**11th MEETING OF THE IHO INTER-REGIONAL COORDINATING COMMITTEE**
**IHO-IRCC11**
**Genoa, Italy, 3-5 June 2019**

**MESO AMERICAN - CARIBBEAN SEA**
**HYDROGRAPHIC COMMISSION**
**Report to IRCC11**

**1. Chair**:  Kathryn Ries, USA, March 2019

**Vice-Chair:**  Vice Admiral Antonio Fernando Garcez Faria,  Brazil, March 2019

**2. Membership**

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

Associate Members: Antigua y Barbuda, Belize, Costa Rica, Dominican Republic, El Salvador, Grenada, Honduras, Panama, St. Vincent and the Grenadines

Observer Countries:  Anguilla, Bermuda, Monserrat, Spain

Observer Organizations:  IALA, COCATRAM, THSOA, University of the West Indies, IOCARIBE INVEMAR/CMA, AMEXID, Caribe EWS, RedGolfo, Map Action

Observer Companies:  HYPACK, Fugro USA, IIC Technologies, Ocean Wise Ltd, Kongsberg, CARIS Teledyne, ACYS Technologies, TCarta

**3. Meetings:**

19th Meeting—Cartagena de Indias, Colombia (26 November-1 December 2018)

The 20th Meeting of the MACHC will be held in Santo Domingo, Dominican Republic (December 2-6, 2019)

**4. Current MACHC Working Groups:**

a)  MACHC Integrated Charting Coordination Working Group  (MICC)
b)  MACHC Capacity Building Committee (CBC)
c)  MACHC Marine Spatial Data Infrastructure Working Group (MMSDI)

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

| 3 | to submit draft IHO Resolution 2/1997 as amended (Annex C) to the RHC Members for comments and report back to IRCC (6.2)\ | RHC Chairs | MACHC submitted comments to IRCC Chair on 12/20/18 |
|---|---|---|---|
| 8 | to report the status of MSI in coastal States to the next IRCC meeting (7b) | WWNWS-SC Chair | MACHC assessed the status of MSI (see Annex to this report) and will be posting it to its working website (under development) for tracking purposes |

**6. Agenda Items:**

Item 7:  WEND –WG Update

The MICC, as part of its workplan, will consider the request of the WEND WG 9/12 for ENC producers to provide their extracted bathymetric data from ENCs as a contribution to both Seabed 2030 and MSDI.

Agenda item 10.  Data Gathering and Management, Maximizing the use of Hydrographic Data

Given the expanding interest in MSDI information within the region, the MACHC determined that its previous Maritime Economic Infrastructure WG should become a MSDI WG to recognize this expanded role.  The new terms of reference and participation are established (see Section 8.1 below).

The 2018 Seminar on Hydrographic Governance prior to the MACHC included a workshop on dealing with maritime disasters.  It produced a draft Disaster Response Plan Framework that the MACHC will elaborate into a more detailed plan with preparation, response and communication actions.  Sharing best practices from other RHCs in developing a viable plan would be very useful as many components are likely to be quite similar.

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

The MACHC is expanding its partnerships with other regional organizations to collaborate and leverage resources for capacity building.   These include 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).

For example, all of these entities are co-sponsors of a proposed CB training on Tides and Water Levels for Spanish speakers, in support of more accurate hydrographic surveys and improved regional early warning systems.

The Caribbean Marine Atlas organization attended the last MACHC meeting and will be engaged in the activities of the MMSDI Working Group, which will be looking at how to make key chart data layers available for non-navigation uses, such a regional risk assessment for maritime accidents and management of marine protected areas.

The MACHC initiated collaboration with the Seabed 2030 Regional Data Center for the Atlantic (a representative attended the 19th MACHC meeting) and the International Bathymetric Chart for the Caribbean to increase regional contributions to this international initiative.

**8. Conclusions:**

Key achievements (see Section 9 below).

Challenges Faced:

1) For the newly established MACHC MSDI WG to determine how best to deliver regional MSDI data offerings.  There is clearly a regional demand for data layers derived from ENCs for non-navigation purposes, to support activities such as the management of a regional marine protected area network, a regional risk assessment for maritime accidents (a project supported by the MACHC) and maritime disaster response.  These efforts require common chart data layers such Bathymetry,  Shoreline, Maritime Boundaries; Ports Facilities (i.e. piers); Aids to Navigation that are not readily available.

2) While contact has been established with the Head of Seabed 2030 Atlantic/ Indian Oceans Regional Data Center, the International Bathymetric Chart for the Caribbean and the MACHC, a challenge is how to increase the regional contributions of existing data and to catalyse collaboration to fill gaps.  A gap analysis is being developed for the MACHC as a tool to help generate that momentum.

3) To develop a Disaster Response Plan with the appropriate level of detail, including ideally a GIS-based layer, that can most effectively support coordination and communication efforts before and after a maritime disaster event.

Lessons learned:

1) The value of increased collaboration across RHCs and regional partnerships for capacity building training requires concerted effort to identify the specific activities of common interest. The MACHC is doing this through development of a calendar of training opportunities to include offerings from both member states, regional organization and private sector partners. This will allow the MACHC to better coordinate and leverage resources and target capacity building efforts for mutual benefit. An example is the proposed in the Tides and Water Levels training course indicated in Section 7.

## 9. Achievements (below) and lessons learned (above):

Guyana is a new (90th) Member State of the IHO as of 18 April 2019 and will officially become a member of the MACHC in December 2019! All coastal states of South America are now IHO Members.

Establishment of the MMSDI WG.

MICC Achievements: Charting collaboration processes work well in the MACHC, very few overlaps exist (two currently, reduced from three last year); have increased large scale ENC coverage (12) of major cruise ship ports; 914 ENCs available; the Orinoco River in Venezuela has completed its Band 4 coverage including three ports identified in the cruise ship port analysis.

Capacity Building Achievements 2017-19

Training Courses:
-Seminar on Raising Awareness of Hydrography, including a workshop on Dealing with Maritime Disasters
-MBES Processing
-Although not MACHC–specific, MSI Training was hosted in Brazil that included participants from the SWAtHC, SEPHC & MACHC (18 students from 12 countries)

Technical Visits:
Guatemala (Mar 2019)
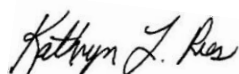Dominican Republic (Jan 2018)
El Salvador (Dec 2017)

## 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 lessons learned and best practices on these topics to be shared across RHCs.

## Name and Signature of the RHC Chair

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

Annex: MACHC MSI Status

| | Country / Territory | PHASE 1.  MSI STATUS Color coded (legend below) |
|---|---|---|
| 1 | Anguilla | Yellow |
| 2 | Antigua & Barbuda | Red |
| 3 | Bahamas | |
| 4 | Barbados | Green |
| 5 | Belize | Green |
| 6 | Bermuda (NAVTEX Station) | Green |
| 7 | Brazil (NAVAREA V) | Green |
| 8 | Cayman Islands | Red |
| 9 | Colombia | Green |
| 10 | Costa Rica | Yellow |
| 11 | Cuba | Green |
| 12 | Dominica | Yellow |
| 13 | Dominican Republic | Green |
| 14 | El Salvador | Red |
| 15 | Clipperton (France) | |
| 16 | Guadalupe (France) | Yellow |
| 17 | Guyane (France) | Green |
| 18 | Martinique (France) | |
| 19 | Saint-Barthélemy (France) | |
| 20 | Saint-Martin (France) | Green |
| 21 | Grenada | Red |
| 22 | Guatemala | Yellow |
| 23 | Guyana | Green |
| 24 | Haiti | Green |
| 25 | Honduras | Yellow |
| 26 | Jamaica | Green |
| 27 | Mexico | Green |
| 28 | Aruba (Netherlands) | Green |
| 29 | Bonaire (Netherlands) | Green |
| 30 | Curaçao (Netherlands) (NAVTEX Stn) | Green |
| 31 | Saba (Netherlands) | Green |
| 32 | Sint Eustatius (Netherlands) | Green |
| 33 | Sint Maarten (Netherlands) | Green |
| 34 | Nicaragua | Yellow |
| 35 | Panama | Green |
| 36 | St. Kitts & Nevis | Green |
| 37 | St. Lucia | Red |
| 38 | St. Vincent & Grenadines | Green |
| 39 | Suriname | Green |
| 40 | Trinidad & Tobago | Green |
| 41 | Turks and Caicos | Red |
| 42 | UK - Anguilla (UK) | Red |
| 43 | UK - Bermuda (UK) (NAVTEX Stn) | Green |
| 44 | UK - British Virgin (UK) | Red |
| 45 | UK - Cayman (UK) | |
| 46 | UK - Montserrat (UK) | Red |
| 47 | UK - Turks & Caicos (UK) | |
| 48 | USA | Green |
| 49 | Navassa (USA) | |
| 50 | Puerto Rico (USA) | Green |
| 51 | US Virgin Is. (USA) | |
| 52 | Venezuela | Green |

**MSI STATUS COLOR CODING**

**Clear--No training, not providing MSI**

**Red--Received training, not providing MSI**

**Yellow--Received training, providing moderate MSI**

**Green--Fulfilling all obligations**