

WEND Report

Introduction

This report reviews the work group's findings, status and the planned next steps.

WENDWG is a working group under the IRCC Committee. Its tasks are:

1. Monitor the development of adequate ENC coverage to meet any carriage requirements for ECDIS;
2. Develop proposals for speeding up ENC production and ensuring uniform ENC quality and consistency, and for making data available worldwide, including SENC distribution, taking advantage of any offers for production assistance, or other ways of mutual assistance and co-operation;
3. Advise MS, where appropriate, on the need, as well as on methods and tools for validating the data, and on any assistance which could be offered by the RENCs;
4. Monitor the implementation of the WEND, in response to Decision 21 of the XVIIth IHC, and advise IRCC of appropriate measures for speeding-up the implementation process;
5. Assist in harmonizing the policies of regional ENC Coordinating Centres (RENC) with respect to matters related to administration, legality, finances, technical processes, etc.

The WENDWG is chaired by *Capt. Jamie McMichael-Phillips*, UK. *Mr Yve Guillian (IHB)* is acting as a secretary.

Each Regional Hydrographic Commission should have a representative in the WENDWG. The BSHC has elected *Mr. Jarmo Mäkinen*, Finland, as its representative of the WENDWG. The NHC has elected *Mr. Jens Peter Hartmann*, Denmark, as their representative.

Outcome of the WENDWG4 meeting 18-19 March 2014, Niteroi, Brazil

The WENDWG4 meeting was held on 18 -19 March 2014 in Brazil. Finland represented at the meeting both BSHC and NHC.

The main issues dealt in the meeting were

- WEND principles and Guidelines
- Overlap Management Processes
- RENC and WENC Developments
- ENC Coverage
- Capacity Building Activities
- Cartographic Boundaries
- Work Programme

More detailed information and list of actions will be found in attached minutes and list of actions of WENDWG4.

Next WENDWG meetings

The meeting agreed to meet on the following dates and venues:

- a) WENDWG5 Singapore from 3 to 5 March 2015, subject to confirmation.
- b) WENDWG6 Norway in March 2016, exact dates to be confirmed.
- c) WENDWG7 Russian Federation in March 2017, exact dates to be confirmed.

Actions for the 58th NHC Conference:

The NHC 58th Conference is requested to:

- take note on this Report.
- nominate NHC representative to WENDWG.
- give further guidance to the WENDWG representative, as seen appropriately.

ANNEX: Report of WENDWG4

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**FOURTH MEETING OF THE WORLDWIDE ENC DATABASE WORKING GROUP
(WENDWG4)
18-19 March 2014, Niteroi, Brazil**

REPORT

Chair: Capt. Jamie McMichael-Phillips (UK)
Vice-Chair: Mr. Sean Hinds (Canada)
Secretary: Mr. Alberto Costa Neves (IHB)

Notes: 1) The paragraph numbering is the same as in the agenda (Doc. WENDWG4-02 Agenda)
2) The list of annexes is provided at the end of this report
3) All documents referred to in these minutes are available from the WENDWG page of the IHO website:
http://www.iho.int/mtg_docs/com_wg/WEND/WENDWG4/WENDWG4-Docs.htm

1. Opening and Administrative Arrangements

Docs: [WENDWG4-01A List of Documents \(IHB\)](#)
[WENDWG4-01B List of Participants \(IHB\)](#)
[WENDWG4-01C WENDWG Membership \(IHB\)](#)
[WENDWG4-01D Terms of Reference for WENDWG \(IHB\)](#)

The fourth meeting of the IHO WEND Working Group (WENDWG4) took place at the Directorate of Hydrography and Navigation (DHN) in Niteroi (Brazil), on 18 and 19 March 2014. The WENDWG Chair (Capt. Jamie McMichael-Phillips, UK) opened the meeting and welcomed all 26 participants representing 15 Member States (Argentina, Brazil, Chile, Colombia, Ecuador, Finland, France, Japan, Mexico, Norway, Singapore, Russian Federation, Suriname, UK, Uruguay) and seven RHCs (NHC, BSHC, NSHC, MBSHC, EAHC, EAthC, SWAtHC), two RENCs (IC-ENC and PRIMAR), and the IHB. Three members of the WENDWG (Ms Julia Powell (USA), Mr. Sean Hinds (Canada, Vice Chair) and Mr Ng Kwok-Chu) joined the meeting via teleconference.

Capt. Gilcemar, Deputy Director of the DHN, welcomed the participants on behalf of Vice Admiral Pontes Lima (Director of Hydrography and Navigation) and pointed the importance of the WENDWG as the main body of the IHO to report on the global ENC coverage, its quality, gaps and overlaps. The Chair invited the participants to introduce themselves.

The WENDWG Secretary, Assistant Director Alberto Costa Neves (IHB), introduced the documents of the meeting. The list of participants was updated (**Annex A**). Due to the changes in the ToR which opened membership to representatives of IHO Member States, the meeting decided to list the members first as representatives of the relevant Member States (first column) and second as representatives of the relevant RHC (for those representing the regions). The Membership is depicted in **Annex B**. The participants agreed on the following action:

Action 1: Secretary to update the WENDWG Membership in the IHO website (May 2014).

Post-meeting note: the WENDWG Membership list is kept updated on the IHO WEND webpage, together with the RENC Harmonization Sub-Group and the WEND Task Group membership lists.

2. Approval of Agenda

Doc: [WENDWG4-02 Agenda and Timetable \(IHB\)](#)

Participants were invited to comment on the draft agenda and timetable. The draft agenda was adopted without any change.

3. Matters arising from Minutes of WENDWG3 Meeting

Docs: [WENDWG4-03A Minutes of WENDWG3 \(IHB\)](#)

[WENDWG4-03B Status of Actions List from WENDWG3 \(IHB\)](#)

[WENDWG4-03C Draft procedure for overlaps \(France, Task Group\)](#)

Participants reviewed and approved the WENDWG3 Minutes and the List of Actions. France reported on the draft procedure for overlaps. The Chair thanked France and the Task Group (TG) for the draft procedures.

The RENCs (PRIMAR and IC-ENC) supported the procedure. Singapore emphasized that overlaps may continue to occur for the foreseeable future and that it may therefore be necessary to find a solution that enables ECDIS to resolve any overlapping cells. Singapore suggested developing guidelines and criteria to allow Original Equipment Manufacturers (OEMs) to address the problem. Until now, IHO standards and guidelines have indicated to OEMs that there will not be overlaps in data. The proposal from Singapore is to use technological tools to resolve any overlaps thereby avoiding political issues and to focus on solutions for any overlapping data in usage bands 4, 5 and 6.

The Russian Federation (RF) informed the meeting that is not a member of a RENC but always cooperated with them. In this regard, RF expressed the view that the number of RENCs needs to increase in order to work closely with the relevant RHCs to harmonize regional data. RF had considered the proposal from France and emphasized that the problem is that the producers are not able to solve the political issues surrounding the overlaps.

Norway agreed with RF in the sense that the sole responsibility for solving the overlaps lies with the relevant Hydrographic Offices but the RHCs can act as facilitators. Norway felt that the proposal from France needed to be understood properly so as not to exaggerate the role of the RENCs whose main role is to highlight encoding issues so that individual Hydrographic Offices can resolve them.

France clarified that in step 4 of the procedures in the WENDWG4-03C document, IHO refers to “IHB, RHC and the Regional International Charting Coordinator (ICC)” and further recommended to forward the proposed procedure to Member States for adoption.

Brazil supported the paper from France as an additional tool to solve overlapping data issues. UK expressed the view that the only way to solve overlaps in politically sensitive areas is to take the problem to the IMO.

Canada agreed with Singapore that the reality is that challenges in some politically sensitive areas may take a long time to be resolved. Acknowledging these challenges was the point of the revised Guidelines that are intended to place the responsibility for reporting on ENC related issues at the RHC level. Canada considered that the Guidelines to the WEND Principles need to be complemented with a risk assessment tool to allow RHCs to assess the priority for resolving overlapping data case by case. Regional experts in ENCs could then identify the solutions and the work to be done, and the priorities in each RHC. Canada invited participants to continue the work on the risk assessment.

Following these discussions the meeting decided to further develop the procedures for dealing with overlapping data in order that the Chair can submit the proposed procedures to IRCC6. This development will be done by the TG composed of Yves Guillaum (lead), Paul Canham, Mike Prince, Nick Ligacs, Sean Hinds, Wesley Cavalheiro, Esref Gunsay and the Secretary. For this task only the

TG will also include Julia Powell, James Harper and Hans Christoffer Lauritzen. WENDWG agreed on the following actions:

Action 2: Task Group to further develop doc. WENDWG4-03C (draft procedure for resolving overlapping ENC data) in order to reflect the Guidelines (Deadline: 15 April 2014)

Action 3: Chair to submit the draft procedure for resolving overlapping ENC data developed under Action 2 to IRCC6 (Deadline: IRCC6)

Action 4: Singapore to develop a proposal for a pilot project using OEM software tools to resolve overlapping ENC data issues and submit it to the WENDWG (deadline: WENDWG5).

Action 5: Chair to submit the paper on Guidelines on Assessing and Eliminating the Risk of Overlapping ENC Cells (doc. WENDWG3-05) to IRCC6 (deadline: IRCC6).

4. Review of the WEND principles and governance

Docs: [WENDWG4-04A](#) [WEND Principles](#) (Chair)

[WENDWG4-04B](#) [Guidelines for the implementation of the WEND Principles](#) (Chair)

[WENDWG4-04C](#) [Development of an IHO-RENC Concept](#) (Norway)[A](#) [B](#) [C](#)

[WENDWG4-04D](#) [Proposal 7 from France to EIHC5](#) (Chair)

Participants reviewed the documents related to the WEND Principles and the Guidelines for their implementation. The IHB informed the participants on the recent approval of the revised Guidelines and the definition of Cartographic Boundary by Member States following Circular Letters No: 04/2014 and 06/2014. Participants also discussed the governance requirements to fulfil the WEND Principles. Norway provided a status report on the developments of an IHO WENC concept following Actions WENDWG3/15 to 18. France' Proposal 7 to EIHC5 was also discussed. The Chair commented that the approval of the revised Guidelines was a good achievement.

France highlighted that the development of a recognized ENC worldwide and seamless database is key. This database does not exist and this is where the problem lies. The IHO “hallmark” needs to be present in the database. France also drew attention to its proposal to the EIHC5 concerning the implications due to the lack of the WEND.

Norway explained to the participants that the RENCs undertake complex operations and are in place to progress the concept of a WENC under the IHO badge. This is a long process that began in 2008 with the harmonization of the RENC procedures. The paper presented (doc. WENDWG4-04C) is in line with the WEND principles according to PRIMAR and to Norway. Norway invited IC-ENC to explain why the IC-ENC Steering Committee (SC) sees problems in the further development of a WENC Concept.

IC-ENC SC Chair commented on the progress made on the operational side between the two RENCs but concluded that despite much effort to achieve a viable IHO-WENC concept beyond the technical level, it was not achievable at that stage. He stressed that the RHSG work is not completed and its focus will return to the technical and commercial policy harmonisation between IC-ENC and PRIMAR.

IHO Director Iptes presented the view of the IHB Directing Committee that a progress report, discussion and recommendations on the work related to Actions WENDWG3/16, 17 and 18 must be undertaken at the meeting. He also provided a statement from the Directing Committee. This is shown in Annex C to these minutes.

As a result, an ad-hoc meeting of the RENC Harmonization Sub-Group (RHSG) produced the following input for the consideration of the participants:

Basis

IHO Recognised WEND Database consists of data from IC-ENC, PRIMAR and future RENCs meeting minimum standards

Way ahead

- *Commitment to WEND Principles*
- *Minimum standards for RENCs supersede overarching management board*
- *Underpinning IHO guidelines*

RHSG report to WENDWG

This concept to be reviewed by existing RENC members as part of process.

The ongoing Membership of the RHSG was confirmed as: China-Hong Kong, USA, Australia, IHB, the Chairs of the RENC governing bodies, the two RENCs operators, the RENC managers, and the members of the Task Group (as listed under agenda item 3).

The meeting then considered the case where ENC producer nations might create their own scheme of ENC distribution. Singapore described the EAHC scheme and how this could be set as minimum RENC operational requirements. The question posed by the meeting was on how the WENDWG would recognize a service as described by Singapore.

After consideration on all the views and documents the participants agreed on the following actions:

Action 6: RHSG to provide a revised RHSG paper on WENC (doc. WENDWG4-04C Annex B) to the Chair (deadline: April 2014).

Action 7: Chair to submit a report on the development of the WENC Concept to IRCC and seek subsequent endorsement by Member States (deadline: IRCC6).

Action 8: RHSG to propose the minimum standards for RENC operation considering CL05-2012 and the paper provided by US-Canada on actions from RHSG1 (deadline: April 2014).

Singapore expressed the view that the RENCs should seek to attract ENC producer nations to join rather than the IHO implement mechanisms to force them.

The meeting discussed how the IHO could attract non-RENC ENC producers to be part of the RENC solution for ENC distribution. The following actions were agreed:

Action 9: RENCs to continue working to attract ENC producer nations to join the RENCs (Permanent action)

Action 10: RHSG to produce a paper on the benefits for ENC producer nations to join a RENC (deadline: April 2014)

5. ENC Coverage Status Review

Doc: [WENDWG4-05](#) [Global ENC Coverage](#) (UK)

UK presented the status of ENC global coverage based on the UKHO database (AVCS data) for Usage Bands 1, 2 and 3. This analysis was not available for larger scale ENCs. Norway recognized the efforts that UKHO has made in assisting the achievement of a nearly global ENC coverage.

RF offered to work with other nations to re-scheme the ENC limits in order to improve Usage Band 1. The Chair's view was that the proposal is appealing but the priority is not high and the goal would not be achievable in the short term.

PRIMAR drew attention to the fact that at Usage Band 1 there are 16 GB cells not distributed via IC-ENC (only by UKHO/AVCS). Norway pointed out that in all Usage Bands there are around 1200 charts that are only available through AVCS and that this works against the WEND concept and the Principles. UKHO replied that the countries that distribute only through AVCS had made a sovereign decision to distribute the relevant ENCs in this way.

Director Iptes pointed out that ENC Coverage status is a permanent agenda item and that the main objective of WENDWG is to monitor and advise IRCC on the development of adequate ENC coverage to meet the SOLAS V/19 carriage requirements for ECDIS. He thanked the UKHO for the past meetings' reports on coverage but suggested that it is time for a joint effort to provide a WENDWG report on global ENC coverage.

UK explained that the effort to produce the ENC global coverage graphics is huge and UKHO would appreciate being released from this task. The participants then agreed on the following actions:

Action 11: RENCs to provide the ENC coverage report to WENDWG (deadline: WENDWG5).

Action 12: RENCs to provide the statistics on those ENCs not distributed via RENCs (deadline: WENDWG5).

6. ENC Gaps, Overlaps and Quality Assurance

Docs: [WENDWG4-06A Global ENC Gap Analysis](#) (UK)

[WENDWG4-06B Global ENC Overlaps](#) (UK)

[WENDWG4-06C Global ENC CATZOC](#) (UK)

[WENDWG4-06D US ENC Gap Analysis](#) (USA)

UK and USA presented the relevant documents. Canada expressed appreciation to UKHO on the efforts to provide images of ENC coverage. The challenge now is to have a validation of this information by the RHCs and to determine an ongoing methodology to communicate these findings and plans related to achievement of WEND objectives.

France called the attention to the "Metadata Store" concept and the need to provide specific information on risk on the basis of regional knowledge. It should be considered and possibly championed by the WENDWG to seek a richer compilation of ENC coverage that could provide route coverage information, source information, where the ENC can be purchased, any associated risks along routes, etc. This concept is not a small challenge but it should start small with what IHO can control. Once built in its basic form and hosted as an IHO ENC Metadata Store then it could be allowed to grow into one authoritative source for official ENCs.

The meeting took note of the reports.

7. ENC Catalogue development

Doc: [WENDWG4-07 ENC Catalogue development](#) (IHB)

IHB presented the developments and update of the online ENC Catalogue available in the IHO website at:

www.iho.int ENCs and ECDIS ENCs Availability View ENC Coverage Catalogue

The Secretary highlighted the need to identify the ENC metadata that will populate the Catalogue. Other source of information can be overlaid for analysis but in principle should not be part of the database.

Participants expressed the view that the Catalogue should contain the current ENC coverage, the target coverage, the quality assessment, the international routes (as endorsed by the IMO) and the main ports (as endorsed by the RHCs).

Participants also requested the IHB to provide a scoping paper on the IHO Catalogue to allow WENDWG members to understand the status and propose developments. The meeting then agreed on the following actions:

Action 13: IHB to provide a scoping paper of the ENC Catalogue (August 2014).

Action 14: WENDWG members to provide comments to the Chair on the necessary items to progress the ENC catalogue (deadline: 1 October 2014).

Action 15: Chair to specify the necessary items to progress the ENC catalogue and provide feedback to the IHB (deadline: 1 December 2014).

Action 16: Chair to request IRCC to task MSs to provide information on the ENCs that are not available through a RENC (deadline: during IRCC6).

8. Review of the WENDWG4 List of Actions

The participants reviewed the draft WENDWG4 List of Actions presented above in red. **Annex D** provides the consolidated list of actions.

Post-meeting note: list of actions and their status as known by the secretary at 15 July 2014 are provided in Annex D.

9. Review of the WENDWG Chair report to IRCC6

The participants reviewed the main items to be reported by the WENDWG Chair to IRCC6 and agreed on the following topics:

- a) Progress made in the WEND Principles and the guidelines, including France proposal 7 to the EIHC5.
- b) The developments on the overlap management process as an IHO procedure.
- c) RENC and WENC developments and the progress made.
- d) IHO ENC Catalogue developments
- e) ENC coverage
- f) Work programme based on the actions
- g) Note to IRCC on the CB activities that have already commenced
- h) Approval of the Definition of cartographic boundaries.

10. Any other business

There was no other business.

11. Next meetings dates and venue

The participants discussed the next meetings dates and venue, considering: the dates of IRCC7; the need to meet physically; the previous locations of the WENDWG meetings and the need for long-term planning.

The meeting agreed to meet on the following dates and venues:

- a) Singapore from 3 to 5 March 2015, subject to confirmation.
- b) Norway in March 2016, exact dates to be confirmed.
- c) Russian Federation in March 2017, exact dates to be confirmed.

END OF THE MEETING

On behalf of the meeting, the Chair warmly thanked the DHN for the excellent arrangements for the meeting. He also thanked all participants for their valuable contribution to the meeting and the following inter sessional work.

WENDWG4 closed at 1730 on 19 March 2014.

Annexes:

A – List of Participants

B – Membership List, April 2014 (*Post-meeting note:* the WENDWG Membership list is kept updated on the IHO WEND webpage, together with the RENC Harmonization Sub-Group and the WEND Task Group membership lists)

C – Statement from Directing Committee on the Establishment of an IHO WENC

D – List of Actions