



**INTERNATIONAL HYDROGRAPHIC ORGANIZATION
MESO AMERICAN & CARIBBEAN HYDROGRAPHIC COMMISSION**

**20th MEETING OF THE MESO AMERICAN & CARIBBEAN SEA HYDROGRAPHIC COMMISSION
(MACHC 20)**

Santo Domingo, Dominican Republic

December 02 - December 6, 2019

PROVISIONAL AGENDA

TIME	PRE-MACHC ACTIVITIES Sunday, 01 December 2019	RESPONSIBLE
06:00-24:00	Reception of the MACHC participants by the staff of the Hydrographic Service. The Dominican Republic Navy will provide transportation from the airport to the Crowne Plaza Hotel. (Look for the MACHC Banner at the airport)	SHARD

TIME	PRE-MACHC ACTIVITIES Monday 02, December 2019 Salon Caribe	RESPONSIBLE
	HYDROGRAPHIC GOVERNANCE SEMINAR	IHO/UK
08:30-09:00	Registration for Seminar Participants	IHO/UK
09:00-17:30	MACHC Seminar on Hydrographic Governance (agenda by Chair)	IHO/UK

TIME	PRE-MACHC ACTIVITIES Tuesday, 03 December 2019 Salon Caribe	RESPONSIBLE
08:15-09:00	Registration 20th MACHC	Host
08:30-12:00	HYDROGRAPHIC GOVERNANCE SEMINAR <i>Continued</i> (Introduction to MSDI Training)	IHO/UK
12:00-13:00	Lunch	All
	PRE-PLenary WG MEETINGS (working level meetings to review annual progress and prepare summary reports with any resulting recommendations or issues for MACHC Plenary consideration)	Chairs and Members
13:00-15:00	MACHC International Charting Coordination Working Group Meeting—Agenda by MICC Chair	Suriname
15:00-17:00	Marine Spatial Data Infrastructure Working Group (MMSDI) Meeting—Agenda by MMSDI Chair	USA
19:30-22:30	Welcome Cocktail at Naval Officers Club (Business Casual)	Host

08:30-09:00	<p style="text-align: center;">DAY ONE OF MACHC 20 Wednesday, 04 December 2019</p> <p style="text-align: center;">FORMAL OPENING OF THE MACHC</p> <p style="text-align: center;">Salon Caribe Opening Addresses (Business Attire and Navy Whites)</p>	Host, IHO Secretariat, Chair
9:00-10:00	<p>Official Photograph Session</p> <p><u>1. MACHC Administration/organizational issues</u></p> <p>1.1 Introductions - Participants will be invited to introduce themselves 10 minutes</p> <p>1.1a Welcome of Guyana as new IHO Member Signing of MACHC Statutes 10 Minutes</p> <p>1.2 Approval of Agenda Doc: MACHC20-01.2 Agenda.Rev2 - Chair invites participants to comment on the agenda and timetable in case updates are necessary. - Agenda is adopted. 10 minutes</p> <p>1.3 List of documents/Administrative Arrangements Docs: MACHC20-01.3A List of Documents MACHC20-01.3B List of Participants - List of Documents as on the IHO/MACHC-20 site - List of Documents is updated as necessary - Logistic guidance and information as necessary 15 minutes</p> <p>1.4. Matters arising from Minutes of MACHC 19 Meeting Doc: MACHC20-01.4 Minutes of MACHC 19 10 minutes</p>	All All/Chair Guyana Chair Chair Host Chair/All
10:00-10:15	Coffee Break	
10:15-11:30	<p><u>1. MACHC Administration/organizational issues continued</u></p> <p>1.5. MACHC 19 Action list review Doc: MACHC20-01.5 Action List from MACHC 19 15 minutes</p>	Chair/All

	<p>2. MACHC Developments, IHO bodies, Policy aspects</p> <p>2.1 IHO Secretariat Report Doc: MACHC20-02.1 IHO Secretariat Report - IHO Secretariat provides a briefing on current IHO matters 10 minutes</p> <p>2.1.1 IRCC update Doc: MACHC20-02.1.1 10 minutes</p> <p>2.1.2 HSSC update Doc: MACHC20-02.1.2 10 minutes</p> <p>2.2 Council Report Doc: MACHC20-02.2 Council Report 10 minutes</p> <p>2.2.1 Overview of election process for MACHC representatives to the IHO Council Doc: MACHC20-02.2.1 10 minutes</p> <p>2.3 Maritime Safety Information/WWNWS Report Doc: MACHC20-02.3 WWNWS Report 10 minutes</p> <p style="text-align: center;">General remark</p> <p>Chair invites the representatives of the above IHO bodies/working groups to present the key (policy) developments, decisions, actions or implications that affect the MACHC region.</p>	<p>IHO</p> <p>Chair</p> <p>Brazil</p> <p>Council Chair</p> <p>Chair</p> <p>Chair, WWNWS</p>
11:30-12:00	<p>2.4 Hydrography in Latin America: Trends and Perspectives Doc: MACHC20-02.4 10 minutes</p> <p>2.5 A Hydrosatial Information System, the Next Frontier for Hydrographic Offices Doc: MACHC20-02.5 10 minutes</p>	<p>HYPACK</p> <p>ESRI</p>
12:00-13:30	Lunch	

13:30-14:00	<p><u>3. National Reports</u></p> <p>3.a Instructions and guidelines for National Report breakout groups.</p> <p>3.b MACHC Capacity Building Plan overview</p> <p style="text-align: center;">General remark</p> <p>Member States will be divided into three parallel groups of approximately 10 each with a Chair in order to:</p> <ol style="list-style-type: none"> 1) Provide an opportunity for greater discussion and engagement about the content of national reports 2) Synthesize the discussion results into priority recommendations for the MACHC 2021-23 capacity building plan to be considered by the plenary <p>The presentations are not intended to replicate the content of the National Report but rather to present key matters. Countries are asked to use the <i>National Reports PPT Template to summarize the following:</i></p> <ol style="list-style-type: none"> a. Top achievements (3 maximum) b. Top challenges (3 maximum) c. Top plans that effect the region (3 maximum) (charts, surveys, training, other) d. Two capacity building recommendations to plenary <p>The recommendations should take into account the following criteria: the greatest collective regional impact; greatest return on investment; greatest opportunity to leverage other partners/resources</p> <p>Chair requests Members and Associate Members not to read verbally the written national report itself.</p>	<p>Chair</p> <p>Chair CBC</p> <p>Member States and Associate Member States</p> <p>Breakout groups will each have a Chair to guide them through this process</p> <p><i>(observers, industry and regional organization representatives are invited to participate in the breakout group of their choice)</i></p>
14:00-15:30	Breakout groups listen to National Report presentations (10 minutes including Q&A), using the PPT template provided.	All
15:30-16:00	<i>Coffee Break</i>	
16:00-17:30	<p>Breakout groups/National Report presentations continue; Breakout groups individually engage to summarize and develop final consensus top recommendations for plenary consideration.</p> <p style="text-align: center;">General remark</p> <p>Breakout group Chairs will have a specific process to guide their group to this outcome.</p>	All
17:30-18:00	Final declaration of Member State candidates for the MACHC seats on the IHO Council (privately to the Chair)	Interested Full Member States

TIME	DAY TWO OF MACHC 20 Thursday, 05 December 2019 Salon Caribe	RESPONSIBLE
	Business Casual (Short sleeved navy whites/short sleeved guayabera/similar)	
	Breakout groups conclude	
8:30-10:00	Breakout Group Chairs report the final CB recommendations and other key messages from their group to plenary and engage in questions and answers.	Chair/All
	Review and prioritize results from previous day via “live polling”	Chair/All
10:00-10:30	Coffee Break	
10:30-11:30	<p>3.1 Industry activities to support countries in the region</p> <p>3.1.1 Innovations for Today’s Hydrographic Office Doc: MACHC20-03.1.1 10 minutes</p> <p>3.1.2 Raising hydrographic awareness using USV Doc: MACHC20-03.1.2 10 minutes</p> <p>3.1.3 Transparency in shallow water SDB: Levels of quality assurance mechanisms and new SDB software capabilities Doc: MACHC20-03.1.3 10 minutes</p> <p>3.1.4 S-101 Production with Teledyne CARIS Software Doc: MACHC20-03.1.4 10 minutes</p> <p>3.1.5 IIC Technologies: Data Streaming Solution and IHO S-5/S-8 B Certification Doc: MACHC20-03.1.5 10 minutes</p>	<p>QPS</p> <p>iXblue</p> <p>EOMAP</p> <p>Teledyne</p> <p>IIC</p>
11:30-12:00	<p>4. Reports from Observing States and Organizations</p> <p>4.1 International Association of Marine Aids to Navigation and Lighthouse Authorities Doc: MACHC20-04.1 10 minutes</p> <p>4.2 IOC Sub-Commission for the Caribbean and Adjacent Regions Doc: MACHC20-04.2 10 minutes</p>	<p>Capacity Building and Resources Manager World-Wide</p> <p>Secretary</p>

12:00-13:30	Lunch	
13:30-14:00	<p>4. Reports from Observing State and Organizations <u>continued</u></p> <p>4.3 International Maritime Organization Doc: MACHC20-04.3 10 minutes</p> <p>4.4 Training offerings for the MACHC region Doc: MACHC20-04.4 10 minutes</p>	<p>Regional Maritime Advisor</p> <p>Spain</p>
14:00-15:30	<p>5. Regional Capacity Building: Leveraging CB Partnerships</p> <p>5.1 CBC report <i>Committee Chairs requested to present a brief summary of IHO CBC Meeting and annual accomplishments</i> Doc: MACHC20-05.1 10 minutes</p> <p>5.2 Update of COCATRAM on its Regional Projects/Training Priorities Doc: MACHC20-05.2 10 minutes</p> <p>5.3 IHO/IALA Capacity Building Initiatives: Building maritime and marine capacity in the Caribbean for climate resilience and sustainable development Doc: MACHC20-05.3 10 minutes</p> <p>5.4 Caribbean Regional Track of the IADB Pilot Programme for Climate Resilience Overview Doc: MACHC20-05.4 10 minutes</p> <p>5.5 Neighboring RHC CB Priorities: SEPRHC and SWAtHC Doc: MACHC20-05.5a and 05.5b 20 minutes (10 minutes each)</p> <p>Session summary and any implications for MACHC CB Plan</p>	<p>Chair Capacity Building Coordinator</p> <p>Secretary General</p> <p>IHO/IALA</p> <p>Project Director</p> <p>Colombia/SEPRHC Brazil/SWAtHC</p> <p>Capacity Building Coordinator</p>
15:30-16:00	Coffee Break	
16:00-17:30	<p>7. MACHC Disaster Response</p> <p>7.1 MACHC response to Disasters (IHO resolution 1/2005): Doc: MACHC20-07.1 MACHC Disaster Response Framework 10 minutes</p>	<p>Chair</p>

	<p>7.2 Response to Hurricane Dorian impacts in The Bahamas Doc: MACHC20-07.2 10 minutes</p> <p>7.3 Response to Hurricane Dorian impacts in The Bahamas Doc: MACHC20-07.3 10 minutes</p> <p>7.4 Tsunami and other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/Caribe EWS) Doc: MACHC20-07.4 10 minutes</p> <p>7.5 Modern Hydrographic Surveys as a Disaster Mitigation Tool Doc: MACHC20-07.5 10 minutes</p> <p>7.6 Real-time data input to a Common Operating Picture for Disaster Response Doc: MACHC20-07.6 10 minutes</p> <p>7.7 Sonar Tools and Autonomous Platforms for Disaster Response Survey Doc: MACHC20-07.7 10 minutes</p>	<p>UK</p> <p>NL</p> <p>Director</p> <p>Fugro</p> <p>OceanWise</p> <p>Kongsberg Underwater Technology, Inc.</p>
17:30-18:00	MACHC Council Seat Election	Full MACHC Members
20:00-22:00	Cocktail Reception (Business Casual)—Second floor of the hotel by the pool	Hosted by Industry Partners

TIME	DAY THREE OF MACHC 20 Friday 06, December 2019 Salon Caribe	RESPONSIBLE
	Business Casual (Short sleeved navy whites/short sleeved guayabera/similar)	
8:30-10:00	<p><u>6. Survey and Risk</u></p> <p>6.1 Economic Assessment of Risks in Maritime Navigation across the Greater Caribbean Region Doc: MACHC20-06.1 10 minutes</p>	University of the West Indies

	<p>6.2 Global Statistical Analysis of Marine Incidents Doc: MACHC20-06.2 10 minutes</p> <p>6.3 GEBCO/IBCCA Doc: MACHC20-06.3 10 minutes</p> <p>6.4 GEBCO/Seabed 2030 and MACHC contributions Doc: MACHC20-06.4 10 minutes</p> <p>6.5 Lidar Surveys in Jamaica and Haiti to Support Climate Resilience in the Caribbean Doc: MACHC20-06.5 10 minutes</p> <p>6.6 Satellite-Based Hydrographic Surveying of Remote Small Island and Developing States Doc: MACHC20-06.6 10 minutes</p> <p>6.7 Enhancing the accuracy of current profiles from surface buoy-mounted systems Doc: MACHC20-06.7 10 minutes</p>	<p>University of the West Indies</p> <p>Colombia</p> <p>Head, Atlantic/Indian Oceans Regional Data Center</p> <p>University of West Indies/Program Manager</p> <p>TCarta</p> <p>Axys</p>
10:00-10:30	Coffee Break	
10:30-12:00	<p>8.1 MMSDI WG Report <i>Chairs requested to present a brief summary of annual accomplishments, result of the pre-Plenary meeting and highlight any recommendations/issues that need to be addressed or approved by the Plenary</i> Doc: MACHC20-08.1 10 minutes</p> <p>8.2 WGMGI (Working Group on Marine Geospatial Information) Update Doc: MACHC20-08.2 10 minutes</p> <p>8.3 Caribbean Marine Atlas Doc: MACHC20-08.3 10 minutes</p>	<p>MMSDI Chair</p> <p>WGMGI Co-Chair</p> <p>Director</p>

	<p>8.4 MapAction: Navigation Datasets for Disaster Response Doc: MACHC20-08.4 10 minutes</p> <p>8.5 Need for a Marine Spatial Data Infrastructure Across the Meso America and Caribbean Sea Doc: MACHC20-08.5 10 minutes</p> <p>Session summary and any implications for MMSDI WP</p>	<p>Regional Coordinator</p> <p>University of the West Indies</p> <p>MMSDI Chair</p>
12:00- 13:30	Lunch	
13:30-15:00	<p>9. Nautical Charts and Publications</p> <p>9.1 MICC Report Doc: MACHC20-09.1 MICC Report - MICC Chair introduces the MICC Report <i>Chair is requested to present a brief summary of annual accomplishments, result of the pre-Plenary meeting and highlight any recommendations/issues that need to be addressed or approved by the Plenary</i> 10 minutes</p> <p>9.2 Examples of other RHC ENC schemes Doc: MACHC20-09.2 20 minutes (10 minutes each)</p> <p>9.3 Proposed ENC scheme for the MACHC Doc: MACHC20-09.3 10 minutes</p> <p>9.4 Future of the Paper Chart: Results of IHO Survey Doc: MACHC20-09.4 10 minutes</p> <p>9.5 High Definition ENCs for Precision Navigation Doc: MACHC20-09.5 10 minutes</p> <p>9.6 WEND WG Report Doc MACHC 20-09.6 10 minutes</p> <p>Session summary and any implications for MICC Workplan</p>	<p>MICC Chair</p> <p>Brazil/SWAtHC Colombia/SEPRHC</p> <p>Colombia</p> <p>IHO</p> <p>ESRI</p> <p>Vice Chair</p> <p>MICC Chair</p>
15:00-15:30	Coffee Break	

15:30-17:00	<p><u>10. Closing activities</u></p> <p>10.1 Any other business</p> <p>10.1.a Election Results for MACHC Representatives to IHO Council</p> <p>10.1.b MACHC Report to A-2</p> <p>10.1.c Chair invites participants to present any other business</p> <p>10.2 Review actions and decisions - Chair reviews actions and decisions</p> <p>10.3 Lessons learned identified - Chair invites participants to provide (procedural) issues to be taken into account for future meetings</p> <p>10.4 Next meeting - Chair invites participants to offer to host the next MACHC meeting</p> <p>10.5 Close of meeting</p>	<p>All</p> <p>Chair</p> <p>Chair</p> <p>Chair</p> <p>Chair</p>
20:00-23:00	<p>Fellowship dinner in honor of our neighboring countries. Dress: “Business Casual” Location: Manolo Restaurant (in the Hotel Raizor behind the Crowne Plaza Hotel)</p>	SHARD

TIME	Saturday 07 December, 2019	RESPONSIBLE
10:00-11:00 (subject to change)	Transportation of the participants to the International Airport of the Americas by members of the Naval Hydrographic Service of the Dominican Republic.	SHARD

TIME	Monday-Wednesday 09-11 December, 2019	RESPONSIBLE
9:00-17:00	IHO Maritime Safety Information Training Course Crowne Plaza Hotel—Agenda by Organizers	IHO/US