



MINUTES
16th CONFERENCE OF THE MESO AMERICAN AND CARIBBEAN
SEA HYDROGRAPHIC COMMISSION
Antigua& Barbuda
08 – 12 December 2015

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MINUTES
16th MACHC CONFERENCE
08 – 12 December 2015

The formal opening of the 16th conference of the Meso American and Caribbean Sea Hydrographic Commission (MACHC) took place on Tuesday evening, 08th December 2015. Captain Marc. van der Donck (Director Netherlands Hydrographic Office), the Chair of the Meso American & Caribbean Sea Hydrographic Commission, Mr. Robert Ward, the President of the International Hydrographic Bureau (IHB) and Ambassador Dwight Gardiner (Antigua & Barbuda) welcomed all the MACHC participants to the MACHC and invited them to have an open and constructive conference. Mexico and Antigua and Barbuda were especially thanked for arranging the English-Spanish translation service. This service is a precondition for a successful conference. After the formal opening all enjoyed the ice-breaker event hosted by Antigua and Barbuda.

The conference itself started the 9th of December 2015 with various meetings:

- the MACHC Charting Committee (MICC), Chair is Mr. John Nyberg,
- the Marine Economic Infrastructure Program (MEIP) Working Group, Chair is Mr. Chris Thorne,
- a meeting on Risk Assessment, Chaired by Mr. Sam Harper and,
- the Capacity Building Committee (CBC), Chair is Mr. Jeff Bryant.

Minutes and action items are kept by the Chairs of the separate working groups or meetings.

Heads of delegations and those delegates not requiring to attend specialist working groups visited HNLMS Friesland in St. John's harbours for a tour and lunch on board. This provided an excellent opportunity to discuss MACHC matters in a different setting and allowed the Netherland Navy to present herself amongst others with a traditional 'rice table'. Both were much appreciated by the attendants.

1. MACHC Administration/organizational issues

1.1 Introductions

On Thursday, 10th December 2015, the plenary meeting started and all participants were invited to introduce themselves.

1.2 Approval of Agenda and timetable

The Chair invited the participants to comment on the agenda and timetable.

- France asked to add the report of the IHO-EU network WG .The Chair added this item as agenda item 8.3.
- Brazil requested to do a presentation on action item 15-6.2.1, as Brazil was asked to engage other countries in the MACHC region and other RHC's to develop a platform in the area of Inland ENC (IENC). This is added to the agenda as part of agenda item 7.6

The adjusted Agenda and Timetable were approved.

See related document, [MACHC16-1.2 Agenda and Timetable](#), to complete the report.

1.3 List of documents/Administrative Arrangements

All documents and presentations are to be made available via the IHO/MACHC website (https://www.iho.int/mtg_docs/rhc/MACHC/MACHC16/MACHC16_Docs.htm).

The Chair noted that 12 of the 13 Member States were present during the meeting of the Commission. This means the quorum for a formal MACHC Conference was met. Also, 7 of the 13 associate member states were present (counted without the Dominican Republic).

The chair reminded the participants that audio recordings of the conference were made and asked if there were objections to this. There were none. The audio recordings will be deleted after the minutes of the MACHC16 conference are finalized.

See related document, [MACHC16-1.3a List of Documents and MACHC16-1.3b List of Participants \(invited and present\)](#), to complete the report.

1.4 Minutes of MACHC15 Conference

There are no comments to the MACHC15 minutes, therefore the minutes of the MACHC15 conference were approved by the conference.

See related document, [MACHC16-1.4 Minutes of MACHC15](#), to complete the report.

1.5 MACHC 15 Action list review

By email correspondence before the conference, the Chair had proposed a procedure to deal with the action list. During the Commission meeting the Chair gave a short presentation about his proposal to reorder the action items and mark them with a colour code.

- *“Open action items. In the column status, I have provided a proposal for this action item. I intend to focus on concrete deliverables, so when deliverables are unclear or actions are overtaken by events, I propose to close them. Also, when the action items are not within the remit of the Terms of Reference of the MACHC, I propose to close them as a MACHC action.*
- *Continuous action items. In the column status, I vetted these items against standing activities/responsibilities with the MACHC structure. If so, these items do not need to be reviewed any longer and I propose to close them as specific MACHC action items. The remainder, I propose to move to a separate list (as below) for future reference, as they do not have a specific deliverable in time.*
- *Completed or closed action items. These action items do no longer need reviewing, so I propose to stop reporting them on an action list. In the future, they can still be retraced as part of previous conference minutes.”*

legend
open item (white)
continuous action (light grey)
completed or closed (light green)

There were no comments on this new procedure.

Decision.

Use the new procedure to manage the MACHC action list.

In preparation for the conference, the Chair had requested participants to study the proposals for the MACHC action items. In order to save processing time at the Commission meeting, the Chair had selected the more important issues for plenary discussion. Those issues were discussed. The results of the discussions are listed in three tables in Annex A to the minutes; specifically the last column "Status":

- Table 2: OPEN ACTION ITEMS AT START OF 16th MACHC
- Table 3: CONTINUOUS ACTION ITEMS AT START OF 16th MACHC
- Table 4: CLOSED ACTION ITEMS AT START OF 16th MACHC

See related document, MACHC16-1.5 Status of Action List from MACHC15, to complete the report.

1.6. MACHC Statutes

In MACHC letter 22/15, the Chair identified four action items that had the Statutes as their subject matter and provided proposals for amendments. The Chair gave a presentation in which he further explained the proposal. Those proposals were considered with following outcome.

Amendment related to Action 15.4

MACHC chair had received a proposal from the IHB on the division of responsibilities between the Chair, the Host country and participants of the MACHC Conference. After discussion, the following amended text was agreed upon to clarify those responsibilities.

ARTICLE 11: OF EXPENSES

- a) The Chair and the host country shall be responsible for the organization of the Conferences ~~and shall pay the expenses except those described below.~~
- b) Travelling, hotel and per diem expenses of ~~the delegates participants at Conferences~~ shall be ~~the responsibility of the nation or the organization of the participants.~~
- c) ~~All expenses related to the provision of the venue and associated facilities for Conferences shall be the responsibility of the host country.~~

Amendment related actions 15.4.2.1, 15.4.2.2 and 15.5.2.1

These action items related to the use of Spanish in the MACHC region. In order to advance the achievement of the objectives of the IHO and in particular the aims of the MACHC region, the use of the Spanish language, wherever possible, would be beneficial.

After an introduction by the Chair on the differences between an official IHO language and a working language of a (subordinate) IHO body, it was agreed that the MACHC should focus on working language issues.

As noted during the last MACHC conference, there is support “to have some kind of inclusiveness of Spanish as working language”. There are, however, significant budgetary constraints in terms of supporting such inclusiveness. The following amended text was agreed upon to reflect the special position of the Spanish language.

ARTICLE 11: OF EXPENSES

d) In order to support Spanish speaking participants at meetings of the Commission (see Article 13), all participants are strongly encouraged to provide in-kind and/or financial support to enable continuous interpretation at the meetings.

ARTICLE 13: Of THE LANGUAGES OF THE COMMISSION

a) The working language of the Commission shall be English, with continuous interpretation at meetings to and from Spanish being provided by the host country, with the support of other collaborating Member States or organizations if required (see Article 11d).

One of the other outstanding challenges for the MACHC region is support for written communication in English and Spanish. Not all Member States are fully proficient in the working language of English. Online services, while improving in quality, do not yet work well for technical details and nuances. So, there is a requirement for additional written translation services in addition to continuous interpretation during the meeting of the Commission at the conference.

New ‘open’ action item.

No	Subject mater	Action	Responsible party	Due date
16.1.6	Statutes	Member States to consider how to provide dual versions in Spanish and English of MACHC documents, for instance as a voluntary service by a Member State.	Member States	17th MACHC Conference

See related document, MACHC16-1.6 MACHC Statutes amendment, to complete the report.

1.7 Request from Dominican Republic for Associate Membership

In MACHC letter19/2015, the Chair had informed the Commission that the Dominican Republic had indicated its interest to apply for associate membership of the MACHC and invited the Member States to accept the application of the Dominican Republic at the 16th MACHC conference. The application was welcomed by all. Consequently, the Chair invited the delegate from the Dominican Republic to sign the MACHC Statutes and welcomed the Dominican Republic as the 14th Associate Member of the MACHC.



See related document, [MACHC16.-1.7 Letter Dominican Republic](#), to complete the report.

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2. MACHC Developments IHO bodies/Policy aspects

2.1 IHB Report

The IHB President, Mr. Robert Ward, informed the Commission about the Ratification of the Protocol of Amendments on the IHO Convention. Principal aims of the Amendments are to:

- remove the requirement for States applying for membership of the IHO to await the approval of two thirds of the existing Member States,
- change the 5 year programme cycle to three years between Conferences (to be known as Assemblies),
- establish a Council that will meet annually,
- change the elected position of President of the Directing Committee to Secretary-General - elected. Directors will be subordinate to the Secretary-General.

44 of the required 48 approvals to the Protocol of Amendments had been received by the Government of Monaco. President Ward urged the IHO Member States of the MACHC (Colombia, Guatemala, Jamaica, Trinidad and Tobago, and Venezuela) that had not yet indicated support to the Amendments to the Convention on the IHO, to ratify the Protocol of Amendments at their earliest opportunity.

There were 4 States (Malta, Congo, Solomon Islands and Vanuatu) with pending applications to join the IHO. Not sufficient IHO Member States have indicated their approval yet. President Ward urged the IHO Members States concerned to indicate their approval at their earliest opportunity.

President Ward noted that there are MACHC Associate Member States and Observers that are not a member of the IHO. These are Antigua and Barbuda, Bahamas, Barbados, Belize, Costa Rica, Dominica, El Salvador, Grenada, Guyana, Honduras, Nicaragua, Panama, Saint Lucia, Saint Vincent and the Grenadines and St Kitts and Nevis. He encouraged the respective delegates to advise their Governments of the numerous advantages, benefits and opportunities that IHO members have with regard to hydrography.

He further mentioned the IHO GIS and database developments, Capacity building, Publicity and outreach, and two new MoUs . The Organization of east Caribbean States (OECS) and the Hydrographic Society of America (THSoA) are now formally recognised as IHO observer

organisations. He introduced the theme for World Hydrography Day 2016: " Hydrography – The Key to Well-managed Seas and Waterways". On the website of IHO, several videos were made available with the titles "What is Hydrography?", "Hydrography for kids" and "Want some excitement?...become a hydrographer".

President Ward, concluded with the following requests for action:

1. MACHC to note this report.
2. Colombia, Guatemala, Jamaica, Trinidad and Tobago , and Venezuela to progress the ratification of the Protocol of Amendments to the IHO Convention and report any difficulties being encountered or assistance required to the IHB
Chair: this is already an existing 'open' action Item (15.5.1.1), which will be kept open.
3. The Relevant States' Representatives to expedite the approval process for the applications of The Republic of the Congo, Malta, The Solomon Islands and Vanuatu to join IHO
Chair: this will be a new Action Item (16.2.1.1).
4. All chart producing States to provide continuous updates to S-11 Part B, through NOAA as coordinator for INT Region B
Chair: this is already is part of standing MICC activity in accordance with IRCC7 decisions.
5. All States to review entries in IHO Publications C-55 and P-5 (Year Book) at least annually.
Chair: this is already an existing Action Item (14.1.30), and will be a continuous action item.
6. Take any other actions as considered appropriate.

Decisions.

IHB report is noted.

New 'continuous' action item.

No	Subject mater	Action	Responsible party	Due date
16.2.1.1	IRCC7/01	Member States to approve pending applications for IHO membership.	Member States	As soon as possible

See related document, MACHC16-2.1 IHB Report, to complete the report.

Document MACHC 16-2.1B discussed the outcome of Gulf of Honduras (GoH) project. The Bureau has concerns about the progress, especially if the provided training and equipment had actually given the expected benefits. The IHB requests the MACHC to ask COCATRAM for an annual report of ongoing activities. Participating countries are invited to provide feedback to MACHC and IHB.

Decisions.

The Report is noted.

New 'open' action items.

No	Subject mater	Action	Responsible party	Due date
16.2.1.2	CB	Chair to contact COCATRAM to request annual report of ongoing activities concerning Gulf of Honduras project. COCATRAM to give an annual report on ongoing activities concerning Gulf of Honduras.	Chair MACHC and COCATRAM	17 th MACHC Conference
16.2.1.3	CB	Honduras, Guatemala and/or Belize to give an (annual) feedback at the MACHC Conference on the Gulf of Honduras project.	Honduras, Guatemala, Belize	17 th MACHC Conference

See related document, MACHC16-2.1B IHB Report GoH, to complete the report.

2.2 IRCC7 Report

In MACHC letter 18/2015, the Chair provided a report on the Inter-Regional Coordination Committee (IRCC) 7. During the conference, the Chair summarised the report, including the decisions and actions affecting the MACHC. In the MACHC letter, the IRCC 7 actions were interpreted in the MACHC context, with proposals for actions. These proposals were discussed, resulting in new MACHC action Items.

New 'open' and 'continuous' action items for the MACHC.

No	Subject mater	Action	Responsible party	Due date
16.2.2.1	IRCC7/01	Member states to approve pending applications for IHO membership.	Member States	As soon as possible
16.2.2.2	IRCC7/05	Provide the IRCC Chair with progress reports on the relevant tasks in the IHO 2015 Work Program.	Chair MACHC, Member states, MICC, CBC, GEBCO, NGA	Jan 2016
16.2.2.3	IRCC7/07	Provide to the IRCC Chair the estimated values of SPIs and agreed WPIs as of 31 December 2015 and target values for 31 December 2017.	Chair MACHC, Member states, MICC, CBC	Jan 2016
16.2.2.4	IRCC7/15	Provide material to the IHB to promote the achievements of IRCC bodies	All	As available
16.2.2.5	IRCC7/17	Encourage 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	Member States and Associate Member States	As required
16.2.2.6	IRCC7/27	To task: a) New INT Chart Producer Nations to provide first	MICC Chair	As required

No	Subject mater	Action	Responsible party	Due date
		<p>edition INT chart to Regional INT Chart Coordinator (or ICCWG) for review as soon as convenient during the production cycle;</p> <p>b) INT Chart Coordinators/ICCWGs to manage the review of the first edition INT charts produced by new INT Chart Producer Nations to check their compliance with IHO standards, provide feedback to the Producer and to report progress to the next RHC meeting;</p> <p>c) All INT Chart Producer Nations to provide first edition and new edition INT charts to Regional INT Chart Coordinator (or ICCWG) 3 months prior to every RHC meeting to enable Regional INT Chart Coordinator (or ICCWG) to validate current INT chart Scheme;</p> <p>d) All editions of INT charts submitted under action 27 a) and b) to be subsequently transferred to the IHB to be included in the IHB reference collection for internal use; and</p> <p>e) Member States to provide an update of the list of on-line chart catalogues, either directly or systematically when updating the Yearbook.</p>		
16.2.2.7	IRCC7/28	Implement procedures approved by Decision 3 and to report their processes for the review of first edition INT Charts produced by new Producer Nations to IRCC	Chair MACHC through MICC chair	IRCC8
16.2.2.8	IRCC7/33	Instruct the MICC to investigate ways to improve communication across the regions and report back to IRCC.	Chair MACHC through MICC chair	IRCC8
16.2.2.10	IRCC7/41	Member States, Associate Member states and Observers to consider incorporating hydrography in more comprehensive maritime projects as a way of raising awareness and funds from Donor agencies, and report back to the chair not later than 8 April 2016".	Member states, Associate Member states, Observers	8 April 2018
16.2.2.11	IRCC7/43	Member States and Associated Member States to provide access for the IHB to any of their relevant promotional material on CB and to consider using the posters displayed at the EIHC 5 CB.	Member states, Associate Member states,	17 th MACHC Conference (as soon as possible)
16.2.2.12	IRCC7/62	MACHC Chair invites Member States to consider providing representatives of the IHO at the international meetings listed in doc. IRCC-10B on relations with stakeholders.	Member States	17 th MACHC Conference (as soon as possible)

See related document, MACHC16-2.2 IRCC7 Report, to complete the report.

2.2.1. Procedure for selecting the MACHC representatives to the IHO Council

In MACHC letter 23/2015, the Chair proposed a procedure for the MACHC to designate representatives to the IHO council with the aim to make a decision at the 16th MACHC conference. The Chair outlined the proposal with a flowchart.

Background

A procedure for selecting MACHC representatives to the IHO council is requested by the IRCC. Action IRCC7/26 applies: "Report to IRCC on the status of the RHC procedures for selecting their respective representatives to the Council". Two-thirds of the Council seats (20 seats in the current configuration) shall be held by Member States selected by the Regional Hydrographic Commissions (RHCs). The remaining one-third of Council seats (10 seats in the current configuration) shall be held by Member States that have the greatest interest in hydrographic matters and have not been selected by the RHCs.

Originally, the MACHC selection process to the council was discussed in St. Maarten in 2013 and resulted in Annex 3 to the Statutes of the MACHC. During the conference, a number of additional matters needed to be taken into account.

- The role of the Secretary-General has evolved with Decision No. 6 of the 5th EIHC in 2014.
- The current Annex 3 is unclear on the procedure if the number of candidates (nominations) is smaller than the number of seats.
- In its letter S1/6200 the IHB has offered a generic rule set for consideration. This offers an additional criterion for a tied voting result. It also poses the question of a voting quorum.
- Lastly, the MACHC Chair introduced an option for automatic selection of the Chair as a MACHC representative. This could be attractive, because the chair already represents the MACHC in the IRCC, and the discussions in the IRCC en Council are likely to converge.

Decisions.

The following decisions were reached on the voting mechanism in the event that the number of candidate Member States is larger than the number of MACHC seats on the Council.

- A quorum is set at 50% of Member States casting their vote. Representatives are then elected by simple majority. An abstention of voting is interpreted as a vote for the quorum.
- If no quorum is achieved, the voting window is extended for two weeks and the missing Member States are invited to vote. Existing votes stand.
- If still no quorum has been achieved, the chair selects the representatives based on the votes cast. In case of a draw, the Member State that has not been a representative for the longest time is selected.

Moreover, it was decided not to adopt the option of automatic selection of the MACHC Chair.

The way in which the selected representatives of the MACHC region would actually 'represent' the region was discussed. On the one hand, they are elected as Member States of the IHO, on the other hand they are elected by a specific group of Member States in a region. The following mechanism was decided upon.

- Introduction of a standing agenda item for MACHC Conferences on IHO Council matters.
- The elected Member States shall take into account the views of the Member States of the Commission.

This resulted in an amended Annex 3 to the Statutes of the MACHC (including the flow chart), as included in Annex B to the minutes.

See related document, [MACHC16-2.2.1](#), to complete the report.

2.3 HSSC7 Report

Captain Nickolás Roscher of Diretoria de Hidrografia e Navegação (DHN) gave a short presentation on the 7th meeting of the Hydrographic Services and Standards Committee (HSSC7), which took place 10th-13th of November 2015 in Busan, Republic of Korea.

HSSC7 discussed the Working level Performance Indicators (WPI's), new survey techniques, the S-100 framework, ECDIS, nautical cartography and the Hydrographic Dictionary.

See related document, [MACHC16-2.3 HSSC7 Report](#) to complete the report.

2.4 WENDWG Report

The MICC Chair, Mr. John Nyberg of NOAA, gave a presentation on the meeting held in 3-5 March 2015 in Singapore. Subjects discussed were amongst others overlay services, overlapping ENC's, a review of the WEND Principles and governance, ENC coverage, ENC gaps, ENC distribution, RENCs, and IHO ENC catalogue development.

See related document, [MACHC16-2.4 WENDWG](#) to complete the report.

2.5 MSI/WWNWS, RATC

Mr. Pete Doherty, Chair of World-Wide Navigational Warning Service Sub-Committee (WWNWS-SC), gave a presentation on MSI/World Wide Navigation Warning Service for NAVAREA IV/XII. This service coordinates the promulgation of hazards to navigation that may affect international shipping.

Mr. Doherty stressed that:

- National Coordinators are to send their MSI to the NAVAREA IV/XII coordinator (NGA) who will disseminate a navigational warning as a text file or as a Google Earth KMZ from NGA's Maritime Safety Information website, so Mariners will be able download the MSI.
- The summary of each national report should conclude with specifying the responsible operational person for the information.

See related document, [MACHC16-2.5](#) to complete the report.

2.6 International Board on Standards of Competence (IBSC)

Prof. Dr. Nicolas Seube, Chair of the IBSC, gave a presentation on the challenges and the new standards in Hydrographic and Cartographic education. New Cat. B Standards of Competence for Hydrographic Surveyors (S-5B), will be in force from January 2016; Cat. A standards (S-5A) will follow by January 2017, Cat. B standards for nautical cartographers (S-8B) by January 2018, and the corresponding Cat. A standards (S-8A) by January 2019.

See related document, [MACHC16-10.5](#), to complete the report.

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3. National Reports from Members and Associate Members

Member States (Cuba, United States of America, Venezuela, France, Guatemala, Belize, Panama, Haiti, Guyana, Dominican Republic, El Salvador, Colombia, Jamaica, Brazil, United Kingdom, The Netherlands, Suriname and Mexico) provided the Commission meeting with a (short) summary of their national report.

- USA asked Brazil if it is possible to give a presentation about river work – inland measurements during next conference. Brazil agreed to do this.
- IHO President complimented everyone for their frankness and openness during the focussed and interesting presentations.

See related documents, [MACHC16-03.a to aa](#) to complete the report.

Intermezzo: **Results from survey in Jolly Harbour**. On Tuesday and Wednesday, a hydrographic survey was conducted in Jolly Harbour. With a small unmanned boat, fully equipped with necessary equipment, the survey was executed. Michael Redmayne from THSOA/CARIS gave a short presentation, showing the work to perform this survey and to present the results as a nautical chart.

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4. Reports from observing States and Organisations

4.1 Organisation of Eastern Caribbean States (OECS)

In line with the MoU IHO-OECS (IHB CL 15/2015), the chair invited the Members to accept OECS as a permanent observer to the MACHC conferences. There are no objections.

Decision.

OECS is accepted as permanent observer of the MACHC conferences.

Dr. Asha Singh, Head of the OECS Commission, and Mr. Sam Harper of UKHO gave a combined presentation on the OECS. They stated that touristic developments emphasize the importance of their project. A final project proposal was released. This proposal has 3 key work streams, which are explained in the presentation. Dr Singh requested the MACHC to look into the matter how Martinique and UK Overseas Territories can be represented in MACHC.

Decisions.

- France represents Martinique in the MACHC.
- UK represents UK overseas territories in the MACHC.

See related document, [MACHC16-04.1 OECS](#), to complete the report.

4.2 Panama Canal Authority

Mr. Jaime Antonio Rodriguez Beckertt from Panama Canal Authority gave a briefing on the new Communication, Tracking and Navigation (CTAN) system, hydrographic charts and the pilot handbook, and the Pilot Portable Unit (PPU) in the Panama Canal area. (The actual briefing was given on after agenda item 8.1.)

See related document, [MACHC16-04.2 Panama Canal Authority](#), to complete the report.

4.3 Observer countries

- Bermuda
- Grenada

After consultation and due to time constraints, this item was removed from the agenda.

4.4 Report neighbouring RHCs

Adm. Luiz Palmer Fonseca of the Southwest Atlantic Hydrographic Committee (SWAtHC) and RAdm. Gerd Glang of the United States & Canada Hydrographic Commission (USCHC) gave short presentations about their regions, activities undertaken and experiences gained last year, and planned activities for next year. (The actual briefings were given on after agenda item 8.1.)

See related document, [MACHC16-04.4 SWAtHC and USCHC](#) to complete the report.

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5. Survey and Risk

5.1 Report Risk Assessment meeting

Mr. Sam Harper of UKHO gave a report on the first MACHC meeting on Risk Assessment prior to the MACHC plenary meeting. Key observations from the Risk Assessment meeting were reported as well as some options concerning the way ahead.

The Commission is requested to:

- note the observations of this report,,
- consider the relevance of this subject to the MACHC region and
- consider the options for progressing this work.

After a short discussion, it was concluded that the initiative to explore risk assessment proved worthwhile and that planning this Risk Assessment meeting as if it were a MACHC Working Group meeting is a good way ahead. The meeting should focus on topics that are relevant to the situation in the MACHC area. Next year, a longer slot should be planned for this meeting. Time between meetings should be used for ongoing exchange of thought on the goals and achievements, as well as on the requirements from the participating countries. The chair summarized that this informal group should inform each other and learn from each other. Additional aims should be to get consistency of terminology and to clarify objectives.

Decision.

The observations are noted.

New 'open' MACHC action item.

No	Subject mater	Action	Responsible party	Due date
16.5.1	Risk Assessment	Chair, supported by UKHO, to organize a follow-on and longer meeting on Risk Assessment during next MACHC conference. Aims are: 1. Exchange information, learn and apply. 2. Clarify future objectives and attain consistency about terminology. MS to provide their thinking either in writing or through the MICC-communication channel during the year.	Chair MACHC, UKHO and Member States	17 th MACHC Conference

See related document, MACHC16-05.1, to complete the report.

5.2 UKHO Satellite Derived Bathymetry (SDB) testing update

Mr. Sam Harper from UKHO gave an update of the OECS project, which uses SDB in combination with MBES (The actual presentation is given on Saturday in agenda item AOB). He gave a review of key findings from UKHO SDB Trials, with the following cartographic questions.

- *Is existing symbology enough?* It's important to get uncertainty across to the user. There is a need for some indication to the mariner as to how they should behave. SDB is not a self-contained dataset, its merits may be relative to surrounding data.
- *Building experience ... growing confidence?* The way the Antigua chart is presented is not necessarily the definitive way of representing SDB in future. Limited additional control is still required. Currently, SDB is seen as a way of complementing & extending new MBES surveys, where conditions make this practical.

See related document MACHC16-5.2 presentation on SDB OECS, to complete the report.

5.3 Satellite Derived Bathymetry (SDB)

Dr. Thomas Heege of EOMAP GmbH&Co. KG gave a presentation about SDB. He states that we need to be pragmatic, because SDB comes with advantages and disadvantages. Fugro-EOMAP's partnership is new and developing. Key is to quantify what we have and apply appropriate risk. The second part of the presentation was given by Mr. Don Ventura of Fugro. The aim was to illustrate that an integrated approach to regional mapping and charting needs can be met most efficiently and cost-effectively by combining technologies rather than competition between them.

See related documents, MACHC16-5.3 EOMAP SDB and MACHC16-5.3.B to complete the report.

5.4 Geodetic reference frames

Item was not addressed during the conference.

5.5 Papers Industry and/or Nations

Mr. Sam Harper of UKHO gave a presentation “Challenges and opportunities surveying the UK’s overseas territories (UKOT)”. UKOT hydrography is complicated because the majority of them are island nations with hydrographic data of varying age. Often, there are no modern surveys and no survey programmes, and there is very limited local capacity and capability. The UKOT are also well known for the rich and diverse underwater ecosystems. Many areas remain unexplored, presenting a challenge for effective environment protection.

The presentation highlighted the opportunities where hydro surveys could also be seen as seabed surveys allowing economic growth with minimum environmental damage. This means conducting the survey in such a way that it doesn’t just meet IHO requirements, but also the needs of different end-users.

See related document [MACHC 16-5.5A](#) to complete the report.

Mr. Derrick Peyton of IIC Technologies gave a presentation on the work done by IIC Technologies in collaboration with the Canadian Hydrographic Service that followed the processes and procedures as laid down by the University of New Hampshire Center for Coastal and Ocean Mapping (CCOM) and published in the GEBCO Cookbook.

See related document [MACHC 16-5.5b](#) to complete the report.

Mr. Kevin Wilson of AML Oceanographic (formerly Applied Microsystems Ltd.) gave a presentation on improving the Convenience of Ancillary Sensors for Hydrographic Survey Operations. After a short introduction of the company he talked about different sound velocity probes and profilers, CTD, dissolved oxygen, turbidity sensing for vertical profiling or in-situ deployment and swappable sensors (Xchange).

See related document [MACHC 16-5.5C](#) to complete the report.

Capt. Laurent Kerléguer of SHOM gave a presentation that focussed on latest developments of SDB describing the 12 steps of SDB. SDB can be of great potential in the MACHC environment. The technique can’t do everything, but it’s good for a first guess and is able to fill charting gaps at reasonable costs. The Chair invited SHOM to provide an update on their SDB findings in 2016.

New ‘open’ MACHC action item.

No	Subject mater	Action	Responsible party	Due date
16.5.5	SDB	SHOM to provide an update on the planned SDB activities during 2016.	France (SHOM)	17th MACHC Conference

See related document MACHC 16-5.5D to complete the report.

6. DTM and SDI

6.1 Marine Economic Infrastructure Programme Working Group (MEIP WG)

The Chair of the MEIP WG, Mr. Chris Thorne of UKHO, presented the MEIP report and the findings of the meeting. The MEIP chair proposed that the Working Group continues to work with NOAA and Member States to develop the ENCOline viewer and its content. Therefore, the MEIP chair sought approval from the Member States to remove the password protection. No consensus was reached.

Removal of the password on the one hand will enable the data to be viewed by a wider audience and could promote interest in the data that Hydrographic Offices offer: a “showcase”, so to speak. This could spark interest in how our data could be integrated in activities and projects of others and avoid duplication of effort. On the other hand, chart data is a commodity that requires an effort to produce and thus merits a return on investment. Unprotected data potentially undermines the business model underpinning Hydrographic Offices.

In order to maintain momentum, NOAA offered to host two versions of the ENC Online viewer: one under password protection and one without password protection. The latter will show what data is available, but the data itself is not downloadable (a WMS-service). The Chair gratefully requested the Commission to accept this offer by NOAA.

On a higher level, the discussion focussed on the future viability of the MEIP-initiative. Are the original aim and scope still appropriate or do they need to be adapted to the shifting context. In parallel to the increasing experiences gained with the NOAA ENC Online viewer, a number of options now need to be worked out.

Decisions.

- The report of MEIP Chair is noted.
- The offer from NOAA to host 2 ENC-viewer, one with and one without password protection, is accepted.

New MACHC action items.

No	Subject mater	Action	Responsible party	Due date
16.6.1.1	MEIP	MEIP Chair to prepare a ‘think piece’ which lists potential options for the way ahead for the MEIP with the aim to facilitate decision making in the next MACHC. The ambition level is central to this piece: how and with what data to integrate and fit in with other complementary initiatives for spatial data infrastructures, an example being the “Eye on the Earth” project of PAIGH. Member states are invited to share their thoughts on	MEIP chair and Member States	17 th MACHC Conference

No	Subject mater	Action	Responsible party	Due date
		the future of the MEIP via correspondence/e-mail before next MACHC.		
16.6.1.2	MEIP	Member States to provide NOAA with a letter/email in which they inform NOAA which data is available for the open ENC Online viewer (without password).	Member States	As soon as possible

See related document, [MACHC16-06.1 MEIP Report \(MEIP-WG\)](#) to complete the report.

6.2 Feedback MSDIWG

Due to time constraints, this item was removed from the agenda.

See document, [MACHC 16-6.2](#) for feedback.

6.3 UN/UNGGIM

Captain Ricardo Lopez Cruz of Dirección General Adjunta de Oceanografía, Hidrografía y Meteorología (DIGAOHM) gave a presentation on the United Nations Committee of Experts on Global Geospatial Information Management UNGGIM (Americas) (The actual presentation was given on Saturday morning.) The presentation highlighted the achievements of the UNGGIM so far.

Venezuela asked if this information can be exchanged and if there is a UN website available. Capt. Cruz responded that they are willing to share the information. However, since the initiative is still in a testing phase, there is no website with this information. He expects more progress next year.

See related document, [MACHC 16-6.3](#), to complete the report.

6.4 Project for strengthening of Spatial Data Infrastructures (SDI) in the Caribbean /INEGI

Captain Ricardo Lopez Cruz of DIGAOHM gave an update of this project. He also focused on the relation with other projects.

The Chair highlighted the fact that we all could benefit from this project. The UK agreed but asked to be aware of differences/interoperability between maritime and land based inputs to SDI.

See related document, [MACHC 16-6.4](#), to complete the report.

6.5 UN/General Bathymetric Chart of the Oceans (GEBCO)

Ms. Lisa Taylor of the IHO Data Centre for Digital Bathymetry (DCDB) gave a presentation on GEBCO, the IHO DCDB and the IHO Crowd Sourced Bathymetry Working Group. The common goal among all three activities is to provide as much bathymetric data to the public as possible. The vision is to have so much data that we will be able to depict the ocean floor as if someone “had swallowed the sea”. Therefore, the mission is to “map the gap”.

See related document, [MACHC 16-6.5](#) to complete the report.

6.6 International Bathymetric Chart of the Caribbean Sea and the Gulf of Mexico (IBCCA)

Item not discussed due to time constraints.

6.7 Papers Industry and/or Nations

Mr. Derrick Peyton of IIC Technologies gave a presentation, in which he described MSDI projects from Canada, Saudi Arabia, and India, including lessons learned and recommendations. The project has two goals: to provide data discovery and to populate a web application with the feature level data. This app lets one view the data, but not download the data.

See related document, [MACHC 16-6.7A](#): to complete the report.

The presentation by UKHO on the potential of HOs as data custodians rather than product producers, was not given due to time constraints. It will be programmed during the next MACHC conference.

See related document, [MACHC 16-6.7B](#) for the report.

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7. Nautical Charts and publications

7.1 MACHC Integrated Charting Committee (MICC)

The MICC Chair, Mr. John Nyberg of NOAA, gave a report on MICC developments and challenges, and gave an assessment of the revised management, review and monitoring methodology for new INT charts (IHB, CL 64/2015, dated 31 August 2015). He formulated a number of proposals for consideration by the MACHC members.

Decisions.

- The MICC Work Plan is approved.
- The Venezuelan INT Chart Adjustment is noted.
- The Request to combine the MICC report and the WEND report is approved.

The proposal on where Risk Analysis work belongs within the MACHC-structure remains open. This is part of MACHC action 16.5.1.

President Ward thanked MICC Chair John Nyberg for his excellent work concerning the organization of INT Charts and ENC's in this region. He stated that this is an example for other regions.

See related document [MACHC16-7.1 MICC Report](#), to complete the report.

7.2 RENC

Mr. James Harper, General Manager of IC-ENC, gave a presentation, in which he gave an update on RENC-wide development and on specific activities that affect the MACHC region, such as new regional offices and training activities.

See related document [MACHC 16-7.2](#), to complete the report.

7.3 NOAA/WMS/ENC viewer

The updated NOAA viewer was already presented by Lt. Anthony Klemm of NOAA during the MEIP Working Group meeting. Due to time constraints, this item was removed from the agenda.

See related document [MACHC 16-7.3](#) to complete the report.

7.4 Cruise Lines International Association (CLIA)

Ms. Kim Hall of CLIA gave a presentation, in which she shared the views on navigational safety from a Cruise Lines / cruise industry perspective. A broad range of topics was mentioned: safety of navigation, Caribbean/Gulf of Mexico navigational charts, Arctic cruising (market demand, operational considerations and needs), electronic navigational charts (availability/access, additional features) and enhanced navigation (e-navigation).

See related document [MACHC 16-7.4](#) to complete the report.

7.5: C-55, CATZOC and the IHO GIS

President Ward gave a presentation on C-55, CATZOC and the IHO GIS. He explained the relation between C-55 and CATZOC (Category of Zone of Confidence) and highlighted the way CATZOC is intended to be used in the IHO-GIS. He requested that all Member States confirm that the published C-55 information is correct and provide updated information where it is incorrect. This already is a continuous MACHC action item (14.1.30).

Decision.

The report of IHB is noted.

The Netherlands and UK voiced concerns about the use of CATZOC as a measure of the quality of bathymetric surveys in the IHO-GIS. Mr. Ward noted these concerns, but they were weighed within the IRCC, when it was decided to provide CATZOC information to the IHB through the RENCs for inclusion in C-55.

USA thanks IHB for all the work done. USA requested if they could get better access to the IHB ENC Availability web service for the MACHC region. This would help to keep their ENC catalogue up to date. (It is very complicated to collect all data from different web sites/web services.) IHB is aware of the problem, and is trying to improve.

See related document [MACHC 16-7.6A](#) to complete the report.

7.6 Papers Industry and/or Nations

Mr. Julio Castillo of IIC Technologies gave a presentation that covered the differences between river charts and regular coastal charts, the workings of the Inland ENC Harmonization Group, and the issues related to compilation and presentation of river charts. Brazil is requested to give a presentation about inland ENC during next conference in Brazil.

New 'open' MACHC action item.

No	Subject mater	Action	Responsible party	Due date
16.7.6	Papers	Chair to reserve time and space in the agenda of 17 th MACHC Conference for inland ENC's.	Chair MACHC	17 th MACHC Conference

See related document MACHC 16-7.6A. to complete the report.

Mr. Alejandro Gerones of CARIS gave a presentation that highlighted the need for S-100 and focussed on implementation of S-100 in chart production. He mentioned the possibility for self-paced S100/S101distant learning.

See related document, MACHC 16-7.6B to complete the report.

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8. Impact of International bodies on the MACHC region

8.1 International Maritime Organisation (IMO)

Mr. Colin Young of IMO gave a presentation with an update of the work of the IMO in the region. A new Global Integrated Shipping Information System (GISIS) Module for Member State Audits has been developed. In order to make use of it, every member is obliged to register at least one person to have access to the data.

See related document MACHC 16-8.1 to complete the report.

8.2 International Association off Marine Aids to Navigation and Lighthouse Authorities (IALA) on E-navigation

Mr. Stephen Bennett of IALA gave a presentation (on Saturday) about further developments regarding e-navigation. E-navigation is "a brand", the "e" is not defined. E-Navigation is a multi-organisation project for harmonised Collection, Integration, Exchange, Presentation and Analysis (CIEPA) of information. The practical definition is the sharing of information in real time between ships, between shore authorities, and between ship and shore relating to: Navigation, Routeing, Weather, Tides, Cargo loading, carriage and stowage.

See related document MACHC 16-8.2 to complete the report.

8.3 IHO-EU Network Working Group

Capt. Laurent Kerléguer of SHOM gave an update on the IHO-EU Network Working Group (IENWG), established by the Inter-Regional Coordination Committee (IRCC) to monitor and deal with the activities and processes developed under the aegis of the European Union (EU). The third meeting was in Saint-Mandé, France, on 9 and 10 June 2015, at the invitation of the French Hydrographic Office (SHOM).

During the meeting they discussed the European Marine Observation and Data Network (EMODnet) initiative and the overall aims of the project: assess the current availability of digital coastal maps in the EU, disseminate this information by EMODnet, share experience of coastal mapping in the EU, develop standards for best practices and propose how a future Joint European Programme of Coastal Mapping (JECMaP) could operate.

See related document [MACHC 16-8.3](#) to complete the report.

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9. Impact of Regional bodies in the MACHC region

9.1 Comisión Centro Americana de Transporte Marítimo (COCATRAN)

COCATRAN was unable to participate in the conference.

9.2 Caribbean Memorandum of Understanding (CMOU)

There was no contribution.

9.3 Caribbean Disaster Emergency Management Agency

There was no contribution. Despite repeated efforts the Chair was unable to establish contact with the Caribbean Disaster Emergency Management Agency. He inquired if any of the participants had contact details. If so, please pass them on.

New 'open' MACHC action item.

No	Subject mater	Action	Responsible party	Due date
16.9.3	Regional bodies	Attendees to provide contact information of CDEMA to the Chair so CDEMA can be invited for next conference.	All	17 th MACHC Conference

9.4.1. THSOA- General introduction

Mr. Paul Cooper, president of The Hydrographic Society of America (THSOA), gave a presentation about this organisation. THSOA is a non-profit professional membership organization, whose main focus is to provide support to its members in the Americas. Mr. Cooper spoke about the main objectives of THSOA but also about the four chapters of the organization and their activities, THSOA certification and the scholarship program. Any individual or organization with an interest in Hydrography or closely related field, is welcome to join THSOA. No formal qualifications are required. THSoA will organize the Worldwide Hydrographic Conference in 2020; more info on www.hydroconf.com. The THSOA is now an official observer to the IHO.

See related document [MACHC 16-9.4.1](#) to complete the report.

9.4.2. THSOA - Latin American Chapter

Mr. Carlos Tejada, chapter-president of the THSOA chapter Latin-America, gave a presentation on the newly established Latin-American Chapter of the THSOA. He spoke about the current work plan, membership campaign and dissemination of the chapter, but

also about the university network (support CB programs) and possible crowdsourcing for regional hydrography. He concluded with the presentation of upcoming regional events:

- the Third Mexican Hydrographic Conference in April 2016,
- the First Latin American Convention on Hydrography - Cartagena (Colombia) in September 2017-8 and,
- the First American Convention on Hydrography - Rio de Janeiro 2019 or 2020.

See related document, [MACHC 16-9.4.2](#) to complete the report.

9.5 Pan American Institute of Geography and History (PAIGH)

Mr. Paul Cooper, vice president of the Pan American Institute of Geography and History (PAIGH), gave a short introduction to PAIGH and complementary activities between IHO and PAIGH. He also spoke about a proposal to IHO to join their “Eye on the Earth” project. The Vision of Eye on the Earth Project is:

- Capacity Building on Geoservices and NSDI/MSDI in Latin America and the Caribbean,
- core NSDI datasets to be integrated seamlessly across Latin America and the Caribbean,
- conditions to improve access to Geospatial Data,
- establishing how data will be communicated and visualized,
- providing support and training for agencies to migrate geospatial data to a cloud environment,
- securing national participation to guarantee data availability,
- leveraging training materials, resources and best practices learned in the Spanish language project and,
- increasing WMS services in the Caribbean.

Participants are Latin American and Caribbean English speaking nation members of the Organization of American States, PAIGH (lead agency), Geocentric Reference System for the Americas (SIRGAS), Permanent Committee on Spatial Data Infrastructure (CP-IDEA), Geospatial Network for Latin America and the Caribbean (GeoSUR), Development Bank of Latin America (CAF), National Center for Geographic Information (Spain), International Monetary Fund and IHO (proposed).

Action Item.

The relation between the “Eye on the Earth” project and the MACHC ENC-viewer is an integral part of action items 16.1.11 (MEIP).

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10. Regional Capacity Building (CB)

10.1 MACHC Capacity Building Committee (CBC)

CBC chair, Mr. Jeff Bryant of UKHO, gave a short presentation. He spoke about future challenges, like the demand for more courses in Spanish. He also shared the complications in managing and coordinating MACHC CB activities in combination with a growing number of regional initiatives, e.g. FOCHIAMECA, OECS, PAIGH, US support to Haiti etc. He further highlighted the outcomes concerning the venues for the 2016 MACHC CB activities, and the activities to be submitted for the 2017 CB program.

Lastly, the CBC Chair stressed the requirement for a Vice Chairman of the MACHC CB Committee. Commander Mr. Paolo Matos from Brazil graciously offered to take up this position. This offer was supported by the Member States.

Dominican Republic asks if it is possible to have a CB Workshop with a mini-forum, in which specific hydrographic topics will be discussed. The Chair will investigate how we can do this in the next conference.

In conclusion, the Chair enquired about a Technical Visit to Haiti, also discussed during the review of the Action Items. IHB has the lead in coordinating this visit. Timing is still the biggest issue.

See related document [MACHC16-10.1 CBC Report](#) to complete the report.

Decision.

Brazil is appointed as Vice Chair of the MACHC CB Committee.

New 'open' MACHC action item

No	Subject mater	Action	Responsible party	Due date
16.10.1	CB	Chair to investigate the possibility for a 'CB Workshop with a mini forum' on specific hydrographic topics at the next MACHC.	Chair, in consultation with CBC	17 th MACHC Conference

10.2 Feedback CBSB

CBC chair, Mr. Jeff Bryant of UKHO gave a presentation with feedback from the IRCC CBSC. The CBSC13 met in Mexico City (27-29th May 2015); Chairman is Thomas Dheling (Germany). The delivery of the 2014 CB Work Programme in the MACHC region proved to be a success. There are, however, financial challenges for the 2016 CB Work Programme €1.2M worth of submissions were presented at the CBSC and only €20k is available.

UK suggested that this commission should thank Japan and Korea for their contribution to capacity building. The Chair replied that those contributors should be thanked in the MACHC report to IRCC.

See related document [MACHC16-10.2 CBSC12 Report](#) to complete the report.

10.3 International Association off Marine Aids to Navigation and Lighthouse Authorities (IALA) on training programs

Mrs. Geraldine Delanoye of the International Association off Marine Aids to Navigation and Lighthouse Authorities (IALA) gave a presentation on developments regarding IALA training programs.

See related document [MACHC 16-10.3](#) to complete the report.

10.4 Project of FOCAHIMECA

Captain Ricardo Lopez Cruz of DIGAOHM gave a presentation on a new multi-lateral initiative with the aim to reinforce the hydrographic capability in the region: “Proyecto de Fortalecimiento de Capacidades Hidrográficas en Mesoamérica y el Caribe” (FOCAHIMECA). He showed the activities that took place during 2015. As the next milestone, the invited nations intend to formalize their participation in this project no later than the 15th of January 2016.

The Chair noted that the FOCAHIMECA project is very encouraging but it could potentially overlap with other CB activities and compete for scarce funding. Therefore it is important to synchronise efforts.

New ‘open’ and ‘continuous’ MACHC action items.

No	Subject mater	Action	Responsible party	Due date
16.10.4.1	FOCAHIMECA	Mexico to make their FOCAHIMECA program available to the CB Coordinator (Chair and Vice Chair) with the aim to harmonize time schedules and/or CB-activities between programs.	Mexico	17 th MACHC Conference and as required
16.10.4.2	FOCAHIMECA	If additional funding is sought from CB-funds, Mexico to make bids through the established CB mechanism's.	Mexico	As required

See related document [MACHC 16-10.4](#) to complete report.

10.5 Papers Industry

Mr. David Loosley of the Institute of Marine Engineering, Science & Technology (IMarEST) gave a short presentation on the purpose and work of the IMarEST in the global marine sector. He focused on how the IMarEST could support individuals and organisations in the hydrographic community through professional development, professional qualifications and training.

See related document [MACHC 16-10.5A](#) to complete the report.

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11. Closing activities

11.1 AOB

Some agenda items were “re-discussed” or finalized during AOB. The results are all described under the relevant agenda items.

11.2 Review actions and decisions

The actions and decisions noted during the meeting of the Commission were presented and if need be corrected. The actions and decisions in these minutes reflect the outcome of this review.

11.3 Lessons identified

The chair invites all participants to provide (procedural) issues to be taken into account for future conferences. Mr Alberto Costa Neves expressed some recommendations, which will be taken into account for the next conference. The chair invited everybody to send him additional issues.

11.4 Next conference

A short presentation was given by Admiral Luiz Fernando Palmer Fonseca, in which he suggested Brazil as Host Nation for the MACHC17 in the City of Belém. After the presentation, Brazil's offer was unanimously accepted for the 17th MACHC conference in December 2016. The conference is scheduled to take place from Monday the 12th of December until Saturday the 17th of December:

- Monday and Tuesday: CB-seminar,
- Wednesday: the MACHC working groups and,
- Thursday until Saturday: the MACHC Plenary meeting.

See related document [MACHC16-11.4 Proposal Letter\(s\)](#) to complete the report.

Decision.

Brazil to host the 17th MACHC in the City of Belém.

Closing

The Chair thanked the Government of Antigua and Barbuda for hosting the 16th MACHC conference. On behalf of the Commission he expressed his gratitude for the excellent organization of the event. He also thanked the translators, offered by Mexico, for a job very well done. The Chair presented some gifts as token for his appreciation to the host nation. The Chair was also commended on his excellent leadership during the conference.

President Ward complimented the MACHC on the excellent conference. The MACHC is one of the most active RHCs of the IHO and he looks forward to the further development of the MACHC. He presented a gift to the host nation.

Antigua and Barbuda offered all participants a farewell gift as a remembrance to their stay on the Island. This was very much appreciated by the delegates.

The Chair concluded the conference by thanking the members, the industry, the international and regional organizations and all the participants for their contributions and also commended them on the outstanding work delivered.

The conference was closed at 12:30.



INTERNATIONAL HYDROGRAPHIC ORGANIZATION
MESO AMERICAN & CARIBBEAN SEA HYDROGRAPHIC COMMISSION



**16th Meso American & Caribbean Sea Hydrographic
Commission Meeting
9- 12 December 2015
Jolly Harbour, Antigua,
List of Actions**

**MACHC 16-1.5
Results of action list review at 16th MACHC Conference**

During the 16th MACHC Conference the outstanding action items were administered and discussed, and new ones were adding. The latter as a result of debate in the plenary meeting or as a result of IRCC7 actions. Below you will find the MACHC action list divided in four separate tables. The first table lists the new action items as agreed during the 16th MACHC. The last three tables are the previous Open, Continuous and Closed or Completed action items as they were listed **at the start** of the 16th MACHC Conference. The column 'Status' reflects the status as agreed **during** the 16th MACHC Conference itself. This status is also reflected in the color of the row.

These four tables are meant to be a part of the minutes of the 16th MACHC Conference. In preparation for the 17th MACHC the tables will be vetted for closed and completed action items so that only active action items (Open and Continuous) remain listed. This will lead to a much reduced action list.

legend
White: open item
Light grey: continuous action
Light Green: completed or closed

Table 1: NEW ACTION ITEMS DURING THE 16th MACHC

No	Subject mater	Action	Responsible party	Due date	Status after 16 th MACHC
List of actions 16th MACHC meeting					
16.1.6	Statutes	Member States to consider how to provide dual versions in Spanish and English of MACHC documents, for instance as a voluntary service by a Member State.	Member States	17th MACHC Conference	Open
16.2.1.2	CB	Chair to contact COCATRAM to request annual report of ongoing activities concerning Gulf of Honduras project. COCATRAM to give an annual report on ongoing activities concerning Gulf of Honduras.	Chair MACHC and COCATRAM	17 th MACHC Conference	Open
16.2.1.3	CB	Honduras, Guatemala and/or Belize to give an (annual) feedback at the MACHC Conference on the Gulf of Honduras project.	Honduras, Guatemala, Belize	17 th MACHC Conference	Open
16.2.2.1	IRCC7/01	Member states to approve pending applications for IHO membership.	Member States	As soon as possible	Continuous , national responsibility
16.2.2.2	IRCC7/05	Provide the IRCC Chair with progress reports on the relevant tasks in the IHO 2015 Work Program.	Chair MACHC, Member states, MICC, CBC, GEBCO, NGA	Next Jan 2016	Continuous . Yearly report, Chairs MACHC WG's and MS to collate updates on the various topics of work programs 1, 2 and 3. Chair MACHC to coordinate overall.
16.2.2.3	IRCC7/07	Provide to the IRCC Chair the estimated values of SPIs and agreed WPIs as of 31 December 2015 and target values for 31 December 2017.	Chair MACHC, Member states,	Next Jan 2016	Continuous . Yearly report. Chairs of MACHC WG and MS

No	Subject mater	Action	Responsible party	Due date	Status after 16 th MACHC
			MICC, CBC		to collate updates on WPI en SPI as indicators. Chair MACHC to coordinate overall.
16.2.2.4	IRCC7/15	Provide material to the IHB to promote the achievements of IRCC bodies	All	As available	Continuous
16.2.2.5	IRCC7/17	Encourage 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	Member States and Associate Member States	As required	Continuous
16.2.2.6	IRCC7/27	<p>To task:</p> <p>a) New INT Chart Producer Nations to provide first edition INT chart to Regional INT Chart Coordinator (or ICCWG) for review as soon as convenient during the production cycle;</p> <p>b) INT Chart Coordinators/ICCWGs to manage the review of the first edition INT charts produced by new INT Chart Producer Nations to check their compliance with IHO standards, provide feedback to the Producer and to report progress to the next RHC meeting;</p> <p>c) All INT Chart Producer Nations to provide first edition and new edition INT charts to Regional INT Chart Coordinator (or ICCWG) 3 months prior to every RHC meeting to enable Regional INT Chart Coordinator (or ICCWG) to validate current INT chart Scheme;</p> <p>d) All editions of INT charts submitted under action 27 a) and b) to be subsequently transferred to the IHB to be included in the IHB reference collection for internal use; and</p> <p>e) Member States to provide an update of the list of on-line chart catalogues, either directly or systematically when updating the Yearbook.</p>	MICC Chair	As required	Continuous. Findings including those of the workshop in Monaco to be reported at the 17 th MACHC.

No	Subject mater	Action	Responsible party	Due date	Status after 16 th MACHC
16.2.2.7	IRCC7/28	Implement procedures approved by Decision 3 and to report their processes for the review of first edition INT Charts produced by new Producer Nations to IRCC	Chair MACHC through MICC chair	IRCC8	Open.
16.2.2.8	IRCC7/33	Instruct the ICCWG Coordinators to investigate ways to improve communication across the regions and report back to IRCC.	Chair MACHC through MICC chair	IRCC8	Continuous. MACHC action 15.7.2.4 also applies
16.2.2.9	IRCC7/41	Member States, Associate Member states and Observers to consider incorporating hydrography in more comprehensive maritime projects as a way of raising awareness and funds from Donor agencies, and report back to the chair not later than 8 April 2016”.	Member states, Associate Member states, Observers	8 April 2018	Open. MACHC action 14.3.1 also applies (standing activity MICC).
16.2.2.10	IRCC7/43	Member States and Associated Member States to provide access for the IHB to any of their relevant promotional material on CB and to consider using the posters displayed at the EIHC 5 CB.	Member states, Associate Member states,	17 th MACHC Conference (as soon as possible)	Open . At 16 th MACHC no feedback given by MS en AMS
16.2.2.11	IRCC7/62	MACHC Chair invites Member States to consider providing representatives of the IHO at the international meetings listed in doc. IRCC-10B on relations with stakeholders.	Member States	17 th MACHC Conference (as soon as possible)	Open.
16.5.1	Risk Assessment	Chair, supported by UKHO, to organize a follow-on and longer meeting on Risk Assessment during next MACHC conference. Aims are: 1. Exchange information, learn and apply. 2. Clarify future objectives and attain consistency about terminology. MS to provide their thinking either in writing or through the MICC-communication channel during the year.	Chair MACHC, UKHO and Member States	17 th MACHC Conference	Open

Annex A to the 16th MACHC Conference minutes

No	Subject mater	Action	Responsible party	Due date	Status after 16th MACHC
16.5.5	SDB	SHOM to provide an update on the planned SDB activities during 2016.	France (SHOM)	17 th MACHC Conference	Open
16.6.1.1	MEIP	MEIP Chair to prepare a 'think piece' which lists potential options for the way ahead for the MEIP with the aim to facilitate decision making in the next MACHC. The ambition level is central to this piece: how and with what data to integrate and fit in with other complementary initiatives for spatial data infrastructures, an example being the "Eye on the Earth" project of PAIGH. Member states are invited to share their thoughts on the future of the MEIP via correspondence/e-mail before next MACHC.	MEIP chair and Member States	17 th MACHC Conference	Open
16.6.1.2	MEIP	Member States to provide NOAA with a letter/email in which they inform NOAA which data is available for the open ENC Online viewer (without password).	Member States	As soon as possible	Open
16.7.6	Papers	Chair to reserve time and space in the agenda of 17 th MACHC Conference for inland ENC's.	Chair MACHC	17 th MACHC Conference	Open
16.9.3	Regional bodies	Attendees to provide contact information of CDEMA to the Chair so CDEMA can be invited for next conference.	All	17 th MACHC Conference	Open
16.10.1	CB	Chair to investigate the possibility for a 'CB Workshop with a mini forum' on specific hydrographic topics at the next MACHC.	Chair, in consultation with CBC	17 th MACHC Conference	Open
16.10.4.1	FOCAHIMECA	Mexico to make their FOCAHIMECA program available to the CB Coordinator (Chair and Vice Chair) with the aim to harmonise time schedules and/or CB-activities between programs.	Mexico	17 th MACHC Conference and as required	Open
16.10.4.2	FOCAHIMECA	If additional funding is sought from CB-funds, Mexico to make bids through the established CB mechanism's.	Mexico	As required	Continuous

Table 2: OPEN ACTION ITEMS AT START OF 16th MACHC

No	Subject mater	Action	Responsible party	Due date	Status after 16 th MACHC
List of actions 15th MACHC meeting					
15.3	GEBCO	MS to provide information on how they provide information on how they engage with GEBCO (follow up on action item 14.1.16)	Member States	As required	Continuous , to be briefed as part of national report.
15.4	Statutes	The IHB to submit a written proposal to be discussed at the XVI th MACHC meeting regarding the amendment of article 11a MACHC Statutes.	IHB	XVIth MACHC meeting.	Closed , iaw MACHC letter 22/2015 and agenda item 15-1.6.
15.4.2.1	Statutes	<ul style="list-style-type: none"> The MACHC will draft a formal proposal to IRCC 7 on Spanish as a working language. Mexico to assist the Chair in drafting the proposal. The proposal will be submitted as a MACHC paper to the IRCC 7 meeting. 	Chair MACHC supported by Mexico	7th IRCC meeting.	Closed , iaw MACHC letter 22/2015 and agenda item 15-1.6.
15.4.2.3	Statutes	Other RHC's will be informed of the process taking place within the MACHC.	Chair MACHC	8 th IRCC meeting	Open , iaw MACHC letter 22/2015 and agenda item 15-1.6.
15.5.1.1	IHO	Colombia, Guatemala, Jamaica, Trinidad & Tobago and Venezuela to send their official letters regarding the Protocol of Amendments to the IHO Convention to Monaco.	Colombia, Guatemala, Jamaica, Trinidad & Tobago, Venezuela	17th MACHC meeting (as soon as possible)	Open . Chair invited MS to provide an update.
15.5.1.2	IHO	Haiti will send the Instrument of Accession to the IHO.	Haiti	As soon as possible	Open , not send in.
15.5.2.1	IRCC	Drafting of a MACHC paper "Spanish as working language".	Chair MACHC	7th IRCC meeting.	Closed , iaw MACHC letter 22/2015 and agenda item 15-1.6.

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No	Subject mater	Action	Responsible party	Due date	Status after 16 th MACHC
15.5.2.2	IRCC	Member States are encouraged to act in line with IRRC 7 papers 11B/11E in anticipation of IRRC7 action 67	Member states	As required	Continuous , as part of MS responsibilities.
15.5.2.3	IRCC	MACHC Chair to consult the Chairs of the working groups to determine other MACHC actions for IRCC7.	Chair MACHC	7th IRCC meeting	Completed
15.5.4	WEND	MICC to update the list of ENCs	MICC Chair	XVIth MACHC meeting	Completed. The WEND gets updates through PRIMAR Catalog.
15.CB.1	CB	IHB to submit a proposal regarding the creation of a roster of experts.	IHB	17th MACHC meeting	Open , is part of the development of the IHO Trainers DB.
15.CB.2	CB	CB element to be included on the website (persons trained, experts etc.)	IHB	TBD	Closed , unclear how this fits in IHB remit
15.CB.3	CB	CB questionnaire to be tabled at IRCC7.	IHB	7th IRCC meeting	Closed , unclear how this fits in IHB remit
15.6.1	Presentation/Papers	Invite the Cruise Lines International Association (CLIA) to make a presentation at the 16th MACHC meeting	Chair MACHC supported by USA	XVIth MACHC meeting	Completed , is agenda item 7.4.
15.6.2.1	National report	Brazil to engage other countries in the MACHC region and other RHCs to develop a platform in the area of Inland ENC (IENC).	Brazil	17th MACHC meeting	Open , ongoing activity.
15.6.2.3	National report	Technical visit to Haiti postponed to 2016 because of busy political agenda in Haiti.	IHB, CB Coordinator, NOAA and IALA	2016	Open , is on-going discussion between IHB, CBC, NOAA and IALA on responsibilities and conduct of TV.
15.6.2.4	National report	IALA to assist Haiti in preparing for the technical visit.	IALA and Haiti	XVIth MACHC meeting	Closed , overtaken by action 15.6.2.3

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No	Subject mater	Action	Responsible party	Due date	Status after 16th MACHC
15.6.2.5	National report	Haiti to deposit the Instrument of Accession to the IHO Convention in the first semester of 2015.	Haiti	As soon as possible	Open , not deposited.
15.6.2.6	National report	ESRI will try to make its data available to Haiti.	ESRI	17 th MACHC meeting.	Open
15.6.2.8	National report	The Netherlands to look at the possibility of sea riding opportunities for other states	The Netherlands	XVIth MACHC meeting.	Completed , always possible in Northsea and when Survey vessel is deployed in Caribbean
15.6.2.9	National report	Venezuela to make their hydrographic products available to the MACHC.	Venezuela	XVIth MACHC meeting.	Closed , is part of standing MICC activities.
15.6.2.10	National report	Spain to send training information to the MACHC Secretary. (CB Coordinator will coordinate these CB activities).	Spain (and CB Coordinator)	XVIth MACHC meeting.	Closed . Nothing received from Spain.
15.6.2.11	National report	Spain to assist Mexico and other MACHC countries with the language issue (resolve the issue regarding courses) [or resources??].	Spain, Mexico	As required	Continuous , is bilateral activity.
15.6.3.1	MSI	MICC Chair to send the information regarding the meetings to the MACHC Secretary.	MICC Chair	30 March 2015	Closed . MACHC Chair through national representation is aware when the meetings are.
15.6.3.3	MSI	MS to respond to the RAC/REMPEITC Carib survey. Note: The Regional Marine Pollution Emergency Information and Training Center for the Wider Caribbean (REMPEITC-Caribe) is a Regional Activity Center (RAC) for the Protocol Concerning the Cooperation in Combating Oil Spills in the Wider Caribbean Region	MS	XVIth MACHC meeting	Closed , survey not within MACHC remit. MS own responsibility.
15.6.3.4	MSI	Invite the Caribbean Disaster Agency to attend the MACHC meetings	Chair MACHC	17 th MACHC meeting.	Open , numerous attempts to contact CDEMA have so far

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No	Subject mater	Action	Responsible party	Due date	Status after 16 th MACHC
					been unsuccessful.
15.6.4	E-NAV	Follow up presentation on developments regarding E-navigation for next MACHC meeting	IALA	XVIth MACHC meeting	Completed , is agenda item 8.2
15.7.1.2	MEIP	The MEIP Chair to present a paper at the next MACHC meeting if there is a need to revisit the TOR of the MEIP WG.	MEIP Chair	XVIth MACHC meeting	Closed , overtaken by action 16.5.1
15.7.1.3	MEIP	The MEIP WG to use the existing structure or database from NOAA.	MEIP Chair supported by NOAA	XVIth MACHC meeting	Completed , the NOAA ENC online structure has been used and is seen as a success.
15.7.2.1	MICC	UKHO to form a correspondence group in order to develop a risk management tool.	UKHO	XVIth MACHC meeting	Closed , overtaken by action 16.5.1.
15.7.2.2	MICC	MICC to cover the inland ENCs. (MICC Chair to contact IC-ENC and the IHG for the inland ENC standard).	MICC Chair	XVIth MACHC meeting	Completed , standards for Inland ENC are on the website of the Inland ENC HG.
15.7.2.3	MICC	IC-ENC to participate in MICC WG.	IC-ENC	XVIth MACHC meeting	Completed . Vice Chair of IC-ENC (Mexico) participates in MICC WG..
15.7.2.4	MICC	Members are invited to contact the MICC Chair if they wish to participate in the MICC WG.	MS	XVIth MACHC meeting	Closed , new members will be addressed in the MICC report.
15.8.1.1	OECS	Chair to facilitate OECS to become an observer to MACHC.	Chair MACHC	XVIth MACHC meeting	Closed , OECS is a <u>permanent</u> observer in line with MOU IHO-OECS (IHB CL

No	Subject mater	Action	Responsible party	Due date	Status after 16 th MACHC
					15/2015).
15.8.1.2	OECS	OECS to join MEIP WG.	OECS	17 th MACHC meeting.	Open , awaits the completion of the OECS report.
15.8.1.3.	OECS	OECS to work together with the MACHC in order to develop common areas of collaboration (e.g. donorship for MACHC projects).	OECS	17 th MACHC meeting.	Open , awaits initiating activity.
15.8.2	IMO	MS to complete their Maritime Profile within the GISIS database. Note: IMO driven obligation.	MS	XVIth MACHC meeting.	Closed , profile not within MACHC remit. MS own responsibility
15.9.1	SDB	Incorporation of emerging data acquisition techniques as a standing item for the MACHC meetings.	Chair MACHC	XVIth MACHC meeting	Completed , iaw cluster approach of agenda
15.9.2	SDB	Presentation for the 16th MACHC meeting regarding further information on this topic (SDB).	EOMAP	XVIth MACHC meeting	Completed , is agenda item 5.3.
List of actions 14th MACHC meeting					
14.1.5	5	MSs to support the new WEND guidelines and the definition of a cartographic boundary that will be circulated by CL.	MS	As by CL to be send	Open , awaiting CL.
14.1.13	7	CB Coordinator to put together a questionnaire to assess how students use the training in their work.	CB Coordinator	15 may 2014	Closed . No specific MACHC proposal at CBSC13 as this is a wider issue and a perpetual challenge for the IHO's CB activities (how success is measured).

No	Subject mater	Action	Responsible party	Due date	Status after 16 th MACHC
14.1.21	7	Invite Trinidad Pilot Organization to MACHC 15.	MACHC Chair	MACHC 15 meeting	Completed , invited for MACHC 16 but not acted upon.
14.1.23	12	UKHO to draft a proposal to IRCC6 and further discussion at MACHC15	UKHO	30 March	Completed , paper on Maximizing use of survey data presented to IRCC. Action now overtaken by Action 15.5.2.2.
14.1.25	12	Chair will send a letter to the IHB with regard to the link between Hydrography and Oceanology	MACHC Chair	March 2014	Closed . MS no longer felt need for of action.
14.1.26	12	Chair to report to IRCC6 the need to investigate the links between Hydrography and Oceanology	MACHC Chair	Pending	Closed . MS no longer felt need for of action.
List of actions 13th MACHC meeting					
14.1.32 (13.1.4)	MACHC 12	NL/VE to pursue discussions on bilateral agreement for data exchange in accordance with TR A3.4 (co- production, distribution of REPROMATS, etc.)	Netherlands/ Venezuela	By 14th MACHC	Open , workaround through IC-ENC
14.2.6 (13.2.6)	MICC (MEIP)	UK and Celebrity Cruises (cruise industry) to discuss alternate sources of survey data and how/if it can be applied to charting products in the Bahamas	UK and Celebrity Cruise	Until completion	Open . Has not been resolved by the MICC. Awaiting UKHO input. Discussed in general at the last CLIA meeting
14.3.6 (13.3.6)	CB	Gulf of Fonseca project: 1. Decision to continue the project discussions with authorities from the three Member states.	PAIGH, Honduras, Nicaragua, El Salvador,	Undetermined	Open . Due to political and organizational issues

No	Subject mater	Action	Responsible party	Due date	Status after 16 th MACHC
		<p>2. Recognize that the future development of the Gulf of Fonseca can benefit from the works proposed by this project; including hydrography for the safety of navigation, physical oceanography for the protection of the marine environment, and coastal zone management.</p> <p>3. Decision to keep this project Regional within Central America as much as possible</p>			project has not yet started the execution phase.
14.3.7 (13.3.7)	CB	Investigate the feasibility of Spanish online training similar to that of the Hydrographic Academy of University of Plymouth.	CB Coordinator	MACHC14 meeting	Closed , not feasible within restraints of CBWP (funding). Online training potentially part of FOCAHIMECA project or action 15.6.2.11.
14.4.4 (13.4.4)	MEIP	Antigua and Barbuda to discuss with CCCCC coordination with the OECS project.	Antigua and Barbuda, CCCCC	by April 2013	Closed . Is part of OECS project on SDB.
14.4.5 (13.4.5)	MEIP	MEIP WG to develop a platform that will identify regional projects in collaboration with CB coordinator	Chair MEIP	by April 2013	Closed . MEIP and CBC are platforms themselves. Identification of regional projects for collaboration is a standing activity.
List of Actions 12th MACHC meeting					
12.2.9	CB	CB Coordinator to seek opportunities to build on the 'Haiti Hydrographic Surveying and Nautical Charting Workshop' of September 2011, in conjunction with the CBSC Chairman and IHB.	CB Coordinator	By 13th MACHC Meeting	Closed . Overtaken by action 15.6.2.3

Table 3: CONTINUOUS ACTION ITEMS AT START OF 16th MACHC

No	Subject mater	Action	Responsible party	Due date	Status after 16 th MACHC
List of actions 15th MACHC meeting					
15.4.2.2	Statutes	Mexico to engage other RHC's where they use Spanish as working language.	Mexico	As necessary within MACHC framework	Closed iaw MACHC letter 22/2015
15.5.1.3	IHO	MS to make full use of the CB opportunities provided by the IHO.	MS	Continuous action	Closed , is part of standing CB activities
15.5.1.4	UN	Delegates to encourage their Hydrographic Offices and to engage with other counterparts to participate in the Global Geospatial Information Management (UN-GGIM) meetings.	MS	As required	Continuous unilateral activity
15.5.3	HSSC	Encouragement of the Spanish speaking countries to participate in the HSSC WG and the HDWG meetings.	MS	As required	Continuous unilateral activity
15.6.2.2	National report	States to make full use of sea riding opportunities to gain experience and share knowledge.	MS	As required	Continuous bilateral activity
15.6.2.7	National report	Member states are urged to assist Haiti in setting up their hydrographic office and other hydrographic activities.	MS	As required	Continuous bilateral activity
15.6.3.2	MSI	Delegates to update their contact information in the NAVAREA IV list..	MS	As required	Continuous unilateral activity
15.7.1.1	MEIP	MS to make the necessary contributions (information, data) to the MEIP WG.	MS	Continuous action	Closed , is part of standing MACHC/MEIP activities
15.13.1	Maritime funding	The MACHC should keep inviting the relevant Organizations to attend the MACHC meetings.	Chair MACHC	Continuous action	Closed , is part of Chair standing responsibilities

No	Subject mater	Action	Responsible party	Due date	Status after 16 th MACHC
List of actions 14th MACHC meeting					
14.1.15	7	MS to submit the CB requests to the Chair by 28 Feb 2014	MS	28 Feb 2014	Closed , is part of standing CBC activity
14.1.16	7	MS to send their relevant information to the GEBCO.	MS	As required	Continuous unilateral activity
14.1.20	7	CB Coordinator to contact IMO and IALA for CB issues.	CB coordinator	15 May 2015	Closed , is part of standing CB Coordinator responsibilities
14.1.22	12	RENC members to recommend to non-RENC ENC producer nations to join a RENC	RENC members	As required	Continuous unilateral activity
List of actions 13th MACHC meeting					
14.1.30 (13.1.1)	MACHC12	MACHC Members should provide update information to IHO C-55 publication and update it at least once a year, reporting this action in the National Report	MS	As required	Continuous , as part of national/MS responsibilities
14.1.33 (13.1.5)	MACHC 12	Working Group Chairs and Chart Committee Coordinators are encouraged to produce quarterly reports	WG Chairs and ECC&ICC Coordinators	Continuous action (quarterly)	Closed , taken over by various other reports.
14.1.34 (13.1.6)	MACHC 12	ECC & ICC Coordinators to liaise and plan/organise their work flow in line with agreed Meso-American and Caribbean International Chart Coordinating Working Group (MACICCWG) Terms of Reference (ToR).	ECC & ICC Coordinators	Continuous action (by the 13 th MACHC meeting)	Closed , is part of standing MICC activities
14.1.35 (13.1.1)	MACHC 13	The Commission accepts IHB proposal to post the main documents of its meeting on the IHB website and keep the discussion documents on the website managed by NOAA	Secretary / IHB	Continuous action	Closed , is part of standing workflow.
14.1.42 (13.1.10)	MACHC 13	MACHC Member States to include 'sharing experience in dealing with maritime disasters' as a standing MACHC agenda item	MACHC Chair	17 th MACHC meeting.	Open , as agenda item next

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No	Subject mater	Action	Responsible party	Due date	Status after 16 th MACHC
					MACHCmeeting
14.2.1 (13.2.1)	MICC (MACHC 13 ENC)	MICC to continue to monitor and update Region B ENC scheme for all Usage Bands, per the current work plan of MACHC MICC	MICC Members	Continuous action	Closed , is part of standing MICC activity
14.2.2 (13.2.2)	MICC	Continue to update resolution of overlaps and gaps as reflected in the ECC Regional Coverage Report Annex A and B	MICC Members and technical coordinator	Continuous action (ASAP)	Closed , is part of standing MICC an RENC activity
14.2.13 (13.2.13)	MICC	Include INT charts in National Chart catalogues according to S-4	MICC Members	Continuous action	Closed , is part of standing MICC activity
14.3.1 (13.3.1)	MACHC13 CB	CB coordinator to investigate further funding sources to enable training, including individual nations efforts next to those of the CB coordinator itself.	CB Coordinator and individual member states	Continuous action	Closed , is part of standing CB Coordinator responsibilities
14.3.2 (13.3.2)	CB	The CB Coordinator should work in close liaison with the adjacent Regional Hydrographic Commissions, including the EAthC	CB Coordinator	Continuous action	Closed , is part of standing CB Coordinator responsibilities
14.3.3 (13.3.3)	CB	CB coordinator to update 5 year plan	CB Coordinator	Continuous action	Completed , as part CB Coord. responsibilities
14.4.3 (13.4.3)	MEIP	MEIP and REMPEITC to aspire to the least duplication of effort possible and REMPEITC to be invited to join MEIP teleconferences	MEIP, REMPEITC	Continuous action	Closed , is MEIP Chair prerogative
14.4.6 (13.4.6)	MEIP	MEIP WG to identify achievable projects within MACHC region in collaboration with CB coordinator	MEIP, CB Coordinator	Continuous action (by MACHC 14 meeting)	Closed , is integral part of MEIP-CB activities

No	Subject mater	Action	Responsible party	Due date	Status after 16 th MACHC
List of Actions 12th MACHC meeting					
12.1.5	Gen (3)	MACHC Member States to include 'sharing experience in dealing with maritime disasters' as a standing MACHC agenda item.	MACHC Chair	Continuous action (By 13th MACHC Meeting)	Closed , overtaken by action 14.1.4.2
12.3.4	ECC	As a permanent task, MACHC Member States are invited to provide the ECC with their ENC production plans taking into account: - IMO requirements for mandatory carriage and priority regional ports; - the availability of adequate survey data for ENC production (keeping in mind that, in some areas, hydrographic offices may not produce ENCs if data are out- of- date or not compliant with S- 44 standards); and - the need to address national overlaps and consistency for all Usage Bands.	MACHC Member States	Continuous action (By 13th MACHC Meeting)	Closed , is part of standing MICC activities
12.3.6	ECC	In order to create the IHO worldwide ENC database, all ENC producers are encouraged to make their ENCs available to the RENCs, even if they are also distributed by different channels.	MACHC ENC producers	As required	Continuous , in accordance with. WEND principles
12.3.7	ECC	If Member Countries are unable to complete their ENC coverage, the MACHC, in partnership with appropriate authorities, should consider options to address this situation, in accordance with the IMO ECDIS Requirements and WEND principles	Appropriate MACHC Member States	Continues activity (By 13th MACHC Meeting)	Closed , is part of standing MICC activities
12.3.8	ECC	If MACHC Member States are unwilling either to distribute ENCs or to have another country produce for them, the MACHC Chair will inform the Inter- Regional Coordinating Committee (IRCC). The IRCC will take appropriate action with the WEND Working Group, the IHB, and IMO.	Appropriate MACHC Member States	As required	Continuous , also activity of MACHC rep In WEND WG

Table 4: COMPLETED OR CLOSED ACTION ITEMS AT START OF 16th MACHC

Action item	Subject mater	Agreement	Responsible party	Due date	Status
List of actions 15th MACHC meeting					
List of actions 14th MACHC meeting					
14.1.1	5	The MACHC Chair will consult with the Chairpersons of the working groups to determine the MACHC actions for IRCC6	Chair	19 March 2014	Completed
14.1.2	5	The Chair will consult with IIC Tech. and Brazil to represent the MACHC at the HSSC meetings and report back to the MACHC.	Chair	15 April 2014	Completed
14.1.3	5	The Chair to request HSSC to approve the support of MSDIWG to the MEIPWG in governance and standards.	Chair	15 April 2014	Completed
14.1.4	5	The revised WEND Guidelines were approved by the WENDWG and by IRCC5 and will be circulated by the IHB.	IHB	April 2014	Completed (on IHO website)
14.1.6	6	MSs to identify the needs in training for MSI and report to the CB Coordinator.	MS	April 2014	Completed
14.1.7	6	Based on the needs, training for MSI can be developed	CB Coordinator	To be decided by CB CO	Completed
14.1.8	6	Chair to send a questionnaire to MS to provide contact details, based on the National Reports and other relevant information	Chair	June 2014	Completed
14.1.9	6	MACHC attendance at ICG IX, May 13-15, 2014, St. Thomas, USVI	Chair	19 March	Closed , no attendance
14.1.10	7	Chair MACHC will send a letter to MSs to use the demonstrator models, review MEIP questionnaire and provide relevant feedback	Chair	30 march 2014	Completed
14.1.11	7	MEIPWG Chair to participate in the MSDIWG5 meeting (5-7 Feb 2014)	MEIP Chair	MSDIWG5 meeting	completed
14.1.12	7	US to provide contact information so the Cruise Lines International Association (CLIA) can be invited to participate in MACHC15.	US	30 march 2014	Closed , is now action item

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Action item	Subject mater	Agreement	Responsible party	Due date	Status
					15.6.1
14.1.14	7	Chair to issue a CL to make membership aware of the CB possibilities.	Chair	April 2014	Completed
14.1.17	7	MS to send their relevant information to the IBCCA for the 15th MACHC meeting	MS	MACHC 15 meeting	Completed
14.1.18	7	Incorporate E-Navigation as a MACHC agenda item for MACHC 15.	MACHC secretary	May 2014	Completed
14.1.19	7	US to make a presentation on E-Navigation at MACHC 15.	US	MACHC 15	Completed by IALA
14.1.24	12	RENCs to provide feedback to MACHC and WENDWG regarding the use of ENCs outside the SOLAS/ECDIS environment. (WENDWG action item)	RENCs	July 2014	Closed after presentation IC-ENC at MACHC15
14.1.27	13	Letter from Chair regarding MACHC to Financial Organizations (support from IHB president). Chair to engage with CCCCC1 and CARICOM. Invitation letters to be send to relevant International and Regional Organizations. Coordination from IHB president.	Chair	15 May 2014	Completed
14.1.28	13	Mexico to lead discussions to amend article 13 (Mexico to present a paper at MACHC 15)	Mexico	By 15th MACHC meeting	Closed , paper not forthcoming. Is overtaken by action 15.4.2.1
14.1.29	13	The chair will inform members accordingly when dates for the 15th MACHC have been set	Chair	May 2014	Completed
List of actions 13th MACHC meeting					
14.1.31 (13.1.3)	MACHC 12	The Commission to consider using one website for MACHC documentation. The Chair to circulate a proposal to achieve this.	USA/IHB	By 14 th MACHC meeting	Completed

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Action item	Subject mater	Agreement	Responsible party	Due date	Status
14.1.36 (13.1.3)	MACHC 13	Letter from the Government of Monaco via IHO to encourage MS yet to ratify pending applications for IHO membership and to press their government for a response.	IHO	End Jan 2-13	Closed , No MACHC action
14.1.37	MACHC1 13	MACHC MS are encouraged to respond to the circular letter on WEND-WG revised guidelines when distributed	MACHC, IHO, MS	IAW CL	Closed , overtaken by events
14.1.38 (13.1.5)	MACHC13	MACHC Members should provide update information to IHO C-55 publication and update it at least once a year, reporting this action in the National Report	MS	Continuous action	Closed , overtaken by action 14.1.30
14.1.39 (13.1.6)	MACHC13	France, Mexico, UK, US to provide point of contact to review progress and work on assessing the viability of satellite Bathymetry and liaise on trials such as in Antigua	France, Mexico, UK, US	End Jan 2013	Closed , SBD is now a standing agenda item
14.1.40 (13.1.7)	MACHC 13	Committee Coordinators are encouraged to produce quarterly reports	Committee Chairs	Continuous action	Closed , overtaken by action 14.1.33
14.1.41 (13.1.8)	MACHC 13	Chair to propose how observer organizations participate in MACHC and how to increase participation in MACHC business	MACHC Chair	By 14th MACHC meeting	Closed , Overtaken by various other action
14.1.43 (13.1.11)	MACHC 13	Chair to invite the Caribbean Disaster Management Response to the 14 th MACHC	MACHC Chair	By 14th MACHC Meeting	Closed , overtaken by action 15.6.3.4
14.1.44 (13.1.12)	MACHC 13	MACHC accepts the validity of Crowd Sourcing and requests the chair propose HSSC to assess the validity of its use	MACHC Chair	End jan 2013	Completed
14.1.45 (13.1.14)	MACHC 13	Chair to look into providing Audio/Video facilities at next conference for delegates unable to attend	MACHC Chair	By 14 th MACHC meeting	Completed

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Action item	Subject mater	Agreement	Responsible party	Due date	Status
14.1.46 (13.1.15)	MACHC 13	Chair (Suriname) or IHO to participate in the Sea Trade Cruise Shipping conference in Miami (March 11-14, 2013)	Chair, IHO	By April 2013	Closed , in the past
14.1.47 (13.1.16)	MACHC 13	Chair (Suriname) and host (Netherlands) to organise MACHC14	Suriname, Netherlands	By 14 th MACH Meeting	Completed
14.2.3 (13.2.3)	MICC	UK will forward projected M_COVR for Charco Azul and Roatan to MICC Technical Coordinator for update to MICC GIS. Charts will be based on GB charts 503 and 2493.	UK, MICC, technical coordinator	March 13, 2013	Completed
14.2.4 (13.2.4)	MICC	UK to provide update on anticipated production date of ENCs for Charco Azul and Roatan	UK	March 13, 2013	Completed
14.2.5 (13.2.5)	MICC	Provide list of Cruise Line priority ports for the MACHC and other RHCs for consideration by respective charting groups.	Celebrity Cruise Rep	ASAP	Completed
14.2.7 (13.2.7)	MICC	US to provide update on production of new ENCs in the Panama Canal	USA	March 13, 2013	Completed
14.2.8 (13.2.8)	MICC	NL produces ENC equivalent to INT 4108 in co-operation with VEN to achieve adequate coverage on very short notice. When appropriate VEN takes over with the publication of VE300100 and VE300200	NL, VEN	NL ENC, 1 march 2013	Completed
14.2.9 (13.2.9)	INT	MICC Technical Coordinator to look into adding ENC usage band column to INR Chart Gis	MICC Technical Coordinator	December 31 2012	Completed
14.2.10 (13.2.10)	MICC	Venezuela and UK to review limits for INT 4102.	Venezuela, UK	March 13,2013	Completed
14.2.11 (13.2.11)	MICC	Colombia and UK review overlap between INT charts 4025 and 4011	Colombia, UK	ASAP	Completed
14.2.12 (13.2.12)	MICC	MICC will explore possibilities for producing an on-line regional catalogue that includes all national coverage in the MACHC region	MICC Members	March 13,2013	Completed
14.2.14 (13.2..14)	MICC	Contact Cuba regarding transfer of charts from Cuba to France, UK, Mexico. It is unclear which charts other than 4149 are to be transferred and who will assume responsibility. France wishes to withdraw from	MACHC Chair with information from MICC Chair	ASAP	Completed

Action item	Subject mater	Agreement	Responsible party	Due date	Status
		consideration of additional coverage			
14.2.15 (13.2.15)	MICC	Incorporate new INT Chart scheme, based on national coverage, for Mexico, Nicaragua and Colombia in the Pacific and Suriname, Venezuela and the US in the Caribbean. All countries are to provide limits and S-11 information to the MICC Technical Coordinator for update to the MICC GIS. The new scheme will be incorporated into the MICC GIS, reviewed by the MICC, and submitted to the CSPCWG and the IHO to change S-11.	Mexico, Nicaragua, Colombia, Suriname Venezuela, US, MICC Technical Coordinator	March 13,2013	Completed
14.2.16 (13.2.16)	MICC	As National Charts are updated to meet S-4 standards, their status will be updated in S-11. National hydrographic offices are responsible to ensure that S-4 standards are properly applied to INT charts.	MICC Member States	Continuous action	Closed , is part of MICC activity in accordance with IRCC 7
14.2.17 (13.2.17)	MICC	MACHC Pacific Coast - Mexico to work with UK on the boundaries between the existing Mexican INT charts and UK charts in neighboring Pacific coast RHCs.	Mexico, UK, USCHC, SEPHC	March 13,2013	Completed
14.2.18 (13.2.18)	ADMN	All countries to update the list of participants with MICC Technical Coordinator	MACHC MICC Member States	ASAP	Closed
14.2.19 (13.2.19)	MICC	Update TORs to replace “WG” with “MICC”	MICC Chair	-	Completed
14.2.20 (13.2.20)	MICC	MACHC Chair to communicate new representative to WEND WG	MACHC Chair	ASAP	Completed
14.2.21 (13.2.21)	MICC	MICC to decide on new combined format for MICC report to MACHC	MICC Member States	May 22, 2013	Completed
14.2.22 (13.2.22)	MICC	MICC to provide IHB with briefing concerning Cuban ENC gaps. IHB will engage with Cuba at IMO-MSC and report back to the MACHC. MICC to continue to work with MACHC Chair, the IHO, and other channels toward improving communication with Cuba.	MICC Technical coordinator, MICC Chair and IHO President	ASAP	completed

Action item	Subject mater	Agreement	Responsible party	Due date	Status
14.2.23 (13.2.23)	MICC	Access REMPEITC AIS and ship routes to assess regional chart coverage and survey adequacy and related navigation risk	MICC Chair	March 13, 2013	Completed
14.2.24 (13.2.24)	MICC	Provide national response re: CL 51 to IHB	MICC Member States	ASAP	Completed
14.2.25 (13.2.25)	MICC	MICC to provide an updated report to 14th MACHC and MACHC Chair is invited to provide this report to the IHB as the regions ENC and INT coverage so that it may be conveyed accordingly to the IMO	MICC Member States	14th MACHC	Completed
14.3.4 (13.3.4)	CB	IALA to distribute via chair their questionnaire to assess nations IALA capability	IALA, Chair	End 2012	Closed , not applicable anymore
14.3.5 (13.3.5)	CB	IALA to organize seminar on level 1+ course on Aids to Navigation Manager training	IALA, CB Coordinator	By MACHC 14	Closed , in the past
14.3.8 (13.3.8)	CB	Netherlands to liaise with Chair Organization of East Caribbean States(OECS) to develop proposals for the establishment of regional deployable survey capability in 2012 for MACHC Members, Associate Members and non-Members	NL	By 31st August 2012	Closed , overtaken by action 15.7.2.1
14.4.1 (13.4.1)	MEIP	MEIP to develop terms and conditions for accessing and using data held within MEIP	MEIP	by Feb 2013	Closed , overtaken by action 15.7.1.2
14.4.2 (13.4.2)	MEIP	MEIP to identify "quick win" data to populate MEIP	MEIP	ongoing	Closed , overtaken by action 15.7.1.1 and 15.7.1.3
14.4.7 (13.4.7)	MEIP	Maritime Alliance to host, coordinate and invite MACHC, industry and donor organisation stakeholders to Maritime Funding session in Washington DC. To include videoconference for those unable to travel	Maritime Alliance, MEIP Chair.	end 2012	Closed , in the past
List of Actions 12th MACHC meeting					

Action item	Subject mater	Agreement	Responsible party	Due date	Status
12.1.5	Gen (3)	MACHC Member States to include 'sharing experience in dealing with maritime disasters' as a standing MACHC agenda item.	MACHC Chair	Continuous action (By 13th MACHC Meeting)	Closed , overtaken by action 14.1.4.2
12.2.1	CB (3)	The Commission takes note of Jama necessity to have, besides training, an effort on technical capacity – equipment and survey's—and also the IHB platform suggestion onto promote events on means to attain support to improve the hydrographic capacity, and requests the CB coordinator to take the appropriate action accordingly with the guidelines of the approved CB Plan.	CB Coordinator priorities	By 13th MACHC Meeting depending on priorities	Closed , integral to CB activity
12.2.2	CB (3)	CB coordinator will review Global Environmental Facility projects (VIA THE GEF WEBSITE) to assess if there are other projects in the region that could be leveraged for CB support, as was done for the Gulf of Honduras Project.	CB Coordinator Meeting, depending on priorities	By 13th MACHC meeting	Closed , overtaken by action 14.4.6
12.2.3	CB (3)	The CB Coordinator should work in close liaison with the adjacent Regional Hydrographic Commissions, including the EAHC.	CB Coordinator	Permanent	Closed , Overtaken by action 14.3.2
12.2.6	CB (6.4.5)	The CB Plan should be reviewed at the next Commission meeting. The following Member States will take part on the revision: A&B, BR, FR, NE K&N, UK, with the collaboration of the PAIGH observer. The 2012 revision should have a long term plan (5 years) and consider: <ol style="list-style-type: none"> 1. Assessment of the CB progress made by MACHC to date, against the IHO CB Strategy and CB Work Program performance indicators; 2. Maintenance of the agreed MACHC CB Plan; 3. Consider to hold hydrographic trainings courses in venues where data updates are needed and take the opportunity to conduct the practical activities to get the required data; 4. Refine the action plan (against the IHO CB Strategy and CB Work Program performance indicators again) and in accordance with Member States priority; 	CB Coordinator	Permanent Meeting By 13th MACHC	Completed with CP plan 2013-2017. Revision as per action item 1.4.3.3

Annex A to the 16th MACHC Conference minutes

Action item	Subject mater	Agreement	Responsible party	Due date	Status
		5. Prepare a job description for a consultant to address CB issues; and prepare technical specifications for a master plan for the Region; 6. If this strategy is approved by MACHC Member States, a proposal roadmap for the implementation of this new strategy to be drafted by MACHC CB Coordinator to be submitted to consideration by the CBSC			
12.2.8	CB	requirements; (OECS) to develop proposals for the establishment of regional deployable survey capability in 2012 for MACHC Members, Associate Members and non-Members	Netherlands HO	By 31st August 2012	Closed , overtaken by action 14.3.8
12.3.1	ECC	MACHC ECC to continue to monitor and update Region B, Atlantic side, ENC scheme for all Usage Bands, per the timetables indicated in Annex A of MACHC ECC report	MACHC ECC Member States	By 13th MACHC Meeting	Closed , integral to MICC activities
12.3.2	ECC	MACHC ECC monitors and updates Region B, Pacific Ocean side, ENC scheme for all Usage Bands, per the timetables indicated in Annex A.	MACHC ECC Member States	By 13th MACHC Meeting	Closed , integral to MICC activities
12.3.3	ECC	MACHC ECC to explore options to provide a means to depict ENC schemes on a webpage, as a pilot project. The display should be interoperable and appropriate for GIS applications. Additionally, MACHC Member States should find it easy to update their ENC coverage.	MACHC ECC Member States	By 13th MACHC Meeting	Completed
12.3.5	ECC	ECC to provide an updated report to 13th MACHC and MACHC Chair is invited to provide this report to global ENC coverage so that it may be conveyed accordingly to the IMO	ECC Chair	By 13th MACHC Meeting	Completed
12.4.1	ICC (6.2)	NT Chart Coordinator to update MACHC web site INT Chart data base.	INT Chart Comm. Chair, U	By 13 MACHC Meeting	Completed
12.4.2	ICC (6.2)	The INT Chart Committee should produce an INT Chart Plan which should include the Pacific Area of the region, and consider using national charts of the UK and US as interim products for future production of INT Charts. A framework should be presented for the	INT Chart Comm. Chair, UK, US & Cuba	By 13th MACHC Meeting	Completed , and submitted to the IHO.

Action item	Subject mater	Agreement	Responsible party	Due date	Status
		Committee work for the MACHC intersectional period.			
12.4.3	ICC(6.2)	Cuba proposed that INT Chart 4017 be produced by another hydrographic service.US offered to produce this chart. Cuba also offered to pass relevant data to the INT chart producer of chart 4021.	US & Cuba	By 13th MACHC Meeting	Completed
12.4.4	ICC (6.2)	The ICC Chair shall send to the Secretary the updates regarding the INT Charts of Venezuela that have changed (see Action 11-46). Members States must send their updated data to the Secretary, include US information regarding INT Charts4015, 4016, 4145, 4146, 4147 and 4148.	ICC Chair, MACHC Members and Secretary	By 13th MACHC Meeting	Completed
12.4.5	6.2	The current limits of the INT Charts 4100 and 4102 shall be maintained Venezuela will confirm the limits of the new INT Charts, as proposed4102A, 4104, 4106, 4108, 4110 and 4112.	ICC Chair, Venezuela	By 28th Feb2012	Completed
12.4.6	ICC (6.2)	Cuba requested the cooperation of UK, USA, France and Mexico for the production and updating of the INT Charts 4149, 4154, 4158, 4166 and4170.	Cuba, France, Mexico ,UK, US	By 13th MACHC Meeting	Completed
12.4.7	ICC (6.2)	Cuba proposed that the USA maintain updating the INT Chart 4149 and becomes responsible for production of this chart.	Cuba, US	By 13th MACHC Meeting	Completed

ANNEX 3 to STATUTES OF THE MACHC

PROCEDURE FOR THE DESIGNATION OF MACHC REPRESENTATIVES TO THE IHO COUNCIL

Designation of MACHC representatives to the IHO Council shall be determined in compliance with IHO General Regulations Articles 2 and 16.

Role and Authority of Representatives to the MACHC in the Council

1. IHO Member States representing the MACHC, shall occupy their seat on the Council for all sessions of the Council throughout the inter-sessional period between Assemblies.
2. All expenses connected with the participation of representatives to the Council shall be defrayed by their respective State, in accordance with IHO General Regulation Article 3.
3. In carrying out their role as a representative of the MACHC to the Council, the elected Member States shall take into account the views of the Member States of the Commission. A standing agenda item during the MACHC Conferences will cover IHO Council matters.

Selection Procedure (see also flowchart Appendix 1)

4. Three months before an ordinary session of the Assembly, the Secretary-General shall inform the Chair of the MACHC of:
 - a. the number of seats allocated to the MACHC, and
 - b. those Member States that are eligible for selection by the MACHC.
5. If the number of Member States eligible for selection to represent the MACHC to the Council is equal to the number of seats on the Council assigned to the MACHC by the Secretary-General under the terms of clause 4 above, then the aforementioned eligible Member States will be designated as representatives of the MACHC.
6. If the number of Member States eligible for selection to represent the MACHC to the Council is greater than the number of seats assigned to the MACHC by the IHO Secretary-General under the terms of clause 4 above, then the Chair of the MACHC will invite those Member States that have been designated as eligible for selection to the Council to indicate if they wish to be considered as candidates for selection.
 - a. If the number of candidate Member States is equal to the number of number of seats on the Council assigned to the MACHC, then these candidate(s) will be designated as representatives of the MACHC.
 - b. If the number of candidate Member States is smaller than the number of seats on the council assigned to the MACHC, the candidate(s), if any, will be automatically designated and will be complemented by the eligible Member State(s) that have not been representatives of the MACHC to the Council for the longest time. If this proves inconclusive, the Chair will designate eligible Members State(s) as representative of the MACHC.

ANNEX 3 to STATUTES OF THE MACHC

- c. If the number of candidate Member States is greater than the number of seats on the council assigned to the MACHC, the candidate(s) to represent the MACHC to the Council will be designated through a voting procedure.

Voting Procedure

7. The voting procedure will take place in the three months prior to the Assembly, preferably at a Conference of the MACHC otherwise by correspondence if no MACHC Conference is scheduled.
 - a. Each Member State may submit one voting paper marking as many candidate Member States from the list as seats have been assigned to the MACHC (see example of voting paper in Appendix 2).
 - b. The quorum for a valid voting procedure is set at 50% of Member States casting their vote. Representatives of the MACHC to the Council are then elected by simple majority. An incomplete or blank voting paper is a valid voting option and does not count against the quorum.
 - c. If no quorum is achieved, the voting window is extended for two weeks and the chair invites the missing Member States to cast their vote. The existing votes stand.
 - d. If still no quorum has been achieved, the chair designates the representatives of the MACHC to the Council based on the votes cast. In case of a draw the candidate that has not been a representative of the MACHC to the Council for the longest time is designated as representative of the MACHC. If this proves inconclusive the Chair will designate a candidate as representative of the MACHC.

Manning of the representatives

8. The Member States selected to represent the MACHC in the Council are normally represented by the head of the Hydrographic office. Each Member State shall inform the Chair of the MACHC and the Secretary-General of the IHO of the name of its official representative. An alternate may also be designated.
9. Member States representing the MACHC shall inform the Chair of the MACHC and the Secretary-General of any changes in representation, whether permanent or temporary, as soon as practicable.

Key
Action by IHB (Secretary General) outside the MACHC
Action within the MACHC

