



MACHC REPORT

16th MEETING OF THE IHO INTER-REGIONAL COORDINATING COMMITTEE

(IRCC-16)

Santa Cruz Island - Galapagos, Ecuador
10-12 June 2024

1. **Leadership:**

Chair: Rear Admiral Angus Essenhigh OBE, United Kingdom, from June 2023 to present

Vice-Chair: Mrs Bernice Mahabier, Suriname, from 3 March 2023 to present

2. **Membership:**

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

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

Observer Countries: Dominica, Spain.

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

3. **Meetings:**

The 24th Conference of the MACHC (MACHC24) was held from 12 - 15 December 2023 in a semi-hybrid format, hosted by the Maritime Authority of Suriname at the Torarica Resort in Paramaribo, Suriname.

4. **Current MACHC Working Groups:**

Capacity Building Committee (CBC)

MACHC International Charting Coordination Working Group (MICCWG)

MACHC Marine Spatial Data Infrastructure Working Group (MMSDIWG)

MACHC Maritime Safety Information Working Group (MSIWG)

5. Status of IRCC Actions and Recommendations relevant for the MACHC:

Recommendations:

No	Action	Status
1	RHCs are encouraged to review the ROP and TOR based on Decision 9b of the Assembly on gender-inclusive language.	Completed. Revised MACHC Statutes with gender-inclusive language circulated to MACHC MS in March 24.
2	RHCs to start producing S-101 and other S-100 Products by focusing on a specific part of the region.	Ongoing. S-100 Workshop organised for the MACHC MS in May 2024 sharing best practice and knowledge.
3	RHC to discuss how HO's can assume a geo-coordinating role to help ensure provision of data on a regional level.	Ongoing and now forms part of the MACHC Ongoing/Permanent Actions List (Annex 5 in statutes).
4	RHC to ask the MS and potential contributors to consider the extended activities in the implementation of the S-100 Roadmap for HCA region.	Completed/Closed - MS informed/notified.
5	RHCs and Subordinate Bodies to consider opening the debate on future engagement in climate change related activities in reference to strategic goal 3.	Ongoing and now forms part of the MACHC Ongoing/Permanent Actions List (Annex 5 in statutes).
6	RHC to encourage relevant Member States to report to the IMO Secretariat and the Chair of the EGC Coordinating Panel on the progress and status of implementation of newly recognized mobile satellite services by MSI providers.	Completed/Closed - MACHC NAVAREA Coordinator is using all MSI providers.
7	RHCs to ensure representation of their region in the CBSC and encourage other IHO Member States to join in the work of the CBSC.	Completed/Ongoing. MACHC CB Coordinator is Ms Lucy Fieldhouse of UKHO.
8	RHCs to prioritise their participation in the WENDWG through the RHC Chart Coordinator or S-100 Coordinator.	Ongoing. MACHC MS encouraged and reminded to complete WENDWG S-1XX Readiness Survey (CL 01/2023). MACHC MICCWG Chair leading on this for the region at present.
9	RHCs, if not done already, establish the S-100 Coordinator role or assign S-100 Coordinator duties as appropriate.	Ongoing. MACHC S-100 Coordinator TORs shared with MS and applications for role to be submitted to MACHC MICCWG Chair.
10	RHC S-100 Coordinators to update their WEND-100 IGIF Matrix submissions every year and share their schedule and roadmap to meeting the 2026 IMO target (S-100 ECDIS) at every WENDWG meeting.	Ongoing until S-100 Coordinator role established in the MACHC region. In addition, MACHC MS have been encouraged to complete the WENDG S1XX Readiness Survey (CL 01/2023) for 2023/24 instead of completing the WEND100 IGIF Matrix.
11	RHC Chart Coordinators/S-100 Coordinators report their planned S-101 chart schemes, usage bands 1 - 4, by 30 September. Request that submissions use INTogIS III when commissioned.	MS informed.
12	RHCs to appoint MSDI ambassadors and inform the MSDIWG with contact details.	Completed. MACHC MSDIWG Chair is the MACHC MSDI Ambassador.
13	RHC to encourage Member States to have more CSBWG participation.	MS encouraged. MACHC member, Mr Diego Billings of Jamaica, is already an active member of the CSBWG.
14	RHC to encourage Member States to support the CSB initiative with positive actions, such as requiring all research vessels to collect	MS encouraged.

No	Action	Status
	bathymetric data for late uploading, when on passage or when it does not interfere with other research activities.	
15	RHCs to encourage Member State and stakeholder bathymetric data contributions to the DCDB, regardless of origin.	MS encouraged.
16	RHCs to collaborate with the DCDB on developing and highlighting annual regional breakdowns of data holdings as part of SPI reporting.	Ongoing.
17	To encourage RHCs to actively contribute with new data to GEBCO.	MS encouraged.
18	To invite RHCs to assign the INT paper chart scheme appropriateness check and possible amendment of the scheme	Ongoing.
19	To encourage RHCs to invite Member States to consider the provision of paper chart updating procedures depending on the findings of NCWG.	Ongoing.
20	To encourage RHCs to invite Member States to consider the requirements (including regulations) for non-ECDIS mandated vessels (e.g. small commercial, fishing, leisure, etc) within national, regional and global discussions on this topic (HSSC15 decision 7 regarding Electronic Chart Systems PT refers).	MACHC MS updated during MACHC24 with UKHO's presentation on the ECS Project Team.

6. **Agenda Items:**

CBC:

- a. The [2024-2026 Capacity Building Workplan](#) was endorsed during MACHC24 in December 2023.
- b. In 2023, Mr Diego Fernando Mendez Porta of Guatemala completed the Master of Science Programme in Hydrographic Science. Mr Walther Danilo Quiroz Gonzalez of Guatemala also completed the CAT B Nautical Cartography Programme (sponsored by ROK); and Mrs Shari Bowen-Robinson of Jamaica completed the NIPPON Foundation GEOMAC course at the UKHO alongside Mrs Nayivis Lopez Ortega from Cuba.
- c. The Tides Workshop for Spanish Speakers, co-funded by the IHO, IMO and IOC was led by NOAA and hosted by Costa Rica in November 2023. This activity saw a total of 31 students representing 16 countries and 24 organisations participating from the MACHC and neighbouring RHCS, SWAtHC and SEPRHC. This was a truly collaborative activity supported also by Brazil and Spain.
- d. During the Committee meeting, the members heard from Ms Juliane Affonso of Brazil who recently completed a one-month secondment with IC-ENC based out of the UKHO as part of the Empowering Women in Hydrography (EWH) Project. Julio Castillo outlined the opportunities provided by NOAA in support of the EWH Project - three women per year to have practical hydrographic experience onboard a NOAA survey vessel, where they will gain an understanding of NOAA's missions and programmes, software and in house tools.

IHO funded High Level Visits were delivered by IHO Director Luigi Sinapi and Lucy Fieldhouse (CBSC VC) to the Dominican Republic and Jamaica as part of the IHO Capacity Building 2023



Workplan. These visits raised the importance of hydrography at the highest levels within the countries. Other funded Technical Visits within the CB plan to Costa Rica and Honduras will be planned for delivery where possible within the next 12 months.

MICC:

- a. The [MICCWG 2024 Workplan](#) was endorsed during MACHC24 in December 2023.
- b. The MACHC MICCWG now has a new Vice Chair, Mr Julio Castillo of the USA. Julio will most likely take over the Chair position at the end of 2024 and so the MACHC MICCWG will then be looking for another VC.
- c. There has been a steady increase in ENC's over the years, with 1,242 ENC's available in 2023. Usage Band 5 has had the largest increase, with 623 ENC's now available. The other bands are mostly stable.
- d. There are no updates to INT charts, with no pending submissions. There are a total of 51 INT Charts produced and 31 Schemed INT Charts.
- e. MACHC Gridded Scheme Update - Gridding has started within the MACHC region but not every Member State is planning to change schemes. Potential benefits to gridding are to eliminate any overlays, standardise data and S-100 product compatibility. However, there are clearly some challenges from the gridded scheme, which include resource limitations, dual fuel, changing international agreements and that there is no universally accepted grid.
- f. MACHC will coordinate and focus on the following products: S-101, S-102, S-104, S-111, S-124 and S-128 in the region.
- g. The ROP for the MACHC S-100 Coordinator Role have been circulated to MS and are currently being revised by the MICCWG Chair. MS to come forward with nominations for the S-100 Coordinator position.

MMSDIWG:

- a. The MMSDIWG section in the MACHC Initiative website is used as a method for sharing meeting materials and useful links with MACHC Members, contributing organizations, industry partners, academia and potential stakeholders.
- b. The [MMSDIWG 2024 Workplan](#) was endorsed during MACHC24 in December 2023.
- c. The MMSDIWG has a new Chair, Mr Andy Dippolito of the USA. The MSDIWG is currently seeking a Vice Chair. Activity within the MACHC region has been a little slow.
- d. Surveys are an ongoing activity within the region and are constantly being updated, MS are encouraged to regularly review the MSDI website to ensure that the survey data they have is the most accurate/up to date.
- e. MMSDIWG actively follows the EMODnet Bathymetry project now that it has expanded from European waters into the Caribbean Sea.

MACHC Coordination to the Seabed 2030 Project and Crowdsourced Bathymetry:

- a. The [MACHC Seabed2030/CSB 2024 Workplan](#) was endorsed during MACHC24.
- b. In 2022, Seabed 2030 completed the following activities: UN Decade Project led by IOCaribe, GEBCO SCRUM MSI Workshop in Cartagena.
- c. In 2023, Seabed 2030 Workshop was completed in Cartagena, this was in collaboration with South & West Pacific Seabed 2030 Regional Centre.
- d. Recent Data Contribution highlights include SDB data from the Bahamas (provided by TCarta and EOMAP).
- e. In 2023, approx. 27% of the MACHC region's Seabed had been mapped to modern standards. There is a steady increase in data coverage within the region and over the last 3 years there has been an approximate increase in data of 7%.
- f. Crowdsourced Bathymetry (CSB) - The CSBWG met in January 2023 and the WG consists of representatives from 18 member states (France, Jamaica, Mexico, UK and USA within the MACHC region). All MACHC MS encouraged to participate in the CSBWG.

Maritime Safety Information:

- a. December 2023 was the first meeting of the MACHC MSIWG. During this meeting, the MACHC MSIWG TORs were approved alongside the [MSIWG 2024 Workplan](#).
- b. The Chair of the overall MSIWG has now been confirmed as Mr Timothy 'Ed' Stacy of the USA. However, the Vice Chair position is still vacant.
- c. NAVAREAs 12, 4 and 5 fall within the MACHC region.
- d. The WWNWS have undertaken a C55 project in which they have created a central location where MSI capacity of MS can easily be shown and accessed. Contributing MS will be able to visit the IHO MSI Capacity webpage and view specific geographical areas' MSI capabilities and also the Points of Contact (POC) within each nation. This service will be available to MS in due course.
- e. In 2023, Anguilla, British Virgin Islands and United States Virgin Islands were all able to establish MSI POCs - this marks a real success within the MACHC region. More coordination is, however, required in the Bahamas, Costa Rica and Nicaragua as we are currently lacking MSI information, including POC.
- f. The MACHC MSI website can be accessed [here](#).

Disaster Response:

- a. A Response to Disasters section has been established since 2019 on the MACHC Initiative website. This section is being filled with more information about National Points of Contact, Disaster Contingency Plans, Response Capabilities and Past Event Responses.
- b. The USA has a series of navigation response teams that conduct hydrographic surveys on small vessels to update NOAA's suite of charts. These teams are strategically located around USA and remain on call to respond to emergencies to facilitate the



resumption of shipping after storms and to protect life and property from dangers to navigation.

c. The MACHC Disaster Response Framework is now at Annex 3 to the MACHC Statutes.

7. **Difficulties encountered and challenges yet to be addressed:**

a. A key challenge remains more active participation from most MACHC Members in the Committee/Working Groups.

b. As of 1 May 2024, no Member State has offered to host the next Conference in December 2024.

c. Full ENC and INT Chart coverages has not yet been achieved.

d. While a MACHC Seabed 2030 Strategy was established in 2020, there continues to be a challenge to motivate, receive support and sustain the engagement of MACHC Members to continue receiving bathymetric data contributions to fill gaps in the MACHC Region.

e. To implement a GIS-based layer for the MACHC Disaster Response Framework that could most effectively support coordination and communication efforts before and after a disaster event with effects on maritime infrastructures.

f. ENC producers face challenges with meeting the IHO S-100 implementation timescales.

8. **MACHC Cooperation with Stakeholders (Organisations, Industry and Academia):**

Several partnerships are already being leveraged to advance MACHC capacity building, MSDI and Seabed 2030 initiatives. New industry partners have been introduced to help share knowledge and expertise within the region.

9. **Achievements and Lessons Learned:**

a. A very well hosted MACHC24 by the Maritime Authority of Suriname in December 2023.

b. It was agreed by the MACHC MS that the Statutes would be revised to now include 'Annex 5 Ongoing/Permanent Actions List'. These actions will be 'Business As Usual' actions that Member States should refer to on a bi-annual basis.

c. The dissemination of IHO-funded training and opportunities has certainly benefited the selection of candidates from IHO Member States in the MACHC Region.

d. Technical Visits and High-Level Technical Visits to Members and Associate Members are extremely relevant to leverage hydrographic and cartographic activities in these countries, as well as to raise their awareness in these fields. When engaging with policymakers it is essential to use relatable language, referring to the UN SDGS and highlighting the wider benefits, such as economic growth and security, to explain the importance of hydrography.

e. The value of increased collaboration across RHCs and regional partnerships for capacity building training, Seabed 2030/CSB (including the development of a Regional Strategy and an Annual Work Plan), MSDI and others requires concerted effort to identify the specific activities of common interest and sustain those connections.



10. **Conclusions:**

The MACHC, in collaboration with other international, regional, bilateral and industry partners, is committed to carrying forward hydrographic, nautical cartography, MSDI and capacity building activities in close alignment with IHO objectives and goals. The increasing demand for responses and support requested of Member States needs to be carefully considered and, where necessary, perhaps regulated a little. There is a sense that we might ask too much from National Hydrographic Offices that have limited capacity and therefore we may need to consider how we prioritise the asks.

11. **Actions required of IRCC:**

The IRCC is invited to take note of this Report.