

**6TH MEETING OF THE WORLDWIDE ENC DATABASE (WEND) WORKING GROUP
(WENDWG-6)**

Stavanger, Norway, 8-10 March 2016

FINAL MINUTES

- Notes:**
- 1) *The numbering of sections is the same as in the agenda, even if the order of the items was not exactly followed in the discussions.*
 - 2) *The actions are listed in Annex B only. When reading the text in the main part of the report, click on the hyperlink to view the associated action if any. Then, when in Annex B, press **ALT+ left arrow** to get back to the original section in the main part of the minutes.*
 - 3) *All documents and related presentations referred to in these minutes are available from the WENDWG page of the IHO website (www.iho.int > Committees & WGs > IRCC > WENDWG > WENDWG6).*

Annexes:

- [Annex A](#) *List of Participants*
[Annex B](#) *List of Actions&Decisions arising from WENDWG-6*

1. Opening and Administrative Arrangements

<i>Docs: WENDWG6-01A</i>	List of Documents (IHB)
<i>WENDWG6-01B</i>	List of Participants (IHB)
<i>WENDWG6-01C</i>	WENDWG Membership (IHB)
<i>WENDWG6-01D</i>	Terms of Reference for WENDWG (IHB)

Captain Jamie McMichael-Phillips (UK), Chair of the WENDWG, opened the meeting and welcomed the participants. On behalf of all the delegates, he expressed his thanks to Evert Flier, Director of the Norwegian Hydrographic Service, for hosting this meeting.

Twenty-four delegates from 16 Member States (Argentina, Brazil, Canada, Finland, France, Germany, Italy, Japan, Norway, Oman, Poland, South Africa, Sweden, Turkey, United Kingdom, USA), representing 11 Regional Hydrographic Commissions (ARHC, BSHC, EAHC, MACHC, MBSHC, NHC, NSHC, RSAHC, SAIHC, SWAHC, USHC), two Regional ENC Coordinating Centres (IC-ENC and PRIMAR), and the IHB attended the meeting. Additionally, four expert contributors from industry and academia had been invited by the WENDWG Chair to participate as observers. Director Mustafa Iptes and Assistant Director Yves Guillam (Secretary) represented the IHB.

In his opening address, Director Mustafa Iptes highlighted the importance of the activities of the WENDWG for the IHO and the need, during this sixth meeting, to carefully prepare the proposals that might be submitted to the IRCC as it was likely that they will be used for the proposals and discussion topics to be considered in April 2017 at the 19th International Hydrographic Conference / 1st IHO Assembly. He also thanked the RENCs for their efficient and continuing support in WEND matters, and the expert contributors that were attending the WENDWG meeting for the first time, whose ideas and views to go ahead are always beneficial to the IHO.

The Secretary indicated that some Regional Hydrographic Commissions needed to update the WENDWG Membership List.

The Chair reminded the participants that Mr Sean Hinds retired from the Canadian Hydrographic Service after a career of almost 35 years. Mr Sean Hinds had been a very proactive contributor to the WEND initiative and as Vice Chair of the WENDWG. Due to the vacancy, the need for the election of a new Vice-Chair was confirmed.

Outcome:

The WENDWG noted the need to keep the list of WENDWG Members updated (Representatives of RHCs in particular).

→ Action [WENDWG6/01](#), [WENDWG6/02](#)

2. Approval of Agenda and Timetable

Doc: WENDWG6-02A Rev2 [Agenda and Timetable](#) (IHB)

The Secretary informed the participants that the agenda of the meeting had been designed to match the work items of the WENDWG Programme of Work as approved at IRCC-7.

Outcome:

- The WENDWG approved the agenda (Rev2), including the election of the Vice-Chair of the WENDWG under agenda item 10.

3. Matters Arising from Minutes of 5th WENDWG Meeting

Docs: WENDWG6-03A [Minutes of WENDWG5](#) (IHB)
WENDWG6-03B [Status of Actions List from WENDWG5](#) (IHB)

The IHB listed the actions and decisions from the last meeting and provided short comments on their status. Most of them had been, either implemented or completed.

Outcome:

The WENDWG noted the status of actions and agreed that the deadline of some pending actions had to be extended.

→ Action [WENDWG6/07](#)

4. Review of progress made on the work items of the WENDWG 2015-16 Programme of Work

4.1 Overlapping issues

Docs: WENDWG6-04.1A1 *Report on a pilot project using OEM tools (SG)*
WENDWG6-04.1A2 *Report on scenarios and test cases on ECDIS (IC-ENC) - [Part A](#) – [Part B - Presentation](#)*
WENDWG6-04.1B1 *Proposal to amend the Guidelines for the implementation of the WEND Principles for Assessing and Eliminating the Risk of Overlapping ENC Cells (Chair, RHCs Representatives) - [Presentation of ENC Status in Regions F&G](#)*
WENDWG6-04.1B2 *Report on the development of the policy on overlapping data and production responsibilities (IC ENC, PRIMAR)*

One of the main objectives of the WENDWG is to monitor the application of the WEND Principles by the Hydrographic Offices and the Regional Hydrographic Commissions (RHCs). As reported to

the IMO, global ENC coverage has reached the point where further progress is primarily dependent upon new surveys or re-surveys being carried out in the areas not yet covered by ENCs. Yet, for various reasons, there remain numerous cases of overlapping ENCs, which is contrary to the ENC production principles established by the IHO. Based on the analysis provided by the UKHO and the RENCs, it was agreed that the situation is not improving very much.

While the research study led by Singapore in the Malacca Strait is expected, IC-ENC provided a very comprehensive report on the unpredictable behaviour of ECDIS in situations where overlapping data occurs, for different scenarios.

CIRM provided very useful comments on the possible existing ENC selection criteria implemented in ECDIS. He also stated that manufacturers would stand ready to implement a hierarchy of tests if the IHO was in a position to propose selection criteria (CATZOC, waters under the jurisdiction of the ENC Producer, compilation scale, more recent survey date, publication date, etc.). But this is obviously not possible at the moment and it is likely that the selection is made...randomly! He also confirmed that HO's cartographers are the right people to make cartographic choices, not the industry. PRIMAR reported that for budget reasons, it is likely that the mariners do not face so many cases of overlapping as they buy only one ENC at the appropriate scale for the voyage. However, the RENCs cannot deny the sale of these overlapping cells. So the US wondered whether the problem was real or not, and if it was, what could be achieved by the WENDWG if not the monitoring only?

As decided at WENDWG-5, ZA confirmed that the WEND Principles together with the Guidelines did not need to be amended, as there will be no effect at all if they were, but they needed to be applied even enforced, notably through the definition of approved-ENC schemes by RHCs in their *respective* Charting Regions.

Considering that the use of IMO arbitration was the absolute last option, as indicated in the Guidelines, the Chair of the IC-ENC Steering Committee suggested a pragmatic approach taking into account all the complementary tools available at the IHO level and as a first stage, to consolidate the results of the IC-ENC overlapping study seeking the views of OEMs, the ENCWG and the NCWG. A full set of actions was decided accordingly.

Post meeting note: An S-57 Encoding Bulletin, regarding the "same compilation scale, different usage band" scenario, was subsequently issued by the ENCWG.

Outcome:

- The WENDWG commended the analysis on *Testing Overlapping ENCs in ECDIS* carried out by IC-ENC and noted the status report provided by FR for ENC coverage and overlapping in Regions F&G.

→ **Actions** [WENDWG6/03](#), [WENDWG6/04](#), [WENDWG6/05](#),
[WENDWG6/06](#), [WENDWG6/07](#)

4.2 RENC Harmonization and Distribution

Docs: WENDWG6-04.2C2 *Report on Harmonization Issues:*

[IC-ENC Report – Presentation](#)

[PRIMAR Report](#)

[Minutes of the Joint RENC-IHB Meeting \(25 Jan. 2016\) - Presentation](#)

WENDWG6-04.2D1 [Joint RENC Document on the benefits of joining a RENC or distributing ENCs through a RENC \(IC-ENC, PRIMAR\)](#)

WENDWG6-04.2D3 *Status report on the ENC Producers who distribute their ENCs through a RENC (RENCs, IHB) - [ENC Data Flow Producers-RENCs-Distributors](#)*

Since the decisions made in 2015 at the RENCs level and at IRCC-7, the RENCs co-operation on harmonization and distribution issues is now well in place.

Director Mustafa Iptes noted that the regular participation of the RENCs in RHCs' conferences and plenary meetings is appreciated as a key factor of the integration process of coastal States in the IHO. That was acknowledged by the RENCs as they assist the potential new IHO Member States in ENC

production and data validation. The WENDWG Chair also noted that the preparation of this WENDWG-6 meeting was facilitated to a large extent by the Joint RENC meeting held at the IHB at the end of January. As a tangible result, the RENCs provided the participants with a very comprehensive data flow diagram that depicts the RENCs membership and the actual data validation and distribution mechanisms. The IHB noted that it would be worthwhile in the future to flag, possibly as an additional layer to this diagram, the ENC producers/data that do not benefit from the full range of data validation by the RENCs, including edge matching, overlapping analysis, application of new edition of S-58, etc.

As a matter of fact, it is important for the Hydrographic Offices (HOs) to understand that the industry considers that the IHO standards in force were supposed to be sufficient. CIRM noted that if there were good reasons to believe that this range of IHO tools was not sufficient, especially with regard to safe navigation, then it was the role of the IHO and its HOs to propose amendments or even new standards.

Norway presented a pilot project for S-102 bathymetric data distribution. That raised some discussions on the principles, both from the perspective of end users and of hydrographic services. CIRM confirmed that these products are not intended to be for primary navigation and ECDIS, but should be considered positively in the future as part of e-navigation. The industry sees the benefit of them in order to set up new maritime services. Nonetheless, the role of the RENCs for S-102 data validation and distribution remain an open question for the time being.

Outcome:

- The WENDWG noted the progress made by the RENCs in supporting the WENDWG programme of work. This will be reported at IRCC-8.

→ Actions [WENDWG6/08](#), [WENDWG6/09](#)

4.3 ENC Coverage

Docs: WENDWG6-04.3F1 Report on global ENC coverage (UK, RHCs Representatives) -

Global Analysis by RHC (Coverage, Overlaps, Ports Not Covered) - [Presentation](#)

WENDWG6-04.3F2 Report on risk assessment methodologies and existing gaps (RHCs

Representatives) - [ENC Coverage for Cruise Ships in the Mediterranean Sea - UB 4, 5 and 6](#)

WENDWG6-04.3F3 List of Ports and Moorings Database (UK, RHCs Representatives) - [Presentation](#)

The UKHO provided a global analysis of the situation in terms of ENC coverage. The meeting was informed that progress had been made by several regional International Charting Coordination Working Groups (ICCWG) that are now using ENC coverage as part of their systematic risk assessment analysis protocols. It is considered that the RHCs that are now doing this will benefit further as soon as they can maintain and keep such studies updated for the various categories of SOLAS vessels, and not only cruise ships. The development of a database, derived from the National Geospatial Agency World Port Index Database (Pub. 150), that will facilitate the identification of the ports and locations where large scale ENC coverage is missing, was decided.

Outcome:

- The WENDWG noted the report made by the UKHO and encouraged the RHCs to implement systematic risk assessment methodologies to assess and further design the optimal ENC coverage.

→ Actions [WENDWG6/10](#), [WENDWG6/11](#), [WENDWG6/12](#)

4.4 IHO Performance Indicators, IHO ENC Catalogue

Docs: WENDWG6-04.4F4 [Report on Performance Indicators related to WEND \(IHB\)](#)
WENDWG6-04.4H1 [Progress report on the development of the IHO ENC Catalogue \(IHB\) - Presentation](#)

Seven Strategic Performance Indicators (SPIs) and Working Level Performance Indicators (WPIs) are currently related to WENDWG activities and reported in the IHO Annual Reports (P-7). In order to facilitate the review of the IHO Strategic Plan at the next IH Conference/IHO Assembly in 2017, the WENDWG was invited to consider the evolution and substitution of these seven indicators by two only: the first one is designed to reflect the IHO's level of commitment in ENC production ; the second one is to assess the appreciation by end-users and stakeholders. This proposal will be discussed at IRCC-8.

An update on the evolution of the IHO ENC Catalogue was provided by the IHB. In relation with distribution issues (see para. 4.2), ENC availability and accessibility were discussed, as well as the extension of the catalogue to display "approved" ENC schemes as it is done in S-11 Part B for INT paper charts.

Outcome:

- The WENDWG agreed to make a proposal at the next meeting of IRCC for the evolution of the performance indicators related to WEND activities in the perspective of the next IHO Strategic Plan and 3-year Programme of Work.

→ Actions [WENDWG6/13](#), [WENDWG6/14](#)

- The WENDWG agreed on several actions to improve the IHO ENC Catalogue and the accessibility of ENCs.

→ Actions [WENDWG6/15](#), [WENDWG6/16](#),
[WENDWG6/17](#), [WENDWG6/22](#)

4.5 The Full Implementation of the WEND Principles

Doc: WENDWG6-04.5J1...J4 Rev1 [Report of the Correspondence Group on the work items relating to the full implementation of the WEND Principles \(assessment, proposals for corrective actions, recommendations on long term consequences if no action identified\) \(FR\)](#)

Since the EIHC-5 and IRCC-6, the WENDWG is tasked to propose a way ahead for assessing the long term consequences of not achieving full implementation of the WEND Principles.

FR, on behalf of the correspondence group, gave a comprehensive analysis on the barriers that prevent the full implementation of the WEND Principles and listed the possible consequences. Several recommendations were reported, some of them existing already in the IHO toolbox (Guidelines, Annex to the WEND Principles), but having no effect as they are not fully applied in some cases. The recommendations will be reported to IRCC-8, seeking for further guidance.

Outcome:

- The WENDWG noted the report on the full implementation of the WEND Principles and invited the WENDWG Chair to seek further guidance at IRCC-8.

→ Action [WENDWG6/18](#), [WENDWG6/22](#)

4.6 Admiralty Information Overlays (AIO)

Docs: WENDWG6-04.6K1 [Status Report on AIO \(UK\)](#)
WENDWG6-04.6K2 [Status Report on AIO following NCWG-1 and HSSC-7, WENDWG Interim Report on AIO \(HSSC7-05.6B\) \(IHB\)](#)
WENDWG6-04.6K3 [Proposals for AIO \(FR\) - Presentation](#)

Since 2014, different steps have been decided at the WENDWG, IRCC and HSSC levels to address the issues related to the Admiralty Information Overlays offered by the UKHO as part of the AVCS service.

The WENDWG considered the proposals made by the correspondence group to be submitted at IRCC-8 for final approval and implementation.

Outcome:

- The WENDWG noted the report prepared by the correspondence group and agreed on the proposals to be submitted at IRCC-8 for endorsement and implementation.
- Without further delay, the UKHO is requested to amend the AIO wording on its website. (*Post meeting note*: complete)

→ Actions [WENDWG6/19](#), [WENDWG6/20](#)

5. Industry and Stakeholders' Session

5.1 The Data Aspects of future navigation: What Industry is looking for when talking e-Navigation?

Doc: WENDWG6-05.1A Presentation (CIRM/Jeppesen) - [Presentation](#)

5.2 ENC's and NtMs around Taiwan: Real-world test cases of WEND, the risks and user needs

Doc: WENDWG6-05.2A Presentation (National Taiwan Ocean University) - [Presentation](#)

5.3 Grid indexing and referencing for S-100/S-101

Doc: WENDWG6-05.3A Presentation (Caris) - [Presentation](#)

5.4 PresLib 4.0 – Consequences in Shipping

Doc: WENDWG6-05.4A Presentation (SevenCs) - [Presentation](#)

The participation of expert contributors at the WENDWG, for the first time, was very fruitful and enlightening throughout the working sessions. The presentations made in the stakeholders' session raised also a lot of discussions and questions.

As it is the case for some other domains (development of S-100 based products for instance, S-101 in particular), one of the lessons learned from these discussions together with industry and academia participants, is that the IHO, its working groups (such as MSDIWG) and the HOs themselves have still the lead to address the current and future issues and develop the relevant standards in the appropriate timeframe. Industry remains engaged to provide technical support but is not entitled to solve IHO strategic issues.

Due to the proximity of the International Hydrographic Conference/Assembly in 2017, it was decided to invite expert contributors in 2018 only, as the next WENDWG meeting will mainly focus on the inputs to the Conference/Assembly.

Outcome:

- The WENDWG welcomed the presentations made by industry and academia and agreed on the benefit of having stakeholders and expert contributors in future WENDWG meetings.

→ Actions [WENDWG6/21](#), [WENDWG6/22](#), [WENDWG6/23](#), [WENDWG6/24](#)

6. Review of Information Papers

There was no information paper to be considered at WENDWG-6.

7. Drafting Session

On the first day, a drafting group (IC-ENC, CIRM, US, ZA,) prepared a draft cover letter for the WENDWG Chair, the objective of which being to transmit the IC-ENC's report on *Testing Overlapping ENCS in ECDIS* to the President of CIRM in order to get the views of various OEMs on the results given in the report. One of the main question is to evaluate the extent of the risks for safety of navigation and to estimate whether the problem of overlapping ENCS is serious enough to be strongly addressed or not.

Outcome:

- The WENDWG thanked CIRM for proposing to inform the CIRM Conference participants on mid-April on the preliminary results given in the IC-ENC's report on *Testing Overlapping ENCS in ECDIS*.

- It was agreed that that a questionnaire seeking OEMs' feedback would be issued.

→ Action [WENDWG6/04](#)

8. Review and update of the WENDWG Programme of Work

Doc: WENDWG6-08A [WENDWG Programme of Work 2015-16](#) (Chair/Sec)

Outcome:

- Considering the few amendments that had to be made, the participants agreed that the WENDWG Programme of Work for 2016-17 would be prepared by the Secretary as part of the report of the WENDWG Chair for submission to IRCC-8.

→ Action [WENDWG6/25](#)

9. Review of the WENDWG6 Action List

Docs: WENDWG6-09A [IC-ENC Report](#) (IC-ENC) – [Presentation](#)

Outcome:

- The participants agreed on the list of actions&decisions during the review made at the end of the meeting.

Post meeting note: version 21 March 2016 of the list has been uploaded on the IHO website.

10. Any other business – Election of Vice-Chair

Norway introduced an interesting educational video on hydrography. As there was no other item, it was decided to proceed to the election of a Vice-Chair.

Outcome:

- A couple of IHO Member States nominated Mr John Nyberg, who was elected unanimously.

→ Decision [WENDWG6/26](#)

11. Next Meeting Dates and Venue

Outcome:

- The WENDWG welcomed the offer made by the US to host the next meeting (WENDWG-7), either in Washington DC, or at the University of New Hampshire, Durham, from 31 January to 2 February 2017.
- The 2nd Joint RENC-IHB meeting will be organized on 31 January 2017 at the same venue.

→ Action [WENDWG6/27](#)

The Chair and Director Iptes, on behalf of the participants, expressed their sincere gratitude to the Norwegian Hydrographic Service for their hospitality and support in preparation of the meeting. Director Iptes was very grateful to the participants noting that, in support of strategic and technical discussions, WENDWG Members had received great inputs from industry and academia expert contributors. This bodes well for the continuous debates that will take place at IRCC-8 at the end of May.

The WENDWG Chair concluded that it was great and so important to have active participants at this meeting, involved at the operational level in their country, and so able to capture and bring home what will make mariners 'life safer and easier.

List of Participants
(Based on the WENDWG Membership List)

Member State	RHC ¹		
Argentina	SWAtHC	Fabian VETERE	fveter@hidro.gov.ar
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¹ RHC : Regional Hydrographic Commission

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Observers/Stakeholders			
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LIST OF ACTIONS&DECISIONS FROM WENDWG-6

AGENDA ITEM/WORK IEM	SUBJECT	ACTION No.	ACTIONS&DECISIONS (in bold, action by)	TARGET DATE/EVENT	STATUS (at 18 April 2016)
1. Opening and Administrative Arrangements					
	WENDWG Membership	WENDWG6/01	UK to report to the NSHC Chair on the need for the designation of a new representative at WENDWG	Prior to NSHC-32, June 2016	
	WENDWG Membership	WENDWG6/02	IHB to update the WENDWG Membership List, following the designation of Canada (Laurent Tardif) as the representative for ARHC and USCHC.	End of March 2016	Complete
4. Review of progress made on the work items of the WENDWG 2015-16					
4.1 Overlapping Issues					
	Impact of overlapping ENCs on ECDIS	WENDWG6/03	IHB (on behalf of HSSC Chair) and IC ENC Rep. in ENCWG to seek the views of the ENCWG and the NCWG, on the <i>IC-ENC's Testing Overlapping ENCs in ECDIS</i> report and these WGs to provide any recommendation as appropriate.	12 March 2016 WENDWG-7	Done
	Impact of overlapping ENCs on ECDIS	WENDWG6/04	WENDWG Chair to seek the views of CIRM on the <i>IC-ENC's Testing Overlapping ENCs in ECDIS</i> report (draft cover letter to be prepared by the ad hoc drafting group, on risk level, criteria used by OEMs, ECDIS standard test, best way of implementing the WEND Principles, reports of significant problems by manufacturers, etc.)	End of March 2016	Complete

AGENDA ITEM/WORK IEM	SUBJECT	ACTION No.	ACTIONS&DECISIONS (in bold, action by)	TARGET DATE/EVENT	STATUS (at 18 April 2016)
	Significant overlapping	WENDWG6/05	WENDWG Chair/Sec to report to IRCC-8 and seek guidance from this Committee, on the intention to draft a proposal at the IHC-19/IHO-A1 for the adoption of an IHO Decision, the objective of which being a commitment to: - identify the most “navigationally-significant” overlapping issues, - prevent the increase of such cases; - address and solve all of those cases, as soon as possible and at least within 3-years, at the IHO level (using the full range of tools: WEND Guidelines, RHCs, ENC Schemes, RENCs, OEMs).	11 April 2016 (IRCC-8 submission deadline) End of August/October 2016	
	ENC Schemes	WENDWG6/06	RHCs to define and adopt ENC Schemes (as it is done for INT Charts Schemes) and provide basic metadata to the IHB and IHB to consider including a layer of “Approved” ENC Schemes to the IHO ENC Catalogue or as an extension of the INT Web Chart Catalogue.	WENDWG-7	
3, 4.1	ECDIS scenarios and ENC overlapping test cases	WENDWG6/07 (former WENDWG5/04)	SG (on behalf of EAHC) to report (including potential impact on WEND Principles if any), on scenarios and outcomes of case studies for solving ENC overlapping issues through OEM software solutions within ECDIS.	IRCC-8	
4.2 RENC Harmonization and Distribution					
	ENC Distribution	WENDWG6/08	IHB to upload on the WENDWG Repository webpage a version-controlled of the ENC Data Flow Producers-RENCs-Distributors diagram, as well as the Joint RENC Document on the benefits of joining a RENC/or distributing ENC through a RENC. Document to be kept updated by the RENCs	1 April 2016	Complete

AGENDA ITEM/WORK IEM	SUBJECT	ACTION No.	ACTIONS&DECISIONS (in bold, action by)	TARGET DATE/EVENT	STATUS (at 18 April 2016)
	ENC Distribution	WENDWG6/09	WENDWG Chair to include the ENC Data Flow Diagram in the report to IRCC-8 and, when highlighting the importance of ENC data quality for mariners and as one of the major objectives of the IHO, confirms that, although it is the Coastal State Responsibility to decide on the ENC distribution mechanisms, one of the best way to ensure a consistent and high quality level within the IHO is to adopt a distribution through the RENCs (ref. to the WENDWG Repository)	11 April 2016 (IRCC-8 submission deadline)	
4.3 ENC Coverage					
	List of Ports	WENDWG6/10	US to provide the IHB with the NGA World Port Index Database (Pub. 150) and liaise with the US Representative at the IMO to get a possible IMO List of the Top 2000 ports.	WENDWG-7	
	Gap Analysis	WENDWG6/11	IHB to make the MACHC worldwide cruise ship gap analysis available on the WENDWG Repository and RHCs to provide feedback on their interest and possible extension to other SOLAS vessels.	WENDWG-7	
	ENC Coverage, IHO Report to NCSR	WENDWG6/12	UKHO to provide coverage statistics for IMO / NCSR 4 (business as usual) and WENDWG Chair to provide IHB with any recommendation to be brought up to the attention of the IMO/NCSR in terms of coverage (moorings, ports, etc.), inconsistencies...	End of October 2016	
4.4 IHO Performance Indicators, IHO ENC Catalogue					

AGENDA ITEM/WORK IEM	SUBJECT	ACTION No.	ACTIONS&DECISIONS (in bold, action by)	TARGET DATE/EVENT	STATUS (at 18 April 2016)
	Preparation of the next IHO Strategic Plan and 3-year Programme of Work	WENDWG6/13	Based on Doc. WENDWG6-04.4F4, WENDWG Chair to make a proposal in his report to IRCC for considering the adoption by the IHC-19/IHO-A1 of 2 new Performance Indicators as part of the new IHO Strategic Plan and 3-year Programme of Work.	11 April 2016	
	Preparation of the next IHO Strategic Plan and 3-year Programme of Work	WENDWG6/14	WENDWG (IHB/RENCs/RHCs) to prepare the implementation of these indicators, following IRCC-8 decision (template report for end-user service providers/RENCs, number of SOLAS ENC users, etc.)	End of October 2016	
	Evolution of the IHO ENC Catalogue	WENDWG6/15	In addition to Action WENDWG6/06 relating to ENC Schemes, IHB to consider the possibility of displaying ENC Coverage by charting regions/RHCs.	End of June 2016	In progress
	Evolution of the IHO ENC Catalogue	WENDWG6/16	IHB to, either add an explanatory note on the attribute <i>RENC_Member</i> , in the IHO ENC Catalogue legend panel, or to delete it from the display.	End of June 2016	
	Extension of the IHO ENC Catalogue, ENC Distribution	WENDWG6/17	All End-User Service Providers (Jeppesen, ...), ENC Producers, VARs, HOs (“black box” of the ENC Data Flow diagram), to provide a subset of their ENC catalogue to complement the IHO ENC Catalogue, so all <u>available</u> ENCs can be displayed, and IHB to consider the possibility of flagging up the ENCs that are not <u>accessible</u> to all, based on the metadata that are provided.	Test by the end of June 2016, then on a monthly basis.	
4.5 The Full Implementation of the WEND Principles					

AGENDA ITEM/WORK IEM	SUBJECT	ACTION No.	ACTIONS&DECISIONS (in bold, action by)	TARGET DATE/EVENT	STATUS (at 18 April 2016)
	Barriers and Recommended Actions	WENDWG6/18	WENDWG Chair to include a summary report of the analysis on the full implementation of WEND Principles and highlight “new” recommendations that might need further considerations either at the IHO global level, or at the Regional level.	11 April 2016	
4.6 Admiralty Information Overlays					
	Admiralty Information Overlay	WENDWG6/19	WENDWG Chair to provide the IRCC with the following proposals: 1. UKHO to withdraw their AIO service for the areas where the primary charting authority produces T&P NtMs for their ENC. 2.a. AIO service to be provided only if and after a given producer nation has provided consent for such a service on waters where it is the primary charting authority. 2.b. An improved solution for awareness and use of T&P updates in future S-101 based ECDIS to be included in the ENCWG / S-101 Project Team work plans.	11 April 2016	
	Admiralty Information Overlay	WENDWG6/20	UKHO to reconsider the wording on the AIO services currently available on their website, in a way that it does not imply as a requirement for safety of navigation.	11 April 2016	Complete
5. Industry and Stakeholders’ Session					
	ENC Data Quality, Preparation of the Future	WENDWG6/21	WENDWG Chair to recommend to the IRCC that HOs work closely with the ENCWG to extend the harmonized use of CATZOC when encoding ENCs and to increase the resolution of bathymetric contour lines within ENCs.	IRCC-8	

AGENDA ITEM/WORK ITEM	SUBJECT	ACTION No.	ACTIONS&DECISIONS (in bold, action by)	TARGET DATE/EVENT	STATUS (at 18 April 2016)
	ENCs Accessibility	WENDWG6/22	UKHO and Jeppesen to consider the possibility of making their “exclusive” ENCs accessible to <u>every</u> End-User Service Provider (VARs, etc.), and to give a timeline on when that will happen. WENDWG to monitor the progress made on an annual basis (ENC Data Flow diagram).	IRCC-8 WENDWG-7	
	Grid Schemes, Preparation of the Future	WENDWG6/23	Following a “food-for-thought” presentation by Caris on new standards (S-1xx, S-4xx, ..) and ENC / S-101 / S-102 schemes, WENDWG Chair to highlight in his report to IRCC (and HSSC), the benefit for HOs to move to a datacentric approach rather than products-based only and encourage and support the work of MSDIWG.	11 April 2016	
	Participation of Expert Contributors in WENDWG meetings	WENDWG6/24	In accordance with WENDWG TORs and considering positive feedback from their participation in WENDWG-6, WENDWG Chair to invite subject matter experts (industry, academia, ...) at WENDWG-8 meeting in 2018.	WENDWG-8	
8. Review and update of the WENDWG Programme of Work					
	IRCC-8 Preparation	WENDWG6/25	WENDWG Chair to submit the draft report, including the WENDWG 2016-17 Programme of Work to IRCC-8.	By 11 April (IRCC8 submission deadline)	In progress
10. Any other business – Election of Vice-Chair					
	Vice-Chair	WENDWG6/26	Mr John Nyberg (USA, NOAA) was elected as Vice-Chair		WENDWG webpage updated
11. Next meeting dates and venue					

AGENDA ITEM/WORK IEM	SUBJECT	ACTION No.	ACTIONS&DECISIONS (in bold, action by)	TARGET DATE/EVENT	STATUS (at 18 April 2016)
	WENDWG-7 and RENCs Co- operation	WENDWG6/27	Due to the IHC-19/IHO-A1 in April 2017, WENDWG-7 will be held back-to-back with the Joint RENCs-IHB meeting in USA (venue, tbc), 31 Jan. – 2 Feb. 2017.	Jan-Feb. 2017	