

**MINUTES OF THE FOURTH MEETING OF THE IHO INTER-REGIONAL
COORDINATION COMMITTEE
IHO-IRCC4
Singapore, 7-8 June 2012**

The fourth Meeting of the IHO Inter Regional Coordination Committee (IRCC) was held at the Regent Hotel Singapore, Singapore, from 7 to 8 June 2012. All Members of the Committee were present or represented. Delegates from individual IHO Member States were also present (**Annex A – List of Participants**).

1 - Opening of the meeting and administrative arrangements

IGA Gilles Bessero, IRCC Chair, opened the meeting and welcomed IRCC Members and Observers, and thanked the Maritime and Port Authority (MPA) of Singapore and the United Kingdom Hydrographic Office (UKHO) for organizing the meeting.

He stressed the importance of the work of the IRCC to translate the directions of the 18th International Hydrographic Conference, held in April 2012, especially, in the light of the Technical Engagement Seminar of the preceding day, those aspects related to:

- Capacity Building strategy, activities and funding
- The need to improve the coverage and quality of the hydrographic surveys
- ENC related issues
- Developments in Marine Spatial Data Infrastructure (MSDI)
- The status of the amendments to the Convention
- Election of the new Chair and Vice Chair

Rear Admiral Nick Lambert (UKHO) thanked the Chair for his kind words and welcomed the participants. Mr. Jamie Chen (MPA) welcomed the participants to Singapore and wished all a good meeting. The participants were invited to introduce themselves for the benefit of those attending IRCC for the first time.

The Chair introduced the Agenda (Doc. IRCC4-01D) and the Timetable (Doc. IRCC4-01F) that were unanimously adopted. The Secretary introduced the List of Documents (Doc. IRCC4-01A) including the latest documents received. The Annotated Agenda (Doc. IRCC4-01E) was used as the guiding document for the progress of the meeting.

The Host offered information about administration and logistics for the meeting.

2 - Report by the Chair and pending matters

2.1 - Report by the Chair

The Chair provided a general overview of events and activities since IRCC3 which are relevant to the Committee within the scope of the IRCC Work Programme, referring to the IRCC Annual Report 2011 (Doc. IRCC4-02.1) as well as to the IRCC Report to the 18th IHC (Doc. CONF.18/WP.3).

Regarding the Protocol of amendments to the IHO Convention, he emphasized the need to engage in a regional level in order to motivate MSs to ratify it. The Committee noted the deposit of the instrument of accession by Cameroon that became the 81st Member State of the IHO.

Following the report, the Chair invited comments from IRCC Members. France (Frachon) proposed to reduce the frequency of IRCC Meetings, possibly to around 18 months or one year ahead of the International Hydrographic Conferences (both Ordinary and Extraordinary). It was backed by Australia (Nairn), Canada (Narayanan), Portugal (Ramos da Silva) and UK (Lambert). However, Germany (Dehling) suggested reconsidering the issue once the work programme is adopted. The IRCC Secretary supported the connection with the work programme and stressed that in the future the Council will also require annual meetings and there will be a chance for inter-regional coordination in this forum. The Committee discussed the need to investigate electronic means to work more efficiently and optimize face-to-face meetings. UK (Lambert) referred to PRO6 discussed by the Conference and invited the Committee to consider whether it should do more to encourage survey activities and make the best use of techniques such as satellite bathymetry and crowd sourcing bathymetry.

On the proposal of the Chair, the Committee agreed to move agenda item 5 (Review of Terms of Reference and Rules of Procedure) to be discussed after agenda item 6 (IRCC Work Programme management).

2.2 - Outcome from the 18th IHC

[IRCC4-02.2 Outcome from the 18th IHC](#)

The Chair reported the outcomes of the 18th IHC (doc. IRCC4-02.2). He presented the outcomes related with IHO Work Programme 1 and proposed to address them under the relevant agenda items:

- Status of IHO Membership (item 2.3)
- Status of approval of the Protocol of amendments to the IHO Convention (item 2.4)
- Input from and to the IHO Strategic Planning Mechanism (item 6.2)
- Input from and to the IHO Work Programme (item 6.1)

He presented the MSDI issues (IHO Work Programme 2) and proposed to address these issues during the general discussion of RHCs' reports (item 3.1).

He also presented the outcome of the Conference about the IHO Stakeholders' forum and proposed to discuss IRCC contribution under item 6.3 (IRCC Work Programme). UK (Lambert) stressed that the issues related to ECDIS should also include ENC's, and any reference be made to the two items.

The Chair presented Conference Decision 11 (CB Strategy) and proposed to discuss the implementation of the Decision under item 3.4 (CBSC Report).

He presented the status of C-55 development and invited the Committee to discuss ways and means to contribute to the relevant tasks of the IHO Work Programme (task 3.4.3 and 3.6.1A) at Committee level and via RHCs, including the possibility to set up an ad hoc working group with the appropriate terms of reference and membership. He indicated that the definition of the appropriate survey indicators is one item to be considered (Annex of IRCC4.02-2) and that the interaction with HSSC and its relevant working groups needs to be discussed also.

Australia (Nairn) questioned whether DQWG should take care of C-55 and the need to establish definitions and users' requirements. He also mentioned the need to add the spatial

element to C-55. He then proposed to start filling C-55 with CATZOC and the upload and update be made through the RENCs. He also suggested that C-55 should incorporate risk analysis. South Africa (Kampfer) supported the idea of using CATZOC. Canada (Narayanan) stressed the need to define the requirements, framework and deliverables in an easy to use environment. She also noted that the term "Adequate Survey" is useless. UK (Lambert), on the other side, supported the idea of using chart source diagrams to start C-55, since CATZOC is not yet well used. Furthermore most of ENC's are compiled from paper charts.

France (Frachon) supported the idea of a two-level approach: characterization of the seafloor and of the shipping in order to allow the establishment of priorities within the regions. He also expressed the need to properly define the necessary metadata. USA (Justi) spoke on the need to clearly define the purpose of C-55.

Denmark (Lars) recalled that it is necessary to assess the survey status as well. Germany (Dehling) supported the use of the re-survey project already developed in the NSHC and referred to the parameters of S-44 as a good way to assess the status of surveys, especially in areas where the rate of change of the seafloor is important. He noted that the general perception of the Committee is that currently C-55 is useless; it misses the spatial element and needs to incorporate external information like major ports and routes.

After further elaboration on the user requirements for C-55, the Chair invited Australia (Nairn) to chair a side meeting on C-55 and present the results in a written format, that will be circulated by the RHC Chairs (see item 3.1).

The outcome of the Conference about the implementation of the WEND Principles (Decisions 12 & 13) was also reported by the Chair who proposed to discuss the way forward under item 3.5 (WEND WG Report).

The Chair presented Conference Decision 14 (IHO Resolution 1/2005 - IHO Response to Disasters) and proposed to address the issue during the general discussion of RHCs' reports (item 3.1).

He also presented Conference Decision 17 (global status of hydrographic surveying) and invited comments on the way forward, taking into consideration the outcome of the discussion about C-55 development and action IRCC03/11. The Committee was invited to:

- elaborate an action plan based on the outline in Doc. IRCC4.02-2,
- consider the role of RHCs and CBSC, and
- evaluate the need of a specific "Survey Assessment Working Group".

It was agreed that it is necessary to revisit suggested action items c and d of Doc IRCC4.02-2. The IRCC Secretary recalled that the IHO structure does not allow the contracting and supervision of surveys. France (Frachon) stated that it is important to develop item d on a survey fund on how to get the funds and how to operate them. He noted that the liability of the IHO if conducting surveys should also be considered.

UK (Lambert) recalled that there are precedents in the World Bank to fund projects and recommended the IHO/IHB to prepare to manage such a fund. Germany (Dehling) reminded the Committee that it is necessary to identify the shortcomings and the regions in order to submit a project. He also noted that it is necessary to contract consultants to

organize the documents and the submission and that it is necessary also that the IHO supports the project in the high level administration as long as the recipient States are committed to the project.

The Chair summarized stating that it is necessary to rephrase this item d, to consider a regional approach, to operate on a project by project basis and to align with the IHO priorities (Africa, Caribbean Sea and Small Islands Developing States).

2.3 - Status of IHO membership

The IRCC Secretary reported (Doc. IRCC4-02.3) on the new IHO Member State (Cameroon), the status of pending approval of applications (Haiti, Viet Nam and Brunei Darussalam), pending deposit of instruments of accession (Bulgaria, Mauritania, Montenegro and Sierra Leone) and reinsertion of suspended Member States (Democratic Republic of the Congo and Dominican Republic).

EAtHC and MBSHC Chairs reported on the progress in implementing action IRCC3/03 with pending applicants in their Region. EAtHC and MACHC reported on the progress in implementing action IRCC3/04 with the suspended Member State in their Region.

The Chair invited the Committee to discuss possible actions to promote IHO membership in cooperation with IMO and other international organizations.

The Committee invited RHCs to continue encouraging the re-insertion of suspended Member States and to encourage pending applicants to deposit their instruments of accession. The IHB was invited to request the support of Monaco Government. IRCC Secretary explained that every year IHB sends the circular letter n° 1 reporting the membership status, together with the convention approval. He also reported that the Monaco Government takes an active role in communicating with the National Points of Contact but is not always successful.

The Committee considered and agreed the following actions:

IRCC4/01 (RHCs): Encourage the approval of pending applications for IHO membership.

IRCC4/02 (EAtHC and MBSHC): Continue to engage pending applicants in their region to encourage the ratification of the IHO Convention.

IRCC4/03 (EAtHC and MACHC) Continue to engage suspended Member States in their region to encourage their re-insertion in IHO.

2.4 - Status of approval of amendments to the IHO Convention

The IRCC Secretary reported (Doc. IRCC4-02.4) on the status of approval of the amendments to the IHO Convention (36 notifications as of 21 April 2012). RHC Chairs reported on the situation and perspectives in their Region.

Committee reviewed the list of Member States which have not yet ratified the Protocol of Amendments and agreed the following **Task** to secure the additional ratification by a minimum of 12 Member States as soon as possible and not later than end of 2013 so that the first Assembly may take place in 2014:

IRCC4 07/2013	Secure the ratification of the Protocol of Amendments to the IHO Convention.	RHCs	Dec 2013
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The IRCC Secretary also reported that Spain has agreed that the IHB circulate as and when necessary the translation into Spanish of the text of the Protocol of Amendments to the Convention that they have produced, in order to facilitate the process in other Spanish-speaking countries.

2.5 - Status of Action List from IRCC3

The Chair reviewed the list of actions agreed at IRCC3 (Doc. IRCC4-02.5B), referred the pending actions to the relevant agenda items and addressed one “orphan” action:

- IRCC03/07: *composition of the IHR Editorial Board*. The Chair invited the RHC Chairs which have not yet designated a representative to do so before the end of the year, in order to allow them to participate in the review of articles that will be submitted in January 2013.

The Commission agreed on the following action:

IRCC4/04 (EAHC, MBSHC, NHC and RSAHC): Nominate a representative to the IHR Editorial Board and report to the IHB.

3 - Actions and inputs from IRCC Bodies

The Chair invited the Chairs of IRCC Bodies to report briefly on the activities of their bodies and introduce recommendations or other items relevant for IRCC consideration.

3.1 - Regional Hydrographic Commissions

The Chair requested the RHC Chairs to address the following actions:

IRCC3/18: *Update the report to IRCC Chair on the implementation of the guidance for the preparation and maintenance of International chart schemes (CL 23/2010 of 3 March 2010).*

IRCC3/19: *Report to IRCC4 on:*

a) *their experience in dealing with marine disasters in relation with IHO guidelines (TR 1/2005),*

b) *strategies to involve non-IHO MSs in RHC’s activities.*

RHC Chairs summarized the activities of their Commissions, reported on actions since IRCC3 and offered comments/recommendations for IRCC consideration (Doc. IRCC4-03.1A to 03.1O). The main elements are provided below:

The NHC reported on the main projects for data exchange and MSDI. The Commission also presented the joint actions to present hydrographic projects and the active Working Groups in the region.

The NSHC presented the achievements of its working groups and the relation to all the IHOs bodies and other international organizations. The impact of the European Commission decisions over national Hydrographic Offices was stressed. The Commission

also reported on the re-survey strategy and the proposal to promote the WEND principles through the distribution of ENC's under a new brand name IHO-WEND.

The EAHC reported the ENC harmonization work on small scale ENC's (due to be completed in 2013) and the capacity building activities in the region. The web site was noted. The IRCC Secretary invited RHC members to visit the EAHC and MACHC web sites as they are good source of information within the region and amongst the regions.

The USCHC reported on the ENC Transboundary Project to eliminate overlaps and other joint actions in the Beaufort Sea and the harmonization of the ENC Catalogue. The Commission also presented suggestions to the WEND-WG to achieve the WEND principles and to the IRCC for the development of C-55.

The MBSHC reported on the status of the IRCC action list and the amendment to the statutes to enable Associate Members to host MBSHC meetings. The Committee acknowledged the value of this principle and agreed on the following action:

IRCC4/09 (RHCs): Consider amending Statutes of the RHCs in order to allow non-IHO MSs to host RHCs conferences, when and if applicable.

The BSHC presented the achievements of its numerous working groups, with emphasis on addressing re-survey planning and maritime spatial data infrastructure. UK (Lambert) commented on the economic infrastructure approach. France (Frachon) noticed the multi-use of data in the region. The Commission also reported on the cooperation with other organizations.

The EAHC presented the status of the INT Chart and ENC schemes, the capacity building activities in the region and the situation of the IRCC action list.

The SEPHC shared its experience with the inundation charts to support tsunami preparedness. The Commission also reported on the INT Chart and ENC schemes, the capacity building activities and the status of the IRCC action list.

The SWPHC emphasized the increasing participation of non-MSs in the Commission meetings and the amendment of the statutes to allow any MS of the Secretariat of the Pacific Community (SPC) to become an SWPHC member. The Commission also reported the ongoing and future capacity building projects in the region, the status of INT Charts and ENC's and the status of the IRCC action list.

The MACHC reported the status of the IRCC action list and the strategy to involve non-IHO MSs in the region. Action IRCC3/10 was accomplished (*Provide as an example the MACHC action plan to other RHCs for consideration in promoting intersessional continuity*). The Commission also presented the INT Chart and ENC schemes, the capacity building initiatives and the engagement of Industry and Stakeholders.

The SAIHC reported the capacity building results in the region, especially the impact of technical visits in creating awareness on hydrography at higher levels of decision making in the visited countries. The Commission stressed the importance of exchanging hydrographic information and the development of C-55 to further build capacity in the region. The IRCC action list and INT Chart and ENC scheme status were also reported.

The NIOHC presented the status of the IRCC actions and the situation of INT Charts and ENC coverage. The Commission reported the development of a conference to highlight the importance of MSDI to economic prosperity, of evolution of satellite bathymetry, the Voluntary IMO Member State Audit Scheme (VIMSAS) and the crowd sourcing survey techniques.

The Committee discussed the transition from VIMSAS to a mandatory regime and decided the following action:

IRCC4/27 (RHC Chairs): Inform MSs of the IMO's transition to and the implication of the mandatory IMO Member State Audit Scheme from 2015.

The RSAHC reported the status of C-55 in the region, the establishment of the International Chart Coordination Working Group and the capacity building activities.

The SWaTHC presented the status of the INT Charts and ENCs in the region, including the actions to remove inconsistencies, and the capacity building project developments.

The ARHC reported that the Commission was formally established, the area of responsibility was agreed in consultation with the neighbor RHCs and the development of the INT Chart Region 'N' is underway (Action IRCC3/08). The Commission reported that a prototype design for the Arctic Mariners Routeing Guide is being developed. The Commission discussed the creation of this INT Chart Region and agreed the following action:

IRCC4/05 (ARHC, IHB and CSPCWG): Create / introduce Region N in the IHO INT Chart Scheme.

The Committee noted the reports and discussed the outputs. Next the Chair invited the Committee to address two issues from the 18th IHC: MSDI and response to disasters. Regarding the MSDI, he suggested that the Committee considers further its role at the Committee level and via RHCs and CBSC in contributing to the development of MSDI through:

- reviewing MSDI developments at the regional level (RHCs),
- identifying CB requirements associated with MSDI development (CBSC),
- identifying any need for cross-regional coordination (IRCC),
- discussing future IRCC input to MSDIWG activities (IRCC).

The following actions were agreed:

IRCC4/22 (IRCC Chair): Request HSSC to task MSDIWG to develop an "introduction to MSDI" training course.

IRCC4/23 (CBSC Chair): Investigate the possibility to deliver a MSDI courses with IOC and/or other organizations.

Regarding the IHO response to disasters, the Chair requested the Committee to take IHC Decision 14 into account when considering the outcome of action IRCC3/19 (RHCs reports on their experience with marine disasters in relation with IHO guidelines). He noted that the new amendments to IHO Resolution 1/2005 which were approved by the Conference deal

mainly with the procedures and guidance at the national levels and invited the Committee to consider the impact on the development of standard operational procedures at the regional level and the role of the IRCC in providing general guidance to RHCs. The Committee considered the request and agreed on the following Task:

IRCC4 09/2013	Contribute to improving the framework of IHO response to marine disasters.	RHCs	Permanent
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The debate on C-55 was re-opened. The Chair invited Australia (Nairn) to present the results of the side meeting on C-55 and the Committee agreed the text incorporated as **Annex B (Discussion on C-55)** to this report. The IBSC Chair (Tsoulos) recalled the metadata standard already established in the ISO 19000 and the INSPIRE initiatives as important sources for the future development of C-55. The Committee decided the following action:

IRCC4/08 (Chair and RHCs): Circulate draft C-55 framework developed by Australia, RHCs to provide comments to Chair. Chair to provide final version to IHB.

and agreed on the following Task:

IRCC4 10/2013	Contribute to monitoring and improving the global status of hydrographic surveying.	RHCs	Permanent
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UK (Lambert) raised the issue of compiling the RHCs' best practices to allow IHO MSs to share this important source of information for hydrographic management. The Commission decided then the following action:

IRCC4/10 (UK): Compile the RHCs best practices to be uploaded to the IHO Web site.

UK (Lambert) also proposed the discussion of the fund raising for the continued improvement of the IHO. The Commission then agreed on the action:

IRCC4/11 (Chair and IHB): Investigate mechanisms for raising external funds.

Canada (Narayanan) proposed to the Committee to elaborate a list of achievements since IRCC1. The Committee agreed and the following action was decided:

IRCC4/12 (Canada and all Members): Complete document identifying achievements prepared at the meeting, to be included in the report. Complete statistical information.

The document prepared by Canada (Narayanan) is attached as **Annex C (List of IRCC Achievements)**.

3.2 - Hydrographic Commission on Antarctica

The HCA Chair summarized the activities of HCA and introduced the relevant items for the Committee consideration. He stressed the discussions on how to improve safety of navigation in Antarctica, including the IHO Work Programme tasks to conduct risk assessment in the region, the status of hydrographic surveys and nautical chart production. The Committee noted the report.

3.3 - World-Wide Navigational Warning Service Sub-Committee

The IRCC Secretary introduced the report in the absence of the WWNW-SC Chair. The SC reported the adoption of the NAVTEX Manual by MSC89 and the following review of the WWNWS documents, in order to ensure consistency. It also reported the establishment of five new NAVAREAs/METAREAs in the Arctic Ocean and the MSI courses. The Commission noted the report.

3.4 - Capacity Building Sub-Committee

The CBSC Chair summarized the outcomes of CBSC10, especially in the view of the 18th IHC. The SC established a working group by correspondence to review the Capacity Building Strategy, so the SC will report back to IRCC5 for discussion. The revised IHO CB strategy is to be submitted in 2015 to the 5th EIHC. The Commission decided then the following action:

IRCC4/24 (CBSC Chair): Report on the revision of the IHO CB Strategy.

The CBSC Chair also reported the increase of the planned IHO contribution to the CB Fund from 125 000 € to 225 000 € in the 2013-2017 period. He acknowledged the participation from Japan via the Nippon Foundation (Japan Capacity Building Project), and from the Republic of Korea (RoK), by means of a direct contribution to the CB Fund. The Joint IHO/IMO/WMO/IOC/IALA/IAEA/FIG Capacity Building meeting was presented.

The CBSC Chair presented the CB Fund balance and the updated 2012 CBWP. He explained the reasoning behind the agreed 2013 CBWP, due to the higher demand from the RHC with respect to the estimated balance for the coming year. The SC discussed the need for the MSDI courses, as noted by all the Regional Hydrographic Commissions.

The CBSC Chair stressed the Capacity Building Management System being developed by the Norwegian Hydrographic Service and the IHB. The system aims to comply with the increasing needs of capacity building management. The SC also discussed the Performance Indicators related to capacity building and established an Ad Hoc Working Group to deal with the subject by correspondence and to report back to CBSC11.

The Committee noted the report and discussed the importance of delivering the MSDI other data-related courses. The need to find ways to raise funds for capacity building was also discussed, as already considered in action IRCC4/11 (above). RoK questioned the figures presented as their 2012 contribution and the following action was decided:

IRCC4/26 (IHB and CBSC Chair): Check ROK funding total in the CB Fund for 2012 and amend the CBSC report if required.

The Commission also discussed the need for the RHCs to comply with the CB Procedures and decide to task the RHC Chairs with an action:

IRCC4/06 (RHCs): Comply with the CBSC Procedures and ensure the timely provision of the appropriate documentation that justify expenses associated to CB projects, and demand refund, if needed, not later than one month after the event has finalized.

3.5 - WEND Working Group

The WEND-WG Chair reported on the activities of the WG. He briefly described the history before the WG and the outcomes of the WEND-WG1 in 2011. The decision was taken to present a draft revised text for the WEND Principles and Guidelines to account for the IMO mandatory carriage of ECDIS, including amplification of the processes for gap and overlap solutions.

The WG also presented the views for improving the RENC operation and attractiveness and also reported the status of ENC coverage by usage bands and of the RENC membership.

The Committee noted the report and decided to confirm the existence of the WEND-WG and its Chair and Vice Chair. The Committee discussed the gaps and overlaps in adjacent cells, and the ENC quality issues. There was an agreement on the need of the high level government awareness to deal with the ENCs challenges. The Committee also recognized the need to engage IMO to reach this high level awareness.

Australia (Nairn) invited the Committee to note IHO CL 05/2012 (RENC transparency documents) and CL 51/2012 (continuous provision of ENCs to the IHB).

The Chair invited the Committee to consider the appropriate actions to implement IHC Decision 12 & 13 (*IRCC04-02.2*), taking into consideration *IHO CL 40/2012* on ensuring consistency between ENCs and corresponding paper charts, and instructs the WEND WG accordingly:

Decision 12 constitutes a reaffirmation of the basis on which the activities of the WEND WG should be continued in accordance with its term of reference. More specifically, the WEND WG is invited to consider the following actions and report back to IRCC:

- a) invite MSs/RHCs to identify ENC gaps and overlaps in their areas and elaborate a program to complete what is still missing, identifying target date for achievement;
- b) invite RHCs to identify their regional shortcoming to be able to comply with SOLAS V Regulation 9, i.e. not what they need but what services they are not able to provide;
- c) define a methodology to monitor coverage and availability of ENC and the priority areas still needed to be covered.

Decision 13 invites IRCC to task WEND WG to give further consideration to Annexes B and C of PRO WENDWG-2 and report back to IRCC6 for revision and adoption before submitting it to the 5th EIHC.

The Committee agreed upon the following actions:

IRCC4/13 (RHCs): Provide written feedback on Annexes B and C of WEND Principles (CONF.18/WP3) according to 18th IHC Decision 13.

IRCC4/14 (WEND-WG): Provide revised Annexes B and C of WEND Principles (CONF.18/WP3) to the IHB for approval by MS.

The Chair invited the Committee to consider the contribution of the WEND-WG to the IHO Stakeholders' forum as input to item 6.3. The Committee decided the action:

IRCC4/28 (WEND-WG Chair): Participate at the IHO Stakeholders' forum organized by HSSC.

The Committee considered the status of action IRCC3/11 (*IHB in connection with WEND-WG: Incorporate in the periodic evaluation of the availability of ENC submitted to IMO (NAV) consideration on the impact of poor bathymetric data availability, datum mis-adjustment problem, and other relevant factors*). The Committee agreed on the following action:

IRCC4/15 (UK, Chair and IRCC Members): UK to investigate, produce and provide the Chair with a draft straw paper highlighting ENC issues required to be reported to IMO and other high level organizations. Chair to circulate it to IRCC Members for comments and to provide this input to IHB for consideration.

The Committee also discussed the previous action IRCC3/11 and considered appropriate to continue with an action in this line:

IRCC4/25 (IHB in connection with WEND-WG): Incorporate in the periodic evaluation of the availability of ENC submitted to IMO (NAV) consideration on the impact of quality deficiencies, data availability, and other relevant factors.

The Chair requested the WEND-WG Chair to discuss the need for a ToR update and the Committee agreed on an action:

IRCC4/16 (WEND-WG Chair): Review and propose amendments to the WEND WG ToR if necessary.

3.6 - FIG-IHO-ICA International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers

The IBSC Chair reported the recent meeting in Buenos Aires and the number of recognized and re-recognized programmes. Worth noting is the recognition of the first regional scheme for individual recognition, from the Australasian Hydrographic Surveyors Certification Panel.

The IBSC Chair reported on the evolution of the overall revision of the Standards (S-5 and S-8) and of the publications C-6 and C-47. He reported on the finance project that will be presented to the IHB to support this revision, according to the approved 2013-2017 Work Programme. The Chair reported that two new members of the IBSC had joined recently and that the on-site review process is being developed.

The Committee noted the report.

3.7 - GEBCO Guiding Committee

The GGC representative reported on GEBCO activities and outcomes: the GEBCO products (gridded data, display software, digital atlas, publications, the web services, undersea feature names and world map). He presented the several meetings, the Scholar Programme, the IHO DCDB and other issues.

Committee noted the report and agreed the continuation of action IRCC03/17:

IRCC4/07 (RHCs and GEBCO): Invite GEBCO Guiding Committee / Bathymetric Regional Project Chairs to attend corresponding RHCs meetings, aiming at strengthening collaboration with a priority on improving high resolution shallow water bathymetry at the regional level.

The Chair referred to IHO CL 42/2012 of 16 April 2012 and invited IRCC members to note that the next GEBCO Meetings and the GEBCO Science Day have been programmed alongside the 7th ABLOS Conference (Theme: UNCLOS in a changing world) in October 2012 to foster dialogue between the two groups who have numerous matters of common interest and encouraged participation in both the GEBCO Science Day and the ABLOS Conference.

4 - Inputs from other bodies affecting IRCC

4.1 - Input from HSSC3

The Chair noted two issues of interest for IRCC:

- MSDI issues: HSSC noted the benefit of providing more operational advice to MS on MSDI and that increased MS participation in MSDI matters should be encouraged (see item 3.1).
- IHO Stakeholders' forum: HSSC agreed to support a joint IRCC / HSSC submission to the 18th IHC (see item 6.3).

4.2 - Status of co-operation with non IHO bodies

4.2.1 - RIO+20 process

The IRCC Secretary reported that, following Action IRCC3/24 (*consider the appropriate level of participation in the RIO + 20 process, in line with the IHO strategic directions*), the Brazilian Hydrographer (Vice-Admiral Miranda) agreed to represent the IHO in the Rio+20 Summit that will take place in Rio de Janeiro, Brazil, 20 - 22 June 2012. The IHB has provided the relevant documents and support to this participation.

The Chair introduced document IRCC4-04.2A and invited the Committee to consider the proposals relevant to IHO:

- proposal 3.b: Reform Regional Ocean Management Organizations,
- proposal 3.c: Enhance Coordination, Coherence and Effectiveness of the UN System on Ocean Issues.

The Committee agreed the following action:

IRCC4/17 (Chair and RHCs): Circulate the paper "A Blueprint for Ocean and Coastal Sustainability" to RHCs to be used as a raising awareness tool.

4.2.2 - Other inputs

The Chair invited the IRCC Secretary to inform the Committee on issues related with MSC90 (16-25 May 2012), TC62 (6-8 June 2012), C108 (11-14 June 2012) and NAV58 (2-6 July 2012). The Secretary also reported on the coming IOC EC45 (26-28 June 2012).

Regarding the relations with regional organizations, the Chair invited the Committee to

discuss its contribution to the implementation of the MOU between the European Commission and the IHO which was signed at the 18th IHC (*IRCC4-02.2B*). France (Frachon) indicated that the issue will be addressed at the next NSHC Conference (Sept. 2012).

5 - Review of Terms of Reference and Rules of Procedure

The Chair invited observations if any on the adequacy of the Terms of Reference and Rules of Procedure. The Committee discussed the eventual change in the periodicity of the IRCC Meetings (RoP 4) after consideration of the work programme (item 6) and decided to keep the annual event.

The Committee also considered whether to change the composition of the IRCC (RoP 1) from the RHC Chair to RHC Representative and decided to keep the Chairs, due to the need to maintain a high level participation.

6 - IRCC Work Programme management

6.1 - Input from and to the IHO Work Programme

The Chair introduced document IRCC4-06.1 and invited the Committee to consider the proposed actions. The Committee so decided:

IRCC4/18 (RHCs and IRCC subsidiary organs): Provide the IRCC Chair with their report on the progress of the relevant tasks of the IHO 2012 Work Programme by end of January 2013.

IRCC4/19 (IRCC Chair): Provide the IHB with the IRCC Annual Report for 2012 by end of February 2013.

IRCC4/20 (RHCs and IRCC subsidiary organs): Review the relevant tasks of the IHO 2013 Work Programme in their respective work plans and report on suggested updates, if any, to the IRCC Chair by end of October 2012.

IRCC4/21 (IRCC Chair): Report suggested updates to the IHO 2013 Work Programme, if any, to the IHB by end of November 2012.

6.2 - Input to the IHO Strategic Planning Mechanism

The Chair introduced document IRCC4-06.2 and invited the Committee to consider the following elements of its contribution to the Strategic Plan monitoring system:

- a) IRCC to agree on its contribution to the monitoring of SPIs based on the SPI table in Annex A;
- b) IRCC to review the WPI table in Annex B and any alternative proposals and to agree on a limited set of basic and representative WPIs suited to the IRCC component of the IHO 2013-2017 Work Plan and on a monitoring framework;
- c) IRCC to invite RHCs and IRCC subsidiary organs to provide to the IRCC Chair the estimated values of SPIs and agreed WPIs as of 31 December 2012 and target values for 31 December 2017 by end of January 2013.
- d) IRCC Chair to report to the IHB Directing Committee on the IRCC contribution to the Strategic Plan monitoring system in the IRCC Annual Report for 2012 by the end of February 2013.

The Committee considered that some refinement of the wording is necessary in order to make the WPIs clear. The following actions were agreed:

IRCC4/32 (RHC Chairs): Provide to the IRCC Chair the estimated values of SPIs and agreed WPIs as of 31 December 2012 and target values for 31 December 2017.

IRCC4/33 (IRCC Chair): Report to the IHB Directing Committee on the IRCC contribution to the Strategic Plan monitoring system in the IRCC Annual Report for 2012.

6.3 - IRCC Work Programme

The Chair introduced document IRCC4-06.3 and invited the Committee to review the status of the IRCC 2012 Work Programme and to consider the draft IRCC 2013 Work Programme. The Commission approved the reviewed **IRCC 2012 Work Programme (Annex D)** and adopted the Tasks as included in **Annex E**.

In accordance with the action plan associated with IHC Decision n° 9, Chair invited the Committee to identify which items of its Work Programme could benefit from exchanges with the relevant Stakeholders and to consider its involvement in the HSSC stakeholders' day, notably in relation with the activities of the WEND-WG (see item 3.5).

The Committee considered these issues and agreed the following actions:

IRCC4/29 (IRCC Members): Identify the need and content of a stakeholders' forum event to be organized in 2013 if necessary.

IRCC4/30 (RHC Chairs): Consider the participation of the stakeholders at the RHC conferences.

7 - Election of Chair and Vice-Chair

The Chair referred to article 3 of IRCC Rules of Procedure:

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 Council and Assembly are 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 act as the Chair with the same powers and duties.

The Chair introduced document IRCC4-07 and invited additional nominations if any.

The IRCC Vice-Chair withdrew his candidacy and nominated Canada (Narayanan) for Chair and UK (Lambert) as Vice Chair. It was supported by Australia (Nairn) and Denmark (Hansen).

The Committee elected Canada (Narayanan) and UK (Lambert) as Chair and Vice Chair of the IRCC.

It was agreed that the elected Chair and Vice-Chair take their positions after the conclusion of the meeting.

8 - Next IRCC meeting. Venue and date.

The Chair invited proposals for the venue and dates for IRCC5. The CBSC Chair reported that CBSC had received an offer from India but it was still pending confirmation from local authorities. Australia (Nairn) kindly offer to host the meeting in case India could not confirm its offer.

The Committee decided to accept the offer from India, with Australia as the alternative venue. Regarding the dates, the Committee decided to meet back to back with the CBSC, with the dates as follows: CBSC (30 May to 1 June 2013) and IRCC (3-4 June 2013).

9 - Any other business

9.1 - World Hydrography Day 2012

The Chair reminded the Committee of the theme for WHD 2012: “*International Hydrographic Cooperation - Supporting safe navigation*” and invited comments on the implementation.

He also reminded the Committee of the preceding themes:

WHD 2011: “Human resources - The important element to the success of Hydrography”

WHD 2010: “Hydrographic services - The essential element for maritime trade”

WHD 2009: “Hydrography - Protecting the Marine Environment”

WHD 2008: “Capacity Building, a vital tool to assist the IHO in achieving its mission and objectives”

WHD 2007: “Electronic Navigational Charts (ENCs); an essential element of safety at sea and efficient maritime operations”

WHD 2006: “85 years of the IHO contributing to worldwide safety to navigation”

The Chair invited ideas on the theme for WHD 2013, including possible link with other celebrations such as:

- the theme of the World Maritime Day for 2013 which should be discussed at the 108th session of the IMO Council (11-14 June 2012)
- UN Observances: 2013 is the International Year of Water Cooperation

The Committee reviewed the ideas put forward at IRCC3:

- *Making ENCs work for you !!*
- *Hydrography the fuel for ECDIS mandating !!*
- *Hydrography an essential element for E- Navigation !!.*
- *Hydrography in the context of the transition to the digital era !!*

The Committee considered the following additional inputs:

- Hydrography supports economic development
- Hydrography enables economic development (prosperity)
- Hydrography - the essential tool for economic development

and agreed to submit to the IHB Directing Committee the list of potential themes.

9.2 - IRCC Report for 2012

The Committee agreed on the procedure for preparing the IRCC Report for 2012 (see item

6.1).

10 - Decisions of the IRCC

The Chair reviewed the list of actions from the meeting for final approval by the Committee.

The Committee agreed on the **LIST OF ACTIONS AND IRCC TASKS** as contained in **Annex E**.

11 - Recommendations of the IRCC for consideration of the IHO Member States.

The Chair reviewed possible recommendations, and the Committee agreed that the recommendations will be channelled via RHC Chairs.

12 - Closure of the meeting.

The Chair thanked the participants and the hosts and adjourned the meeting at 1600, on June 08, 2012.

ANNEX A
FOURTH MEETING OF THE IHO INTER-REGIONAL COORDINATION
COMMITTEE
IHO-IRCC4
Singapore, 7 - 8 June 2012

LIST OF PARTICIPANTS

A - IRCC MEMBERS – CHAIRPERSONS AND DELEGATES

REPRESENTING	TITLE	NAME	E-MAIL ADDRESS
Chairman	Ing. Gen.	Gilles Bessero	gilles.bessero@orange.fr
Vice Chairman (South Africa)	Captain	Abri Kampfer	hydrosan@iafrica.com
Secretary (IHB), HCA & WWNwS	Captain	Hugo Gorziglia	hugo.gorziglia@iho.int
IHB	Captain	Alberto P. Costa Neves	alberto.neves@iho.int
NHC, BSHC & ARHC	Commander	Lars Hansen	larsh@kms.dk
NSHC & MBSHC	Ing. Gen.	Bruno Frachon	bruno.frachon@shom.fr
EAHC	Vice Admiral	Nirut Hongprasith	Nirut_Hongprasith@hotmail.com
USCHC	Dr.	Savithri Narayanan	savithri.narayanan@dfo-mpo.gc.ca
EAtHC	Vice Admiral	Agostinho Ramos da Silva	dirgeral@hidrografico.pt
SEPHC	Captain	Patricio Carrasco	director@shoa.cl
SWPHC, MACHC & NIOHC	Rear Admiral	Nick Lambert	nicholas.lambert@ukho.gov.uk
SAIHC	Captain	Abri Kampfer	hydrosan@iafrica.com
RSAHC	Commander	Thani al Mahrouki	los@omantel.net.om
SWAtHC	Captain	Nickolas de A. Roscher	nickolas.roscher@dhn.mar.mil.br
CBSC	Mr.	Thomas Dehling	thomas.dehling@bsh.de
WEND-WG	Captain	Jamie McMichael-Phillips	jamie.mcmichael-phillips@ukho.gov.uk
IBSC	Prof. Dr.	Lysandros Tsoulos	lysandro@central.ntua.gr
GGC	Captain	Jose Gianella	gjianella@dhn.mil.pe

B – OTHER COUNTRIES AND BODIES – CHAIRPERSONS AND DELEGATES

REPRESENTING	TITLE	NAME	E-MAIL ADDRESS
Australia	Commodore	Rod Nairn	international.relations@hydro.gov.au
Japan	Mr.	Masayuki Fujita	ico@jodc.go.jp
Japan	Mr.	Teruo Kanazawa	kanazawa-r4w@jha.jp
Korea, Rep. of	Dr.	Moon Bo Shim	shimmb@korea.kr
Korea, Rep. of	Dr.	Sang Hyun Suh	shsuh@moeri.re.kr
Nigeria	Mr.	Olumide Omotoso	olumide.omotoso@gmail.com
Portugal	Commander	Fernando Artilheiro	freitas.artilheiro@hidrografico.pt
Singapore	Mr.	Jamie Chen	Jamie_Y_K_Chen@mpa.gov.sg

REPRESENTING	TITLE	NAME	E-MAIL ADDRESS
Thailand	Captain	Bongkoch Samosorn	Bsamosorn@gmail.com
Thailand	Commander	Matukorn Limsakul	Matukornl@yahoo.com
Thailand	Lt Commander	Sanon Rugnhu	Sanono@yahoo.com
Thailand	Lieutenant JG	Chakpetch Sirichumsaeng	Sirichumsaeng@gamil.com
UK	Mr.	Jeff Bryant	jeff.bryant@ukho.gov.uk
UK	Mr.	Tim Sewell	tim.sewell@ukho.gov.uk
UK	Miss	Claire Bunyan	claire.bunyan@ukho.gov.uk
USA	Mr	Jonathan Justi	Jonathan.Justi@nooa.gov

**FOURTH MEETING OF THE IHO INTER REGIONAL COORDINATION COMMITTEE
IHO-IRCC4
Singapore, 7-8 June 2012**

Discussion on the Validity and Updating of C55

1. Background.

1.1 The IRCC was invited to consider ways and means to contribute to Task 3.4.3 and 3.6.1A of the IHO Work Programme.

Task 3.4.3 Enhance publication C-55. IHB with the support of the RHCs, CBSC and GGC to develop a new framework for C-55
2013-2015 Develop the framework for the input, presentation and assessment of the survey and nautical cartography status: 60 k€ for 3 years

Task 3.6.1 C-55 Status of Hydrographic Surveying and Nautical Charting World-wide.

A) MS to provide annual update. (Permanent)

B) IHB to implement the new framework for publication C-55 to improve the collection, quality and availability of hydrographic data world-wide, monitor and rectify possible deficiencies and shortcomings, cooperate with other international organizations and stakeholders as necessary, and to keep MS informed on progress on this issue. (In conjunction with Task 3.4.3)

C) IHB to report periodically to IMO (NAV and MSC) on the impact of poor bathymetric data availability, datum mis-adjustment problems, and other relevant factors governing the limitations and requirements for improvements in global charting and associated services. (Permanent)

1.2 The IRCC undertook to take initial action at their 4th meeting rather than creating a special working group for the task.

2. IRCC4 Discussion on C-55

2.1 The committee agreed that C55 is missing the vital spatial information that would make it useful to member states, that the term “adequate” is invariably interpreted differently by different member states so needs to be changed and that in its present form the information is of little use – accordingly providing updates to C55 in its current form is not seen as a high priority.

2.2 The current intent and purpose of C55 are defined as:

C-55 Executive Summary

The aim of this third edition of IHO Publication No. 55 (C-55) is to present a clear picture of the worldwide coverage of surveys and nautical charts and of the extent of

effective organisations for the timely promulgation of navigational safety information. The content of the reports is now held in a live database on the IHO web site from which up to date reports can be extracted at any time. The data base covers the waters of 90% of the coastal states of the world.

Introduction

The purpose of IHO Publication No. 55 (C-55) is to provide base data for governments and supporting international organisations as they consider the best means by which to implement responsibilities set out in Chapter V, Regulation 9, of the Safety of Life at Sea (SOLAS) Convention. It also informs IHO input to the United Nations Global Maritime Assessment.....

[later]

The C-55 data-base will underpin IHO advice to the UN, IMO and other agencies. Some RHCs are already planning regional data-bases with more detailed layers of information. It is hoped that the systematic approach of C-55 will assist states with developing hydrographic services to put together a coherent national plan.

The data in C-55, together with the additional information provided by states on co-operation and requirements for assistance, will be used by the IHOCBC in the development of a prioritised action plan to implement measures to contribute to the safety of navigation and protection of the marine environment worldwide

[later]

Analysis of the Status of Surveys

The categorisation in the reports is underpinned by detailed national assessment using S-44 criteria, the zones of confidence (CATZOC) defined in S-57, or some other systematic classification of source data.

User Requirements for C-55

2.3 Discussion amongst the IRCC Members generally agreed that it was necessary that the information in C-55 could be used to support to following functions:

- a) Raise awareness of the status of hydrography,
- b) To assist with the targeting of hydrographic resources and hydrographic capacity building resources,
- c) To support regional harmonization and prioritization of hydrographic survey efforts,
- d) To engage with stakeholders as to where hydrographic information supported and did not support safe navigation,
- e) To assist hydrographic planning and reporting,
- f) To inform governments of the need for hydrographic efforts,
- g) As an input to the national survey planning process,
- h) To help convince coastal States of the need to focus on hydrography, and

- i) To measure progress in hydrography over time.

Information Component Requirements for C-55

2.4 To achieve the requirements at paragraph 2.3, above, it was determined that C-55 would ideally include the following information **on a spatially defined** basis:

- a) Chart and ENC Coverage, scale and survey quality information
- b) Survey data coverage and quality and estimate of resurvey requirement date
- c) General depth information
- d) Maritime Activities¹; user needs information such as shipping routes, vessel draughts, port location, cargo types etc
- e) The availability of MSI information

Sources of Information for C-55

2.5 The IRCC considered that if C-55 was to be kept up to date, relevant and thus useful, then it must be a relatively simple or automated process for Member States to provide that information. With this in mind it was considered that the following sources of information would be the most appropriate:

- a) **ENC** including CATZOC information, depth areas – the IHB should be able to automatically collect various information types from ENC once Member States comply with the requirement of CL51/2012 to provide copies of their ENCs to the IHB.
- b) **Paper Charts**, including source data diagrams – this will be a more difficult and manpower intensive task as there is little standardization between source data diagrams and it may require an “expert” to convert the information therein into a useful data type. (Note that the IHB is currently conducting a study into this process)
- c) **Request additional information from Member State Hydrographic Offices.** (it is considered that this will only be successful if the MSHO also has a need for this information and thus a process to regularly collect it). Consideration should

¹ For information, it should be noted that the current C-55 defines maritime activities as:

Maritime Shipping Routes (MSRs). These MSRs are subdivided into 3 categories:

- a. international, i.e. routes between hub ports;
- b. regional, i.e. routes between hub ports and feeder ports;
- c. internal (including inland maritime areas) i.e. routes from feeder ports to other national ports.

Ports and Approaches

Marine Industry (Fisheries, Offshore Resources)

also be given to interoperability with any hydrographic information systems that may already exist at national and regional levels.

Action 1: IRCC Members to decide whether the utility of automatic collection of the limited information available from ENC should outweigh the ideal information requirements of C-55.

Action 2: Define the feature types and metadata standards for the information at paragraph 2.4 giving consideration to existing information and data exchange standards such as S-57, S-100, the European Inspire. (In defining these requirements the requirements of paragraph 2.5 should be considered – it would be unfortunate to create paralysis by setting unachievable information requirements).

2.6 The IRCC considered the above paper at 0830 Friday 8 June.

Action 1 Outcome. IRCC Members agreed that simplicity of collection of information in order to maintain its currency were the overriding considerations.

Action 2 Outcome. IRCC Members agreed that CATZOC polygon and depth information would be a reasonable initial approach to the hydrographic quality layer of C-55 but that the system should be extensible to allow future improvements.

2.7 The following comments and considerations were also agreed:

- a. 'Adequacy' of hydrographic data was recognised as being dependent on the Maritime Activity needs, thus C-55 needed to be capable of interrogating the hydrographic quality layer against a variety of Maritime Activity needs and derive an 'adequacy' rating for each specific purpose.
- b. It is essential to develop a simple display system representing 'adequacy' of hydrographic information in order to meet the intended uses of C-55. A traffic light system of Red, Amber, Green defined as required to display the levels of adequacy was considered to be most appropriate.
- c. Functionality. The C-55 database should allow Member States to upload their national/regional information, provide read-only and report generation access to the broader maritime user community and provide information transfer to Member States and other by Web Feature Server or similar.

d. National HOs may already have similar information in their own planning databases at a much more detailed level of granularity than would be required by the IHO for the purposes outlined in paragraph 2.3 above. In any case, Member States still consider that the aggregated global hydrographic quality information will be useful for their own needs.

Recommendation for IHB

2.8 This document is offered by IRCC as an initial user requirement statement for the development of a new C-55 framework within the new IHO information system.

FOURTH MEETING OF THE IHO INTER REGIONAL COORDINATION COMMITTEE
IHO-IRCC4
Singapore, 7-8 June 2012

ACHIEVEMENTS OF THE IRCC

The IRCC meeting provided an excellent and productive forum to discuss the activities, outputs and outcomes, and the work plans for the next intersessional period of the RHCs, as well as to develop a common strategy to advance the objectives of the IHO. It also provided an opportunity to identify and highlight the key achievements of the IHO through the RHCs during the period leading up to IRCC4, some of which are captured in this document, grouped according to the operational elements of the IRCC TORs. It should be recognized that there were many other successes that were considered essential to delivering on IRCC objectives, details of which may be found in the RHC and other reports.

IRCC TOR: Establish, coordinate and enhance cooperation in hydrographic activities amongst States on a regional basis, and between regions – expect this includes promoting hydrography and recruiting new members to IHO

- IRCC's Capacity building/enhancement activities such as technical visits (14 countries were visited during the intersessional period), seeking extra-budgetary support for CB from member states (the contributions from Japan and Republic of Korea significantly increased CB activities) and the industry, and facilitating participation of observers and technical experts in RHC meetings significantly raised the awareness and increased the participation of the number of maritime nations in IHO's activities.
- WHD activities with the theme '*Human Resources - The important element to the success of hydrography*' in Hydrographic Services around the world highlighted the important role of hydrography to ensure safety of life at sea and responsible and sustainable use of our oceans (some examples of the celebration of WHD in 2011 can be seen in the IHO web site).
- IHO achieved its long-standing objective to ensure a complete suite of RHCs providing full coverage of the global oceans to enable delivery of hydrographic services through the establishment of the ARHC; the open scientific session that takes place just prior to the official meeting of the ARHC provides an excellent advisory forum to discuss the specific challenges and opportunities in the Arctic hydrography to set the objectives and work plans of ARHC.
- The IHO has received applications from Viet Nam and Brunei Darussalam and Cameroon became an IHO MS in 2012. RHCs, particularly the SWPHC and MACHC have seen an increase in the participation of non-IHO MSs to their last conferences.

IRCC TOR: Establish co-operation and partnership with governments, organizations and industry to enhance the delivery of Capacity Building programs and to ensure long-term sustainability.

- The commitment and effort of the IRCC through the RHCs and the IHB resulted in establishing many partnership agreements and availing new opportunities to enhance the delivery of Capacity Building programs and to ensure long-term sustainability. These included:

- Partnerships with relevant organizations were strengthened through participation in multi-organizational (IHO-IMO-WMO-IOC-IALA-IAEA-FIG) meetings designed to achieve economies of scale to build capacity in maritime nations and to promote and advance hydrography.
- MoUs were put in place with Republic of Korea and Japan, as well as with ICA, FIG, IOC, ISO, and IFHS.
- At the regional level, MoUs were established with regional organizations such as PAIGH, PMAWCA, SOPAC, ACS and SPC.
- During the XVIIIth IHC a MoU was signed with the European Commission to integrate approaches to maritime affairs.
- In cooperation with IMO, there were 5 courses delivered training for more than 60 people, and two more courses are planned for the upcoming year.

IRCC TOR: Facilitate interaction between RHCs and potential donors at both international and regional levels.

- Inviting stakeholders and industry to RHC meetings and holding technical presentations and training sessions has helped to enhance engagement with stakeholders and industry. This facilitated, the following projects:
 - Technical workshop in Hydrography and Nautical Cartography delivered in Haiti (2011), jointly accomplished by IHO, PAIGH and Industry (Kongsberg Maritime, Caris, Hypack, Hemisphere).
 - Introduction to Hydrographic Surveying and Nautical Charting Course delivered in St John's, Antigua (2011) and involved close collaboration with industry - Kongsberg Maritime, CARIS and Fugro Pelagos together with the Antigua & Barbuda Coastguard (who provided the vessel).

IRCC TOR: Liaise with other relevant international organizations (governmental and Non-Governmental).

- The International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers (IBSC) is a joint FIG, IHO and ICA organ. At its 35th Meeting, 11 programmes for Hydrography and Cartography were reviewed and 8 awarded recognition or re-recognition both at Category A and B levels. For the first time an international scheme for individual recognition was also awarded.
- The cooperation with GEBCO has resulted in a series of important products like the GEBCO Digital Atlas, the GEBCO world map and the GEBCO Gazetteer of Undersea Feature Names; these products are available in the GEBCO web site.
- Improvement of the WWNWS can be represented by the close and coordinated work conducted with the IMO in the update of several MSI publications and review of all the related documents, as well as in the establishment of the five new NAVAREAS covering the Arctic Ocean.

IRCC TOR: Through RHCs, deliver on the objectives of IHO.

- INT Chart / ENC production: several RHCs created WGs to develop and maintain for their regions, integrated international chart schemes, overseeing both paper and ENC coverage. The WEND-WG monitors and advises IRCC on the development of adequate ENC coverage to meet the SOLAS V/19 carriage requirements for ECDIS.
- Harmonization of re-survey schemes: Although an international standard for accuracy of hydrographic surveys existed for many years, there was no internationally accepted guideline regarding the strategy (frequency, extent) of re-survey of critical areas with heavy vessel traffic and susceptible to significant temporal changes in bathymetry. Two

regional hydrographic commissions have been addressing the issue of harmonizing methods and practices for analyzing critical areas and for planning efficient re-survey, opening the way for a more rational and cost-effective approach to addressing this challenge.

- Provision of common tidal surface: bathymetric measurements made for the purpose of charting must be corrected to account for the tidal fluctuations so that the soundings on nautical charts refer to a fixed level of reference (datum). When several nations surround a common maritime space, the reference level may vary from region to region and in some cases, chart to chart. Consistency of nautical charts and elimination of ambiguity prejudicial to the safety of mariners require that the different reference levels are integrated into one single seamless surface. Several RHCs, working on enclosed or semi-enclosed seas, are collaborating to transform their charts to a common tidal reference, including its precise vertical positioning.

**FOURTH MEETING OF THE IHO INTER REGIONAL COORDINATION COMMITTEE
IHO-IRCC4
Singapore, 7-8 June 2012**

IRCC 2012 Work Programme

Task No	Activity	Responsible	Deadline	Status
IRCC3 1/2012 IHO WP201 2 3.0.0 A	Inter Regional Coordinating Committee (IRCC) Meeting. Organize, prepare and conduct IRCC4 in conjunction with the CBSC Meeting, on the first week of June, venue to be decided, hosted by UK.	Chair with the support of Secretary and IHB	20 February 2012	Done. See IHO CL 25/2012.
IRCC3 2/2012 IHO WP201 2 3.0.0 B	Preparation of the XVIII IHC Report to the XVIII IHC (See action IRCC03/16).	Chair	At the XVIII IHC	Done. See CONF.18/WP.3.
IRCC3 3/2012	Preparation of Work Program and Budget 2013-2017 Cooperate with the IHB in the preparation of the 2013-2017 IHO Work Programme and Budget to be submitted to the XVIII IHC (Assembly) in 2012. (Ref. 4th EIHC Dec. 5) (See action IRCC03/23).	Chair with the support of Secretary	01 November 2011	Done. See IRCC4-02.5B.
IRCC3 4/2012 IHO WP201 2 3.0.0 C	Implement strategic mechanism Provide advice to IHB to review the implementation of the new planning mechanism at the end of each annual cycle in 2012. (Ref. 4 th EIHC Decision 7).	Chair	01 March 2012	Done. See PRO IRCC-1 in CONF.18/WP.3.
IHO WP201 2 3.0.0 D	Produce IRCC Annual Report for 2011.	Chair	01 March 2012	Done.
IHO WP201 2 3.0.0 E	Update and implement the IRCC Work Programme.	Chair	Permanent	This document.
IHO WP201 2 3.6.3 B	C-55 Status of Hydrographic Surveying and Nautical Charting Worldwide IRCC to design a framework for C-55 development	IRCC	31 Dec. 2012	On going. See IRCC4-02.2.

**FOURTH MEETING OF THE IHO INTER REGIONAL COORDINATION COMMITTEE
IHO-IRCC4
Singapore, 7-8 June 2012**

LIST OF ACTIONS AND IRCC TASKS AGREED AT IRCC4

LIST OF ACTIONS

No	ACTION	RESP.	DEADLINE	STATUS
IRCC4/01	Encourage the approval of pending applications for IHO membership.	RHCs	Permanent. Report to IRCC Chair Dec 2012	Ongoing
IRCC4/02	Continue to engage pending applicants in their region to encourage the ratification of the IHO Convention.	EAtHC MBSHC	Permanent. Report to IRCC Chair Dec 2012	Ongoing
IRCC4/03	Continue to engage suspended Member States in their region to encourage their re-insertion in IHO.	EAtHC and MACHC	Permanent. Report to IRCC Chair Dec 2012	Ongoing
IRCC4/04	Nominate a representative to the IHR Editorial Board and report to the IHB.	EAHC, MBSHC, NHC and RSAHC	30 Dec 2012	
IRCC4/05	Create / introduce Region N in the IHO INT Chart Scheme	ARHC/IHB/ CSPCWG	Oct 2012	
IRCC4/06	Comply with the CBSC Procedures and ensure the timely provision of the appropriate documentation that justify expenses associated to CB projects, and to demand refund, if needed, not later than one month after the event has finalized.	RHC	Permanent	Ongoing
IRCC4/07	Invite GEBCO Guiding Committee / Bathymetric Regional Project Chairs to attend corresponding RHCs meetings, aiming at strengthening collaboration with a priority on improving high resolution shallow water bathymetry at the regional level.	RHCs / GEBCO	Permanent	
IRCC4/08	a) Circulate draft C-55 framework developed by Australia. b) RHCs to provide comments to Chair. c) Chair to provide final version to IHB	a) Chair b) RHCs c) Chair	a) 15 June b) end June c) 15 July	
IRCC4/09	Consider amending Statutes of the RHCs in order to allow non-IHO MSs to host RHCs conferences, when and if applicable.	RHCs	As soon as applicable	

No	ACTION	RESP.	DEADLINE	STATUS
IRCC4/10	Compile the RHCs best practices to be uploaded to the IHO Web site	UK	Dec 2012	
IRCC4/11	Investigate mechanisms for raising external funds.	Chair/IHB	?	
IRCC4/12	Complete document identifying achievements prepared at the meeting, to be included in the report. Complete statistical information.	Canada All	2 weeks 2 weeks	(to be included in the meeting report)
IRCC4/13	Provide written feedback on Annexes B and C of WEND Principles (<u>CONF.18/WP3</u>) according to 18 th IHC Decision 13	RHCs	?	
IRCC4/14	Provide revised Annexes B and C of WEND Principles (<u>CONF.18/WP3</u>) to the IHB for approval by MS	WEND WG	Dec 2012	
IRCC4/15	a) Investigate, produce and provide the Chair with a draft straw paper highlighting ENC issues required to be reported to IMO and other high level organizations. b) Chair to circulate it to IRCC Members for comments. c) Provide this input to IHB for consideration.	a) UK b) Chair /IRCC Members c) Chair	a) ? b) ? c) Sep 2012	
IRCC4/16	Review and propose amendments to the WEND WG ToR if necessary	WEND Chair	Dec 2012	
IRCC4/17	Circulate the paper " A Blueprint for Ocean and Coastal Sustainability " to RHCs to be used as a raising awareness tool.	Chair RHCs	As soon as practicable	
IRCC4/18	Provide the IRCC Chair with their report on the progress of the relevant tasks of the IHO 2012 Work Programme.	RHCs and IRCC subsidiary organs	by the end of Jan 2013	
IRCC4/19	Provide the IHB with the IRCC Annual Report for 2012	IRCC Chair	by the end of Feb 2013	
IRCC4/20	Review the relevant tasks of the IHO 2013 Work Programme in their respective work plans and report on suggested updates, if any, to the IRCC Chair	RHCs and IRCC subsidiary organs	by the end of Oct 2012	
IRCC4/21	Report suggested updates to the IHO 2013 Work Programme, if any, to the IHB	IRCC Chair	by the end of Nov 2012	
IRCC4/22	Request HSSC to task MSDIWG to develop an "introduction to MSDI" training course	IRCC Chair	Jun 2012	
IRCC4/23	Investigate the possibility to deliver a MSDI courses with IOC and/or other organizations	CBSC Chair	Oct 2012	
IRCC4/24	Report on the revision of the IHO CB Strategy	CBSC Chair	IRCC5 IRCC6	Final report to be submitted to 5 th EIHC

No	ACTION	RESP.	DEADLINE	STATUS
IRCC4/25	Incorporate in the periodic evaluation of the availability of ENC submitted to IMO (NAV) consideration on the impact of quality deficiencies, data availability, and other relevant factors.	IHB in connection with WEND-WG	In time for NAV59	(to be considered with IRCC4/15)
IRCC4/26	Check ROK funding total in the CB Fund for 2012 and amend the CBSC report if required	IHB and CBSC Chair	As soon as possible	
IRCC4/27	Inform MSs of the IMO's transition to and the implication of the mandatory IMO Member States Audit Scheme from 2015	RHC Chairs	As soon as possible	
IRCC4/28	Participate at the IHO Stakeholders forum organized by HSSC	WEND-WG Chair	Sep 2012	
IRCC4/29	Identify the need and content of a stakeholders' forum event to be organized in 2013 if necessary	IRCC Members	Oct 2012	
IRCC4/30	Consider the participation of the stakeholders at the RHC conferences	RHC Chairs	?	
IRCC4/31	Organize, prepare, attend IRCC5	Chair with support of IHB Secretary	IRCC5	
IRCC4/32	Provide to the IRCC Chair the estimated values of SPIs and agreed WPIs as of 31 December 2012 and target values for 31 December 2017	RHC Chairs	by the end of Jan 2013	
IRCC4/33	Report to the IHB Directing Committee on the IRCC contribution to the Strategic Plan monitoring system in the IRCC Annual Report for 2012	IRCC Chair	by the end of Feb 2013	

IRCC TASKS

No	ACTIVITY	RESP.	DEADLINE	STATUS
IRCC4 01/2013 IHO WP2013 3.0.0 A	Organize, prepare, attend and report IRCC5.	Chair with the support of Secretary and IHB	IRCC5	See Action IRCC4/31
IRCC4 02/2013 IHO WP2013 3.0.0 B	Support the IHB to implement the IHO planning mechanism.	Chair	Feb 2013	See IRCC4-06.2 and Actions IRCC4/32 and IRCC4/33

No	ACTIVITY	RESP.	DEADLINE	STATUS
IRCC4 03/2013 IHO WP2013 3.0.0 C	Contribute to the IHO Annual Report.	Chair	Feb 2013	Produce IRCC Annual Report 2012. See Action IRCC4/19
IRCC4 04/2013 IHO WP2013 3.0.0 D	Update and implement the IRCC Work Programme (List of Actions and Tasks agreed at IRCC4).	IRCC	Dec 2013	This document.
IRCC4 05/2013 IHO WP2013 3.2.11	Encourage the approval of pending applications for IHO membership.	RHCs	Permanent	See Action IRCC4/01
IRCC4 06/2013 IHO WP2013 3.2.12	Encourage the ratification of the IHO Convention by approved applicants.	RHCs	Permanent	See Action IRCC4/02
IRCC4 07/2013	Secure the ratification of the Protocol of Amendments to the IHO Convention.	RHCs	Dec 2013	See IRCC4-02.4.
IRCC4 08/2013 IHO WP2013 3.4.3	Contribute to the development of C-55.	RHCs and Chair		See Action IRCC4/08
IRCC4 09/2013	Contribute to improving the framework of IHO response to marine disasters.	RHCs	Permanent	See IRCC4-02.2.
IRCC4 10/2013	Contribute to monitoring and improving the global status of hydrographic surveying.	RHCs	Permanent	See IRCC4-02.2.
IRCC4 11/2013	Contribute to the development of MSDI.	Chair and CBSC Chair		See Actions IRCC4/22 & 23
IRCC4 12/2013	Contribute to the IHO Stakeholders' forum.	Chair		See Action IRCC4/29