



MINUTES
17th CONFERENCE OF THE MESO AMERICAN AND CARIBBEAN
SEA HYDROGRAPHIC COMMISSION (MACHC17)
Belém, Brazil
14 – 17 December 2016

Contents:

1. MACHC Administration/organizational issues

- 1.1 Introductions
- 1.2 Approval of Agenda and timetable
- 1.3 List of documents/Administrative Arrangements
- 1.4 Matters arising from Minutes of MACHC16 Meeting
- 1.5 MACHC 16 Action list review
- 1.6 Selection for the IHO Council-Candidacy

2. MACHC Developments IHO bodies/Policy aspects

- 2.1 IHO Secretariat Report
- 2.2 IRCC8 Report
- 2.3 HSSC8 Report
- 2.4 MSI/WWNWS, RATC
- 2.5 MACHC response to Disasters (IHO resolution 1/2005)

3. National Reports from Members and Associate Members

4. Reports from observing States and Organisations

- 4.1 Organisation of Eastern Caribbean States (OECS)
- 4.2 Panama Canal Authority
- 4.3 Observer countries

5. Survey and Risk

- 5.1 Report Risk assessment meeting
- 5.2 Risk-based approaches
- 5.3 Satellite Derived Bathymetry (SDB)
- 5.4 Papers Industry and/or Nations

6. DTM and SDI

- 6.1 Marine Economic Infrastructure Programme Working Group (MEIP WG)
- 6.2 Feedback MSDIWG
- 6.3 UN/UNGGIM / Project for strengthening of Spatial Data Infrastructures (SDI) in the Caribbean
- 6.4 GEBCO/IBCCA
- 6.5 IHO-IOC GEBCO Seabed 2030 Project
- 6.6 Concluding discussions on MEIP way ahead

6.7 Papers Industry and/or Nations

7. Nautical Charts and publications

7.1 MACHC Integrated Charting Committee (MICC)

7.2 RENC

7.3 Papers Industry and/or Nations

8. Impact of International bodies on the MACHC region

8.1 International Maritime Organisation (IMO)

8.2 IALA on E-navigation

9. Impact of Regional bodies in the MACHC region

9.1 Caribbean Memorandum of Understanding (CMOU)

9.2 The Hydrographic Society Of America (THSOA)

9.3 Selection for the IHO Council-voting

10. Regional Capacity Building (CB)

10.1 MACHC Capacity Building Committee (CBC)

10.2 Feedback CBSB

10.3 Project of FOCAHIMECA

10.4 Report 3rd Mexican Hydrographic Conference

10.5 Training programs of IALA

10.6 Pan American Institute of Geography and History (PAIGH)

10.7 Papers Industry and/or Nations

11. Closing activities

11.1 Selection for the IHO Council-results

11.2 Election (vice) Chair MACHC

11.3 AOB

11.4 Review actions and decisions

11.5 Lessons identified

11.6 Next meeting

11.7 Close of meeting



MINUTES
17th MACHC CONFERENCE
14 – 17 December 2016

The formal opening of the 17th conference of the Meso American and Caribbean Sea Hydrographic Commission (MACHC) took place on Wednesday 14th December 2016. The formal opening was preceded by two days of seminars on raising awareness of hydrography. On Monday 12th December 2016 and Tuesday 13th December, the seminar focussed on Hydrographic governance and Satellite Derived Bathymetry.

Captain Marc van der Donck (Director of the Netherlands Hydrographic Office and Chairman of this MACHC conference) welcomed all the MACHC participants to the conference and to the city of Belém, which celebrates its 400th birthday this year. The mayor of the city of Belém had planned to give a welcome speech, but regretfully he had to cancel due to personal circumstances.

Mr. Robert Ward, the Secretary General of the International Hydrographic Organisation, welcomed all participants to the conference. The conference gives us the opportunity to coordinate and to cooperate, in order to produce the best hydrographic surveys we can, for our nations, and also for our region. The Secretary General stated that the awareness of the seas had never been higher than today. In the MACHC, we should think of possibilities how to use that awareness to realise our aims and ambitions, which is to have the seas, oceans and waterways better mapped than they are today. The Secretary General was pleased to have had two social events, giving the chance to get to know each other; for many of us it is the first meeting. The next three days should build as a continuation on what we have done in previous meetings. The MACHC committee was described as a cooperative environment making significant progress. The Secretary General was looking forward to a very successful meeting.

The Secretary General thanked Brazil and Diretoria de Hidrografia e Navegação (DHN), for hosting this meeting. He commemorated that Brazil was a founding member of IHO, 95 years ago, and still has active participants in a number of IHO bodies.

Vice Admiral Alippio Jorge Rodrigues Da Silva , 4th Naval District Commander, thanked all attendants for coming to Belém, port to the Amazon river. The Admiral was looking forward to a constructive meeting with all MACHC members with whom we are working together.

The National Hydrographer, Vice Admiral Marcos Sampaio Olsen of the Diretoria de Hidrografia e Navegação (DHN) thanked all and highlighted the efforts to prepare the meeting. The Admiral expressed hope that the meeting will be productive. Our results contribute to a common goal, which is the safety of navigation in the region. The Admiral stimulated all member states to expand their hydrographic activities and capabilities. He wished all a very pleasant and fruitful meeting in Belém.

Captain Marc van der Donck noted an excellent spirit during the two days of seminars preceding the conference. The Chair encouraged all attendants to maintain their enthusiasm during the plenary meeting, and to actively participate. All of us should be able to bring and take relevant information. The Chair noted that the challenges and possibilities are different for all nations around the table. The conference should be a place to work together on our goals, such as: to promote the cooperation; to stimulate and expand hydrographic activities, for instance for capacity building; to facilitate information exchange. One of this week's agenda items will be the nomination of the IHO council.

The Chair mentioned the excellent hospitality of our Brazilian hosts: last night's Icebreaker provided a good opportunity to start the meeting in a relaxed atmosphere, and there are more social activities during the days to come.



Figure: Formal opening of MACHC17 conference.

After the formal opening on Wednesday the 14th of December 2016, four working group meetings took place:

- 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;
- The Capacity Building Committee (CBC), chaired by Mr. Jeff Bryant.

Minutes and action items are kept by the Chairs of the separate working groups or meetings. However, the working groups reported to the MACHC during the conference. A summary of these briefings can be found in this document at their respective agenda items.

1. MACHC Administration/organizational issues

1.1 Introductions

On Thursday, 15th December 2016, the plenary meeting started. All participants were invited to introduce themselves.

1.2 Approval of Agenda and timetable

Chair invited participants to comment on the agenda and timetable in case updates were necessary. The agenda was adopted.

See related document, [MACHC17-1.2 Agenda and Timetable](#), to complete the report.

1.3 List of documents/Administrative Arrangements

All documents and presentations of this meeting will be made available on the MACHC section of IHO website after this meeting:

https://www.iho.int/mtg_docs/rhc/MACHC/MACHC17/MACHC17_Docs.htm.

Chair asked all to check their names and e-mail addresses on the attendants' list that was going around the room.

The Chair noted the quorum for a formal MACHC Conference was achieved, which means that the meeting has decision making status.

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 MACHC17 conference are finalized.

See related documents, [MACHC17-1.3a List of Documents](#) and [MACHC17-1.3b List of Participants \(invited and present\)](#), to complete the report.

1.4 Matters arising from Minutes of MACHC16 Meeting

The final draft version of the minutes was sent out on April 8th, 2016. There were no comments on these minutes, therefore the minutes of the MACHC16 conference were approved.

Chair also sent MACHC Letter 5/16 with the amended statutes, as agreed in the last MACHC meeting.

Decision

To approve the minutes of 16th MACHC Conference

See related document, [MACHC17-1.4 Minutes of MACHC16](#), to complete the report.

1.5 MACHC 16 Action list review

A list of the actions items was shown on the screen. In order to save processing time at the Commission meeting, the Chair selected the more important issues for plenary discussion. Those issues were discussed.

The results of the discussions are listed as the column “status after 17th MACHC” in three tables in Annex A to the minutes:

- Table 2: OPEN ACTION ITEMS AT START OF 17th MACHC
- Table 3: CONTINUOUS ACTION ITEMS AT START OF 17th MACHC
- Table 4: CLOSED ACTION ITEMS AT START OF 17th MACHC

Decision

To accept the proposed status updates for MACHC action items

New ‘open’ action items

No	Subject matter	Action	Responsible party	Due date
17.1.5.1	Statutes	Amend Annex 1 to the Statutes describing the national report to better take into account the developments of MSDI and GEBCO.	MACHC Chair	1 April 2017
17.1.5.2	GOH project	Write a letter to Guatemala requesting an update on the status of and intentions with the hydrographic equipment provided through the Gulf of Honduras project.	MACHC Chair	1 April 2017

See related document, MACHC17-1.5 Status of Action List from MACHC16, which served as input to the discussions at the conference.

1.6 Selection for the IHO Council-Candidacy

Annex 3 of the Statutes describes the selection process for the IHO council. Based on this the Chair introduced the procedural process for seats allocated to the MACHC during the conference. There are two seats in the IHO council to be filled by MACHC member states.

- If there are more than two candidates, there will be elections during this conference under agenda item 9.5.
- If there are two candidates, they will take the two seats.
- If there is only one candidate or none, member states will be appointed.

Only full member states can apply for a seat, not the associate member states. The countries eligible to occupy seats allocated to the MACHC are: Brazil, Cuba, Guatemala, Jamaica, Mexico, Netherlands, Suriname, Trinidad and Tobago, the United Kingdom and Venezuela. Member states were invited to consider their candidacy for IHO council and to report this to Thijs Ligteringen, not later than the closure of today’s meeting (agenda item 4.3).

1.7 Photo session



Figure: Participants of MACHC17.

[Back to top](#)

2. MACHC Developments IHO bodies/Policy aspects

2.1 IHO Secretariat Report

IHO Secretariat provided a background brief on the composition and roles of the Council. The Protocol of Amendments on IHO Convention has been ratified by the required majority. As a result, we will have Assembly-1 in April 2017. A consequence is that we will move to a 3-yearly operational and planning cycle. The IHO Council will be established at the first Assembly, and every subsequent Assembly; the Council will convene annually. Another change can be found in the election process for the Secretary-General and Directors of the IHO. The final change is certainly relevant for the MACHC region: nations that are member states of the United Nations are eligible to join IHO without the requirement for the IHO Member State approval process. Under the old convention, this process would take two to three years.

Within the MACHC region, there are 16 states that are not yet a member state of IHO. They can now join IHO without the requirement for an IHO Member State voting process. Secretary-General encourages all coastal states in the region to join the MACHC and the IHO.

The Secretary-General presents a report on the inventory of the national regulations and ECDIS back-up arrangements on paper charts. For many states, no information was provided to the IHO Secretariat. Those states are requested to provide the information as soon as possible (new action item 17.2.1.4).

The IHO Secretariat has been invited to make a presentation at the next meeting of the Caribbean MoU; this is the meeting of all the Maritime Administrations that implement the requirements of particularly SOLAS under the framework of an MoU. The presentation will focus on Maritime Administration responsibilities under SOLAS, and will give an opportunity for IHO to present hydrographic capabilities in the region. This includes the limitations and impact in charting and survey coverage. Moreover, it will discuss current shortcomings on service delivery on MSI (Maritime Safety Information) in the region. MSI performance is variable; some states show good results, whereas others are of concern. The Secretary-General asked relevant states to review Annex C (MSI training outcomes) of the report, and to report to the Chair of MACHC any obstacles and challenges that are impeding the establishment of an effective MSI capacity (new action item 17.2.1.1).

A map was shown with state of surveys in the MACHC region. This map shows significant areas with the status 'Never surveyed' or 'Re-survey required'. Member states were requested to review Annex B (hydrographic status report) of the report and to provide comments to Secretariat as soon as possible (new action item 17.2.1.2).

The report gives an overview on the status of Capacity Building. This was scheduled to be discussed in this MACHC meeting under agenda item 10 as well. Secretary-General asked countries to think what capacity building their country needs, and to prepare candidates for capacity building training well in advance.

IHO has been working on several GIS-es and databases; this enables data visualisation, fusion and analysis. Secretary-General asks MACHC member states to check if their data in the IHO year book and country information database is correct. The C-55 database is an inventory of the status of surveying and charting on a country-by-country base. Secretary-General asks countries to check if their data in the C-55 database are up-to-date (new action item 17.2.1.4). IHO has developed INTtoGIS database, which is used to manage the INT chart coverage. IHO has the obligation to maintain an ENC catalogue. Member states were requested to update their INT charts directly into INTtoGIS of IHO (new action item 17.2.1.3).

The Crowd-Sourced Bathymetry programme is the low-cost, high-impact way of improving bathymetric knowledge of the world's oceans and seas. CSB is not a chart improvement programme, but may contain useful information for chart improvement. The aim of the IHO is that every professional crewed ship will use a logger (cost around \$25) that will be used to collect data for the CSB programme. Potential uses can be found in many applications: tsunami warning, storm surge modelling, coastal zone management, fisheries management, etc.

States were encouraged to link hydrography to the UN post-2015 development agenda. Especially SDG (Sustainable Development Goal) 14 – use of the oceans – was mentioned. Secretary-General will be present at the UN Conference on SDG 14; this conference will take place at UN Headquarters from 5-9 June 2017.

This year's theme of World Hydrography Day is 'Mapping our seas, oceans and waterways – more important than ever'. Goal of World Hydrography Day is the promotion of different aspects of our work, a.o. our roles and responsibilities, the fundamental importance of hydrographic data, and crowd-sourced bathymetry.

The IHO Assembly will take place from 24 to 28 April 2017 in Monaco. The IHO Assembly will review and adopt the strategic plan, the 3-year work plan and the budget. Committee reports on progress and plans for the future will be discussed. The Secretary-General and the Directors will be elected, and the IHO Council will be established. The role of the Council is to approve the annual budget and the work programme. The IHO Council consists of 20 seats which are allocated to the regions, plus 10 seats for the IHO member states with the largest interest (i.e. largest tonnage). The IHO Council meets annually in October.

The MACHC was requested by the Secretary-General to note the report.

The United States will make an official note in which they express their appreciation for the IHO initiative to make GIS data available to MACHC member states.

Decision

To note for consideration the report of the IHO secretariat

The IHO report resulted in following new 'open' and 'continuous' action items

New 'open' action items

No	Subject matter	Action	Responsible party	Due date
17.2.1.1	IHO secretariat (MSI)	Members States to review the MSI status presented in Annex C of the IHO Secretariat report (MACHC17-02.1) and report to the chair of the MACHC any obstacles and challenges that are impeding the establishment of and effective MSI Capacity. See App 4 to Annex 1 of the Statutes as aid for MSI self-assessment.	Member States	1 July 2017
17.2.1.2	IHO secretariat	Member States to review their Nations entry on the provision of Hydrographic services in Annex B of the IHO Secretariat report (MACHC17-02.1) <u>before</u> the next meeting of the Caribbean MoU in February 2017	Member States	1 Feb 2017

New 'continuous' action items

No	Subject matter	Action	Responsible party	Due date
17.2.1.3	IHO Secretariat (MICC)	Members States to update S-11 Part B for INT region B through the INTToGIS tool and implement the procedures depicted in IHO CL 64/2015 for reviewing and monitoring of INT charts. MS to update their INT charts directly into INTToGIS of IHO.	Member States as decided and coordinated by MICC	
17.2.1.4	IHO Secretariat (IRRC8/32)	Member States review entries related to IHO C-55, P-5 (yearbook) and ECDIS backup up arrangements (iaw. IHO CL 61/15) and report annually to IHO secretariat, including reports of "no change". See Annex 1 of MACHC statutes for structured report formats.	Member States	

See related document, [MACHC17-2.1 Secretariat Report](#) to complete the report.

2.2 IRCC8 Report

Chair provided a report to IRCC8 highlighting the following.

- It was reported that Dominican Republic became an Associate Member of MACHC.
- Spanish in MACHC: the MACHC statutes were amended, stating that continuous interpretation at meetings to and from Spanish will be provided.
- Steady progress within the MICC (MACHC Integrated Charting Committee).
- ENC Online viewer as developed by MEIP (Marine Economic Infrastructure Programme) Working Group. It was discussed whether the ENC Online Viewer should be password protected or not. NOAA offered to host two versions of the viewer: one under password and one without.
- Capacity Building Committee shows good progress. Some challenges remain: there is a need for more courses in Spanish, and there are complications in managing MACHC Capacity Building activities in combination with regional activities.

The IRCC8 itself resulted in a number of actions and decisions that affect the MACHC region or may be of immediate interest to its members. The Chair proposed a way ahead in MACHC letter 17/2016 which formed the basis for discussion during the conference. The resulting IRCC actions applicable to the MACHC region were added to the MACHC action list, given as an Annex to these minutes.

Decision

To accept the proposed MACHC actions resulting from the IRCC8 actions and decisions.

This led to following new open and continuous action items

New 'continuous' action items

No	Subject matter	Action	Responsible party	Due date
17.2.2.1	IRRC 8/6	Member States and observers are encouraged to attend WWNWS-SC meetings.	Member States	
17.2.2.2	IRCC 8/7	Raise awareness of the impact of e-navigation on the provision of MSI in the respective regions and to highlight the use of the Joint Manual on MSI to ensure correct terminology and formats are used in MSI messages.	MACHC Chair	
17.2.2.3	IRCC 8/8	Encourage closer engagement of the National MSI Coordinators of Member States with the relevant NAVAREA Coordinator (7b).	MACHC Chair	
17.2.2.4	IRCC8/31	Be attentive to opportunities to raise awareness on the role of hydrography and the importance of improving mankind's knowledge of the seas and oceans in support of the sustainable development goals, disaster risk reduction and the integrity of the oceans.	MACHC Chair in coordination with Member States	

See related document, [MACHC17-2.2 IRCC8](#) to complete the report.

2.3 HSSC8 Report

Captain Nickolás Roscher of Diretoria de Hidrografia e Navegação (DHN) gave a short presentation on the 8th meeting of the Hydrographic Services and Standards Committee (HSSC), which took place 15-18 November 2016 in Monaco.

HSSC8 discussed the S-100 framework, ECDIS, nautical cartography and the need to establish a Hydrographic Surveys Project Team on Standards for Hydrographic Surveys (HS PT). This Project Team is primarily tasked to review S-44 – IHO Standards for Hydrographic Surveys, draft a new edition, if appropriate, and identify additional tasks, if any, that might require the establishment of a standing Hydrographic Surveys Working Group. Secretary-General invited any potential expert contributors to the HS PT to contact the secretary of the HSSC (currently IHO Director Gilles Bessero).

See related document, [MACHC17-2.3 HSSC8 Report](#) to complete the report.

2.4 MSI / WWNWS

Mr. Pete Doherty, Chair of the World-Wide Navigational Warning Service (WWNWS), gave a presentation on Maritime Safety Information / World-Wide Navigational Warning Service. World-Wide Navigational Warning Service is the coordination service for the promulgation of hazards to navigation that may effect international shipping. Maritime Safety Information (MSI) comprises navigational and meteorological warnings, meteorological forecasts and other urgent safety related information broadcast to ships.

Mr. Doherty stated that support from National Authorities is critical. National coordinators were asked to forward coastal warnings and relevant information directly to the NAVAREA coordinator: navsafety@nga.mil.

Mr. Doherty encouraged MACHC members and associate members to attend the MACHC MSI Training Course. The next MSI Training Course will be organised in 2017 in the MACHC region.

See related document, MACHC17-2.4 WNWNS MSI Brief to complete the report.

Secretary-General posed a question to the States identified as 'not providing MSI, although having had a training': what is the reason that these States have been unable to take advantage of the training, and actually are not providing a proper safety information service to the mariner? Those States were invited to share any relevant information.

Secretary-General encouraged all attendees of the MACHC conference to speak to Mr. Doherty to confirm the name of their national coordinator for MSI in one of the remaining days of the conference.

2.5 MACHC response to Disasters (IHO resolution 1/2005)

Chairman Captain Van der Donck gave a presentation on IHO resolution 1-2005 on disaster management. The passage of Hurricane Matthew in Haiti was taken as a case study. The main aim of resolution 1-2005 is to have procedures and guidelines in place to enable immediate and appropriate response. The resolution identifies three actors, namely coastal states, the regional hydrographic committee and the IHO secretariat; and the actions they should take in case of a disaster.

Mr. Leendert Dorst gave a presentation on a survey done by the Netherlands in support of humanitarian relief operations. Main objective of the survey is the accessibility of ports and landing spots for loading and unloading relief goods. Hydrographic capacity consisted of RHIBS, operated by two qualified hydrographic officers and one boat driver, and equipped with an integrated multi beam system, side scan sonar and a sound velocity profiler. Results were according to IHO Special Order requirements.

Mr. Jim Rogers gave a presentation on the support that NGA gave in this case study. NGA created a website, which was made available via the internet. Other useful products from NGA are port assessments, damage assessments and maps query / GIS analysis.

Lessons identified, from the perspective of MACHC chair.

- Ambitions for the mandate of the MACHC should be realistic, and coordination should be restricted to hydrography.
- The role of MACHC is to be a broker for demand and supply.
- Open diplomatic channels are key.
- A phased approach should be adapted: first the immediate disaster response and later the recovery response, in which the focus is on updating charts and other hydrographic information.
- Good communication is essential, via e-mail, telephone and web site, including a virtual common coordination facility, as the NGA did in this case study.

MACHC Chair took an action, as the outgoing MACHC chair, to write a letter to the Assembly, describing lessons identified in Haiti and proposing amendments to resolution 1/2005. The letter provides comments to Assembly Proposal 3 (action item 17.2.5.1). Chair proposed to include the principles of MACHC disaster response in the Statutes of the MACHC based on lessons identified. The proposal was accepted and included in action item 17.2.5.2.

New action item

No	Subject matter	Action	Responsible party	Due date
17.2.5.1	Response to disaster	Provide comments on PRO3 - Revision of the Resolution on Response to Disasters- based on the very recent experience in the MACHC region, and as discussed and supported by the 17 th MACHC meeting in Belém (14-17 December 2016).	MACHC Chair	December 2016

After meeting note: This action item was completed by MACHC letter 21/2016.

New 'open' action item

No	Subject matter	Action	Responsible party	Due date
17.2.5.2	Response to disaster (Statutes)	Include the principles of MACHC Disaster response in the MACHC Statutes based on lessons identified. Include as particular aim: "To examine the role hydrography can play in disaster risk reduction, for instance by capacity building."	MACHC Chair	1 April 2017

See related documents, MACHC17-02.5.1-MACHC Response to distasters and MACHC17-02.5.2-NGA Hurricane Matthew Support to complete the report.

[Back to top](#)

3. National Reports from Members and Associate Members

The following (Associate) Member States provided the Commission with a briefing on their national report: Antigua and Barbuda, Belize, Brazil, Colombia, Cuba, Dominican Republic, France, Guatemala, Guyana, Haiti, Mexico, Netherlands, Nicaragua, Panama, Saint Vincent and the Grenadines, Suriname, United Kingdom, United States of America, Venezuela.

See related documents, MACHC17-03.A to AA to complete the report.

Since the national reports are always in alphabetical order, starting at A, there is often time pressure for the countries starting with a letter in the end of the alphabet. Chairman proposed to start at the end of the alphabet next year. The suggestion will be added to the lessons identified.

4. Reports from observing States and Organisations

4.1 Organisation of Eastern Caribbean States (OECS)

The agenda item was not discussed as no representative from the Organisation of Eastern Caribbean States was present.

4.2 Panama Canal Authority

A briefing was given under agenda item 3, national reports.

4.3 Observer countries

No observer countries being present, the agenda item was not discussed.

5. Survey and Risk

5.1 Report Risk Assessment meeting

Mr. Sam Harper of UKHO gave a report on the second MACHC Risk Assessment workshop, which was held prior to the MACHC plenary meeting. Key observations were reported.

During the MACHC Risk Assessment four presentations were given:

1. Ms. Dawn Seepersad (University of West Indies), Risk Assessment in Maritime Navigation for the Greater Caribbean Region.
2. Ms. Kathryn Ries (NOAA), The risk-based approach NOAA is taking to determine hydrographic survey priorities.
3. Ms. Gerardine Delanoye (IALA), The IALA Risk Management Toolbox - IWRAP Mk2; PAWSA and Simulation.
4. Mr. Leendert Dorst (Royal Netherlands Navy, outgoing chair NSHC Resurvey WG), Marine data management as a prerequisite for regional risk assessment: the case of the Dover Strait.

Outcome of the workshop was a proposal to form a user support group to help Ms. Dawn Seepersad in her research project.

Chair noted that various Member States have national Risk Assessment initiatives as well, presented in their national reports. He invited those countries, in particular Suriname, to present the findings during the next MACHC.

New 'open' action item.

No	Subject matter	Action	Responsible party	Due date
17.5.1	Risk Assessment	Suriname to present on their risk-assessment project at MACHC meeting in 2017.	Suriname	18 th MACHC meeting

See related document, [MACHC17-05.1](#), to complete the report.

5.2 Risk-based approaches

Ms. Dawn Seepersad (University of West Indies) gave a presentation on her PhD project on Risk Assessment in Maritime Navigation for the Greater Caribbean Region (GCR). The main reason for this study is: “The availability and quality of hydrographic data and support for navigational practices might be improved to support safety of life at sea, to reduce the risk of marine pollution and to support the expansion of economic development”.

General objective of the research project is to conduct a risk assessment of maritime navigation across the GCR. Specific objectives are the mapping of:

1. Areas of risk within the maritime navigation areas across the GCR.
2. The economic feasibility of risk management and mitigation plans.

Strategies for risk assessment & prioritization of surveys have been developed by several maritime departments including Land Information New Zealand (LINZ). The LINZ strategy turns out to be the best applicable strategy to the GCR region. The LINZ Hydrographic Risk Assessment applies a weighted overlay method, based on three criteria: vessel traffic, the likelihood of a marine incident to happen, and the consequences a marine incident might have.

Chair noted that this project is in the interest of all MACHC member states. The Netherlands stated that this research project should be seen as a gift from the University of West Indies, for which we have to be very grateful. The United Kingdom underlined the importance of local knowledge in this project. France proposed that the user support group delivers a roadmap for the support of the project.

Decision

To actively support the PhD work on “Risk Assessment in Maritime Navigation for the Greater Caribbean Region (GCR)” by Ms. Dawn Seepersad of the UWI.

New ‘open’ action items

No	Subject matter	Action	Responsible party	Due date
17.5.2.1	Risk Assessment	Member states are encouraged to take part actively in a User Support Group for the Phd work on “Risk Assessment in Maritime Navigation for the Greater Caribbean Region (GCR)” by Ms. Dawn Seepersad of the UWI.	Member States as coordinated by Chair RA group	ASAP
17.5.2.2	Risk Assessment	User Support Group is to develop a ‘road map’ on how to effectively support the Phd work on “Risk Assessment in Maritime Navigation for the Greater Caribbean Region (GCR)”.	Member States as coordinated by Chair RA group	ASAP
17.5.2.3	Risk Assessment	Invite Ms. Dawn Seepersad to provide an update on her Risk Assessment project for the GCR. (see also action 17.5.2.1).	MACHC Chair	18 th MACHC meeting

See related document [MACHC17-05.2B Risk Assessment of Maritime Navigation across the GCR - Seepersad](#) to complete the report.

5.3 Satellite Derived Bathymetry (SDB)

Dr. Thomas Heege of EOMAP GmbH gave a presentation about Satellite Derived Bathymetry (SDB). SDB is based on optical techniques and delivers (hidden) geoinformation in 4 dimensions: 3D location + time. Some examples and use cases were mentioned. Chair noticed a lot of possibilities for SDB and encouraged all attendees to discuss any uses for SDB in the MACHC region with the presenter.

Mr. Don Ventura of Fugro gave a presentation “Common problems: common solutions from different perspectives”. The presentation illustrated that having different but overlapping perspectives does not result in differences between Government issues and Industry issues. Technologies include acoustic, optical and remotely sensed. Bottom-line is clients and industries have to be more aware of each other’s possibilities.

Lt Cdr Eric Langlois of SHOM (French Hydrographic Office) gave an update on their SDB activities. The presenter noted that production of charts with SDB is not yet routine, and that chart production must still be supervised by qualified hydrographers. For the near future, the presenter suggested improvements by making a comparison between SDB models with surface ground truth using S-44 standards.

See related documents, [MACHC17-05.3A-EOMAP4MACHC](#), [MACHC17-05.3B Presentation Fugro dv1](#) and [MACHC17-05.3C-SDB Activites Shom](#) to complete the report.

5.4 Papers Industry and/or Nations

Mr. Juan Carballini from Teledyne CARIS Inc. gave a presentation with the title “Leveraging near real-time data processing to safely increase hydrographic production.” The presentation covers new developments that are used by the Canadian Hydrographic Service (CHS). The presenter mentions controlled crowd-sourcing and autonomous platforms as two new useful techniques. CARIS Onboard is a workflow for processing hydrographic measurements onboard. It was concluded that onboard data processing allows CHS to obtain maximum value from autonomous surveys.

See related document, [MACHC17-05.4-MACHC 2016 Onboard TDY](#) to complete the report.

[Back to top](#)

6. DTM and SDI

6.1 Marine Economic Infrastructure Programme Working Group (MEIP WG)

Mr. Jim Rogers of NGA, vice-chair of the MEIP WG, presented the MEIP report and the findings of the meeting on behalf of Chris Thorne, chair of the MEIP WG. In MACHC16, it was decided that NOAA would host two ENC Online viewers, one with and one without password. Background of this decision: 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.

MEIP chair posed the following questions to the MACHC: There are no resources available to make big steps, so should we continue with MEIP activities or stop? If we continue with MEIP activities, should we continue with both viewers, or retain only the open viewer?

These questions led to a discussion which led to a proposal by the chairman, asking: Are MACHC members happy to let the MEIP WG continue their work with an open end state and see how things develop? In other words MEIP takes a more process orientated approach than an end state approach. Attendees were invited to think about this question, and to come to a conclusion under agenda item 6.6.

Mr. Jim Rogers underlined the very valuable contributions of Chris Thorne for the working group.

The decision related to agenda item 6.1 was mentioned in this report under agenda item 6.6.

See related document [MACHC17-06.1 MEIP Report](#) to complete the report.

6.2 Feedback MSDIWG

Mr. John Pepper, working for OceanWise and secretary of the IHO MSDI WG, gave a presentation “Data Management and MSDI – Successes and Challenges”. Spatial Data Infrastructure (SDI) is defined as the relevant base collection of technologies, policies and institutional arrangements that facilitate the availability of and access to spatial data. SDI is based on four pillars: policy & governance, technical standards, information systems and geographic content.

The presenter gave insight in the current situation of MSDI. At the moment, the greatest challenges are with policy and governance. Success stories are starting to appear, for example at the North Sea and Baltic Sea MSDI Working Group. The MSDIWG is on schedule with its 2015-20 Action Plan. A lot has been done, and there is still a lot to be done.

See related document [MACHC17-06.2 MSDIWG](#) to complete the report.

6.3 UN-GGIM / Project for strengthening of Spatial Data Infrastructures (SDI) in the Caribbean

Mr. Felix Ibarra gave a presentation of the project, which has the following objectives:

- To reduce geospatial data infrastructure gaps within the Caribbean region, and with respect to the rest of the continent;
- To support the integration and participation of Caribbean countries in the international geospatial information context, including the UN-GGIM: Americas (UN-GGIM = UN Group of Experts on Global Geospatial Information Management).

Secretary-General stated that the alarm bells should be ringing loud and clear now. UN-GGIM has been working for 7 years, but mainly on terrestrial-based activities. There is nothing in the UN-GGIM's mandate about the sea or hydrography. There has hardly been any representation from hydrography in UN-GGIM, while the water surface mass on earth is significantly larger than the land surface mass. UN-GGIM is all about encouraging the availability of data, not products. The Secretary-General encouraged all to get involved in GGIM.

The United States announced that they propose the formation of a UN Expert Group on Marine Geospatial Data. The proposal will be sent to Member States. The US recommended everyone to get in contact with their national contact within UN-GGIM and to get a copy of the proposal, and to get involved. Goal of the Expert Group will be to develop a coordinating global marine data infrastructure roadmap that takes advantage of and endorses existing or developing standards for mapping the seas and oceans.

See related document [MACHC17-06.3_UNGGIM](#) to complete the report.

6.4 GEBCO/IBCCA

Mr. Felix Ibarra presented an update of IBCCA within the context of GEBCO.

The Secretary-General of IHO had a request: the data for making these maps has come primarily from the GEBCO data repository, known as the Data Center for Digital Bathymetry (DCDB), and operated by NOAA. There is an open request from IHO, collectively to all states: to provide permission for the bathymetry from their ENC's to be made available, the contour set at least, to projects such as this. The Secretary-General would like to ask that all the States represented here make contact with their primary charting authority and give that permission, so that the contours from the ENC's can be made available to go into projects such as this.

New 'open' action item.

No	Subject matter	Action	Responsible party	Due date
17.6.4	DTM	Members States to consider making ENC bathymetric and contour information available for the IBCCA project via GEBCO (DCDB).	Member States	18 th MACHC meeting

See related document [MACHC17-06.4 GEBCO IBCCA](#) to complete the report.

6.5 IHO-IOC GEBCO Seabed 2030 Project

A United States proposal to invite the MACHC Member States to support the IHO-IOC GEBCO Seabed 2030 Project. The goal of the project is to improve a common understanding of the world's oceans.

Decision

To note for consideration the paper Seabed 2030 – Understanding the Shape of the Sea Floor.

New 'open' action item:

No	Subject matter	Action	Responsible party	Due date
17.6.5	DTM	Members States are encouraged to participate actively in the GEBCO's Seabed 2030 project by providing bathymetric data to the IHO DCDB to support mapping ocean areas at high resolution and by providing shallow water bathymetric data from ENCs to the IHO DCDB.	Member States	18 th MACHC meeting

See related document [MACHC17-06.5 GEBCO Seabed2030](#) to complete the report.

6.6 Concluding discussions on MEIP way ahead

In response of the question of agenda item 6.1 "Are MACHC members happy to let the MEIP WG continue their work and see how things develop?", the answer was affirmative, which led to the following decisions.

Decisions

To approve the way forward as proposed by the MEIP vice-chair, as detailed below:

- The MACHC ENC viewer will be brought under the responsibility of the MICC;
- Only the open (non-password) MACHC ENC viewer will be continued;
- Mr Jim Rogers of NGA is appointed as the new MEIP coordinator, with the main task to act as MACHC focal point for MEIP/ SDI developments in the region;
- MEIP develops as opportunities arise, eg as a data layer in other initiatives or as discovery function, hosted on the MACHC website.

6.7 Papers Industry and/or Nations

Mr. Nuno Rodrigo Silva from IIC Technologies presented 'Marine Cadastre as an Application of MSDI'. The presenter stated that an MSDI is not a data storage system, nor a product storage system, but an enabler of the blue economy. A Marine Cadastre is a system of registries that allows for the systematic recording of all recognized legal rights, restrictions and responsibilities in the offshore area. Key to an effective MSDI are the metadata, which must be standardized, comprehensive, up-to-date and monitored.

See related document [MACHC17-06.7A](#) to complete the report.

Mr. John Pepper gave a presentation "Smart Telemetry – Developments in Environmental Data Sharing and Publishing (for Ports, Harbours and Coastal Authorities) – Ways to support HO's, ports and harbours." Telemetry means that data is collected at remote or inaccessible points and transmitted to receiving equipment for monitoring. Data is being collected remotely and processed real-time or near real-time. Two case studies were presented, the first one in Liverpool and the second one in the Dominican Republic. In both cases meteorological data are being collected and distributed.

See related document [MACHC17-06.7B](#) to complete the report.

[Back to top](#)

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.

- Progress in the region is good: in 2016, the number of ENC's in the MACHC region rose from 723 to 760.
- In 2016, the new US/Cuba/UK INT chart 4149 was published, which was a very good example of collaboration in the region.
- MICC Chair proposes Commander Paulo Matos from Brazil as the new INT Chart Coordinator. The proposal is received with applause.
- A graph is shown with MACHC ENC online usage: it shows a very clear jump at the time hurricane Matthew hit Haiti.

MICC Chair recommended some interesting documents and case-studies that can be found in the WENDWG Repository.

MICC Chair had the following requests to the MACHC:

- Approve the Work Plan;
- Approve the addition of cruise ship ports to the list of ENC gaps;
- Re - Approve Commander Paulo Matos as INT Chart coordinator;
- Encourage MACHC ENC Online participation;
- Note the WEND Report and provide feedback.

Decision

To endorse the five requests by the MICC chair as formulated in his report.

New 'open' action items:

No	Subject matter	Action	Responsible party	Due date
17.7.1.1	MICC	Encourage MACHC ENC Online participation	MACHC Chair	
17.7.1.2	MICC	Note the WEND Report and provide feedback.	Member States	Before next WENDWG

After meeting note: action 17.7.1.2 can be closed as the 7th WENDWG already took place the beginning of February 2017.

Chair thanked Mr. John Nyberg for his work for the MICC. Secretary-General thanked Mr. John Nyberg for his excellent work concerning the organization of INT charts and ENC's in the region. Much of the work was reached due to John's personality and tenacity. Applause for John Nyberg.

See related document [MACHC17-07.1 MICC Report](#) to complete the report.



Figures: Presentation of new US/Cuba/UK INT chart 4149.

7.2 RENC

Mr. James Harper, General Manager of IC-ENC, gave a presentation, in which he gave an update in RENC-wide development and on specific activities that affect the MACHC region, such as new regional offices and training activities. The presenter mentioned that the number of ENCs in the MACHC continues to grow, thanks to the excellent work of the MICC.

See related document [MACHC17-07.2](#) to complete the report.

7.3 Papers Industry and/or Nations

Commander Paulo Matos from Brazil gave a presentation about the challenges and peculiarities of Brazilian Inland ENCs. Inland ENCs are the easiest solution to ensure compatibility with maritime ECDIS. Compatibility is necessary because the Amazon river is, for a large part, suitable for sea-going vessels. This creates many ENC / Inland ENC boundaries between the Amazon river and its many tributaries (Madeira river, Rio Negro etc.). The Brazilian waterways are characterised by their immense size, and by large differences between the wet and dry season.

Based on the discussion, action item 15.6.2.1 was reformulated.

See related document [MACHC17-07.3A](#) to complete the report.

Mr. Nuno Rodriguez Silva from IIC Technologies gave a presentation 'Inland Electronic Charts vs Electronic Charts'. Major differences between ENC and IENC are present: various clients, different usages, chart scheming and scales, buoyage systems. A detailed encoding guide for inland ENCs exists, focussing on navigation aids, bridges, dams and other inland-specific objects. The Inland ENC Harmonization Group, established in 2003, advises and provides input regarding IENC technical standards development, implementation and maintenance. IIC Technologies supports the USACE program, which aims to produce IENCs for over 10.000 kilometres of waterways.

See related document [MACHC17-07.3B](#) to complete the report.

[Back to top](#)

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. Mr. Young recently attended the 3rd meeting of the subcommittee on Safety of Navigation, Communication and Search and Rescue (NCSR). The meeting discussed routing measures and mandatory ship reporting systems and aids to navigation.

The senior maritime administrators (SMA) of IMO invited Caribbean States to research the feasibility of a regional hydrographic office, and to consider becoming members of MACHC and IHO.

See related document [MACHC17-08.1](#) to complete the report.

8.2 IALA on E-navigation

Mrs. Gerardine Delanoye, working for IALA, gave an update on e-navigation. IALA is an abbreviation of the International Association of Marine Aids to Navigation and Lighthouse Authorities. IMO defines e-navigation as “the harmonized collection, integration, exchange, presentation and analysis of marine information on board and ashore by electronic means to enhance berth to berth navigation and related services for safety and security at sea and protection of the marine environment.”

The presenter stated that navigation on board has not changed significantly during the past 30 years. Equipment is not harmonized. E-Navigation is considered not to be a revolution, but a logical evolution, just like developments in other sectors, for example e-banking. E-Navigation likely requires the creation of a maritime cloud, which can be seen as the connection between stakeholders, services and vessels, by VHF data exchange systems and communication technologies.

See related document [MACHC17-08.2](#) to complete the report.

[Back to top](#)

9. Impact of Regional bodies in the MACHC region

9.1 Caribbean Memorandum of Understanding (CMOU)

Not present, not discussed.

9.2 THSOA – The Hydrographic Society Of America

Mr. Carlos Tejada gave an overview of the activities of The Hydrographic Society Of America and especially its Latin American chapter. THSOA is a non-profit professional membership organization, whose main focus is to provide support to its members in the Americas. Mr. Tejada spoke about the workplan of THSOA and their activities, THSOA certification of hydrographers, and the scholarship program. THSOA will organise the Convención Latinoamericana de Hidrografía 2018 in the city of Cartagena in Colombia.

See related document [MACHC17-09.2](#) to complete the report.

9.3 Selection for the IHO Council

There are two eligible candidates for two seats, so no elections are necessary. Those Member States are Brazil and the Netherlands.

[Back to top](#)

10. Regional Capacity Building (CB)

10.1 MACHC Capacity Building Committee (CBC)

CBC Chair, Mr. Jeff Bryant of UKHO, gave a short presentation, also on behalf of vice-chair Commander Paulo Matos from Brazil. In the year 2016 an MSI training course, MSDI workshops, a tide training course and a hydrographic awareness seminar were organised. For 2017, four activities are identified, as part of the MACHC CB plan 2013-2017. Three of them were supported by CBSC:

- A further MSI Course;
- Technical implementation visits to Dominican Republic and El Salvador;
- A further seminar on raising awareness of hydrography.

CB Chair Jeff Bryant continued to present his proposed activities for 2018 as part of the MACHC CB plan 2018-2020. The activities comprise the following:

- Repeat technical visits;
- MBES processing course;
- Tides & water levels workshop for Spanish speakers;
- Support for Dawn's risk research project;
- On the job training (sea riding) on an opportunity basis.

Through the IHO CB program some advanced training opportunities are offered. The prerequisite to join these trainings is being a member of IHO. The opportunities are, however, not always fully used. Reasons can be English language, the level of education required of students. CB Chair therefore encourages all who did not do so, to join IHO in order to be eligible for this advanced training.

Decision

To approve the new Capacity Building Plan for 2018-2020 as proposed by the CB Coordinator.

IHO Associate Director Alberto Costa Neves expressed his concerns, foreseeing difficulties to get the necessary support from IHO under the Capacity Building program, due to the amount of funds available.

See related document [MACHC17-10.1](#) to complete the report.

10.2 Feedback CBSC

CBC Chair, Mr. Jeff Bryant of UKHO, provided the MACHC meeting with feedback from the Capacity Building Sub Committee (CBSC) meeting, which met for the 14th time in May 2016. The CBSC meeting noted that there is far more demand for support from Capacity Building than the actual CB fund. The major challenges at the moment are fund limitation, the workload of the capacity builders and the coordination of the growing number and complexity

of regional projects. The Republic of Korea and the Nippon Foundation are complimented for their large contribution to Capacity Building.

See related document [MACHC17-10.2](#) to complete the report.

10.3 Project of FOCAHIMECA

Captain Leonardo Tun Humbert (Mexico) gave a presentation on a the 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). In January 2015, the FOCAHIMECA project was formally started.

Objectives of the project are:

- To integrate joint programs of capacity through workshops and courses on topics of hydrography;
- To work on identification of sources of financial resources to promote the acquisition or construction of vessels and hydrographic equipment;
- To organize training events that are scheduled in coordination with international organizations with hydrographic and maritime competence.

FOCAHIMECA has 25 participant countries.

In 2016, five workshops were organised, with a total of 72 participants.

IHO Associate Director Alberto Costa Neves noticed very good results of FOCAHIMECA and encourages Mexico to give more frequent updates on the project.

Chairman stresses the importance of continuation, which in this case means that it is the same person who is getting the successive training, enabling the building of knowledge and capacity.

See related document [MACHC17-10.3](#) to complete the report.

10.4 Report 3rd Mexican Hydrographic Conference

Captain Leonardo Tun Humbert (Mexico) gave a presentation on the 3rd Mexican Hydrographic Conference. The first Mexican Hydrographic Conference was organised in 2013. Since then, the conference showed very significant growth: in 2013 the number of participants was 150, while at the third conference 730 persons attended and got training in Spanish on different hydrographic topics. The conference was attended by 16 member states of MACHC and 10 other IHO member states.

Chairman noted the positive effects of bringing hydrography to the attention in this region, getting new businesses off the ground.

See related document [MACHC17-10.4](#) to complete the report.

10.5 Training programs of IALA

Mrs. Gerardine Delanoye, working for IALA, first explained that IALA should not be confused with IMO, which sets the standards for safety of shipping. IALA (International Association of Marine Aids to Navigation and Lighthouse Authorities) is focusing on safety of navigation. This includes marine aids to navigation, which are devices or systems external to a vessel that are designed and operated to enhance the safe and efficient navigation of vessels and/or vessel traffic. Safe and efficient navigation facilitates good accessibility of ports, which can make a port more competitive and attractive for commercial shipping.

This is summarised in IALA's motto 'Successful voyages, sustainable planet'. IALA's activities are divided into four committees:

- AtoN Requirements and Management;
- Engineering and Sustainability;
- Vessel Traffic Services;
- e-Navigation.

The IALA Academy, started in 2012, is the vehicle by which IALA delivers training and capacity building to developing countries. Trainings include VTS Courses, Aids to Navigation courses, GNSS and e-Navigation courses, and more. In May 2017, an AtoN training will be organised in Suriname. Attendees are encouraged to contact Mrs. Mahabier from Suriname if they are interested in attending. Developing countries are encouraged to contact IALA if they need assistance in setting up aids to navigation in their country. A technical visit is for free and can be very useful in the preparations for the IMSAS audit. Certification means removal from the IALA target list, which has a positive effect on insurance rates for vessel traffic. This makes a state attractive for vessels like cruise ships, and it will make its waterways a safer place. Suriname is congratulated with its removal from the IALA target list, and for being the first accredited Level 1 Aids to Navigation training location in the region.

See related document [MACHC17-10.5](#) to complete the report.

10.6 Pan American Institute of Geography and History (PAIGH)

Not present, not discussed.

10.7 Papers Industry and/or Nations

Mr. Sam Harper informed the MACHC about the work UKHO has been doing in the MACHC region to support the development of Blue Economies, to improve the quality of charting and to support the development of hydrographic capability. He furthermore showed a world map indicating that UKHO has been working on hydrographic projects and capacity building events nearly all over the world. Hydrography is described as the keystone data type for arranging oceans governance, via habitat mapping, marine protected areas, fisheries management and coastal zoning. The same applies for disaster preparedness, where hydrography is the keystone data type for climate change resilience.

A specific effort is the Commonwealth Marine Economies Programme. This programme is a collaboration between UKHO, Cefas (Centre for Environment Fisheries and Aquaculture Sciences) and the National Oceanography Centre and brings UK marine expertise together: hydrographic and geospatial data, scientific solutions to support blue growth and food security, and ocean research and technology.

See related document [MACHC17-10.7A](#) to complete the report.

Mr. Derrick Peyton from IIC Technologies presented "Hydrographic Certification in Canada". The paths to become a Cat A or Cat B Hydrographer are being described. The hydrographic certification program in Canada was recently IHO IBSC certified. The Canadian Hydrographic Certification schema is open to non-Canadians as well.

IHO Associate Director Alberto Costa Neves noticed the good achievements in Canada.

See related document [MACHC17-10.7B](#) to complete the report.

[Back to top](#)

11. Closing activities

11.1 Selection for the IHO Council-results

There are two eligible candidates for two seats. The two Members States that are willing to take the seats allocated to MACHC are Brazil and the Netherlands.

Decision

To select Brazil and the Netherlands for the seats allocated to the MACHC in the next IHO Council.

11.2 Election (vice) Chair MACHC

Mexico is candidate for Chair, the United States are candidate for Vice-Chair. These candidacies were unanimously carried.

Decision

To accept the nominations of Mexico as the next Chair and the USA as the next Vice-Chair of MACHC.

11.3 AOB

None.

11.4 Review actions and decisions

The actions and decisions noted during the meeting of the Commission were presented and corrected if needed. The actions and decisions in these minutes reflect the outcome of this review, bearing in mind that some have been edited for consistency.

Chair announced that the MACHC section of IHO website will be updated with the documents that were received and presented during this meeting. IHO secretariat will take care of this.

11.5 Lessons identified

Concerning the order of national reports (agenda item 3): a proposal was made to discuss the national reports in opposite alphabetical order; this is fairer for the countries that otherwise always are the last ones to be discussed.

Chair invited everybody to share lessons identified if these come up after the meeting.

11.6 Next meeting

The Servicio Hidrografico y Geodesico de la Republica de Cuba (SHGC) graciously offered to host the 18th MACHC meeting in the beautiful resort of Varadero, in the Matanzas province, which is one of the main places of touristic development in Cuba. The flanking activities (seminar, demonstration, training) will prove an excellent opportunity for Capacity Building activities in the MACHC region. Also the translation service from English to Spanish and vice versa is an invaluable asset for achieving a successful MACHC meeting.

After an inspiring presentation given by Cuba, their offer was unanimously accepted.

Decision

To organise the 18th MACHC in Varadero, Cuba, taking place from 27 November until 2 December 2017.

11.7 Close of meeting

Mr. John Nyberg from NOAA thanked the Netherlands delegation for their professionalism and especially Captain Van der Donck for his excellent leadership during his MACHC chairmanship. The United States is looking forward to work together with the new chair Mexico. This was the last MACHC Conference of Mr. Robert Ward, as the function of Secretary-General is up for election in 2017 and he is not eligible. The conference thanked Robert Ward for being an exemplary role model with excellent advice for many years.

Brazil offered all participants a farewell gift as a remembrance to their stay in Belém. This was very much appreciated by the delegates.

Chair spoke warm words of thanks to the Brazilian host, who enabled a very successful meeting. DHN and the 4th Naval District were greatly acknowledged for the organisation of the location and all the social activities, which made all participants feel very welcome and at home in Brazil. Captain van der Donck presented a gift to Vice Admiral Alippio Jorge Rodrigues Da Silva.

Secretary-General complimented the MACHC on the excellent conference. The MACHC is one of the most active regional hydrographic committees of the IHO; over the past years very significant progress has been made by MACHC member states; he was looking forward to the further development of the MACHC. Secretary-General thanked chairman Marc van der Donck and his team for the leadership over the past two years. The Secretary-General presented a gift from the IHO to Vice Admiral Marcos Sampaio Olsen as representative of the host nation.

Vice Admiral Alippio thanked all attendees for coming to Belém and wished them all a safe trip home, a merry Christmas and best wishes for 2017.

Secretary-General thanked Mr. Nickolás Roscher of DHN on all the work he did behind the scenes for making this conference a success. Ms. Dawn Seepersad of the University of West Indies received a token of appreciation for the work she is going to do, not only for the MACHC region, but for the benefit of the whole IHO.

Admiral Luiz Fernando Palmer Fonseca thanked IHO, in the person of Secretary-General Robert Ward and Associate Director Alberto Costa Neves, for the support of the event. The Admiral thanked the chair and his team, all representatives in the room, the translators, the hotel staff and all personnel working behind the scenes.



The Chair concluded the conference by wishing everyone a safe trip home, a merry Christmas with family or friends, and a good beginning of 2017.

The conference was closed at 11:53.



**17th Meso American & Caribbean Sea Hydrographic
Commission Meeting
14- 17 December 2016
Belém, Brasil,
List of Actions**

**MACHC 17-1.5
Results of action list review at 17th MACHC Conference**

During the 17th 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 IRCC8 actions. Below you will find the MACHC action list divided in three separate tables. The first table lists the new action items as agreed during the 17th MACHC. The last two tables are the previous Open and Continuous 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, the exception being those new action itemS that could be completed/closed since the 16th MACHC (Table 1). This status is also reflected in the color of the row.

These three tables are part of the minutes of the 17th MACHC Conference. In preparation for the 18th 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 for the 18th MACHC.

The result is shown in tables below.

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

ANNEX A to the 17th MACHC Conference minutes

Table 1: NEW ACTION ITEMS DURING THE 17th MACHC

No	Subject mater	Action	Responsible party	Due date	Status after 17 th MACHC
List of actions 17th MACHC meeting					
17.1.5.1	Statutes	Amend Annex 1 to the Statutes describing the national report to better take into account the developments of MSDI and GEBCO. (See also action 15.3 and IRRC 8 action 21)	MACH Chair	1 April 2017	Completed. See Annex B to the minutes already promulgated to the Member States.
17.1.5.2	GOH project	Write a letter to Guatemala requesting an update on the status of and intentions with the hydrographic equipment provide through the Gulf of Honduras project.	MACHC Chair	1 April 2017	Completed. See MACH letter 06/2017.
17.2.1.1	IHO secretariat (MSI)	Members States to review the MSO status presented in Annex C of the IHO Secretariat report (MACHC17-02.1) and report to the chair of the MACHC any obstacles and challenges that are impeding the establishment of and effective MSI Capacity. See App 4 to Annex 1 of the Statutes as aid for MSI self-assessment.	Member States	1 July 2017	Open. See also action 15.6.3.2
17.2.1.2	IHO secretariat	Member States to review their Nations entry on the provision of Hydrographic services in Annex B of the IHO Secretariat report (MACHC17-02.1) <u>before</u> the next meeting of the Caribbean MoU in February 2017	Member States	1 Feb 2017	Open. Results will be part of IHO report for 18 th MACHC.
17.2.1.3	IHO Secretariat (MICC)	Members States to update S-11 Part B for INT region B through the INTtoGIS tool and implement the procedures depicted in IHO CL 64/2015 for reviewing and monitoring of INT charts. MS to update their INT charts directly into INTtoGIS of IHO.	Member States as decided and coordinated by MICC		Continuous.
17.2.1.4	IHO Secretariat (IRRC8/32)	Member States review entries related to IHO C-55, P-5 (yearbook) and ECDIS backup up arrangements (iaw. IHO CL 61/15) and report annually to IHO secretariat, including reports of “no change”. See Annex 1 of MACHC statutes for structured report formats.	Member States		Continuous, Rewritten in line with IRRC8 action 32 and IHO secretariat report

ANNEX A to the 17th MACHC Conference minutes

No	Subject mater	Action	Responsible party	Due date	Status after 17 th MACHC
					(MACH 17-02.1).
17.2.2.1	IRRC 8/6	Member States and observers are encouraged to attend WWNWS-SC meetings.	Member States		Continuous.
17.2.2.2	IRCC 8/7	Raise awareness of the impact of e-navigation on the provision of MSI in the respective regions and to highlight the use of the Joint Manual on MSI to ensure correct terminology and formats are used in MSI messages.	MACHC Chair		Continuous. By way of agenda setting.
17.2.2.3	IRCC 8/8	Encourage closer engagement of the National MSI Coordinators of Member States with the relevant NAVAREA Coordinator (7b).	MACHC Chair		Continuous. By way of agenda setting.
17.2.2.4	IRCC8/31	Be attentive to opportunities to raise awareness on the role of hydrography and the importance of improving mankind's knowledge of the seas and oceans in support of the sustainable development goals, disaster risk reduction and the integrity of the oceans.	MACHC Chair in coordination with Member States		Continuous.
17.2.5.1	Response to disaster	Provide comments on PRO3 - Revision of the Resolution on Response to Disasters- based on the very recent experience in the MACHC region, and as discussed and supported by the 17 th MACHC meeting in Belém (14-17 December 2016).	MACHC Chair	December 2016	Completed, by MACHC letter 21/2016.
17.2.5.2	Response to disaster (Statutes)	Include the principles of MACHC Disaster response in the MACHC Statutes based on lessons identified. Include as particular aim: "To examine the role hydrography can play in disaster risk reduction, for instance by capacity building.".	MACHC Chair	1 April 2017	Completed. See Annex B to the minutes already promulgated to the Member States.
17.5.1	Risk Assessment	Suriname to present on their risk-assessment project at MACHC meeting in 2017.	Suriname	18 th MACHC meeting	Open.

ANNEX A to the 17th MACHC Conference minutes

No	Subject mater	Action	Responsible party	Due date	Status after 17th MACHC
17.5.2.1	Risk Assessment	Member states are encouraged to take part actively in a User Support Group for the Phd work on “Risk Assessment in Maritime Navigation for the Greater Caribbean Region (GCR)” by Ms. Dawn Seepersad of the UWI.	Member States as coordinated by Chair RA group	ASAP	Open.
17.5.2.2	Risk Assessment	User Support Group is to develop a ‘road map’ on how to effectively support the Phd work on “Risk Assessment in Maritime Navigation for the Greater Caribbean Region (GCR)”.	Member States as coordinated by Chair RA group	ASAP	Open.
17.5.2.3	Risk Assessment	Invite Ms. Dawn Seepersad to provide an update on her Risk Assessment project for the GCR. (see also action 17.5.2.1).	MACHC Chair	18 th MACHC meeting	Open.
17.6.4	DTM	Members States to consider making ENC bathymetric and contour information available for the IBCCA project via GEBCO (DCDB).	Member States	18 th MACHC meeting	Open.
17.6.5	DTM	Members States are encouraged to participate actively in the GEBCO’s Seabed 2030 project by providing bathymetric data to the IHO DCDB to support mapping ocean areas at high resolution and by providing shallow water bathymetric data from ENCs to the IHO DCDB.	Member States	18 th MACHC meeting	Open.
17.7.1.1	MICC	Encourage MACHC ENC Online participation	MACHC Chair		Continuous.
17.7.1.2	MICC	Note the WEND Report and provide feedback.	Member States	Before the next WENDWG	Closed. The 7 th WENDWG took place beginning of February 2017

ANNEX A to the 17th MACHC Conference minutes

Table 2: OPEN ACTION ITEMS AT START OF 17th MACHC, BUT WITH STATUS UPDATED DURING THE 17TH MACHC

No	Subject mater	Action	Responsible party	Due date	Status after 17 th MACHC
List of open 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	18th MACHC Conference	Open. No members volunteered before or during 17 th MACHC.
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	Closed. The Golf of Honduras project is no longer active.
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	18 th MACHC Conference	Open. Within the context of the GOH-project hydrographic systems were provided. Currently it is unclear if and where this capability has been put to use.
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	Completed, also taken over by action 17.2.1.3.
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	Closed. No feedback given by MS en AMS. MACHC action is part of standing CB Coordinator tasks.
16.2.2.10	IRCC7/43	Member States and Associated Member States to provide access for the IHO Secretariat to any of their relevant promotional material on	Member states, Associate Member	17 th MACHC Conference	Closed . No feedback given by

ANNEX A to the 17th MACHC Conference minutes

No	Subject mater	Action	Responsible party	Due date	Status after 17 th MACHC
		CB and to consider using the posters displayed at the EIHC 5 CB.	states,	(ASAP)	MS en AMS
16.2.2.11	IHO secretariat	MACHC Chair invites Member States to consider providing representatives of the IHO at the international meetings listed in Annex A to paper IRRC8-08B on “Relations with other International Organizations and IHO Stakeholders”	Member States	Annually at MACH meetings	Continuous , list of meetings is updated yearly at IRCC.
16.5.1	Risk Assessment	Chair, supported by UKHO as chair of the Risk Assessment Group, to organize a follow-on meeting on Risk Assessment during MACHC conferences. With the aim to exchange information, learn and apply.	Chair MACHC, UKHO and Member States	Annually at MACH meetings	Continuous .
16.5.5	SDB	SHOM to provide an update on the planned SDB activities during 2016.	France (SHOM)	17th MACHC Conference	Completed .
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	Completed . Decisions on how to proceed with the MEIP WG are reflected in minutes of the 17th MACHC meeting.
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	Completed . As briefed at 17 th MACHC meeting.
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	Completed . As per 17 th MACHC meeting Agenda.
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	Closed . Contact has been established.
16.10.1	CB	Chair to investigate the possibility for a ‘CB Workshop with a mini	Chair, in consultation with	17 th MACHC Conference	Completed . Awareness seminar

ANNEX A to the 17th MACHC Conference minutes

No	Subject mater	Action	Responsible party	Due date	Status after 17 th MACHC
		forum' on specific hydrographic topics at the next MACHC.	CBC		before the actual MACHC focused on 2 topics: governance and SDB.
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	As required for the 2017 MACHC CB plan	Open. CBC has limited insight, coordination is still ad hoc.
List of open actions 15th MACHC meeting					
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	Completed. law MACHC letter 06/2016 and doc IRCC8-06J.
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)	Closed. Relevance overtaken by events.
15.5.1.2	IHO	Haiti will send the Instrument of Accession to the IHO.	Haiti	As soon as possible	Open, not deposited yet,. Expect after elections in 2017.
15.CB.1	CB	IHO Secretariat to submit a proposal regarding the creation of a roster of experts.	IHO Secretariat	17th MACHC meeting	Closed, overtaken by events. Is already part of the development for a CB Management System.
15.6.2.1	National report	Brazil to share experience and expertise on development of Inland ENC with interested countries in MACHC region. Experience of stakeholders is also appreciated.	Brazil	18th MACHC meeting	Open, rewritten as result of 17 th MACHC meeting.

ANNEX A to the 17th MACHC Conference minutes

No	Subject mater	Action	Responsible party	Due date	Status after 17 th MACHC
15.6.2.3	National report	Technical visit to Haiti postponed to 2016 because of busy political agenda in Haiti. NB: further postponed by the passage of Hurricane Matthew	IHO Secretariat, CB Coordinator, NOAA and IALA	TBD	Open , is on-going discussion between IHO Secretariat, CBC, NOAA and IALA on responsibilities and scope of TV.
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	Closed , same as action 15.5.1.2
15.6.2.6	National report	ESRI will try to make its data available to Haiti.	ESRI	18 th MACHC meeting.	Open . ESRI not present at 17 th MACHC meeting
15.6.3.4	MSI	Invite the Caribbean Disaster Emergency Management Agency (CDEMA) to attend the MACHC meetings	Chair MACHC	18 th MACHC meeting.	Open , contact established. No attendance at 17 th MACHC. Still pending for the 18 th MACHC.
15.8.1.2	OECS	OECS to join MEIP WG.	OECS	17 th MACHC meeting.	Closed . Over taken by decisions on future shape of MEIP initiative.
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	18 th MACHC meeting.	Open , awaits initiating activity.
List of open 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 per CL to be send	Open , awaiting CL by WEND WG .
List of open actions 13th MACHC meeting					

ANNEX A to the 17th MACHC Conference minutes

No	Subject mater	Action	Responsible party	Due date	Status after 17 th MACHC
13.1.32 (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	Closed , current procedures through IC-ENC and MICC work satisfactory.
13.1.42 (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.	Completed , is part of 17th MACHC meeting agenda, items 2.5
13.2.6 (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	Closed , is not an unique issue but part of existing dialog between HO's and cruise Industry.
13.3.6 (13.3.6)	CB	<p>Gulf of Fonseca project:</p> <ol style="list-style-type: none"> 1. Decision to continue the project discussions with authorities from the three Member states. 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. 3. Decision to keep this project Regional within Central America as much as possible 	PAIGH, Honduras, Nicaragua, El Salvador,	Undetermined	Closed . The Golf of Honduras project is no longer active.

ANNEX A to the 17th MACHC Conference minutes

Table 3: CONTINUOUS ACTION ITEMS AT START OF 17th MACHC, BUT WITH STATUS UPDATED DURING THE 17TH MACHC

No	Subject mater	Action	Responsible party	Due date	Status after 17 th MACHC
List of continuous actions 16th MACHC meeting					
16.2.2.1	IRCC7/01	Member states to approve pending applications for IHO membership.	Member States	As soon as possible	Closed. Relevance overtaken by events.
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 2017	Closed, no longer extant as concrete IRRC action. Now part of standing IRCC workplan and standing remit of MACHC (WG) chairs.
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	Next Jan 2017	Closed, no longer extant as concrete IRRC action. Now part of standing IRCC workplan and standing remit of MACHC (WG) chairs.
16.2.2.4	IRCC7/15	Provide material to the IHO Secretariat to promote the achievements of IRCC bodies	All	As available	Closed, no longer extant as IRRC action
16.2.2.5	CB	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, no longer extant as IRRC7 action 17. Maintain as MACHC action under CB.

ANNEX A to the 17th MACHC Conference minutes

No	Subject mater	Action	Responsible party	Due date	Status after 17 th MACHC
16.2.2.6	IRCC7/27	To task: 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; 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; 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; d) All editions of INT charts submitted under action 27 a) and b) to be subsequently transferred to the IHO SECRETARIAT to be included in the IHO SECRETARIAT reference collection for internal use; and e) Member States to provide an update of the list of on-line chart catalogues, either directly or systematically when updating the Yearbook.	MICC Chair	As required	Closed , taken over by action 17.2.1.3, also being part of MICC's standing remit.
16.2.2.8	IRCC7/33	Instruct the ICCWG Coordinators to investigate ways to improve communication across the regions and report back to IRCC.	MICC chair	IRCC8	Closed , no longer extant as IRRC action, is also part of standing MICC remit.
16.10.4.2	FOCAHIM ECA	If additional funding is sought from CB-funds, Mexico to make bids through the established CB mechanism's.	Mexico	As required	Continuous
List of continuous actions 15th MACHC meeting					

ANNEX A to the 17th MACHC Conference minutes

No	Subject mater	Action	Responsible party	Due date	Status after 17 th MACHC
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	Closed , taken over by action 17.1.5
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
15.5.2.2	IRCC	Member States are encouraged to act in line with IRRC 7 papers 11B/11E in anticipation of IRRC7 action 67 (revision of C-17 SDI “the Maritime dimension” for national access to bathymetric and related data collected for commercial or scientific purposes)	Member states	As required	Continuous , as part of MS responsibilities. Intend to close when IRCC8 action 15 is completed.
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.
15.6.2.11	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	Closed . Spain is not a member of the MACHC and can't be given an action.
15.6.3.2	MSI	Delegates to update their contact information in the NAVAREA IV list.	MS	As required	Continuous , unilateral activity.
List of continuous actions 14th MACHC meeting					
14.1.16	7	MS to send their relevant information to the GEBCO.	MS	As required	Closed . Overtaken by actions 17.6.4 and 17.6.5.

ANNEX A to the 17th MACHC Conference minutes

No	Subject mater	Action	Responsible party	Due date	Status after 17 th MACHC
14.1.22	12	RENC members to recommend to non-RENC ENC producer nations to join a RENC	RENC members	As required	Closed. All ENC producer nations are member of a RENC.
List of continuous 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	Closed, overtaken by action 17.2.1.4.
List of continuous actions 12th MACHC meeting					
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.
12.3.8	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 IHO Secretariat, and IMO.	MACHC Chair as prompted by MICC	As required	Continuous, also activity of MACHC rep In WEND WG.



STATUTES *of the*

MESO AMERICAN - CARIBBEAN SEA HYDROGRAPHIC COMMISSION (MACHC)

as amended by the XVIIth Conference of the Commission in Belém, Brazil (December 2016)

Notes:

1. The terms "International Hydrographic Bureau" and "IHB" to be replaced by "Secretariat of the IHO" when the amendments to the Convention on the IHO enter into force.
2. The term "Directing Committee of the IHB" to be replaced by "Secretary-General of the IHO" when the amendments to the Convention on the IHO enter into force.
3. The terms "International Hydrographic Conference" and "IHC" to be replaced by "IHO Assembly" when the amendments to the Convention on the IHO enter into force.

ARTICLE 1: OF THE COMMISSION

- a) The Meso American - Caribbean Sea Hydrographic Commission has been constituted in conformity with Resolution 2/1997 as amended of the International Hydrographic Organization (IHO), included as Annex 1, and shall be governed according to these Statutes.
- b) The geographic Region covered by the Commission shall be that defined by the IHO INT Charting Scheme Region B, included as Annex 2, hereafter referred as "the Region".

ARTICLE 2: OF THE MEMBERS

- a) Full Members of the Commission shall be IHO Member States within the Region that are signatories to these Statutes.
- b) Associate Membership is open to any non-IHO Member State within the Region that is a signatory to these Statutes. Other Members of the IHO that contribute to the safety of navigation through their activities in the fields of hydrography, nautical charting or nautical information in the Region and are signatories to these Statutes may be accepted as Associate Members. Associate Members have the same rights and obligations as the Full Members of the Commission except the right to vote or to be elected Chair.
- c) The Chair shall also invite other IHO Member States that are not signatories to these Statutes but that contribute to the safety of navigation by their activities in the fields of hydrography, nautical charting or nautical information in the Region, or organisations active in the Region, to attend as Observers.

ARTICLE 3: OF THE AIMS

- a) The Commission, which is an integral element in achieving the objectives of the IHO and which promotes the aims of the Organization at the regional level, shall have an advisory, scientific and technological character; it shall not exert any authority over the Hydrographic Services or institutions responsible for hydrography and navigation of the Member countries and activities shall not extend to matters concerning international political issues.

- b) The Commission has a limited capacity for disaster response (IHO resolutions 1/2005). The role of the Chair of the MACHC is that of a broker of hydrographic demand (from the affected countries) and supply (by countries offering assets). The Chair cannot absorb Member States responsibilities for Diplomatic clearance needed to deploy those hydrographic assets.
- c) Particular aims of the Commission are:
 - 1. To promote technical co-operation and training in the domain of hydrographic surveying, marine cartography and nautical information.
 - 2. To examine in its area of interest, matters with which the IHO is concerned, avoiding any interference with the prerogatives of the International Hydrographic Bureau (IHB) and of any other bodies set up by the IHO.
 - 3. To stimulate all countries of the Region to expand their hydrographic activities and to encourage them to seek advice and technical assistance from the IHB and other organisations in order to strengthen their hydrographic capabilities.
 - 4. To facilitate the exchange of information related to surveys, research and/or scientific and technical development to assist in planning and organizing the hydrographic activities in the widest sense of the aims, but without interference in national responsibilities.
 - 5. To implement the INT and ENC Chart Schemes for the Region and to monitor their suitability.
 - 6. To carry out studies and projects through committees or working groups of the Commission so as to provide input to the IHO when deemed necessary.
 - 7. To identify the MACHC Representative(s) to the IHO Council (when the IHO Council is established), as outlined in the guidance provided in Annex 3 to the Statutes.
 - 8. To examine the role hydrography can play in disaster risk reduction, for instance by capacity building.

ARTICLE 4: OF THE ORDINARY CONFERENCE

- a) The Commission shall meet in ordinary Conference in a country of the Region at least twice between two successive ordinary sessions of the International Hydrographic Conference (IHC).
- b) The Members shall be represented at the Conferences by the heads of the Hydrographic Authorities or their nominees or, where such services do not exist, by heads of national authorities responsible for hydrography and navigation.
- c) The presence of at least one-half of the Full Members of the Commission shall constitute the necessary quorum to hold the meeting.
- d) An invitation to attend the Conference shall always be sent to the Directing Committee of the IHB.
- e) The Chair shall invite those countries of the Region that are not Members of the Commission and the Coordinators of adjacent INT-Chart Regions to send Representatives to attend the Commission Conferences as Observers. Any Members may propose to the Chair the invitation of technical experts as Observers. Observers can participate in the discussions and in the working groups set up by the Commission but shall not have voting rights.

- f) The host country may limit the number of participants to not more than two per country according to the availability of facilities.

ARTICLE 5: OF THE CHAIR AND VICE CHAIR

- a) The Conferences of the Commission are conducted by the Chair with the assistance of the Vice Chair.
- b) The Chair and Vice Chair of the Commission shall be from a Full Member State of the Commission, elected on a rotational basis. Under normal circumstances, the term for the Chair and Vice Chair will be two years. If the period between Conferences exceeds two years, the term will extend until the end of the next Conference.
- c) At the conclusion of a Conference, Full Members will offer suggestions regarding the election of a new Chair and Vice Chair. In order to assure the continuity, it is suggested that the Vice Chair be elevated to the position of Chair for the next period.
- d) If the Chair, or the Vice Chair, is unable to officiate at the Conference, he or she shall be replaced by his or her Representative.
- e) The incoming Chair shall take office three months after the conclusion of an ordinary Conference.

ARTICLE 6: OF THE SEATS OF THE CONFERENCES

- a) At the end of each conference the Full Members desirous of hosting the following conference shall put forward their candidatures. Proposals for holding the conference in a country of an Associate Member may also be considered. Where no other compelling circumstances exist, priority shall be given to a Full Member State which has not yet hosted a conference, or to the one which did so the longest time ago.
- b) The host country will assist with the arrangement of authorizations and visas, so as to facilitate attendance at the Conference.

ARTICLE 7: OF THE CONFERENCE

- a) The Chair shall prepare the Provisional Agenda in conjunction with the Members at least two months before its opening. The Provisional Agenda shall normally include the standard items suggested in relevant IHO guidance (for example, National Reports, INT Charts and ENC Cell scheme). The first item shall be the Chair's report on the activities of the Commission since the last Conference. All Conference Documents shall be made available on the IHO/MACHC web site at least one month prior to the meeting.
- b) Members' Proposals to be included on the Agenda of a Conference should be sent to the Chair for the next Conference at least four months in advance of the date agreed for the commencement of the Conference.
- c) The Agenda shall be adopted by the Commission at the beginning of each Conference.
- d) The Commission can modify the order of discussion of the different items of the Agenda during the Conference.
- e) Proposals of Members not included in the Agenda shall be submitted to the Chair and, with the agreement of the Members, shall be added to the Agenda for consideration.
- f) Each Full Member has one vote and votes shall be indicated by a show of hands.
- g) At the end of each Conference, the Chair shall present the Resolutions and Decisions

taken in the working language of the Commission. 20 days after the close of the Conference, the Chair will submit to the Full Members and Participants a report, (in the working language of the Commission) which will include those Resolutions and Decisions, as well as any supporting information submitted. Full Members shall report any objections of the report within 20 days. Any objections to the report shall be made by electronic mail.

- h) Between Conferences, if necessary, subjects may be discussed and decided by correspondence in the MACHC working language.
- i) In preparation for, during and between Conferences, the Chair shall be assisted by the Secretary appointed by him/her. The duties of the Secretary include the following:
 - 1. To collate, three months before the Conference, all proposals from the Full Members, to be included in the Agenda.
 - 2. To forward proposals and the provisional Agenda to the Chair and Vice Chair at least two months prior to the Conference.
 - 3. To prepare and distribute a list of participants at least one month prior to the Conference.
 - 4. To receive and to forward any requirements from the Members to the Chair and Vice Chair as appropriate.
 - 5. To prepare for the Chair, a report of the Conference within 20 days following its conclusion, including the discussions resolutions and decisions taken, as well as any supportive information that was submitted.
 - 6. To prepare the final report and forward it to the IHB.
 - 7. To assure with the host country, the nominal organization of the Conference.

ARTICLE 8: OF RESOLUTIONS AND DECISIONS

- a) The resolutions and decisions of the Conference shall usually be reached by consensus among Full Members. If consensus cannot be reached, resolutions and decisions shall be adopted by a simple majority of the Full Members present. In case of an equal number of votes (tie), a second vote shall take place after listening to the comments of the Representative of the IHB.
- b) The Chair each day shall prepare a written text of the decisions taken on each item of the Agenda and shall see to its distribution to all the attendees present for the next day.
- c) Each Full Member has only one vote.
- d) At the end of the Conference, the Chair shall read the text of the resolutions and decisions taken. All decisions become operative immediately.

ARTICLE 9: OF CORRESPONDENCE

- a) The Chair shall send, within two months after the closing of the Conference, one copy of the Draft Report regarding the discussions and decisions taken during the Conference to each of the Full Members for its approval, and for Associate Members and Observers to comment. The Full Members shall send back their approval or any amendments within two months after its receipt. Any objection shall be resolved by correspondence. A signature page shall be circulated to obtain final approval.

- b) A copy of the Final Report of the Conference shall be sent to the Full Members, Associate Members, Observers and the IHB.

ARTICLE 10: OF EXTRAORDINARY CONFERENCES

- a) The Chair may convene an Extraordinary Conference of the Members of the Commission when their Representatives are assembled for a session of the IHC, inviting others qualified to attend as Observers.
- b) In the case of urgent matters, which cannot be treated by correspondence nor can be delayed for the next Conference, the Chair, in agreement with the Full Members may convene an Extraordinary Conference.

ARTICLE 11: OF EXPENSES

- a) The Chair and the host country shall be responsible for the organisation of the Conferences.
- b) Travelling, hotel and per diem expenses of participants at Conferences shall be the responsibility of the nation or the organization of the participant.
- c) All expenses related to the provision of the venue and associated facilities for Conferences shall be the responsibility of the host country.
- 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 12: OF THE STATUTES

- a) The IHB shall be the custodian of these Statutes.
- b) The modification of the Statutes requires the approval of at least two-thirds of the Full Members of the Commission.
- c) If modifications to the extant Statutes are agreed by those Full Members attending a Conference, but they do not receive the approval of at least two-thirds of the Full Members as required, the Chair shall submit the proposal(s) by mail to all Full Members with information copies to Associate Members. Final approval shall be subject to the provisions of Article 12b. All approved modifications to the Statutes shall then appear in the report of the Conference.

ARTICLE 13: OF THE LANGUAGE 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).

Signatures: Full Members

BRAZIL	Name Title/Post	
COLOMBIA	Name Title/Post	
CUBA	Name Title/Post	
FRANCE	Name Title/Post	
GUATEMALA	Name Title/Post	
JAMAICA	Name Title/Post	
MEXICO	Name Title/Post	
NETHERLANDS	Name Title/Post	
SURINAME	Name Title/Post	
TRINIDAD & TOBAGO	Name Title/Post	
UNITED KINGDOM	Name Title/Post	
UNITED STATES OF AMERICA	Name Title/Post	
VENEZUELA	Name Title/Post	

Associate Members

ANTIGUA AND BARBUDA	Name Title/Post	
BARBADOS	Name Title/Post	
BELIZE	Name Title/Post	
COSTA RICA	Name Title/Post	
DOMINICAN REPUBLIC	Name Title/Post	
EL SALVADOR	Name Title/Post	
GUYANA	Name Title/Post	
HAITI	Name Title/Post	
HONDURAS	Name Title/Post	
NICARAGUA	Name Title/Post	
PANAMA	Name Title/Post	
SANTA LUCIA	Name Title/Post	
ST. KITTS AND NEVIS	Name Title/Post	
ST. VINCENT AND THE GRENADINES	Name Title/Post	

IHO RESOLUTION 2/1997
(Latest amendment: CL 69/2010)

ESTABLISHMENT OF REGIONAL HYDROGRAPHIC COMMISSIONS (RHC)

1. It is resolved that the IHB shall encourage Member States having common regional interests in data collecting or nautical charting to form Regional Hydrographic Commissions (RHC) to cooperate in the undertaking of surveys and other projects. As part of IHO, the RHC shall complement the work of the Bureau.

2. RHCs are intended to provide, in pursuance of the resolutions and recommendations of the IHO, regional co-ordination with regard to nautical information, hydrographic surveys, production of nautical charts and documents, training, technical cooperation and hydrographic capacity building projects. They (RHC) should enable the exchange of information and consultation between the hydrographic services concerned. Geographically adjacent RHCs should liaise with each other.

2bis. Where Capacity Building is required in a region, RHCs are recommended to establish an internal body to deal with CB matters and to designate a focal point to ensure continuity in the CB process. This part-time allocation to assist RHCs should come primarily and ideally from an HO within the region. If that is not possible then the RHC might agree to request support from another RHC or an HO that might wish to take that responsibility.

These regional contact points, the responsibilities of which should be given directly and in detail by the RHC concerned, shall have the support of the RHCs; shall be nominated having in mind the importance of continuity; shall be in permanent contact with the corresponding RHC Chairman as well as with the CBC Chairman. Ideally should be a CBC member with access to RHC meetings.

In the absence of any other viable alternative and despite its limited human resources availability a request of support could be requested to the IHB.

3. RHCs shall be properly constituted and have activities in line with the objectives of the IHO as described in Article II of the Convention on the IHO and in accordance with the approved IHO Work Programme. Geographical areas of the RHC will normally coincide with INT chart regions, modified as appropriate to meet regional requirements and special circumstances. There are special provisions for Region M (Antarctica) because of its special status.

4. RHC membership may include full members, associate members, and observers, all willing to contribute to the safety of navigation in the fields of hydrography, nautical charting, nautical information or navigational warnings in the region concerned. The roles of full members, associated members and observers will be defined by each RHC.

Full membership is reserved for IHO Member States within the region who sign the statutes of the RHC.

Associate membership is available to other IHO Members States or States of the region who are non-IHO members, both being signatories of the statutes of the RHC.

Other States and International Organizations active in the region concerned may be invited by the RHC to participate as observers.

The invitation procedures should be established by each RHC.

5. The working languages used by the RHC shall be agreed upon by their members and designated to ensure the best communication between participants. The reports and IHO documents relating to RHC activities shall be in at least one of the official languages of the

IHO. For correspondence with the Bureau, one of the official languages of the IHO shall be used.

6. A representative of the Bureau shall be invited to attend meetings of RHCs.

6bis RHCs shall assess regularly the hydrographic capacity and requirements within their region.

7. Chairs of RHCs shall report to the I.H. Conference on RHC activities, hydrographic capacity and requirements within their region, future plans and the agreed key targets that support RHC tasks detailed in the IHO Work Programme. The Chairs of RHC's shall also submit an annual report to the IHB indicating progress made against the agreed key targets in the IHO Work Programme for general dissemination. Between sessions of the IHC, reports of studies or other activities, which may be considered of general interest to all IHO Member States, shall be sent by Chairs of RHCs to the Bureau for general dissemination.

8. The following structure is to be used for National Reports made to those RHCs that wish to receive such reports.

MACHC addendum:

- Appendix 1 provides the structure for the national report
- Appendix 2 provides a structure for input to the IHO Publication P-5 (*Yearbook*)
- Appendix 3 provides a structure for input to the IHO Publication C-55 (*Status of Hydrographic Surveying and Charting Worldwide*)
- Appendix 4 provides a structure for a National MSI Self-Assessment



INTERNATIONAL HYDROGRAPHIC ORGANIZATION
MESO AMERICAN & CARIBBEAN SEA HYDROGRAPHIC COMMISSION



NATIONAL REPORTS FROM [Name of the Country] TO THE MACHC[meeting number]

Reference: IHO Resolution 2/1997 as amended

Executive summary

1. Hydrographic Office / Service:
 - a) Name of the institution: [*name of the institution submitting the report*]
 - b) Description: [*General description, including updates for the IHO Yearbook e.g. reorganization*]
 - c) Submitted by: [*name and e-mail of the responsible for the report*]

Detailed information to update IHO Publication P-5 (*Yearbook*) is submitted as Annex A to this report as detailed in IHO Resolution 2/1997.

2. Surveys:

[*Describe any significant developments since the last MACHC meeting in surveys related to the items below*]

 - a) Coverage of new surveys:
 - b) New technologies and /or equipment
 - c) New ships
 - d) Problems encountered

Detailed information about surveys to update IHO Publications P-5 (*Yearbook*) and C-55 (*Status of Hydrographic Surveying and Charting Worldwide*) is submitted separately and directly to IHO secretariat.

3. New charts & updates:

[*Describe any significant developments since the last MACHC meeting in charting related to the items below*]

 - a) ENCs
 - b) ENC Distribution method
 - c) RNCs
 - d) INT charts
 - e) National paper charts
 - f) Other charts, e.g. for pleasure craft
 - g) Problems encountered

Detailed information about charting to update IHO Publications P-5 (*Yearbook*) and C-55 (*Status of Hydrographic Surveying and Charting Worldwide*) is submitted separately and directly to IHO secretariat.

4. New publications & updates:

[*Describe any significant developments since the last MACHC meeting in nautical publications related to the items below*]

 - a) New Publications
 - b) Updated publications

APPENDIX 1 to ANNEX 1 to STATUTES OF THE MACHC

- c) Means of delivery, e.g. paper, digital
- d) Problems encountered

Detailed information to update IHO Publication P-5 (*Yearbook*) is submitted separately and directly to IHO secretariat.

5. MSI

[Describe the status of Maritime Safety Information (MSI) related to the items below]

- a) Existing infrastructure for transmission
- b) New infrastructure in accordance with GMDSS Master Plan
- c) Problems encountered

Detailed information about MSI to update IHO Publication C-55 (*Status of Hydrographic Surveying and Charting Worldwide*) is submitted separately and directly to IHO secretariat. The national self-assessment of MSI is also submitted separately.

6. C-55

[Describe any significant developments]

The detailed table with the latest information to update IHO Publication C-55 (*Status of Hydrographic Surveying and Charting Worldwide*) is provided separately and directly to IHO secretariat..

7. Capacity Building Offer of and/or demand for Capacity Building

[Describe the need for or ability to offer Capacity Building in relation to the items below]

- a) Training received, needed, offered
- b) Status of national, bilateral, multilateral or regional development projects with a hydrographic component. (In progress, planned, under evaluation or study)
- c) Description of requests to be considered by the IHO/CBSC (specific requests for support)

8. Oceanographic activities

[Describe any significant developments in oceanographic activity since the last MACHC meeting related to the items below]

- a) General
- b) GEBCO/IBC's activities (Bathymetric data made available to GEBCO)
- c) Tide gauge network
- d) New equipment
- e) Problems encountered

9. MSDI Progress

[Describe any significant MSDI development since the last MACHC Meeting related to items below]

- a) The status of MSDI
- b) plans for involvement in MSDI
- c) challenges facing the HO

10. Other activities

[Describe any other significant developments of interest to the MACHC since the last MACHC meeting related to the items below]

- a) Participation in IHO Working Groups
- b) Meteorological data collection
- c) Geospatial studies
- d) Disaster prevention

APPENDIX 1 to ANNEX 1 to STATUTES OF THE MACHC

- e) Environmental protection
- f) Astronomical observations
- g) Magnetic/Gravity surveys
- h) International
- i) Etc.

11. Summary Statement

[Provide a short summary statement that highlights any of the following]

- a) Areas of significant achievement (main achievement during the year)
- b) Areas of particular concern (main challenges and/or obstructions)
- c) Any other matters of interest to the MACHC (plans that affect the region)
- d) Lessons learned to share

APPENDIX 2 to ANNEX 1 to STATUTES OF THE MACHCInput to the IHO Publication P-5 (*Yearbook*)

Country: _____

Organization: _____

Contact information/ Informations de contact / Información de contacto	
-National Hydrographer or equivalent -Directeur du service hydrographique ou équivalent -Director del Servicio Hidrográfico o equivalente	Post: Name: Postal address: Tel: Fax: Email:
-Head of the Hydrographic Office (if different from the person indicated above) -Directeur du Service Hydrographique (si différent de la personne indiquée ci-dessus) -Director del Servicio Hidrográfico (si diferente de la persona indicada anteriormente)	Post: Name: Postal address: Tel: Fax: Email:
-Other point(s) of contact -Autre(s) point(s) de contact -Otros punto(s) de contacto	
-Web site -site web -sitio web	
Country information / Informations sur le pays/ Información sobre el país	
-Declared National Tonnage -Tonnage national déclaré -Tonelaje Nacional Declarado	Tonnage: Date:
-National day -Fête nationale -Fiesta nacional	
-Date of establishment and Relevant National Legislation -Date de mise en place et législation nationale pertinente -Fecha de constitución y legislación nacional pertinente	

APPENDIX 2 to ANNEX 1 to STATUTES OF THE MACHC

-Date first joined IHO -Date d'adhésion à l'OHI -Fecha de adhesión a la OHI	
-Date ratification Convention -Date de ratification de la Convention -Fecha de ratificación de la Convención	
-Remarks on membership -Remarques sur l'adhésion -Comentarios sobre la adhesión	
Agency information/ Information sur l'agence/ Información sobre la agencia	
-Top level parent organisation -Organisme mère -Organización asociada de nivel superior	
-Principal functions of the organisation or the department -Attribution principales de l'organisme ou du département -Principales funciones de la Organización o departamento	
-Annual operating budget -Budget annuel -presupuesto anual	
-Total number of staff employed -Effectifs totaux -Número total de personal empleado	
-Number of INT charts published -Nombres de cartes INT publiées -Número de cartas INT publicadas	
-Total number of paper charts published-Nombre total de cartes papier publiées-Número total de cartas de papel publicadas	

APPENDIX 2 to ANNEX 1 to STATUTES OF THE MACHC

-Number of ENC cells published -Nombres de cellules ENC publiées -Número de células ENC publicadas				
-Number of Other charts -Nombre d'Autres cartes -Número de Otras cartas				
-Type of publications produced -Type d'ouvrages produits -Tipo de publicaciones producidas				
-Detail of surveying vessels/ aircraft -Détail des bâtiments hydrographiques / aéronefs -Detalle de los buques hidrográficos / aeronaves	-Name -Nom -Nombre	-Displacement -Déplacement -Desplazamiento	-Date Launched -Date de mise en service -Fecha de botado	-Number of crew -Nombre de l'équipage -Tripulación
-Other information of interest -Autres informations utiles -Otra información de interés				

APPENDIX 3 to ANNEX 1 to STATUTES OF THE MACHC

Input to the IHO Publication C-55 (*Status of Hydrographic Surveying and Charting Worldwide*)

Country: _____

C-55 Summary for:				Comments on Charts:
Country:				
Country Iso Code:				
Country SubCode:				
INT Region:				
Country/Depend:				
Last updated:				
Provided by:				
Chart coverage	Passage (%)	Coastal (%)	Port (%)	Comments on Surveys:
INT				
RNC				
ENC				
Status of Paper Charts				
Paper charts with depths in meters (%)				
Paper charts referenced to a satellite datum (%)				
Status of surveys	Adequate (%)	Resurvey (%)	No survey (%)	
0-200m				
> 200m				

MSI	Y/N	Comments on MSI:
Local warning		
Coastal warning		
Nav warning		
Port warning		
GMDSS	Y/N	Comments on GMDSS:
Master Plan		
Area A1		
Area A2		
Area A3		
NAVTEX		
SafetyNet		

APPENDIX 4 to ANNEX 1 to STATUTES OF THE MACHC

National MSI Self-Assessment

Country: _____

Organization: _____

1. Maritime area

[Describe maritime area including details of the geographic boundaries]

2. Operational Points of Contact for the National Coordinator

INSTITUTION	TELEPHONE	FACSIMILE	EMAIL

3. GMDSS Master Plan

[Report on the status of the GMDSS Master Plan: Is it up to date? When was the last update?]

[Specifics of equipment used and software version with date up-dated]

Equipment Type for Ports and Local Area	Software Version	Date of Up-date

[Detail the number of warnings identified as immediate priority (requiring transmission within 30 minutes) and the average elapsed time for passing to NAVAREA coordinator, as reported to the last RHC meeting]:

Year Y-2		Year Y-1		Year Y	
Total	Average elapsed time	Total	Average elapsed time	Total	Average elapsed time
xx	xx.x Mins	xx	xx.x Mins	xx	xx.x Mins

4. NAVTEX Coverage:

[Diagram of NAVTEX stations and service areas within maritime area; Contact details for NAVTEX Stations; Confirm operational status has been validated.]

5. Operational Issues:

[New infrastructure in accordance with GMDSS Master Plan; Problems encountered?]

6. Contingency Planning

APPENDIX 4 to ANNEX 1 to STATUTES OF THE MACHC

[Provide information regarding contingency plans that have been established and future plans where appropriate. Also report on any testing of the plan that has been conducted]

7. Capacity Building

[Demands for Capacity Building, Training requested or received, any offered, status of national, bilateral, multilateral or regional development projects with MSI component]

8. Other Activities

[Participation in other IHO or IMO Working Groups, Regional Hydrographic Commissions, regional conferences related to MSI over past year]

9. National Maritime Website

[(Address, statistics (if permitted by national legislation; how often is the information on your web site updated? Do you display the date and time of the last update on your web site?)]

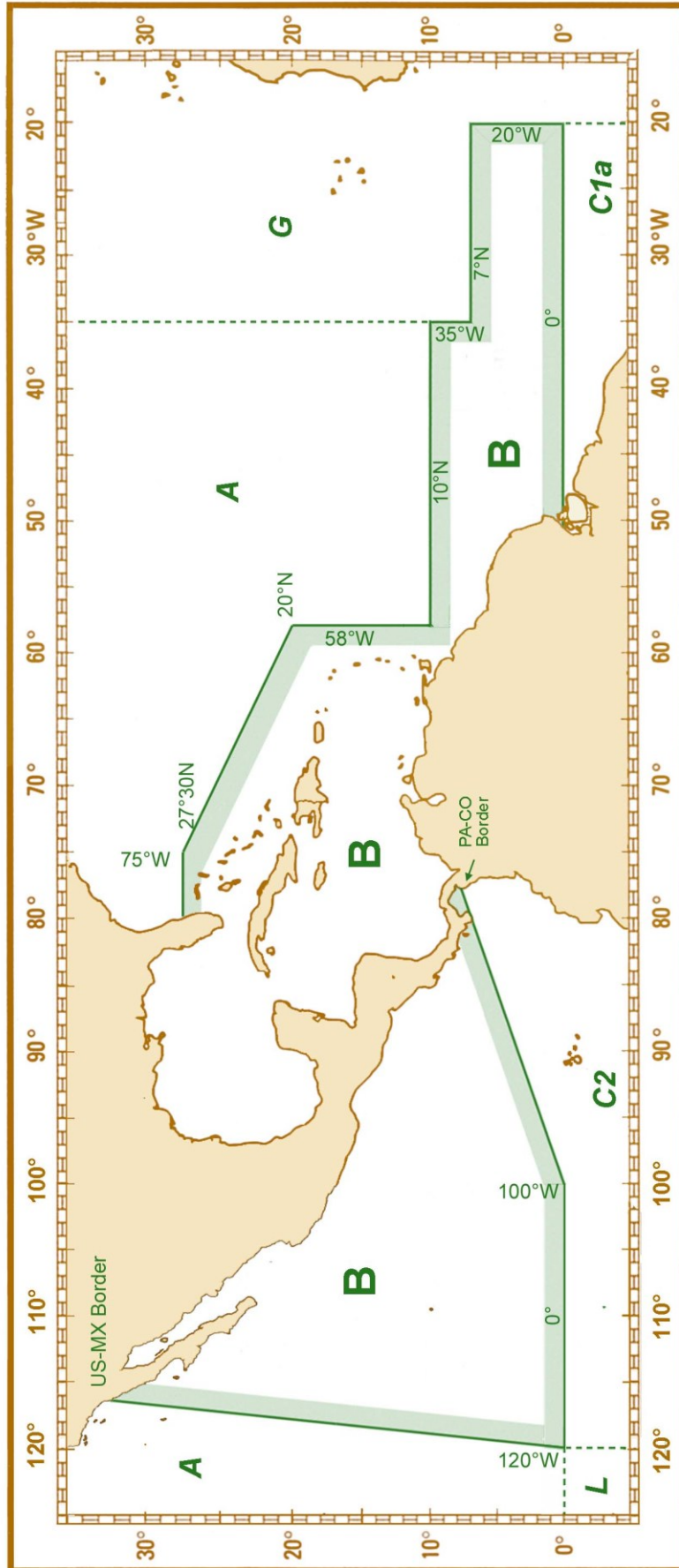
10. Recommendations

[If any]

11. Summary

[Please provide a short summary of this paper which will be included in the final report of the meeting.]

ANNEX 2 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.
 - 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.

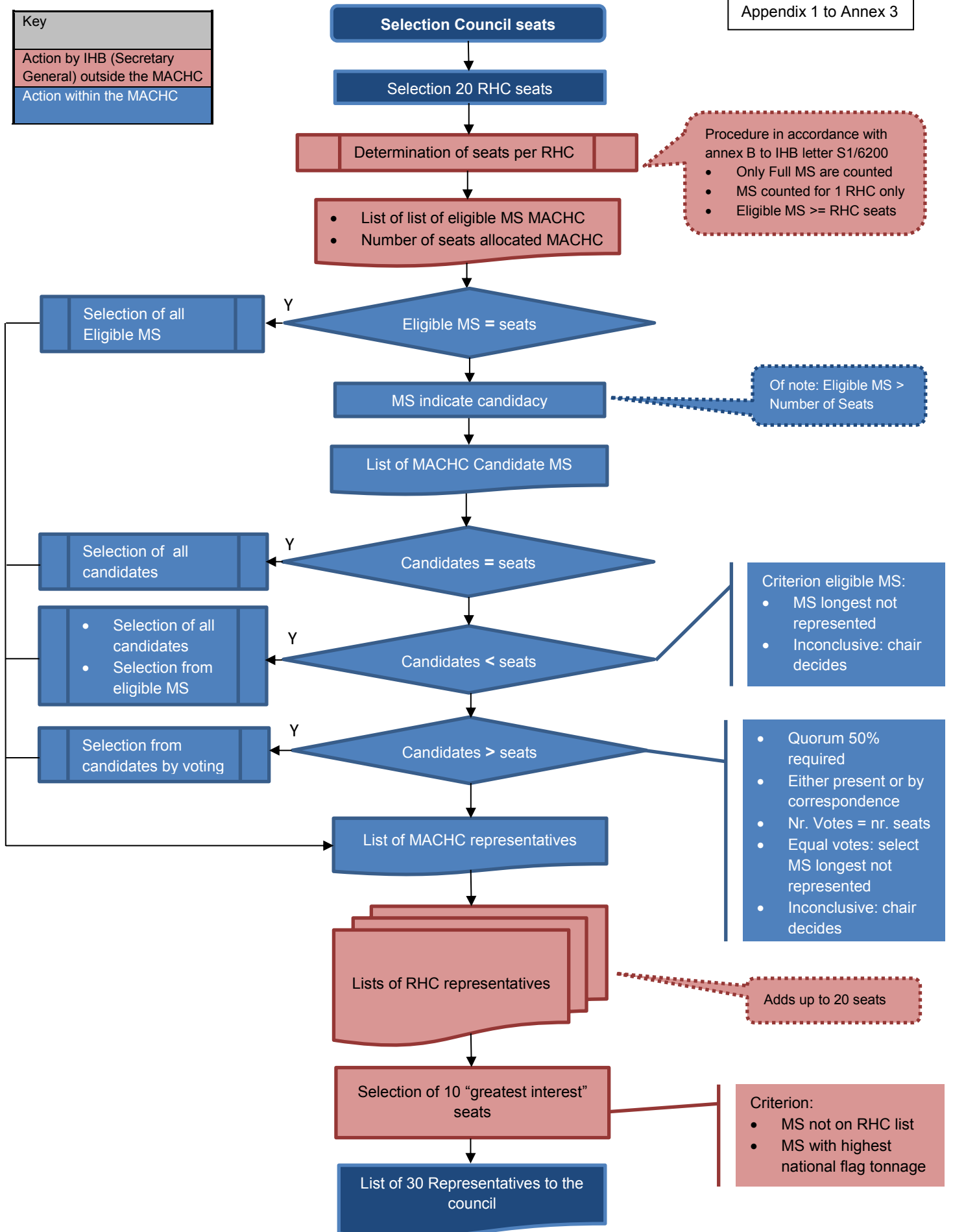
- a. Each Member State may submit one voting paper marking as many candidate Member States from the list as seats have been assigned to the MACHC (see example of voting paper in Appendix 2).
- b. The quorum for a valid voting procedure is set at 50% of Member States casting their vote. Representatives 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



Appendix 2

Meso-American and Caribbean Sea Hydrographic Commission (MACHC)

Selection of Representative(s) to the IHO Council

Example of Voting Paper

Part A

Number of Seats on Council allocated to the MACHC: *Chair inserts number in here*

(This is the number of boxes that may be marked below)

Part B

To vote for a candidate State put an 'X' in the adjacent box. The number of boxes that may be marked is shown in Part A above.

<i>Chair inserts candidate State A in here</i>	<i>Votes indicated with an X here</i>
<i>Chair inserts State B in here</i>	<i>Votes indicated with an X here</i>
<i>Chair inserts State C in here</i>	<i>Votes indicated with an X here</i>
<i>insert other States if appropriate</i>	<i>Votes indicated with an X here</i>

Member State: Date:

Authorised By: Position:

(signature)