

**12th MEETING OF THE IHO INTER-REGIONAL COORDINATING COMMITTEE
IHO-IRCC11
Gdansk, Poland, 6-8 October 2020**



**MESOAMERICAN AND CARIBBEAN SEA
HYDROGRAPHIC COMMISSION
Report to IRCC12**

1. Chair: Kathryn Ries, USA, March 2019

Vice-Chair: Vice-Admiral Edgar Luiz Siqueira Barbosa, February 2020

2. Membership

Members: Brazil, Colombia, Cuba, Dominican Republic, France, Guatemala, Guyana, Jamaica, Mexico, Netherlands, Suriname, Trinidad and Tobago, UK, USA, Venezuela

Associate Members: Antigua and Barbuda, Belize, Costa Rica, El Salvador, Grenada, Haiti, Honduras, Nicaragua, Panama, Saint Lucia, St. Kitts and Nevis, St. Vincent and the Grenadines

Observer Countries: Dominica, Spain

Observer Organizations: AMEXCID, Caribe EWS, CLIA, COCATRAM, IALA, IC-ENC, IMarEST, IMO, INEGI, IOCARIBE, INVEMAR, MapAction, Marine Conservation, OECS, THSOA, University of the West Indies

Observer Companies: EOMAP, Esri, HYPACK, Fugro USA, IIC Technologies, Ocean Wise Ltd, QPS, Kongsberg, CARIS Teledyne, AXYS Technologies, TCarta

3. Meetings:

20th Meeting—Santo Domingo, Dominican Republic (2-6 December 2019)

The 21st Meeting of the MACHC was scheduled to be held in New Orleans, Louisiana, USA (December 1-4, 2020). However due to the coronavirus pandemic, the 21st MACHC will be a virtual conference held from November 30 – December 4, 2020.

4. Current MACHC Working Groups:

- a) MACHC International Charting Coordination Working Group (MICC)
- b) MACHC Capacity Building Committee (CBC)
- c) MACHC Marine Spatial Data Infrastructure Working Group (MMSDIWG)

5. Status of IRCC actions (relevant for the MACHC):

N.	Action (Agenda item)	Responsible	Deadline	Status
01	to confirm/update the representatives to the IHR Editorial Board	RHC Chairs	August 2019	Completed
08	to request MSI National Coordinators to review the contents of the relevant Annexes of the GMDSS Master Plan and of section C	RHC Chairs	30 July 2019	Completed (discussed at MACHC20)

	(MSI) of IHO Publication C-55 – <i>Status of Hydrographic Surveying and Nautical Charting Worldwide</i> – to ensure consistency for their national entries (7b)			Agenda 2.3 and is a continuous action)
12	To consider the tasks listed as duties for the Regional Seabed Coordinator/Mechanism (doc. IRCC11-0713) and to include Seabed 2030 in RHC work plans and reports to IRCC (7i)	RHC Chairs	IRCC12	Completed (designated coordinator at MACHC 20 and developed 2020 plan)
13	to provide reports to A-2 to the IHO Secretariat in accordance with the Action C-2/53 (8a)	RHC Chairs	15 November 2019	Not completed, Assembly-2 postponed
16	to invite Members to make comments and suggestions to the Secretary of the S-100 services roadmap drafting group (Council Chair, RAdm Smith, shep.smith@noaa.gov) (8f)	RHC Chairs	24 June 2019	Completed (MACHC CL 07/2019)

IRCC Recommendations for RHCs—MACHC Status:

Maritime Safety Information: 5 (Four already in MACHC Continuous Actions, 1 additional addressed in MACHC20 Agenda Item: 2.3)

Surveys: 7 of 10 are in the MACHC Continuous Action List; 3 on Crowd Sourced Bathymetry addressed under MACHC20 Agenda Item 6. Survey and Risk and ongoing

Charting: 14 actions referred to the Chair, MACHC International Charting Coordination Working Group to address as appropriate within their work plan

Others: MapAction participated in MACHC20 (agenda item 8.4); New training material for MSDI used as part of the Hydrographic Governance Seminar: Introduction to MSDI Training

6. Agenda Items:

Item 7b): World-Wide Navigational Warning Service Sub-Committee--MSI Update and Achievements

The Maritime Safety Information (MSI) [Status Matrix](#) and [MSI Training Status Details](#) on the [MACHC Initiative website](#) provides a color-coded representation that describes the level of MSI support National Coordinators provide to NAVAREA IV, NAVAREA V and NAVAREA XII. This matrix is used to identify and prioritize future MSI training and support within the MACHC.

As a result of the IHO-funded MSI Course that was held after MACHC20 in 2019, the WWNWS noted a 50% increase overall in MSI contributions since the end of the course. This impressive metric was driven by the significant contributions from Anguilla, Belize, Curacao, Honduras, and Montserrat. All Members are highly encouraged to follow the example of those who have supported NAVAREA IV and submit MSI to navsafety@nga.mil.

Item 7c): CBC: MACHC CBC Update and Achievements

A successful Technical Visit to Guatemala was conducted in March 2019. The Guatemala Navy (DIGEMAR) is a regular contributor of MSI information in support of their National Coordinator obligations. Guatemala has a functioning hydrographic commission (CIIHO) that regularly meets to coordinate hydrographic issues across the government and is actively working in the IHO CB Phases 1 and 2 with support from the US Primary Charting Authority.

The IHO-funded Seminar on Hydrographic Governance took place just prior to the MACHC20 on Monday, December 2, 2019, to increase the understanding by MACHC Associate Members of their national hydrographic responsibilities. It also included an introductory training on Marine Spatial Data Infrastructure (using the IHO training materials funded by Denmark) on Tuesday morning December 3, to raise awareness among these participants about the importance of establishing a marine spatial data infrastructure as part of their capacity development.

In recognition that the IHO CB funding resources are insufficient to meet the regional demand, the MACHC is actively seeking and leveraging CB partnerships with other regional organizations and stakeholders who have common capacity building needs. These include IMO, IALA, IOCARIBE, the Intergovernmental Coordination Group for the Tsunami and other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE EWS), the Central American Marine Transportation Commission (COCATRAM) and neighboring RHCs (SEPRHC, SWAtHC). The MACHC CB Coordinator is exploring partnership opportunities for incorporation in the new MACHC CB plan (2021-2023).

An excellent example of these kinds of strategic partnerships is that the IHO-funded MACHC Training Course for 2020 (Tides and Water Levels for Spanish Speakers) is co-sponsored by multiple regional partners (EWS, COCATRAM, SEPRHC, SWAtHC and the MACHC). However due to the impacts of COVID-19, it may not be held in 2020. The MACHC has requested that the funding for this training be carried over to 2021 so that this opportunity will not be lost. The other co-sponsors (IOC and COCATRAM) are carrying over their funds into 2021 for this purpose.

The MACHC CBC has developed a CB assessment table “Assessment of Capacity Building Phases of Coastal States – MACHC 2020” based on IHO procedure 11 which is under review by all coastal state members. Like the MSI status matrix, it will be used to better evaluate, prioritize and focus future capacity building training.

At Capacity Building Sub Committee (CBSC18) four MACHC CB Proposals have secured funding for 2021:

- High Level Technical Visit to Dominican Republic
- High Level Technical visit to Jamaica
- Technical Visit to Honduras
- Seminar on Raising Awareness of Hydrography

Item 7d): WEND: MACHC International Charting Coordination Working Group achievements include:

- MACHC ENC Online established and now available from MACHC Initiative Website
- MACHC ENC Boundary limits now include parts of the Amazon River basin within the MACHC area.
- Increasing Availability of ENCs in the region: 933 in 2019
- Increasing Availability of INT Charts in the region: 51 produced, 33 schemed in 2019
- Ports Analysis evaluation to identify gaps added anchorage areas to list of ports, totalling 92; with only 32 currently not covered.
- Development of a MACHC Regional ENC scheme is progressing with the establishment in 2019 of a MICC sub-working group established to develop guidance for a way forward.
- S 100 Series Test Beds - National Testbeds are in progress for S-102 (bathymetric surface), S-111 (surface currents), S-122 (marine protected areas)

As noted in section 5 above, 14 charting related recommendations from IRCC-11 were referred to the MICC to address as appropriate within their work plan.

Item 7e) MSDI: MACHC MSDI WG Update and Achievements

- Initiated an inventory of national MSDI data holdings.
- Established a [website portal](#) to provide an inventory and make key data sets (bathymetry, shoreline and maritime boundaries) more accessible for non-navigation uses, such as a regional risk assessment for maritime accidents, management of marine protected areas and disaster response.
- Contributed some of these datasets to the Caribbean Marine Atlas, an existing regional geospatial data and information platform and encouraged other countries in the region to make their open geospatial information available there and avoid having to build a duplicative individual MSDI.
- Increased national bathymetric data contributions to the IHO DCDB and to the Seabed2030 Regional Data Assembly and Coordination Center for the Atlantic and Indian Oceans.
- Established linkages with the UN-GGIM Working Group on Marine Geospatial Information (WG-MGI) effort, and its associated Caribbean Geospatial Development Initiative (CariGeo) Initiative seeks to advance the use and sharing of geospatial information to support improved decision making for sustainable national and regional development in the Caribbean.

Item 7i): Seabed 2030: MACHC Update and Achievements

In direct support of Seabed 2030, the MACHC appointed a regional coordinator for Seabed 2030 at MACHC20, who is already working directly with the IHO DCDB and the Seabed 2030 RDAC Coordinator for the Atlantic and Indian Oceans. The MACHC and IOCARIBE joined forces and sent out a [joint CL](#) with a regional call to action for Seabed 2030, asking their respective memberships to identify points of contact. The MACHC developed a [draft work plan for Seabed2030](#) and will work with Member States and other regional partners on implementation activities to provide:

- Existing data (or information on existing data) from national mapping efforts (governmental, non-governmental, industry) to the IHO DCDB.
- Planned mapping efforts for 2020-2023. Polygons of these areas to be mapped would be reflected as a layer on the MACHC [Seabed 2030 web application](#). The WebApp presents several layers of information related to the most recent GEBCO bathymetry products, existing data and soon, upcoming mapping efforts with your contributions (see the enclosure).
- An update of each country's crowd sourced bathymetry policy as requested by the International Hydrographic Organization's Circular Letter CL 21/2020.
- Any technical support and information needed in order to respond to these requests, such as tools, workflows, etc.

The MACHC intends to hold a series of short workshop webinars in advance of MACHC21 to explain the activities, answer questions and identify resources needed to support a response.

7. MACHC cooperation with stakeholders (organizations, industry, etc.):

As noted in the sections above, several partnerships are already being leveraged or cultivated to advance MACHC capacity building, MSDI and Seabed 2030. The MACHC Chair and some members participated in the UN Decade Western Tropical Atlantic Regional Workshop. The purpose of the workshop was to identify regional priorities and identify new and expanded stakeholders and partnerships for the UN Decade of Ocean Science (2021-2030). The MACHC representatives made a concerted effort to emphasize the importance of bathymetry as a key ocean science, as well as Seabed2030 and its contribution to the UN Decade Societal Goals. The need for a high-resolution bathymetric global (and regional) map is foundational to all of them.

8. Conclusions:

Key achievements (see Section 6 above).

Challenges Faced/Lessons Learned:

- 1) How to determine the best means to deliver regional MSDI data offerings. There is clearly a demand for data layers derived from ENC's for non-navigation purposes. MACHC MS and all coastal states have been encouraged to make their other open marine spatial data available on the Caribbean Marine Atlas to take advantage of the excellent existing infrastructure and not have to recreate it individually. The MMSDI WG is exploring the Caribbean Geospatial Development Initiative as another potential delivery mechanism.
- 2) While a regional coordinator for Seabed 2030 for the MACHC is established, the challenge is to motivate, support and sustain the engagement of MACHC and other regional members, which is why the MACHC has initiated a set of explanatory webinars. It would be useful for RHCs to share their lessons learned in this arena, as they try to galvanize the engagement of their respective members. Metrics for % mapped in RHCs boundary areas from Seabed2030 are needed as a baseline to measure progress over the next decade.
- 3) The role of the IHO and its RHCs in Seabed2030, as well as the contribution of Seabed2030 to the UN Decade of Ocean Science Societal Goals are not well recognized. Concerted outreach efforts at the regional and international level are needed to ensure those linkages are made.
- 4) The impacts of the current coronavirus pandemic, which requires a virtual MACHC Conference and potentially the loss of key training opportunities (such as the Tides and Water Levels course for Spanish speakers) and of funding, if trainings cannot be held in person.

Lessons learned:

- 1) The value of increased collaboration across RHCs and regional partnerships for capacity building training, Seabed2030, MMSDIWG and other requires concerted effort to identify the specific activities of common interest and sustain those connections.

10. Actions required of IRCC:

The IRCC is invited to:

- a. Endorse this report
- b. Note specifically the challenges faced in Section 8 which are common to many RHCs
- c. Consider providing either common guidance and/or requesting lessons learned and best practices on these topics to be shared across RHCs, in particular for Seabed2030.
- d. Consider allowing training funds allocated for 2020 activities to be used in 2021 so that the opportunities are not lost due to the unusual circumstances of the pandemic or request CBSC to consider this.
- d. Make a request to Seabed2030 to provide baseline metric of % mapped for each RHC to measure its progress by.

Name and Signature of the RHC Chair

Kathryn L. Ries
Chair, MesoAmerican and Caribbean Sea Hydrographic Commission

