

## EXECUTIVE SUMMARY

### MesoAmerican - Caribbean Sea Hydrographic Commission (MACHC) Electronic Chart Working Group Report

The International Hydrographic Organization (IHO) is an intergovernmental consultative and technical organization that was established in 1921 to support navigation safety and protection of the marine environment. The mission of the IHO is to ensure the provision of adequate and timely hydrographic information for world wide marine navigation and other purposes, through the endeavors of national hydrographic offices. The IHO encourages the establishment of Regional Hydrographic Commissions (RHC), which are integral parts of the IHO and promote the aims of the Organization at a regional level. The MesoAmerican - Caribbean Sea Hydrographic Commission (MACHC) is one such RHC. Committees and/or Working Groups are established under the Commissions to address specific topics at a working level.

The MesoAmerican Caribbean Sea Hydrographic Commission (MACHC) was established in 1994 and held its first conference in May of that year in Havana, Cuba. The conference agenda covered five topics: the statutes of the Commission, training, electronic charting, international bathymetric charts of the Caribbean, and development of International Charts in the region. These five areas have remained the primary focus of the Commission, but over time more and more emphasis and effort has been placed on development of electronic charts for the region.

In 2002, the U.S. put forward a proposal to the MACHC and the IHO to extend the limits of the MACHC to include the Pacific Coast of Central America. This proposal was adopted and resulted in an extension that allows the Commission members in Central America to collaborate on issues on both of their coasts, and also allows inclusion in the MACHC of El Salvador, the only country in Central America that was not part of the Commission.

The Electronic Chart Working Group (ECWG) of the MACHC was established in the early days of the Commission and At its meeting of 5 November 2002, the ECWG of the MACHC identified the need to both build up national capacity in hydrographic offices, and to speed up ENC coverage of the region, particularly along major shipping routes.

Deleted: for hydrographic data acquisition and nautical chart production.

The MACHC-ECWG met in Cartagena, Colombia 30 August – 3 September 2004. At that meeting, progress was made with regard to priority ports/routes/areas, small-scale ENC coverage and production, alternatives for ENC production, and regional ENC distribution/services.

#### MACHC-ECWG Points of Contact:

Katie Ries (USA–NOAA), Chair  
LCDR Rafael Ponce (Mexico), Vice Chair  
Captain Fernando Angli (Mexico), Chair, Task Group 2 (ENCs)  
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**ENC PRODUCTION**

Previously, three maps of the MACHC region were provided showing:

- a. Major Commercial Shipping Routes
- b. Major Container Ports
- c. Prioritized Shipping Routes/Areas for ENC coverage

At the August - September 2004 meeting of the MACHC-ECWG, a comprehensive table was developed that contains a prioritized list major ports and routes, important environmental protection areas, and key ports specifically identified by the Cruise Ship Association. [See Annex A]

At the MACHC-ECWG meeting in Cartagena, Colombia Small-scale ENC Cell Boundaries for the Gulf of Mexico – Caribbean Sea Region were agreed. The ENC coverage is based on small-scale INT charts (1:1,000,000-scale) with boundaries adjusted so that the cells do not overlap. Four (4) INT Charts and corresponding ENCs have already been produced by Member States. Responsibility for the remaining six charts have been tentatively agreed. [See Annex B]

**GULF OF HONDURAS PROJECT**

A major challenge for the MACHC regions is that many countries do not even have the capacity to produce paper charts, much less raster or ENCs. In many respects, lack of resources (trained personnel, equipment, software, etc.) is a fundamental limitation. As one means to achieve

capacity building in the MACHC region, the MACHC – Electronic Chart Working Group made a concerted effort to get a hydrographic component included in a Gulf of Honduras Project

Proposal that was submitted to the Global Environment Facility (GEF) for funding. This project called “Environmental Protection and Maritime Transport Pollution Control in the Gulf of Honduras” contains a specific objective to:

*“Enhance navigational safety of key ports and approaches with the goal of reducing marine environmental pollution by improving hydrographic capacity in terms of improved navigation safety products (e.g., nautical charts) and services (e.g., notice-to-mariners), and improving a coastal/oceanographic GIS database that can be used for an oil and chemical spill prevention and contingency planning for the Gulf of Honduras to prevent damages associated with both operational and accidental discharges at sea, and the ability to respond to accidental spills.”*

There are three primary hydrographic-related activities identified under this objective:

1. Facilitate hydrographic capacity building for the three nations in the region (Belize, Honduras, and Guatemala)
2. Develop and implement a training/demonstration program for national and regional entities in hydrography to improve technical capacity
3. Conduct demonstration pilot projects that include improved navigational products (e.g., updated hydrographic surveys, paper charts, RNCs, and ENC)s and services (e.g., notice to mariners and Marine Information Objects (MIOs) for marine environmental protection.

The Gulf of Honduras Project was approved by the Global Environment Facility Council in December 2004 and is in the process of being approved by the InterAmerican Development Bank’s Executive Board. The Project may well become operational before the end of 2005. The project’s regional executing agencies are COCATRAM and the Central American Sustainable Development Commission, and a Coordination Unit is being hosted in Puerto Cortes, Honduras. The ECWG country representatives from Belize, Honduras and Guatemala are working in coordination with the IHO Capacity Building Committee to develop a detailed implementation plan, using the IHO S-55 as a tool to define the tri-national hydrographic priorities within the project framework.

#### ENC DISTRIBUTION

With the goal of speeding up ENC production and ensuring ENC quality and consistency, MACHC has begun investigating possible options for distribution. One option is the International Centre for ENCs (IC –ENC) which provides independent ENC quality assurance and international distribution services on a not-for-profit basis to its members. IC-ENC invited several members of the ECWG to travel to Taunton, UK to discuss the possibility of establishing a RENC within the MACHC region. Participants at the meeting included representatives from Colombia, Mexico, Spain, and Venezuela, with Capt. Luis Ojeda (Venezuela) being the primary organizer. Following an overview of IC-ENC policies and procedures, the discussions focused on three possibilities for the MACHC region:

1. Join IC-ENC and have them assist in the QA and distribution of ENC cells within the region.
2. Look to establish a Virtual RENC.
3. Do not establish a RENC (i.e., would be left up to individual countries)

A small task group headed up by Capt. Luis Ojeda will investigate the advantages and disadvantages for each option. A brief update will be made at an Ad Hoc Meeting of the ECWG on 10 April 2005, and a more detailed report at the next regular meeting of the ECWG (November 2005, Vera Cruz, Mexico). Included will be some recommendations for establishing short, medium and long-range goals for ENC QA and distribution services within the MACHC.

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