 10 & 14/2014 NCWG1 Action 15
A19	Provide additional guidance on charting AIS where on most AtoN in region	M	HSSC/MS approval & include in next revision S-4	2014	2016	O	Sec NCWG	S-4 B-489	CSPCWG10 Action 28 WG Ltrs 10 & 14/2014

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A20	Provide guidance on use of QR codes	M	HSSC/MS approval & include in next revision S-4	2014	2016	O	Sec NCWG	S-4 B-243	CSPCWG10 Action 38 WG Ltrs 11/2014 & 01/2015
A21	Provide guidance on adding reminder about T & P NMs on charts	M	HSSC/MS approval & include in next revision S-4	2014	2016	O	Sec NCWG	S-4 B-252	CSPCWG10 Action 41 WG Ltrs 11/2014 & 01/2015
A22	Consider standardization issues related with additional information overlay services and provide recommendations as appropriate	H	Report on NCWG1 discussions to HSSC7	2014	2015	O	Chair NCWG/UK		HSSC6-05.5D rev1 refers NCWG1 Action 42
A23	Specify "consistency" of charted information between paper charts and corresponding ENCs	M	WG letter for S-4 draft	2015	2016	P	Sec NCWG	S-4 Part B Sections 100 and 600	NCWG1 Action 43
A24	Provide guidance on the use of seals of non- IHO members on INT charts	M	WG letter for S-4draft	2014	2016	P	Sec NCWG	S-4	HSSC6-05.5C & F refer NCWG1 Action 46
A25	Buildings above the water	M	WG letter for S-4draft	2015	2016	P	Sec NCWG	S-4	NCWG1 Action 29
B.3	Develop guidelines for preparation & maintenance of small / medium scale ENC schemes.	H	Review NSEHWG draft	2009	2017	O	Sec/Chair NCWG IHB	S-11A	Draft by NSEHWG; keep WENDWG engaged Agenda 10.1
D32.1	Lights issues: Major lights, Direction lights, Highlighting	M	Publish S-4 Ed 4.5.0	2012	2014	C	Sec CSPCWG	S-4 / B-470	CL32/2014—Retain until HSSC7
D32.2	Interrupted lights	M	Publish S-4 Ed 4.5.0	2012	2015	C	Sec NCWG	S-4 / B-470	CSPCWG9 Action 13 CSPCWG10 Action 22,23 Retain until HSSC7
D32.4	Reinstate (simplified) symbol for light vessels	M	HSSC/MS approval & include in next revision S-4	2012	2016	O	Sec NCWG	S-4 / B-474, INT1	CSPCWG9 Action 18; CSPCWG10 Action 16 NCWG1 Action 34

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D34	Devise new symbol for 'Maximum authorized draught'	M	Inform HSSC	2014	2015	Cancelled	Chair NCWG	S-4 / B-400	CSPCWG10 Action 12; see also A13. WG Ltrs 09 & 13/14, Action deleted
D35	Dangerous cargo berth	M	HSSC/MS approval & include in next revision S-4	2014	2016	O	Sec NCWG	S4 / B-300	CSPCWG10 Action 18 WG Ltrs 10 & 14/2014
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 Guillou ES: F. Yanguas	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	INT1subWG to supply list to Chair		2016	O	INT1subWG, Chair	INT 1, S-4 part B	NCWG1 Action 14
E8	Reorganize INT1 to exclude composite symbols	L				P	INT1 sub-WG	INT1	Not to be progressed at present; use CSPCWG10-11.2A when progressed.
E9	Develop new section V for INT1 for 'data quality'	M	Draft to WG	2014	2016	O	Chair NCWG	INT1	CSPCWG10 Action 35

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

Chair: Peter Jones (UK) until 31/03/14

Chair: Jeff Wootton (AU) from 01/04/14

Vice Chair: Jeff Wootton (AU) until 31/03/14

Vice Chair: Chris Thorne (UK) from 01/04/14

Vice Chair: Nick Webb (UK) from 01/09/14

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Annex F to CSPCWG11-NCWG1 Record

11th CSPCWG-1st NCWG MEETING
Rostock, Germany 27-30 April 2015

Draft NCWG Terms of Reference
NAUTICAL CARTOGRAPHY WORKING GROUP (NCWG)
(Formerly the Chart Standardization and Paper Chart Working Group - CSPCWG)

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)
4) 7th HSSC Meeting (Busan, Republic of Korea, November 2015)

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 IHB (“IHB” to be replaced by “IHO Secretariat” when the IHO Secretariat is established). 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 Conference (IHC) (Conference to be replaced by Assembly when the revised IHO Convention enters into force) 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 before the next ordinary IHC, inter-conference elections may be conducted at the next NCWG meeting or by correspondence between Working Group meetings.
- 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 IHB ("IHB" to be replaced by "IHO Secretariat" when the IHO Secretariat is established) 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 conducts its business mainly by correspondence. It will also plan to hold meetings at least once every two years, dependant on membership support and business needs. 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.
- d) Decisions shall generally be made by consensus. If votes are required on issues or to endorse proposals presented to the WG, votes shall be taken by a simple majority of the MS present and voting. When dealing with inter-sessional matters by correspondence, a simple majority of responding MS shall be required. Each MS shall have one vote.
- e) The date and venue of WG meetings shall normally be announced by the Chair at least six months in advance.

- f) 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.
- g) 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.
- h) The WG will maintain close liaison with other HSSC WGs, particularly those developing and maintaining S-100 based products, and other international and IHO bodies, as appropriate and as instructed by HSSC.
- i) The WG should prepare annually a report on its activities and a rolling two-year work plan, including expected time frame.

11th CSPCWG-1st NCWG MEETING
Rostock, Germany 27-30 April 2015
LIST OF ACRONYMS AND ABBREVIATIONS USED AT CSPCWG11-NCWG1

AIO	Admiralty Information Overlay
AIS	Automatic Identification System
AtoN	Aid to navigation
AU	Australia
BSH	Bundesamt für Seeschifffahrt und Hydrographie (German Maritime and Hydrographic Agency)
CA	Canada
CATZOC	Category of Zone of Confidence
CG	Correspondence Group
CL	Circular Letter (of IHO)
CSPCWG	Chart Standardization and Paper Chart WG (of HSSC)
DE	Germany
DIPWG	Digital Information Portrayal Working Group (of HSSC)
DK	Denmark
doc	CSPCWG11 document or paper associated with the meeting
DQWG	Data Quality Working Group (of HSSC)
DRTC	Digital Reference Tool for Cartographers
ECDIS	Electronic Chart Display and Information System
ED	Existence Doubtful
EN	Explanatory note
ENC	Electronic Navigational Chart
EPNM	Electronic Preliminary Notice to Mariners
ES	Spain
ESRI	Environmental Systems Research Institute
FI	Finland
FIG	International Federation of Surveyors
FR	France
HDWG	Hydrographic Dictionary Working Group (of HSSC)
HO	Hydrographic Office
HSSC	Hydrographic Services and Standards Committee (of IHO)
IALA	International Association of Marine Aids to Navigation and Lighthouse Authorities
IBSC	International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers
ICA	International Cartographic Association
ICCWG	(Regional) International Charting Coordination WG
ID	Indonesia
IEC	International Electrotechnical Commission
IHB	International Hydrographic Bureau
IHO	International Hydrographic Organization
IMO	International Maritime Organization
INF	Information paper associated with the meeting

INT	International
INT1	Symbols, Abbreviations, Terms used on Charts
INT2	Borders, Graduations, Grids and Linear Scales
INT3	Use of Symbols and Abbreviations - standard reference chart
IRCC	Inter-Regional Coordination Committee
IT	Italy
KR	Republic of Korea
LANBY	Large Automatic Navigational Buoy
LED	Light Emitting Diode
LINZ	Land Information New Zealand
LtV	Light Vessel
MPA	Marine Protected Areas
MS	Member State (of IHO)
MSDIWG	Marine Spatial Data Infrastructure Working Group (of HSSC)
MX	Mexico
NCWG	Nautical Cartography Working Group (of HSSC)
NGA	National Geospatial-Intelligence Agency (US)
NIPWG	Nautical Information Provision Working Group (of HSSC)
NL	Netherlands
NO	Norway
NOAA	National Oceanic and Atmospheric Administration (US)
NM	Notice to Mariners
NSEHWG	North Sea ENC Harmonization Working Group
NZ	New Zealand
PDF	Portable document format
(P)NM	Preliminary Notice to Mariners
PT	Project Team
Ref	Refuge
Res.	Resolution (of the IHO)
rev	Revision (of a paper)
RNC	Raster Nautical (or Navigational) Chart
S-4	Chart Specifications of the IHO and Regulations for International (INT) Charts
S-8	Standards of Competence for Nautical Cartographers
S-11	Guidance for the Preparation and Maintenance of International Chart Schemes and Catalogue of International (INT) Charts
S-49	Guidance for Mariners' Routeing Guides
S-52	Specifications for Chart Content and Display Aspects of ECDIS
S-57	IHO Transfer Standard for Digital Hydrographic Data
S-58	ENC Validation Checks
S-65	ENCs: Production, Maintenance and Distribution Guidance
S-100	IHO Geospatial Standard for Hydrographic data
S-101	ENC Product Specification
SDB	Satellite-derived bathymetry
SE	Sweden

Sec	Secretary (of CSPCWG)
SNPWG	Standardization of Nautical Products Working Group (of HSSC)
subWG	Sub-working group (of relevant HSSC WG)
(T)NM	Temporary Notice to Mariners
TOR	Terms of Reference
TSMADWG	Transfer Standard Maintenance and Application Development Working Group (of HSSC)
UK	United Kingdom of Great Britain and Northern Ireland
US	United States of America
V-AIS	Virtual Automatic Identification System (aid to navigation)
WENDWG	World-wide ENC Database Working Group
WG	Working Group (of IHO)
WW1	First World War