



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



Report of the MACHC INTEGRATED CHART COMMITTEE

INT CHART AND ENC COVERAGE FOR THE MACHC REGION

DECEMBER 2015

INTRODUCTION

The purpose of the Meso American and Caribbean Sea Hydrographic Commission's (MACHC) Integrated Chart Committee (MICC) is to provide consistency in the development and maintenance of regional charting schemes, including the monitoring of INT Chart and ENC production, and to promote standardization of charting activities of the in International Hydrographic Organization (IHO). This is an on-going activity and this report provides the status of these efforts. Previous reports included detailed plans of ENC schemes, compilation, and expected delivery dates and the various methodologies used for assessing their status. While this effort continues, the 2015 effort was concentrated at identifying needs and resolving gaps in ENC coverage. Similar efforts are being dedicated to completing the INT Chart coverage within the MACHC Region. However, detailed information on methodology and approaches used to resolve issues is not replicated in this report. For such background information, please refer to the 2014 MICC Report which is available at: http://www.iho-machc.org/documents/micc/MICC_Report_MACHC2014_final.pdf. This Report provides a summary of activities of the MICC during 2015.

MICC ORGANIZATION

Participation on the MICC is open to all MACHC members. However, as people are reassigned within their organizations and new persons come aboard the actual list is in a constant state of flux. This past year, from Colombia, Alex Ferrero, Gustavo Guitierrez, Olga Bonfante and Dagoberto David joined the MICC. Dagoberto David had been a participant several years ago and has recently rejoined the group. Additionally Victor Emilio Aluija Urgell from Cuba, Pierre-Yves Le Moigne from France, Leendert Dorst from the Netherlands, Bernice Mahabier from Suriname, Paul Barrett, Claire Bunyan and Jane Jones from the United Kingdom, Jesse Friedmann from the United States and D. A. Rojas from Venezuela joined in the deliberations of the MICC. The current list of participants is at Annex A.

MICC WORK PLAN AND PROCESS

The work plan for 2015 included full implementation of the newly proposed Port Analysis to determine adequate ENC coverage (Bands 4, 5, and 6) for Cruise Vessels. The Work Plan also called for the investigation on the use of ENC On-Line for use in developing a MACHC Catalog. This was a cooperative effort with the MEIP. Further, plans to expand this effort to include other vessel types continue to be investigated. A major task was to interact with the Cruise Lines International Association (CLIA) and engage them in these efforts. In fact CLIA has been invited to the 16th MACHC here in Antigua.

These activities were handled primarily through three Conference Calls and one face-to-face meeting as follows:

1. April 1, 2015
2. July 1, 2015
3. October 21, 2015, and
4. December 9, 2015 at the MACHC meeting.

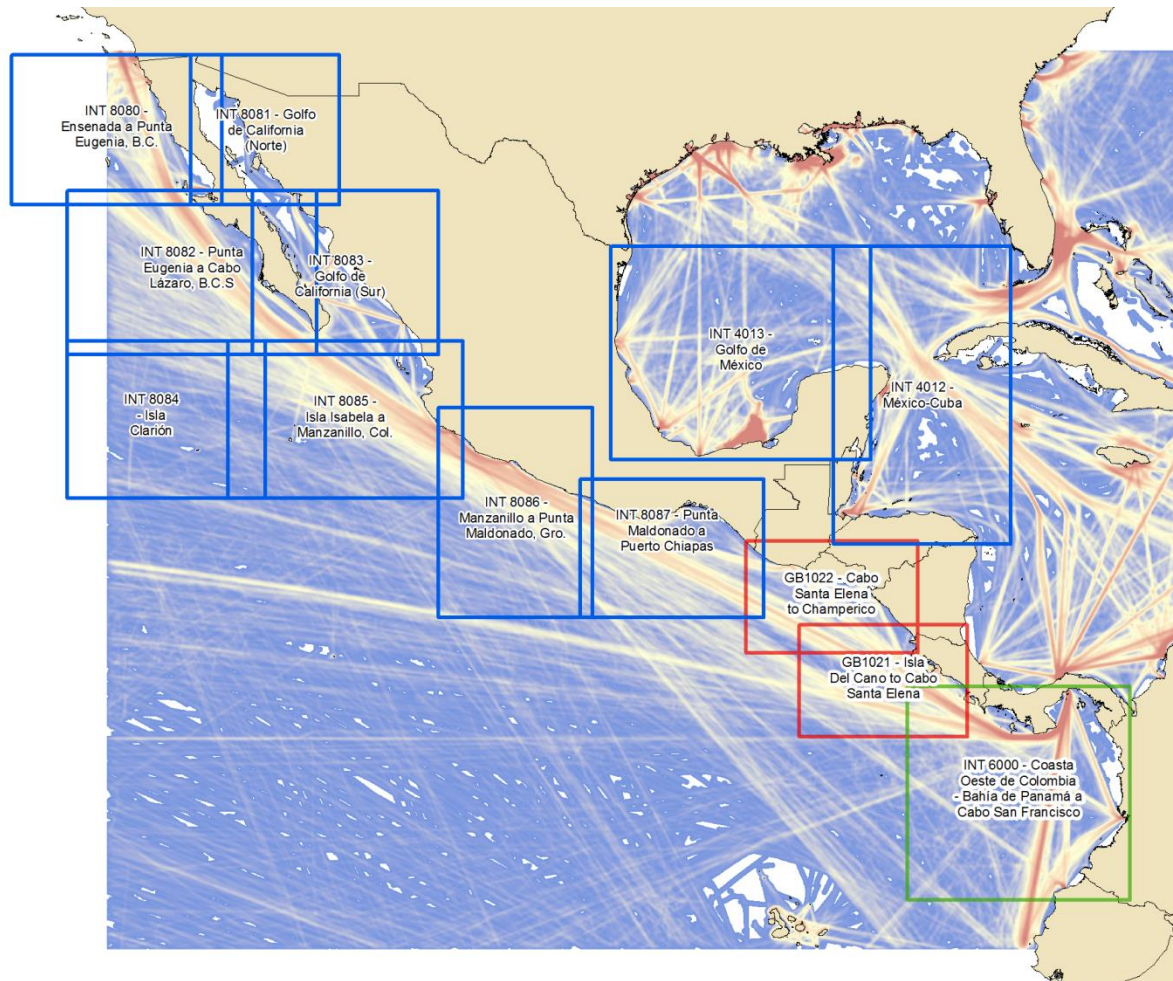
Additional communications were conducted among individuals in an on-going nature.

PORT ANALYSIS EVALUATION

During the past year, an assessment of available ENC coverage of Ports was undertaken for individual MACHC countries. This included evaluating 18 months of data of Cruise Ships destinations. The Ports of Call were then compared to the availability of Bands 4, 5, and 6 ENC coverage of those Ports. To address any issues or gaps in coverage, plans are to work directly with Member States to build the required ENCs in order to provide adequate coverage as required by IMO. The individual country reports have been distributed and this continues to be an on-going activity which will be further addressed at the 16th MACHC. The initial analysis revealed that some gaps remain and it is proposed that after further discussions, an agreed upon plan for final resolution can be achieved.

INT CHARTS

Information for IHO Publication S-11 was submitted to the IHB early in calendar year 2015. Additionally, with the adjustment of some of the Mexican charts, the MICC completed the INT Chart Scheme along the Pacific Coast.



The MICC is grateful to the UK for the inclusion of the two UK charts; GB1022 and GB1021, anticipated for completion in late 2016, in the INT Chart Scheme. In addition, Venezuela has recently proposed to modify the planned INT Chart Scheme along the Venezuelan Coast currently in S-11 to better align it with their national chart scheme. This does not significantly change the planned INT coverage, and contingent on MACHC member state approval and support, Venezuela plans to start providing the INT Charts to the international community in the next three years.

Finally, the MICC explored the idea of an INT Chart Catalog for the MACHC Region, as suggested at the last full MICC meeting in Mexico. However, Korea has already prepared a world-wide INT Chart Catalog, which will be made available to IHO. Thus to avoid duplication, the MICC proposes to utilize the MACHC section of this Catalog and offer it on the MACHC Committees website hosted by NOAA. The MICC is very appreciative and grateful to Korea for undertaking this important work.

ELECTRONIC CHARTS

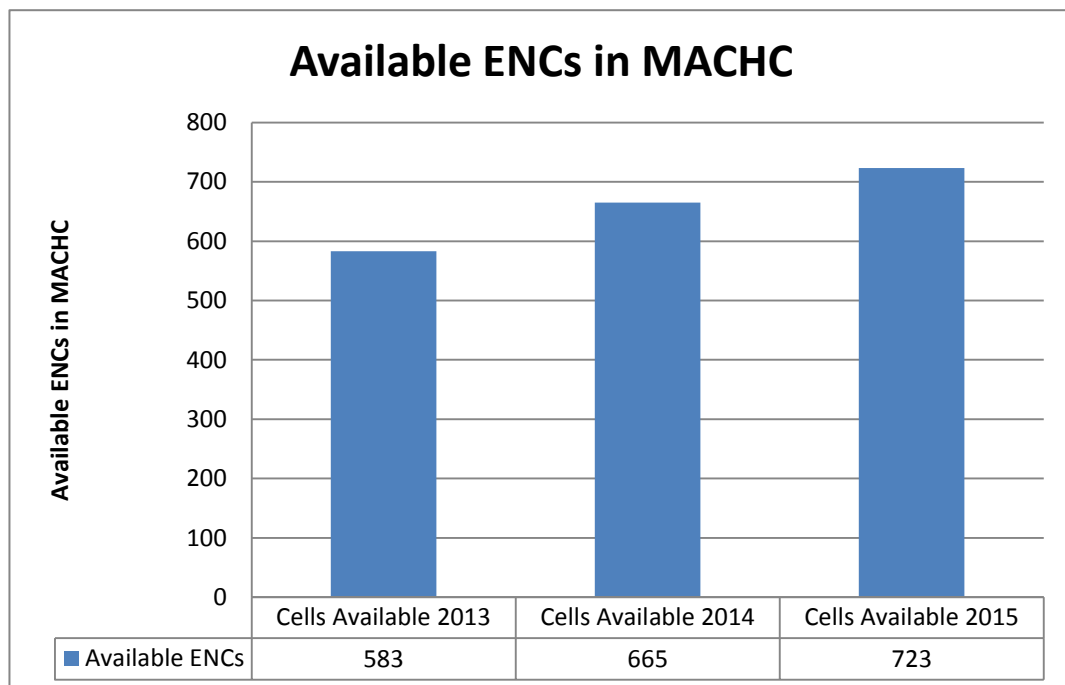
During the past year, the MICC addressed and resolved the Band 2 overlaps between the UK and Mexico. With the availability of an increasing number of ENC's, other overlaps are often introduced and are continuously being addressed as they arise. With the new approach of using results of the Port analysis to determine adequate ENC coverage, the previous baseline for the definition of using *“the medium scale INT Chart Scheme as the baseline for adequate medium scale ENC coverage--usage bands 2/3”* was considered lacking. The Ports analysis clearly identified the requirement for additional ENC's. The MICC Technical Coordinator is closely working with the impacted Member States to resolve this deficiency.

The goal of attaining the required number of ENC cells to achieve adequate coverage as per the WEND Principles is progressing. Although this number will achieve adequate coverage within the Region, it should be noted that the Cruise Line Industry has requested several additional large-scale ENC coverage for selected Ports of Call. Steps are being explored to supplement the existing suite of ENC's to improve coverage beyond the *“adequate”* requirement of the WEND Principles and to satisfy the Cruise Lines. All ENC cells are included in the listing of ENC's at Annex A to this report.

The table at right represents a summary of this year's accomplishments. It should be noted that because 13 cells were withdrawn due to possible duplication and/or overlaps, it reduced the new 2015 increase from 58 cells to a net of 45 new cells for this year.

Newly Available cells in 2015	58
Cells Canceled in 2015	13
Total Cells Available 2014	665
Total Cells Available 2015	723
Net New Cells in 2015	45

The bar graph below provides a snapshot of the significant increase in ENC cells for the MACHC Region.



As documented in the 2015 Work Plan, the MACHC Integrated Charting Committee has examined several Risk Assessment methodologies this past year. The MICC examined two models: the IALA model; and the more sophisticated New Zealand (Vanuatu) model. The IALA effort utilized IWRAP (modeling tool useful for maritime risk assessment) information. It was decided to evaluate the IALA Risk Model because it was more localized in high traffic areas. Several MICC participants communicated throughout the year, with very limited progress. While the MICC agrees that this may be a useful tool, it became clear that this is a rather significant undertaking, in terms of resource requirements and concluded that it is beyond the scope of the MICC and would be more appropriately handled directly under the MACHC by a separate Working Group specifically tasked with this activity. As a result, the MICC submitted a Proposal to the MACHC to:

1. Ask the MACHC whether a Risk Assessment project in the MACHC Region can be supported, and if so;
2. Request MACHC to establish a separate independent “Risk Assessment Group” on a temporary basis.

Leading up to the 15th MACHC in Manzanillo, the MICC entertained the possibility of conducting a survey among MACHC Member States as well as Associate Member States to inquire about their RENC participation. Thus, at the 15th MACHC in 2014, the MICC was tasked with conducting a WEND-based survey among MACHC Members on RENC participation and/or availability and distribution of ENCs. After several Conference Calls of the MICC, a questionnaire/survey was developed and approved. This web-based questionnaire/survey closed on October 31, 2015 and its results will be made available at the 16th MACHC in Antigua.

ENC-ON LINE

The MICC also investigated an ENC On-Line concept this past year. The MICC is grateful to the Member States who have provided their data for this effort. For those Member States who have not yet provided their data, the MICC would ask that they do so as soon as possible. Results of this activity, which has been closely coordinated with the MEIP, can be viewed at: <http://www.iho-machc.org/>.

RECOMMENDATIONS

The MICC makes the following recommendations for 2016:

1. MICC continue to monitor and update the Region B, both for the Atlantic and Pacific side, ENC scheme for all Usage Bands on a continuing basis.
2. Encourage Member States to provide their .000 information for the ENC On-Line project so that it might develop into a useful tool.
3. As a permanent task, MICC invites all MACHC Member States to provide the MICC Technical Coordinator with updates to their ENC production plans.
4. The MICC continue with the Ports Analysis and work directly with Member States to build the required ENCs in order to provide adequate coverage as required by IMO.
5. MICC continue to monitor and update the Region B INT Chart scheme for all scales for both the Atlantic and Pacific sides.
6. As a permanent task, MICC invites all MACHC Member States to provide the MICC Technical Coordinator with updates to their INT Chart schemes and production plans.
7. Make use of the Korean effort to compile an INT Chart Catalog for IHO and adapt it to the MACHC Region
8. MICC encourages Member States to synchronize the release of new (and updated editions) “INT Charts” and “ENCs” as best as possible.
9. MACHC Chair is invited to provide this report to the International Hydrographic Bureau (IHB) as the region’s contribution to global (ENC and INT) chart coverage so that it may be conveyed as appropriate to the IMO.

ACTIONS REQUIRED OF THE MACHC

The MICC invites MACHC Member States to note and endorse this report and its recommendations. The MICC also requests that the MACHC Chair then transmit the report to the IHB for final communications as appropriate to the IMO.