

SIXTH MEETING OF THE IHO INTER-REGIONAL COORDINATION COMMITTEE
IHO-IRCC6
Paris, France, 19-20 May 2014

REPORT

1. OPENING AND ADMINISTRATIVE ARRANGEMENTS

Docs: IRCC6-01A List of Documents (IHB)
IRCC6-01B rev5 List of Participants (IHB)

The Chair, Rear Admiral Tom Karsten (UK), opened the meeting and welcomed the IRCC Members and Observers. He thanked his predecessor, Dr. Savi Narayanan (Canada) for her work at IRCC. He also thanked the *Service Hydrographique et Océanographique de la Marine* (SHOM) for hosting the meeting and for their excellent organization and the IHB for the support to the Chair. The Chair also gave a brief presentation highlighting the main objectives of the IRCC; namely, that Members and Observers could promote and coordinate their activities and express their views.

The *Ingénieur Général de l'Armement* (IGA) Bruno FRACHON (France) welcomed all the participants to the *Pôle Géosciences* where Météo-France, *Institut National de l'Information Géographique et Forestier* (IGN) and SHOM are located in Paris. He thanked his team for working hard to prepare the meeting.

Mr. Robert Ward, the President of the IHO, thanked the host, SHOM, for arranging the venue and the facilities for IRCC6. He highlighted the role of the IRCC to provide the oversight, governance and the direction for the execution of Programme 3 of the IHO Work Programme, particularly the delivery, implementation and execution of the global and regional aspects of the IHO's objectives. For this reason the IRCC is made up of representatives of the regional Commissions and the subordinate bodies of the IRCC rather than representatives of individual States. He also noted the busy agenda for only two days and the many important matters to consider, while stressing that WEND is a particularly important topic.

The meeting participants were invited to introduce themselves for the benefit of participants attending IRCC for the first time. The list of participants was updated (**Annex A**). The hosts and the IHB gave a brief on logistics and administrative issues.

2. APPROVAL OF THE AGENDA AND TIMETABLE

Doc: IRCC6-02 rev1 Agenda and Timetable (IHB)

The Chair introduced the Agenda items and the timetable (*doc. IRCC6-02 rev1*) and invited participants to comment. The agenda and timetable were adopted without changes.

3. MATTERS ARISING FROM MINUTES OF IRCC5 MEETING

Docs: IRCC6-03A Minutes of IRCC5 (IHB)
IRCC6-03B Status of Action List from IRCC5 (IHB)

The Secretary, IHB Director Mustafa Iptes, introduced the IRCC5 Report and List of Actions (docs IRCC6-03A and IRCC6-03B) which were reviewed and updated accordingly. The Chair inquired whether there was any feedback from IMO on action IRCC5/15 concerning the IHO report to the NAV Committee. President Ward explained that the report had been compiled and would be considered during the IMO/NCSR1 meeting (30 June - 4 July 2014). Regarding action IRCC5/16, the

Secretary explained that very few answers were received to the IRCC CL 3/2014 on the relevant tasks of the IHO 2013 Work Programme.

The Secretary also explained that a limited number of answers were received for IRCC CL 4/2014 on the IHO-EU Network Working Group (IENWG). Regarding actions IRCC5/34 and IRCC5/35, the Chair invited the RHC Chairs to provide the regional view on Satellite Derived Bathymetry (SDB) and Crowd-Sourced Bathymetry (CSB) for the next EIHC5. The meeting agreed on the following actions and decision:

Decision 1: to approve the IRCC5 report and the action list.

Action 17: RHC Chairs to invite Hydrographic Office representatives to be prepared to discuss Proposals 4 (Crowd Sourced Bathymetry - CSB) and 6 (Satellite Derived Bathymetry- SDB) during EIHC5 (deadline: EIHC5).

Action 18: RHC Chairs to be ready to present the regional view on CSB and SDB during EIHC5 (deadline: EIHC5).

Action 19: Chair of IHO-EU Network WG to report the progress of the IHO-EU Network WG to IRCC7 (during IRCC7).

Note: Actions 1 to 16 are permanent and actions agreed during the respective agenda items are numbered from 17 onward.

4. REVIEW OF TERMS OF REFERENCE AND RULES OF PROCEDURE

Doc: IRCC6-04 TOR-ROP (IHB)

The Secretary introduced the IRCC Terms of Reference (ToR) and Rules of Procedure (RoP). The Article 1 of the RoP was revised to include the WENDWG and IENWG in IRCC and Article 3 of the RoP was amended to better reflect of the process through which the Vice-Chair assumes the Chair if the Chair is unable to carry out his duties. The revised RoPs will be submitted for Member States' approval.

The final text for IRCC RoP Article 1 and Article 3 was agreed as below, with the changes in red:

1. The Committee shall be composed of the Chairs of the Regional Hydrographic Commissions; the Chairs of the Hydrographic Commission on Antarctica (HCA), the Capacity Building Sub- Committee (CBSC), the Worldwide Navigational Warning Service Sub-Committee (WWNWS), the International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers (IBSC), **Worldwide ENC Data (WEND) Working Group, IHO-EU Network Working Group (IENWG)** and the General Bathymetric Chart of the Oceans (GEBCO) Guiding Committee. Committee Meetings shall be open to all Member States (MSs) of the IHO. International Organizations and accredited Non-Government International Organizations (NGIOs) may attend Committee Meetings.
3. The Chair and Vice-Chair shall be a representative of a Member State. The election of the Chair and Vice-Chair shall be decided at the first meeting after each ordinary session of the Conference (“*Conference*” to be replaced by “*Assembly*” when the Assembly is established) and shall be determined by vote of the Committee Members present and voting. If the Chair is unable to carry out the duties of the office, the Vice-Chair shall **assume** the Chair with the same powers and duties.

The meeting agreed on the following decision and actions:

Decision 2: to approve the amendments to the IRCC RoP and submit to MSs for approval (**Annex B**).

Action 20: IHB to issue CL to seek MSs approval of the updated IRCC RoP (deadline: June 2014)

Action 21: IHB to upload the revised IRCC RoP to the IHO website when adopted by MSs (deadline: September 2014).

5. REPORT BY THE CHAIR AND THE IHB

Docs: IRCC6-05 Report of IHB (IHB)

The Chair presented his oral report on the activities of the IRCC since the last meeting. He highlighted; the revision of the WEND Principles with new guidelines and the new definition of cartographic boundary; new ToR for WENDWG; the revision on publications B-6, S-5 and S-8; revision of the IHO CB Strategy; the progress of CB activities (increasing numbers); new digital C-55 available; increased number of recognized courses of Category A and Category B; the establishment of the IENWG; and, the activities in the RHC meetings.

President Ward presented the IHB Report (*doc. IRCC6-05*) with special emphasis on the ratification of the IHO Convention by 48 Member States with only 8 more necessary for the approval. He highlighted also the status of approval of Viet Nam, Brunei Darussalam and Georgia. The President also presented the status of development of the Country Information Database, the Regional Information Database, the pilot project for the Antarctica and the IHO ENC Catalogue.

The President also presented IHO outreach and World Hydrographic Day preparation, the future participation in IFHS Hydro 14 (that will include an IHO Stakeholders' Forum) and the stand down of the International Hydrographic Review editor. Regarding the EIHC5, he reported the nine proposals, the three reports and recommendations, the three programme summaries and recommendations and the 2015 WP and budget. He highlighted the participation of Member States in the execution of the IHO WP, the increasing dependence on voluntary industry participation and contract support, the need to coordinate the scheduling of meetings and the dependency on the inputs from Committees, Sub-Committees and Working Groups for resource-based planning.

Director Iptes presented the objectives and the outcome of the IHO Seminars on Capacity Building and on the Standards of Competence that were held in Monaco from 5 to 7 March 2014. The level of participation and the feedback received indicated the importance of these two themes to the IHO community. He also suggested IRCC worked intersessionally in order to fulfill its needs and underlined the fact that the IRCC Secretariat was facing difficulties in getting responses from RHC Chairs and from IRCC bodies the IRCC Circular Letters. The meeting then agreed on the following decision:

Decision 3: to note the reports of the Chair and of the IHB.

6. RHC REPORTS

<i>Docs: IRCC6-06A</i>	<i>Nordic HC (NHC Chair)</i>
<i>IRCC6-06B</i>	<i>North Sea HC (NSHC Chair)</i>
<i>IRCC6-06C</i>	<i>East Asia HC (EAHC Chair)</i>
<i>IRCC6-06D rev 2</i>	<i>US/Canada HC (USCHC Co-Chair)</i>
<i>IRCC6-06E</i>	<i>Mediterranean and Black Seas HC (MBSHC Chair)</i>
<i>IRCC6-06F</i>	<i>Baltic Sea HC (BSHC Chair)</i>
<i>IRCC6-06G</i>	<i>Eastern Atlantic HC (EAtHC Chair)</i>
<i>IRCC6-06H rev 1</i>	<i>South-East Pacific Regional HC (SEPRHC Chair)</i>
<i>IRCC6-06I</i>	<i>South-West Pacific HC (SWPHC Chair)</i>
<i>IRCC6-06J</i>	<i>Meso American & Caribbean Sea HC (MACHC Chair)</i>

<i>IRCC6-06K</i>	<i>Southern Africa and Islands HC (SAIHC Chair)</i>
<i>IRCC6-06L</i>	<i>North Indian Ocean HC (NIOHC Chair)</i>
<i>IRCC6-06M</i>	<i>ROPME Sea Area HC (RSAHC Chair)</i>
<i>IRCC6-06N</i>	<i>South West Atlantic HC (SWAtHC Chair)</i>
<i>IRCC6-06O</i>	<i>Arctic Regional HC (ARHC Chair)</i>

The Chair invited RHC Chairs and Representatives to briefly summarize their report and to present key achievements, the challenges faced and lessons learned in each Region.

NHC Chair, Mr. Rainer Mustaniemi (Finland), reported on the developments in the NHC WGs and the status regarding the IRCC5 actions.

NSHC Representative, Mr. Hans C. Lauritzen (Norway), highlighted the extensive participation of its members in the IHO bodies, the participation in the EMODNet and the EU Coastal Projects. The region decided to follow and contribute to the development of remote sensing bathymetry.

EAHC Representative, Hideki Kinoshita (Japan), highlighted that two Members of the region, Brunei Darussalam and Vietnam, are waiting for approval, the development of the EAHC Training, Research and Development Center (TRDC), the capacity building activities in the region, and the nomination of Dr. Nishida as new member at the IHR Editorial board.

Regarding the response to disaster, the Chair requested the EAHC to share their experience and knowledge with others whenever possible. Mr. Shin Tani (Japan), the Chair of GEBCO Guiding Committee, explained that activities were already conducted to share the experiences gained after the last tsunami.

USCHC Co-Chair, Mr. Denis Hains (Canada) reported the last meeting held in conjunction with the Canadian Hydrographic Conference (CHC2014), the active contribution from the region to 11 IHO bodies with 31 participants, the ongoing solution for the ENC overlap in Beaufort Sea between the USA and Canada, the progress done in LIDAR, SDB and near real-time digital nautical publications. He reported the challenges on facing the need for awareness of the need for better charting in the Arctic, the demands for real or near real-time products and services, the maintenance or increasing the participation in the IHO activities and the use of technology for virtual collaboration.

MBSHC Chair, Captain Erhan Gezgin (Turkey), reported the work of the Region F International Charting Coordination Working Group (ICCWG) and the activities of the Working Group on the Safety of Navigation in the Black and Azov Seas (BASWG), the status of the actions from IRCC5, the draft disaster action plan for the region, the approval of the "Rules for the designation of MBSHC representatives to the IHO Council", the definition of the Performance Indicators and the nomination of the representative from MBSHC (LCDR Bulent Gurses, Turkey) to the IHR Editorial Board. He also reported the 2014 capacity building activities (two technical visits done to Lebanon and Georgia and one in preparation for Israel).

BSHC Chair, Mr. Taivo Kivimae (Estonia), reported the work done by the five WGs, particularly, the new project for re-surveying, the preparation for the implementation of the harmonized European Vertical Reference System, the updates to the INT Chart Scheme, the harmonization rules for ENC production, the creation of a harmonized bathymetric database and the developments for MSDI. He also reported the IHR special edition dedicated to the BSHC before EIHC5, the status of the actions from IRCC5 and cooperation with other organizations.

EAtHC Chair, IGA Bruno Frachon (France), reported the increasing importance of maritime activities in the region, with an increase of awareness of Hydrography both in-country and in regional organizations and the need to make tools available to assist with these increasing activities. He reported on the High Level Seminar held in the region focused on the development of Hydrography in

coastal States, jointly organized by IALA-IMO-IHO, under the “Delivery As One” strategy. He highlighted the difficulties in organizing the proper flow of Maritime Safety Information and establishing permanent points of contact. He also noted the proposal to develop a holistic capacity building project in the region in a sustainable form and the use of an MSI portal to share information in the region.

SEPRHC Chair, Rear Admiral Hugo Veran (Peru), reported the status of the actions from IRCC5, the current situation of ENCs in the region, and thanked the support from CBSC to help identifying common areas in Hydrography and Nautical Cartography in the region that will lead to enhanced opportunities and development of common tools.

SWPHC Chair, Commodore Brett Brace (Australia), reported that New Caledonia became an Observer to SWPHC, the risk assessment programme for prioritizing surveys in Cook Islands and Tonga, the results of the risk assessment for Vanuatu, the key role of the Secretariat of the Pacific Community (SPC) in the region with high level engagement in the development of a regional hydrographic surveying capability. He noted the increasing awareness of the value of hydrographic data for the development of the region and recognition of the need to establish a regional hydrographic data gathering capability.

UK (previous SWPHC Chair) recognized the value of the risk assessment methodology in SWPHC. The President highlighted the model of developing a regional survey capability in SWPHC (SPC) and MACHC (Organization of the Eastern Caribbean States - OECS) in order to support and enhance the provision of hydrographic services in Small Islands Developing States (SIDS).

MACHC Chair, Mr. Michel Amafo (Suriname), reported the importance of working on the highest levels of decision making in the region, the lessons learned with the participation of industry, policy makers, politicians and other international and regional organizations. He announced the forthcoming Mexican Hydrographic Conference to be held in December 2014, along with the MACHC15 Meeting and a CB-supported Raising Awareness Seminar.

SAIHC Chair, Captain Abri Kampfer (South Africa), reported the progress made by means of capacity building activities, the establishment of the INT Chart Coordinating Committee and the lack of hydrographic survey data or the lack of access to the available data. He also noted that a large number of states have not fully achieved hydrographic capability; so more progress is expected by doing more capacity building activities.

NIOHC Chair, Vice-Admiral Witoon Tantigun (Thailand), reported on capacity building activities in the region and the final status of the IRCC5 actions. He also presented the improvement in regional charting activities.

RSAHC Representative, Admiral Srinivasan (Saudi Arabia), reported on the improved ENC scheme for medium and small scale charts, the admission of Iraq as an Associate Member, the growing improvement on charting in national waters and the progress made in preparation for the adoption of an INT Chart scheme for the ROPME Area in 2015. He mentioned that Saudi Arabia offered to conduct training from 2015 at the Hydrographic Training Centre in Jeddah for trainees from the Gulf and Red Sea regions, the development of a 5-year capacity building plan, the increasing interaction with stakeholders to enable better Hydrographic Services and the nomination of Oman as a new member at the IHR Editorial Board.

The Chair asked whether RSAHC and NIOHC cooperate in capacity building issues. RSAHC Representative highlighted the Tides and Water Level and Ports and Shallow Water training affecting both regions. The CBSC Chair, Mr. Thomas Dehling, stressed that there is increasing inter-regional capacity building collaboration and UK noted the role of the CB Coordinators to foster inter-regional cooperation.

SWAtHC Representative, Captain Nickolas Roscher (Brazil), reported the status of the INT Chart and the ENC schemes, the capacity building activities in the region, the inter-regional ‘on the job’ training provided by Brazil in Mozambique and the training of hydrographic personnel from Namibia in the Brazilian Hydrographic Service (DHN).

ARHC Representative, Mr. Noralf Slotsvik, reported the harsh environmental conditions and the difficulties in surveying the Arctic, the development of the strategic direction document and the specifications of an Arctic Voyage Planning Guide with the support from Canada. He noted the work done by the three WGs, the cooperation with other international organizations, the experiences in running a Scientific Forum with invited experts, the use of ECDIS north of 85° N and the investigation on the use of satellite derived vertical reference surfaces.

President Ward highlighted that the IHO requested to become an Observer of the Arctic Council and approval is expected in due time. The Chair then led a debate on how to enhance cooperation and the following actions were agreed by the meeting:

Decision 4: to note the reports from the RHC Chairs and Representatives

Action 22: USCHC to share the lessons learned from the US-Canada transboundary (agreement) project with IRCC (deadline: IRCC7)

Action 23: EAthC to report progress in the use of an Internet portal in the EAthC region aiming at sharing MSI information (deadline: IRCC7).

Action 24: EAHC to share experiences gained in handling natural disasters (ref. IHO Resolution 1/2005) that recently occurred in the EAHC region (deadline: IRCC7).

Action 25: SWPHC to share experience gained in developing the risk assessment tool, including activities related to engaging decision makers and donor agencies (deadline: IRCC7).

Action 26: CBSC to report on the development of joint CB projects with inter-regional and inter-institutional relevance (completed during the meeting).

7. REPORTS FROM IRCC BODIES

Docs: IRCC6-07A Hydrographic Commission on Antarctica (HCA Chair)

IRCC6-07B World-Wide Navigational Warning Service SC (WWNWS-SC Chair)

IRCC6-07C Capacity Building Sub-Committee (CBSC Chair)

IRCC6-07D WEND Working Group (WENDWG Chair)

IRCC6-07E FIG-IHO-ICA International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers (IBSC Chair)

IRCC6-07F GEBCO Guiding Committee (GGC Chair)

IRCC6-07G IHO-EU Network Working Group (France)

The Chair invited the IRCC bodies to present the main achievements, challenges faced and lessons learned and invited the Committee to discuss the inputs and to provide guidance to each body’s work programme.

HCA Chair, President Robert Ward, reported the outcomes of HCA13 held in Cadiz (Spain) with the participation of 15 of the 23 Member States, Colombia as an Observer for the first time and a number of organizations, IHO body representatives and expert contributors. He noted that the main topics of the meeting were: the ways to increase surveying activity in Antarctic waters, the continuing campaign to raise awareness at the Antarctic Treaty Consultative Meeting (ATCM), the progress in the INT

Chart and ENC scheming and production, the progress on crowd-sourced bathymetry and the declaration of encouragement for public/private cooperation to minimize expenses on contract surveying. He stressed that more than 95% of the Antarctic waters are unsurveyed.

The Chair requested information and links between HCA and ARHC. The President explained that there are better surveys in the Arctic than in the Antarctic but both regions share common problems. In both, the lead is the Ministry of Foreign Affairs and the challenge is to raise awareness in Hydrography in the regions. The recent resolution at ATCM on cooperation in Hydrography put IHO/HCA as the coordinating authority and the same needs to be undertaken in the Arctic Council.

USA suggested a resolution on the use of non-standard data like CSB and SDB in order to make progress in areas with boundary disputes. This should incorporate guidance on how to use the data. The meeting then agreed on the following decision and action:

Decision 5: to note the report from HCA.

Action 27: Chair to invite HSSC/EIHC5 to consider the use of non-standard data such as CSB, SDB and how to use it in direct and indirect ways (deadline: EIHC5).

WWNWS-SC Representative, Mr. Eric Langlois (France) reported that the Sub-Committee monitors and guides the IHO/IMO WWNWS including 21 NAVAREA Coordinators, maintain close liaison with WMO for the WWMIWS and METAREA Coordinators, proposes new methods to enhance the provision of navigational warnings to mariners at sea and provides appropriate guidance to concerned IHO Member State Representatives. He noted the last meeting that saw the participation of 42 delegates from 22 Member States and other international organizations; the meeting was also attended by 19 NAVAREA and one Sub-Area Coordinators. He reported on the work done in preparing editorial amendments to the Joint IMO/IHO/WMO Manual on MSI, in reviewing the IMO documents related to MSI to ensure consistency, the establishment of a WG to develop an MSI standard for S-100 and the delivery of capacity building training on MSI. He also reported the future work programme for the WWNWS-SC.

The meeting agreed on the following decisions:

Decision 6: to note the report from WWNWS-SC.

Decision 7: to approve the continuation of the WWNWS-SC under its current ToR and RoP.

CBSC Chair, Mr. Thomas Dehling (Germany), reported the revision of the IHO CB Strategy that established a limitation on acquisition of equipment only when continued support exists under a comprehensive programme and funding for non-Member States limited to Phase 1 projects. He also noted the development of a new procedure for technical visits, the need to improve C-55 under a GIS infrastructure, the development of the ToR for the CB Coordinators and its importance for the IHO CB Strategy, even for the regions that do not need capacity building support. He stressed the fact that CB Coordinators should commit for longer than a year in order to properly organize the activities in or from the region and acknowledged the work done by the IHB CB Assistant to improve the general management of the capacity building activities.

The President noted that the CB Assistant cannot be renewed beyond December 2014 due to administrative reasons and that the IHB will try to absorb the tasks in-house, coming back to Member States if this approach fails.

France thanked the CBSC Chair for the work done and the achievements of the CBSC. The President echoed France's views and said that the whole IHO should be proud of the work done by the CBSC, which is also of interest to IMO and IALA.

The Secretary highlighted the problems in selecting the candidates for the Category A and Category B courses, namely, not enough applications were received and invited Member States to give more support to their potential candidates. The Committee then agreed on the following decision and action:

Decision 8: to note the report from CBSC.

Action 28: RHC Chairs to encourage the National Hydrographers to invest in English language training in order to increase the chances of their candidates being selected to Cat A and Cat B training courses delivered in English (permanent).

WENDWG Chair, Captain Jamie McMichael-Phillips (UK) reported on the development of the WEND Principles and its revised Guidelines, the Proposal 7 from France to the EIHC5, the draft procedure for overlaps, the RENC and WENC development, governance and associated problems, the minimum standards for a RENC operation, the coverage for small, medium and large scale ENC's and the concept of the metadata data store. He also submitted to IRCC the WENDWG Work Programme for approval.

The Chair invited the Committee to discuss the WENDWG issues in agenda item 8 and the meeting agreed on the following decision:

Decision 9: to note the report from WENDWG.

IBSC Chair, Prof. Nicolas Seube (France), reported the current status of the IBSC, the revision to the IHO Publications S-5 (Standards of Competence for Hydrographic Surveyors) and S-8 (Standards of Competence for Nautical Cartographers), the development of a new edition of S-5 and S-8 with separate Category A and Category B components, the positive outcomes of the Standards of Competence Stakeholders' Seminar and of the consultation done for the development of the standards. The Chair submitted the IBSC work programme for the future S-5A and S-5B.

The Chair invited the Committee to discuss the revised S-5 and S-8 under agenda item 9 and this was agreed by the meeting. The Committee then agreed on the following decision:

Decision 10: to note the report from IBSC.

GEBCO GC Chair, Mr. Shin Tani, reported the progress of the GEBCO products and projects: the initiatives in bathymetric grids, the standardization of undersea feature names, the capacity building support from Nippon Foundation of Japan and other education initiatives, the GEBCO World Map, the regional mapping projects, the IHO-IOC GEBCO Cook Book, the development of shallow water bathymetry, the importance of DCDB, and the online interface to the Gazetteer of Undersea Feature Names. He also noted the difficulties in obtaining data from Member States to progress the GEBCO initiatives.

The Committee then agreed on the following decisions:

Decision 11: to note the report from GEBCO Guiding Committee.

Decision 12: to urge Regional Hydrographic Commissions to support GEBCO regional projects.

Decision 13: to encourage Regional Hydrographic Commission member states to submit data to GEBCO.

IHO-EU Network Working Group (IENWG) Representative, IGA Bruno Frachon (France), reported the establishment of this new WG and invited the nominations to the WG. He highlighted the

importance of the cooperation with the European Union and the development of Marine Knowledge 2020 in European waters to which the IHO contribution is considered very relevant. He also reported the meeting held and the participation of the IHB and the Member States, and the IHO participation to help promoting the IHO standards.

The meeting agreed on the following decision:

Decision 14: to note the report from IHO-EU Network WG.

8. WEND PRINCIPLES AND GOVERNANCE

<i>IRCC6-08A</i>	<i>Revised Guidelines for the implementation of the WEND Principles, as amended (IHB)</i>
<i>IRCC6-08B</i>	<i>Relevance of information overlay services and their status in the global IHO ENC programme (France)</i>
<i>IRCC6-08C</i>	<i>Draft procedure for the ENC Overlaps (France)</i>
<i>IRCC6-08D</i>	<i>The IHO ENC Catalogue (IHB)</i>
<i>IRCC6-08E</i>	<i>Report on the development of an IHO WENC (WENDWG)</i>

The Chair invited the meeting to review the WEND Principles and the Guidelines for its implementation, together with the governance requirements to fulfill the WEND Principles.

The President Ward provided the views of the IHB Directing Committee on WEND issues and the complexity of the current status of WEND. The statement of the President is as follows:

“The WEND concept was originally adopted by the IHO Member States 17 years ago. It was conceived and adopted before ECDIS and ENCs were being used widely. Things have changed over time - and the WEND Principles and the ways that HO’s operate have also changed. Notwithstanding those changes, the WEND was, and still is, in effect, the IHO’s implementation and delivery programme for achieving global ENC coverage. Quoting from the WEND Principles, which are an IHO Resolution, the WEND aims *to ensure a world-wide consistent level of high-quality, updated official ENCs through integrated services that support chart carriage requirements of SOLAS Chapter V, and the requirements of the IMO Performance Standards for ECDIS.*

In the 17 years of the WEND Principles we have seen the establishment of RENCs, such that about two thirds of the world’s ENCs are now regularly and independently quality assured as meeting the IHO’s ENC compilation standards and, at the same time, the RENCs provide chart distributors with an effective and very convenient one-stop shop for obtaining ENCs for sale and distribution to mariners. This means that about one third of the world’s ENCs are, in effect, being quality assured and distributed only at the local rather than the regional and global level through the RENC system. This means that some ENCs may be consistent at the national level, but not consistent regionally or globally. ENCs that do not go through a RENC also make it more difficult for many potential service providers to deliver fully integrated ENC services if they have to obtain them from each HO rather than through the RENC system. This is a question to be addressed by the IHO. Also, we should bear in mind that integrated services are an underpinning concept in the IMO’s vision for e-Navigation.

Turning to specific WEND issues, and the priority that we are placing on them, it is interesting to note that the WEND WG and the IRCC continues to place a high emphasis on ENC coverage, on the quality and reliability of the information in ENCs and on the harmonization of current ENCs with the corresponding paper charts, and on overlapping ENCs. Meanwhile, there is no comment or obvious concern on any of these matters at the IMO and the Directing Committee has received no adverse input or comments from any stakeholders either. It appears that not all the IHO Member States are equally concerned. This lack of concern from some member states may actually be the real issue.

The IHB Directing Committee also notes that there are a relatively small number of States active in raising WEND and ENC issues and then trying to address them. A much greater number of States are choosing to remain silent. Is this because those States do not think that the WEND and its objectives affect them? Or that the issues don't refer to their ENCs? Or is it because they don't like the WEND model? Or are there other reasons? If so, what are they? It seems difficult for the IHO to find a way forward with WEND if we don't have these answers.

This criticism of the IHO regarding the accessibility of some ENCs has not been formalized, as yet. But it is worthy of our consideration. The Directing Committee would therefore encourage the IRCC to carefully consider the WEND in its current form - its purpose, its successes and its future. This is because the WEND is an IHO concept that has been repeatedly endorsed by the Member States, but appears not to enjoy universal support from all our Member States.

Whatever is decided, the IHO cannot impose directives on its member states and therefore there needs to be compromise - as there has always been throughout the life of the WEND concept. National sensitivities, policies and constraints must be taken into account and acknowledged in whatever policies collectively adopted for the future.

The Directing Committee looks forward to a constructive discussion on the WEND and its future, on the outstanding issues, and in particular, on identifying all the different points of view and opinions. We believe that it is important to bring the different opinions and the priorities out into the open - so that all IHO Member States are aware and understand that everyone has a part to play and is a stakeholder. We hope that this meeting provides that opportunity - EIHC5 will provide another.

Our task and our challenge as the IHO, is to continue to harmonize the different national circumstances, policies and sensitivities that can affect individual ENC Producer States and thereby keep our stakeholders as satisfied with the IHO ENC programme in the future as they seem to be at present." The topic was then offered for wider comment.

The WENDWG Chair presented the revised guidelines (*doc. IRCC6-08A*), that was submitted to the approval of Member States by CL 6/2014, and was followed by France that reported on the Proposal 7 to the EIHC5 on WEND Principles and Guidelines.

The Chair invited the WENDWG Chair to comment on the proposal, who highlighted the challenges and difficulties with implementing the WEND Principles. The meeting acknowledged that further discussion will take place during EIHC5. He noted that some of the overlaps are difficult to solve due to geopolitical considerations and commented on the proposal from Singapore to use technological tools to allow OEMs to solve the overlaps.

UK agreed with many of the issues identified by France in Proposal 7 and supported tasking the WENDWG to undertake an analysis to identify the factors related to the inability to fulfill the WEND Principles. He noted that further details were provided in the comments to the CCL 8 to the EIHC5.

NSHC Chair stressed that the main issue is the lack of availability of ENCs and not the overlaps. There is a need for a seamless ENC database. UK, however, noted that from the mariners' perspective there is no issue with availability as they deal with chart agents.

Saudi Arabia supported Proposal 7 in order to avoid competition between RENCs and service providers. He noted the good work done to develop ENC Coverage. The Chair noted that Proposal 7 will be raised at the EIHC, so that the WENDWG should look at the Proposal very carefully and consider the consequences.

The IRCC agreed that there is the need of a collective view on Proposal 7 and proposed to task the WENDWG to produce a document with the impact, consequences and identified lines of actions related to Proposal 7.

The meeting then agreed that the WENDWG Chair should adjust the WENDWG Work Programme to address the topics under consideration and resubmit during agenda item 10, input from HSSC5.

The Chair then invited France to introduce *doc. IRCC6-08C* on the draft procedure on ENC overlaps. The WENDWG Chair agreed with the procedure but acknowledged that some of the overlaps would remain due to the geopolitical situation.

PRIMAR noted that the procedure was developed within the RENCs as a natural consequence of its day-to-day operational work. USCHC stated that it is good procedure but should be more visible. He proposed that this procedure should be an IHO resolution and was supported by UK and the MBSHC Chair. IC-ENC agreed that the procedure should be endorsed by a relevant body of the IHO.

WENDWG Chair suggested one further step, in case there is no agreement to solve an overlap: take the issue to the IMO. The President stressed that the IHO has a duty of care to identify and report these issues to the IMO and in this regard, a risk assessment is the tool to be used. The RENCs informed IRCC that this procedure has been used successfully.

USCHC Chair highlighted the length of time it has taken for USA and Canada to solve the four disputed limits between their countries. The meeting then agreed to the following decision:

Decision 15: RENCs to first use the procedure on overlaps as an IRCC procedure until more input is received and then possibly propose this to be an IHO resolution.

The Chair then invited France to introduce *doc. IRCC6-08B* on the Admiralty Information Overlay (AIO), highlighting some of the issues identified. UK noted that the primary objective of the AIO is to provide the mariners with the differences and ambiguities between ENCs and paper charts, as many mariners still live in a hybrid environment. He also noted that the number of issues in the AIO is decreasing with time as they are being resolved, and that there are limitations with the AIO but the point of view of the mariner is important and the solution of these issues needs to be sought. He pointed out that AIO is a practical way to help mariners during the transition from paper chart to ENC and that this is to allow the ECDIS to be able to create additional layers to update the ENCs.

MACHC Chair asked whether there is communication with the coastal State before issuing AIOs over their charts, which was confirmed by the UK. However, the NSHC Chair expressed that Norway does not consider AIO as a necessary product for Norwegian ENCs as they already include Notice to Mariners (Temporary/Permanent) in their ENCs.

The Chair suggested this issue should be resolved by UK and France bilaterally. France, however, stressed that this is also multilateral and that the question is whether this is crucial to navigation or not. He highlighted that if this is related to safety of navigation, then it should be used according to the collective view of the IHO.

The IRCC then agreed on the following action:

Action 29: UK and France to address the AIO issue bilaterally and report back to IRCC7 (deadline: IRCC7)

The Chair invited the WENDWG Chair to introduce *doc. IRCC6-08E* on the IHO WENC Concept. He reported that WENDWG4 had reached an impasse. A task was agreed to the RENC Harmonization Sub-Group (RHSG) to progress the work and provide a common view of the RENCs on the way

forward. He reported that in the meantime the minimum standards for the RENC operation are under development.

IC-ENC explained that the Member States belonging to the RENCs do not support the view that the IHO WENC is made of the ENC's available via RENCs and think this is too prescriptive, as the way to distribute the ENC's is a national decision. The meeting then agreed on the following action:

Action 30: WENDWG Chair to report back to IRCC7 on the evolution of the WENC Concept (deadline: IRCC7).

The Chair invited the IHB to report on the ENC Catalogue (*doc. IRCC6-08D*) and the developments in C-55. The new version of the online Catalogue was presented and the absence of CATZOC was explained, as these are data and not metadata. The new version of C-55 was also introduced. The IHB highlighted the need for more guidance on how to improve C-55 and the Catalogue.

9. ENDORSEMENTS FROM THE IRCC

Docs: IRCC6-09A Revised IHO Capacity Building Strategy (CBSC Chair)
IRCC6-09B Revised IHO Publications S-5 Ed. 11.1.0 (Standards of Competence for Hydrographic Surveyors) and S-8 Ed. 3.1.0 (Standards of Competence for Nautical Cartographers) (IBSC Chair)
IRCC6-09C Work Plan for the new S-5A and S-5B Standards of Competence for Hydrographic Surveyors (IBSC Chair)
IRCC6-09D Revised ToR for the GEBCO Guiding Committee (GEBCO GC Chair)

CB Strategy

The Chair invited the CBSC Chair to introduce doc IRCC6-09A on the revised IHO CB Strategy. He noted the mature stage of the revision and the numerous opportunities to present inputs, including the recent CB Seminar.

The meeting agreed on the following decision:

Decision 16: to note the report from CBSC regarding the revision of the CB Strategy.

IHO Publications S-5 and S-8

The Chair invited the IBSC Chair to introduce doc IRCC6-09B on the revised IHO Publications S-5 and S-8. He commented on the feedbacks and inputs received, including the recent Seminar on Standards of Competence.

The IRCC agreed on the following decision and action:

Decision 17: to endorse the IHO publications S-5 Ed. 11.1.0 and S-8 Ed. 3.1.0.

Action 31: IHB to issue a CL seeking MSs approval of IHO publications S-5 and S-8 (deadline: June 2014).

IBSC Work Plan

The Chair invited the IBSC Chair to introduce doc IRCC6-09C on the IBSC Work Plan to achieve the new S-5A and S-5B. He explained the process of consultation and noted the feedback received from Stakeholders.

The meeting then agreed on the following decision and action:

Decision 18: to approve the IBSC Work Plan on the development of the new standards.

Action 32: IBSC to develop the new S-5A and S-5B standards and report to IRCC for endorsement (deadline: IRCC7)

GEBCO TOR

The Chair invited the GEBCO Guiding Committee Chair to introduce doc IRCC6-09D on the revised ToR. The President suggested a change to RoP 2.1 from "shall act" to "shall assume".

The meeting then agreed on the following decision and actions:

Decision 19: to endorse the new ToR/RoP with the change in RoP item 2.1 from "shall act" to "shall assume".

Action 33: IHB to seek MSs approval of the revised ToR/RoP of the GEBCO Guiding Committee (deadline: June 2014).

Action 34: IHB to send a letter to IOC to seek endorsement for the revised GEBCO ToR/RoP (deadline: June 2014)

10. INPUTS FROM MEMBER STATES AND OTHER BODIES AFFECTING IRCC

Docs: IRCC6-10A Input from HSSC5 (HSSC)
IRCC6-10B IHO Representation in GEO Events (IHB)
IRCC6-10C Input from MSDIWG5 (MSDIWG)

The Chair invited the President to introduce *doc. IRCC6-10A* on the inputs from HSSC5. He reported the extensive participation during the last meeting and the outcomes related to SDB and CSB, including the possible impact to S-44. He highlighted the concerns regarding the differences between paper chart and ENC updates, as well as inconsistencies between ENCs from different producers, and how this reflects badly on the IHO. HSSC requested IRCC to encourage the resolution of these issues by Regional Hydrographic Commissions via the WENDWG.

The President also stressed that HSSC requested that the WENDWG be tasked to assess if the ENC usage indicator based on the number of ENCs distributed annually under license by PRIMAR and IC-ENC (equivalent annual licenses) is appropriate, and to propose alternatives, if not. He also pointed out that IRCC was invited to consider the updated list of potential stakeholders' events planned in 2014 that would justify the involvement of representatives from IHO Member States and/or from the IHB, taking into account the available resources.

He also commented on the promotion of MSDI development and the development of a product specification for navigational warnings based on S-100 (IHO S-124), to which WWNWS-SC was invited to liaise with TSMAD.

The meeting held a discussion on the provision of temporary and preliminary ENC updates, the differences between paper charts updates and ENC updates, and the inconsistencies between ENCs from different producers and the impacts on the IHO. WENDWG Chair suggested using the figures provided by the producer nations rather than the RENCs.

The meeting also discussed the significance of the Performance Indicators on the number of ENCs distributed annually under license as provided by the RENCs versus the total number distributed. Turkey suggested tasking WENDWG to prepare the guidelines for the work of the RENCs, supported by France and PRIMAR.

The IRCC further considered the work programme of the WENDWG and then agreed on the following actions and decision:

Decision 20: to approve the WENDWG Work Programme.

Action 35: WENDWG to assess how representative are the performance indicators based solely on the inputs from PRIMAR and IC-ENC, and propose alternatives, if appropriate (deadline: HSSC6).

Action 36: WENDWG to assess the impact and consistency of updates for ENC's and paper charts (coverage and quality) and to include this as a permanent agenda item (until 2018).

Action 37: WENDWG to investigate a change in the WEND Guidelines to address the coverage and quality of updates for ENC's and paper charts (IRCC7).

Action 38: IHB to issue a CL to ask producer nations whether they distribute their ENC's via RENC's and, if not, what is the reason (June 2014).

Action 39: IHB to issue a follow up CL with the results of the previous action (deadline: August 2014).

WENDWG Work Programme:

- i. To develop a proposal for a pilot project using OEM software tools to resolve overlapping ENC data issues for consideration at WENDWG5.
 - ii. To finalise paper on Guidelines on Assessing and Eliminating the Risk of Overlapping ENC Cells.
 - iii. To provide a revised RHSG paper on WENC.
 - iv. To continue working to attract ENC producer nations to join the RENCs.
 - v. To produce a paper on the benefits for ENC producer nations to join a RENC.
 - vi. To monitor ENC coverage and quality and report to IRCC and IHB.
 - vii. To monitor and report the statistics on those ENC's not distributed via RENCs.
 - viii. To provide a scoping paper of the ENC Catalogue and to progress catalogue development.
 - ix. To develop Capacity Building activities.
 - x. To monitor and advice on the impact of differences between paper charts and ENC updates and encourage Producer Nations through IRCC to solve issues that affect end users.
 - xi. To assess ENC usage indicators and to propose alternatives if appropriate.
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Action 40: RHC Chairs to facilitate the resolution of inconsistencies between paper charts and ENC's and between ENC's from different producers (permanent).

Action 41: RHC to consider opportunities to interact with stakeholders in 2014 and encourage participation in the relevant events (deadline: December 2014).

Action 42: RHC Chairs to notify Member States in their regions of opportunities for interaction and encourage participation with relevant stakeholders in accordance with CL 8/2014 (deadline: December 2014).

Regarding actions related to the stakeholders, France noted the Brest Sea Tech Week event in October 2014 and the knowledge of the maritime environment and suggested adding this event to the HSSC5 list of Stakeholders' Events (Annex to doc. IRCC6-10A).

The Chair invited the IHB to introduce *doc. IRCC6-10B* on the relations between the IHO and the Group on Earth Observations (GEO). The President highlighted the previous participation of the IHO, the importance of GEO and invited the IRCC to consider the appropriate IHO representation in future GEO-related events. The meeting then agreed on the following decision:

Decision 21: to recognize the importance of GEO and to continue participation in GEO related events by all means, with the IHB in the lead but involving the RHCs, MSs and GEBCO.

The Chair invited the MSDIWG Representative, Mr. Edward Hosken (UK) to introduce *doc. IRCC6-10C* on the inputs from MSDIWG5. He highlighted the importance of MSDI as a tool for the development of Hydrographic Services and the contributions expected from the IRCC.

The BSHC Chair presented the regional experience with MSDI and the MACHC Chair introduced the Marine Economic Infrastructure Programme (MEIP) to emphasize the economic benefits of Hydrography, to facilitate the engagement of policy and decision makers, and to prepare marine disaster plans.

New Zealand also offered to contribute to the work of the MSDIWG by sharing the experience regarding the importance of geo-information, and presented the current use for hydrographic assessment in the Pacific Community and the future use for environmental assessment.

Director Iptes informed the meeting that there will be a session on MSDI during EIHC5. Saudi Arabia shared the experience with the establishment of a large database, a 2-year programme starting July 2014 with three stages: planning, execution and operation.

Canada informed the IRCC about the development of the programme: "Marine Cadastre and Targeted Ocean Mapping" (TOM) and will share experiences of that programme, which contains a strategy to better use marine information (coastal zone management, natural resources offshore, etc.).

The NSHC Chair considered that despite the huge importance of the MSDI, the IHO devotes little time to the subject and proposed to encourage Hydrographic Services to evolve from the classical approach of chart producing to creating an infrastructure (MSDI) that could benefit a broader range of activities.

The NSHC Chair asked whether MSDIWG could sit under the two Committees (HSSC and IRCC). The President explained that the creation of WG is under each committee discretion and the background on why MSDIWG is under HSSC. He noted that a case could be made to place MSDI under IRCC due to the importance of coordination to MSDI.

Following the discussion the meeting agreed on the decisions and actions:

Decision 22: to address the IRCC contribution to MSDI during IRCC7.

Action 43: Chair and Secretary to include a MSDI agenda item at IRCC7 (deadline: IRCC7).

Decision 23: to contribute to the "policy" component of the MSDIWG.

Decision 24: to propose moving the MSDIWG subordination from HSSC to IRCC.

Action 44: IHB to facilitate the move of the MSDIWG from HSSC to IRCC (deadline: HSSC6).

11. PERFORMANCE MONITORING

<i>Docs: IRCC6-11A</i>	<i>BSHC Input to the IRCC SPIs and WPIs (BSHC)</i>
<i>IRCC6-11B</i>	<i>SEPRHC Input to the IRCC SPIs and WPIs (SEPRHC)</i>
<i>IRCC6-11C</i>	<i>NSHC Input to the IRCC SPIs and WPIs (NSHC)</i>
<i>IRCC6-11D</i>	<i>MBSHC Input to the IRCC SPIs and WPIs (MBSHC)</i>
<i>IRCC6-11E</i>	<i>SWPHC Input to the IRCC SPIs and WPIs (SWPHC)</i>
<i>IRCC6-11F</i>	<i>EAtHC Input to the IRCC SPIs and WPIs (EAtHC)</i>

Director Iptes presented the Performance Indicators compiled by the IHB and highlighted the importance of receiving input from the RHCs and from the IHO subordinated bodies. Following the comments from RHCs, the meeting agreed on the action:

Action 45: Chair to send an IRCC CL seeking input to the Performance Indicators (deadline: June 2014).

12. DATA GATHERING AND MANAGEMENT

<i>Docs: IRCC6-12A</i>	<i>Risk Assessment Methodology (NZ)</i>
<i>IRCC6-12B</i>	<i>Maximizing the use of Hydrographic Survey Data (MACHC)</i>

New Zealand presented the use of a Risk Assessment Methodology developed by New Zealand and how it may be considered as an example to RHCs to add in their CBSC tool box to improve their awareness. The meeting also discussed the benefits of the Risk Assessment tool to establish Hydrographic Survey priority by Member States.

The CBSC Chair explained that the methodology was already incorporated in the revised IHO CB Strategy. The President explained that the development of the GIS platform and C-55 will be able to provide the tools for a better risk assessment. The meeting then agreed on the following decision and action:

Decision 25: to recommend the use of the Risk Assessment methodology to establish Hydrographic Survey priority by Member States.

Action 46: RHC Chairs to encourage MSs in their respective regions to use the Risk Assessment methodology to establish Hydrographic Survey priorities (permanent).

The MACHC Chair introduced *doc. IRCC6-12B* on the benefits of maximizing the use of hydrographic data. UK explained that there is no national regulation to force the flow of data to the HO and such an initiative would be welcomed.

The President suggested that those ideas on survey data should be put in a written paper as guidance so that the Chair can propose it as a resolution to the EIHC when delivering the IRCC report so that the MSs could refer to it directly.

The NSHC Chair explained that there are two sides to this story. One side is reported in the paper under consideration. The other is that data being held in HOs should be made available for use by a broader community.

USCHC Co-Chairs supported the initiative that links to the MSDI development to allow data sharing and considered that an IHO Resolution would be appropriate. France supported the pragmatic approach, but considered that an IHO Resolution does not have the power to enforce and should be taken carefully so that it does not jeopardize countries' policy. He also pointed that the IHO Resolution could have an obligation to report shoals.

The meeting then agreed on the following action:

Action 47: Chair to propose an IHO resolution on maximizing access to hydrographic information when delivering the IRCC report to the EIHC (EIHC5).

13. IRCC WORK PROGRAMME MANAGEMENT

The IHB presented an overview of the review cycle mechanism as below:

Reporting by MSs/RHC/IRCC

a) References:

IHO Strategy 2009

IHO Resolution 12/2002 - Review Cycle

b) Inputs:

MS to Chair (February): progress of the relevant items of the IHO WP

Chair to IHB (March): IRCC Annual Report

c) Additional inputs:

MS to Chair/IHB the SPIs and WPIs (January)

ICCWG: INT and ENC Schemes (January)

Director Iptes informed the Committee that the IHB will issue a CL regarding the missing reports on performance indicators and ENC Schemes in due time.

14. ELECTION OF THE VICE-CHAIR

The Chair invited nominations to the vacant position of the Vice Chair in accordance with the IRCC ToR and RoP. SAIHC Chair nominated Parry Oei (Singapore) for Vice Chair and was seconded by EAHC, SWPHC and CBSC. Mr. Parry Oei was elected by acclamation. The meeting agreed on the following action:

Action 48: Chair to write to the new Vice Chair to inform him of his nomination (deadline: June 2014)

15. NEXT IRCC MEETINGS (VENUE AND DATE)

The Chair invited the IRCC Members to discuss the venue and date of the following meetings. Following the offerings from a number of countries, the meeting agreed on the following decisions:

Decision 26: to hold IRCC7 over 3 days following the CBSC meeting with a weekend in-between.

Decision 27: to hold IRCC7 in Mexico (exact venue TBD) on 1-3 June 2015.

Decision 28: to hold IRCC8 in UAE (Abu Dhabi) in 2016 (first week of June, exact dates TBD).

Decision 29: to hold IRCC9 in Suriname in 2017 (exact venue and dates TBD).

16. REVIEW OF THE ACTIONS, DECISIONS AND PROPOSALS FOR EIHC5

The Chair invited the Secretary to present the draft actions and decisions agreed during the meeting for adoption. The IRCC reviewed the permanent actions and the actions agreed during the meeting (**Annex C**), the decisions (**Annex D**) and the tasks (**Annex E**) associated to IRCC.

17. RECOMMENDATIONS OF THE IRCC FOR CONSIDERATION OF THE IHO MEMBER STATES

The Committee discussed the recommendations for consideration by the IHO Member States and agreed on the following decision, considering that the recommendations are embedded in the actions and decisions agreed:

Decision 30: to remove the agenda item on "Recommendations of the IRCC for considerations of the IHO Member States" from future IRCC Meetings.

18. ANY OTHER BUSINESS

The Chair invited the participants to present other business items, if any. No other item was proposed.

CLOSURE OF THE MEETING

The Chair highlighted the achievements during the meeting and thanked the support from SHOM and from the IHB. The President expressed that the IRCC is a young body but each meeting raises a level of maturity, not to forget the incredible impact it has on the IHO reputation. He was also impressed by the great sense of ownership from the RHC's. The Chair thanked again Mexico, the UAE and Suriname for offering to host the next IRCC meetings. The Chair closed the IRCC6 at 15h30 on 20 May 2014.

ANNEXES:

- A) List of Participants
- B) Revised Terms of Reference and Rules of Procedure of the IRCC
- C) List of Actions
- D) Decisions
- E) Tasks