

**EXTRAORDINARY MEETING OF THE  
MESOAMERICAN- CARIBBEAN SEA HYDROGRAPHIC COMMISSION  
(MACHC)  
AND  
ELECTRONIC CHART SEMINAR**

**VERACRUZ, MEXICO,  
7- 11 NOVEMBER 2005.**

**FINAL REPORT**



**1. INTRODUCTION.**

An Extraordinary Meeting of the MesoAmerican-Caribbean Sea Hydrographic Commission (MACHC), along with a Seminar on the Electronic Chart, was held at the Naval Academy of the Mexican Navy, in Veracruz (Mexico) organized by the *Secretaría de Marina* of Mexico. Representatives from Barbados, Belize, Brazil, Colombia, the Dominican Republic, France, Guatemala, Honduras, Jamaica, Mexico, The Netherlands, Suriname, UK, USA and Venezuela attended the meeting, along with representatives from commercial firms who participated in the Seminar, namely CARIS, SevenCs, MPC, MAPTECH and the Universities of New Hampshire and Southern Mississippi. The meeting was chaired by Rear Admiral Edgar CELY NUÑEZ (Colombia).

A welcome speech was given by Vice Admiral Edgar NARRO Y QUESADA, General Director of Research and Development of the Mexican Navy, who stressed the importance of Hydrography for the region and recalled his country's commitment to sign agreements for the protection of the marine environment.

Other authorities attending the meeting were the Commander of the Third Naval Department, the Chief of Staff of the Third Naval Department and the Director of the Naval Academy.

Captain Hugo GORZIGLIA, IHB Director, and Rear Admiral Carlos ANGULO, Joint Director of the Directorate of Oceanography, Hydrography and Meteorology of the Mexican Navy, gave a general overview of the Seminar. Captain GORZIGLIA referred to the obligations resulting from the adoption of the revised SOLAS Chapter V and RAdm. ANGULO highlighted the objectives of the Seminar of addressing fundamental topics such as the production, distribution and future use of electronic nautical charts.

## **2. ELECTRONIC NAUTICAL CHART SEMINAR**

The Seminar was divided into the following parts:

- a) Emerging technologies – with presentations from NAVOCEANO, CARIS, UNH and the UKHO;
- b) Training – with a presentation from USM;
- c) Data production for ENCs – with presentations from CARIS and SevenCs; and
- d) Distribution of data – with presentations from MPC (Marine Press of Canada), MAPTECH, IC-ENC, Mexican H.O and the UNH.

Captain GORZIGLIA (IHB Director) summarized the subjects addressed by the Seminar and then followed a round-table discussion. The following points were highlighted:

- a) To produce ENC (and really improve safety to navigation) new data are needed;
- b) Making ENCs based on old data does not make any difference. On the contrary, expectations of safety improvement provided are not founded;
- c) In the case where we are ready to collect, manage and process new data, are we prepared to produce ENCs?
- d) Is that true of all MACHC countries?
- e) Distribution makes sense when there is something to distribute.

Overall, it was evident that there was a clear understanding on the necessary steps:

- a) planning;
- b) data gathering;
- c) data processing/management;
- d) ENC production;
- e) ENC distribution;
- f) ENC maintenance.
  - All these steps include challenges, as it is mandatory to provide the mariner with reliable, timely, confident consistent, uncorrupted and updated products;
  - Seminars like this present the advantage of offering the opportunity to see the world from different perspectives, all absolutely useful but none of them “perfect”.

### **3. EXTRAORDINARY MEETING OF MACHC**

#### **Review of the actions carried out since the 6th meeting of the MACHC (June 2005)**

The Chairman welcomed the participants and regretted the absence of El Salvador recalling that the Commission Statutes had been changed in 2002 specifically to admit that country into the Commission. In spite of this, El Salvador had not participated in any Commission meeting since that decision.

The representative from the Dominican Republic apologized for the absence of her country in the past and stated that full participation was now envisaged for the future, including the reintegration in the IHO as a full member.

Coming with the Agenda, the Chairman of the Commission presented the results of the Special Meeting made at the end of May 2005 in Cartagena, indicating itself that was three meetings in one, being the first relative to the Seminar PHASE ONE "Obtaining and circulation of nautical information necessary to maintain updated nautical charts and publications", sponsored by the Committee of Creation of Capacities of the OHI; the second meeting was a special session of the MACHC with the Caribbean countries that had not been able to participate in the previous meetings of the Commission and third it was the Session of the Committee of the Building of Capacities of the IHO. In this last one the supports obtained for the MACHC stand out that was made during the 2006, being these:

- a) Seminary for the representatives National Hydrographic Services, focused to sensitize the political levels of each participant country on the importance of the Hydrography and the necessity to give fulfilment to the commitments acquired in the SOLAS Convention.
- b) Support for the participation of the Chairman of the MACHC in one of the CARICOM meetings, with a view to sensitizing to the Ministers of the Caribbean countries on the importance of counting on Hydrographic Services able to emit information of utility for the Marine Security.
- c) To support to Nicaragua to development basic course in Hydrography of three weeks, previous endorsement of the Chairman of the MACHC, this already was granted.
- d) To continue with the technical visit to the countries of the region for the International Hydrographic Bureau, with a view to increasing the level of sensitization of the country towards the Hydrographic subjects and of improvement of the availability of the information for the Marine Security.

Next a reported of the Chairman on the made tasks and those that are in execution, emphasizing itself the advanced thing in the generation of sub-bases of data regional, based in the S-55, the update of the national contact points, the signature of the Statutes, the entailment with the Committee of Hydrography of the IPGH, the facilitation of exchange of information with the reliable of NAVAREA IV and XII and managements to obtain the entailment of the Salvador to the MACHC.

In the following point of the Agenda, the IHB presents status of the changes approved in April 2005, to the Convention of the IHO informing that Denmark is the only country that has ratified the amendments. Also one inquires into the advances in the meetings of the SPWG to establish the strategy of implementation of the changes to the Convention, indicating the discussed thing in Australia, as well as the meeting that will be made in Mexico the 7 of December of 2005 and another one in Korea before half of year 2006 (April). The importance stands out of initiating the discussions to the interior. Finally the IHB stands out that one of the raised challenges is to obtain the ratification of the countries members of the IHO, of the new Convention, before the next Assembly in the 2007.

## **Revision of Proposals in Meeting MACHC:**

Proposal 1 - Establishment of a regional Capacity Building Committee;  
Proposal 2 - Inclusion of Brazil in the Regional Hydrographic Commission;  
Proposal 3 - Review of the Statutes of the Commission;

Proposal 4 - To rename the Electronic Chart Working Group to Electronic Chart Committee.

Proposal 2 on the entrance of BRAZIL like member of the MACHC, for which the Chairman of the MACHC, asked for the Director of Hydrography and Navigation of the Navy of Brazil to give the corresponding argumentation, taking step to the opinion of the assistants on the individual, being that unanimously it is considered pertinent to grant the entrance of Brazil to the Commission and extends a congratulation to Mr. Vice Admiral Paulo Cesar Dias de Lima, by its incorporation to the Commission.

Colombia raised the necessity to formalize the internal structure of the Commission, inasmuch as it is had Committees, work groups and task groups, nevertheless this structure is not regulated in the Statutes with a guide or terms of reference. All the Members were in agreement with the exposition and it was defined to make a work group to Venezuela and Colombia to raise a rough draft of discussion for the Commission and its approval in the next Meeting. Also the proposal appears to turn the Work Group of Electronic Nautical Chart to Committee, since its work is long term, which is accepted by consensus, and to define the terms of reference of this Committee it considers and it accepts that the USA, presenter of the proposal, joint it to the work group previously established.

Mexico with the USA the corresponding sustentation proposes to establish MACHC Committee on Capacity Building being given it. The USA add that in the page Web of the Commission ([www.ihomachc.org/welcome.html](http://www.ihomachc.org/welcome.html)), a space for the subject of creation of capacities exists and ask for the plenty of the established form to place the courses available in each country. Another reason by which the creation of the Committee is justified is the one to be in charge to compile the requirements of creation of capacities of the region, to display before the 1st April 2006, to the CBCIHO.

Continuing with the discussion of the proposals revised the proposal on the necessity to modify the present statutes considering the approval of the entrance from Brazil to the Commission, or the changes recently approved by the OHI in its convention. One sets out that the work group proposed before also has the task of raising a proposal of how selecting the representatives to the IHO Council, settling down itself as puts the month of February of 2006 for the presentation of that initial proposal. In this task one is due to include that the countries that are part of both of two commissions, must determine by as they go to postulate his representation.

The Work group created in this Meeting, conformed by Colombia, Mexico, United Kingdom, United States, and Venezuela; they will have like task of presenting following documents with a month of anticipation to the next Meeting of the MACHC:

- Draft Terms of Reference for the internal structure, including the reports to be submitted and their periodicity as well as any other item that may improve the functioning of the Commission;
- Draft Terms of Reference for a MACHC Committee on Capacity Building;
- A proposal of amendment of the Statutes including amendments suggested by USA and other amendments that may be proposed at the meeting;
- To submit, by February 2006, a draft on the selection procedure of representatives from MACHC for the future IHO Council.

### **Presentation of Reports by the Member States of the Commission (MACHC).**

The delegations of the countries attending presented the National Reports of their activities, including the status of Hydrographic surveys and actions related to training and capacity building. The need for training was common to all developing countries of the Commission and representatives from Colombia, Mexico, UK, USA and Venezuela tabled the various opportunities for training in their countries.

**Guatemala:** The following high -priority necessities consider:

- Qualification Class A and B
- Technical Consultant's office
- Equipment (everything less boat)
- Participation in projects of cooperation

**France:** It indicates that his report this in the Web, also that training can be proved in French language.

**Belize:** It indicates that they do not have any Hydrographic capacity at the moment, although if the creation of a commission of high level stands out to handle the subject, also they shows that they have discharges expectations with the Project of the Gulf of Honduras. Course Cat A and B require. Insistent on receiving the technical visit of the IHO, proposing February like date for it, which previously was coordinated with the technical Expert of NAVOCEANO that would make this visit.

**Surinam:** It also informs that they do not have a Hydrographic Service formally established, that receives support of the Hydrographic Service of Holland. They request for training for hydrographs, in tides, handling of data, maintenance of positioning equipment and renovation of equipment. The IHB informs that UKHO could include the possibility of a technical visit to increase sensitivity on the importance of the Hydrography for March 2006 to Surinam, but that they stop it would be very important to have the consent of the country, as well as the confirmation of which this visit would be productive and beneficial for the consolidation of a Hydrographic Service in the region.

**Holland:** It informs that send its report to the MACHC, doing emphasis in three subjects: The change of MACHC headquarters anticipated for March 2006. The changes by the restructure of the Hydrographic Office for that will be implemented in the 2006. And finally the Hydrographic expedition that in the area of the Caribbean made in the 2006, with echo sounder multibeam. It on board offers training of the ships that will be in this campaign.

**Venezuela:** It informs on bathymetric verification into stranding ships of transport in Cuba, Dominica and Granada. They count on CARIS HOM, LOTS, INSPECTING HPD and DKART and ENC ANALIZER, these two last ones for the process of validation of its ENC. 25 navigation charts of the Orinoco River elaborated with a view to producing the respective ENC. Those channels are dredged and it looks for to maintain the characteristics described in letters. They offer three courses: one for officer-specialists in Hydrographic Sciences (for Lieutenant Junior or civilian with title professional).. Courses for specialist in Cartography for Army and Navy and Air Force. Technical specialist course in Hydrography with mentions in Cartography and Hydrography and Meteorology and Oceanography (it lasts 18 months), being internationally so far the first course is not offered. Course of 3 to 6 months (400 hours) on hydrometeorology, for administrative sergeant majors.

The representative from Venezuela presented to the MACHC Chairman and the IHB Director with copies of the Spanish version of the "Manual on Hydrography", translated by the Venezuelan Hydrographic Service. Captain Gorziglia expressed, on behalf of the IHO, his sincere gratitude to the Venezuelan H.O. for this valuable contribution. This manual will be exposed in the IHO web and it request at the countries with Spanish language of the region your comments.

**UK.** It informs to produce 22 ENC per month. They can provide support and training in production with ENC. They offer a course of 5 weeks in Cartography in England and another one of 2 weeks in the country that requires it (on S57 and ENC). They have a course of three sections that they are looking for to turn it Cat B. They can even provide cost of such stay for the assistants. They offer passant in Taunton of 3 - 6 months or a year if therefore it was desired and the country makes a requirement specific. Also it is possible to offer courses of Hydrography in Cat A or B that offers the Navy of UK, requiring a formal request to see the support possibilities since one is expensive courses that the UKHO does not make directly. The IHB remembers that the S-47 publishes all the courses offered by the States Members in Hydrography, which this available one in the Web of the IHO.

**Mexico:** It informs that also they are responsible for the works of oceanography and meteorology, like those of Hydrography. In this last area they have 3 Hydrographic brigades, 4 boats one of them equipped by NAVOCEANO. In the last year, they received a ship of the NOAA that this equipping itself with Multibeam and will be ready in the 2006. They are working in HPD, which has modified the process of construction of nautical charts. They count on its own printing; operate 33 mareography stations, 6 of them with telemetry. In oceanography they have 6 ships, of them for fishing exploration, which are possibly used for Hydrographic studies. They inform that the Coastline constructs it with satellite images, not by photography's aerial. At the moment they count on 70 cells ENC, 12 already validated. They have Notices to Mariners by Web like catalogue of nautical charts. They continue advancing in the homologation of the Course of Hydrography class B. They need to form hydrographs Category A. As well offer passant in cartography in city of Mexico, not through formal course, but like passant, in special in CARIS HPD. Also they offer to elaborate navigation charts in paper to the countries with capacity to collect the necessary data.

**Colombia:** It presents the state of advance of the Country in the collection of Hydrographic data, as well as in the emission of naval cartography in small, medium and great scale paper as much. It indicates like main recent profits the coordination done with NAVAREA IV and XII for the distribution of information of marine Security, the presented proposal to use GIS to improve the calculations displayed in the S-55 (to see the articulate appeared in the Hydrographic Magazine of the IHO). As far as Building of Capacities the course is offered Category A that it is made in the Naval School of Officials in Cartagena de Indias and the course at technical level that is made in the Naval School of Petty Officer that will appear for homologation like Category B, also offers the availability to participate in each one of the modules that compose the previous courses, if as in the case of the presentation of Surinam, the interest is by a specific subject as Tides and not all the formation like hydrographer. Also offer passants as much in surveys as in naval cartography is offered. Finally the requirements in Building of Capacities mainly in receiving consultant's office for the assembly of Stations NAVTEX, and training consider that allows to reduce to the relation in the time of gathering collection /processing of data multibeam, that at the moment this is 1: 6. Also the new Hydrographic boat constructed in Colombia appears, which will be equipped with echo sounder multibeam of high frequency and that will be operative in January of the 2006. It offers the capacity of the shipyard of the Colombian Navy to produce this type of boats.

**Brazil:** They count on three greater ships and 10 Hydrographic boats. It has 1500 staff and it has all the information on the Direction of Hydrography and Navigation of Brazil in the page Web. They have an echo sounder multibeam Em1001 and seabat. All their charts are in format raster and will have 100 letters ENC in 2006. Finally one gives in the ready meeting of the courses offered by the Navy of Brazil in Hydrography and Oceanography.

**USA:** It explains which are the organizations of his Country involved in the collection and Hydrographic data processing and the form as they interact to produce Navigation charts, them they focuses its presentation towards the answer before hurricanes and their organization of Hydrographic equipment of fast answer to evaluate the effects of the meteorological anomalies on the ship canals. Offers of training: Course Category A with the USM, Category B of 6 months in NAVOCEANO, Category A, master level and doctorate with the UNH. Certificate in Oceanic Cartography (12 months) a course with support of Japan. The possibility of support with the equipment MTT of the NAVOCEANO. The possibility training on board in the ships of the NOAA.

**Dominican Republic:** It requests to reactivate itself like member of the Commission. They request technical attendance. They have agreement with NAVOCEANO to make surveys of 4 ports, of which only one has concluded. They have an intention in agreement with UK, for the ENC production and with the NGA they will make an Agreement to produce topographic charts.

**Honduras:** They present/display requirements of equipment that thinks to obtain with the project of Gulf of Honduras, (est. Meteorological, sensor of movement, floats oceanographic, SSS echo sounder single beam). Cat B (Their civil employees have the experience, but they require the certification) and two nautical cartographers require formation of 3 hygrographs. They require a new visit of the IHO with the new authorities recently chosen that begin to toil in the 2006.

**Jamaica:** They count with 10 surveyors that have different levels from training. They have not been having own boat for 2 years ago, do it with ships of opportunity. The processing of its data is manual.

**Barbados:** They do not have enabled personnel. Their Navigation charts are done by UKHO that also support them in the ENC production. They request attendance for the establishment of major geodetic points and require training in Hydrography and generation of MSI.

Continuing with the program, Colombia informed the analysis done by the Chairman of the situation of the region in agreement with the results published in S-55, indicating the zones of the MACHC that presents the greater deficiencies of information, those zones that require update of data not reported availability in ENC. Also, indicated the important availability the chart in paper and RASTER. Finally the necessity considers working in the establishment of stations NAVTEX, for the low cap of the few existing stations.

Capt. GORZIGLIA and Capt. BERMEJO (IHB) noted that the CBC Fund may contribute to some training needs, either by funding courses such as recently approved for Nicaragua or by sending students to attend specific courses, such as the Multibeam course recently run in Plymouth, where 3 students were financed by the CBC Fund. It was also recalled that any project should be sent to the Commission Chairman who will transmit them to the CBC Committee before its next meeting.

BHI presents to the Commission a task very important to undertake as of the date being the relative one to the Plan of Work of the IHO for period 2008-2012. It is emphasized for the first time that, considers in form specifies a mechanism to consider the opinions of the Regional Hydrographic Expeditions and therefore one asks for the MACHC, taking note from circulating emitted on the matter and the necessity to have this like a permanent point of discussion in all the Commissions. The date remembers limits of 1<sup>st</sup> of August of 2006, to send to the IHB the proposals to include in the mentioned Plan of Work.

#### **4. ELECTRONIC CHART COMMITTEE (ANNEX B AND C)**

The Electronic Chart Committee (ECC) held separate meetings for Task Groups 1 and 2. Task Group 1 discussions focused on the development of the "Gulf of Honduras Project" and Task Group 2 worked on the development of ENC coverage and production in the area. Both Task Groups presented reports that were endorsed by the plenary MACHC. (Reports of both Task Groups are attached)

The President of the Electronic Nautical Chart Committee presented the situation of this committee to the date and the tasks propose during the work session to initiate, in special in the settled down Task Groups that is to say:

**Task Group 1:** Project Gulf of Honduras - GoH: "Environmental Protection and Marine Transport Pollution control in the Gulf of Honduras Project." Environmental project that has been used to obtain resources for develop the Hydrographic Services of Honduras, Guatemala and Belize. One inquires that the funds will be available at the beginning of the 2006 and that during the following session will work in the detailed planning of the project that simultaneously will be available in the Web [www.ihc-machc.org/welcome.html](http://www.ihc-machc.org/welcome.html)

Specifically one will work in aspects like plan of implementation, cartographic production and training related and administrative steps for the execution of the plan to COCATRAM. The Chairman of MACHC was tasked with transmitting to COCATRAM the task group 1 report regarding the status of the Gulf of Honduras project.

**Task Group 2:** on production and distribution of ENC. One indicates the advances on the scheme on small scale, the identification of the offices that would work in nautical charts in paper and ENC. In the Web of the Commission one announces as ENC will be available and the advances in the Inventory of priorities of ports and routes of the meeting.

It is come to finish the Plenary Session of the Commission and to install the Groups of Task of the Electronic Nautical Chart Committee, also begins session of the Committee on the International Nautical Chart Scheme. Finished the work in the Groups it was come to retake the plenary one, for which the President of the MACHC, asked the Coordinators of each one of the groups to present the corresponding report.

**NOTE:** France informed by means of official note No. 111 EPSHOM/CH/CA/NP, with date March 6 2006 that the French ENC FR250020 has been produced and released to PRIMAR Stavanger for distribution. See additional information in Annex C.

## **5. INTERNATIONAL CHART COMMITTEE - INT (ANNEX D)**

The INT Chart Committee is working very closely with the Electronic Chart Committee. Identification of "Producer" States is the first goal and is currently being finalized. In order to proceed with both INT and Electronic Chart activities, it is considered beneficial to produce both the INT chart and the ENC either concurrently or at least within as close a time frame as possible. Since a number of States use automated methods to produce the paper INT chart, making the corresponding ENC is a relatively simple task in these instances, especially when compiling small-scale charts.

The MACHC INT Chart Committee considers small-scale INT charts a priority. The Electronic Chart Committee is approaching the goal of producing ENCs in a similar fashion as the INT Chart Committee. Since these tasks are so closely linked, it is imperative that the INT Chart "Producer" States be identified without delay so that a compilation/production schedule can be developed. The following tables provide current information on the planned INT charts in the greater MACHC area.

## **6. NEXT MEETING MACHC AND CHAIRMAN 2006 - 2007.**

In this point of the meeting, the Chairman of the MACHC, giving continuity to the Agenda, came to ask for the assistants to propose whom the Chairman of the Commission would assume, being received on the part of Colombia the postulation of Mexico like new Chairman, who was supported by Venezuela and with which was put under consideration of all the Commission, accepting itself unanimously, immediately afterwards the Chairman came to request to him to Mexico if he accepted this nomination, obtaining itself a positive answer, thus the Commission congratulate and finished the election of his new Chairman.

Immediately afterwards it was requested to Mexico to propose date and place of the MACHC Seventh Meeting, being remembered to make it in Acapulco, Mexico in October 2-6, 2006. The IHB, requested to consider the possibility of making of joint way with the Seventh Meeting the "Seminary for the National Hydrographic Services", that this anticipating to make in the second semester of the 2006 with financial support of the Committee of Building of Capacities of the IHO, which would allow to assure the efficient participation and being but in the accomplishment the two activities in comment. This proposal was accepted in principle by the assistants and will be considered by the new chairman. Finally it was clarifying that; given the present statutes of the Commission, the delivery of the Chairman on the part of Colombia would be necessary next the 30 of March 2006. Colombia taking advantage of the exposition, proposed to consider within the work group that was approved to review the statutes considering modifying that relief with 6 months of anticipation by little practical that it was, which was accepted and will be considered in the Work group.

## **7. AGREEMENTS AND PENDING TASKS OF EXTRAORDINARY MEETING MACHC**

1. A Work group settles down itself integrated by Colombia, Mexico, UK, USA and Venezuela, presided over by Venezuela that fulfilling the established terms of reference in this meeting, fulfils the following tasks:
  - a. To present 30 days before the next meeting a rough draft of the terms of reference for the internal structure of the Commission that includes the reports to present, its necessary regularity and all those aspects for a better operation of the Commission.
  - b. To present 30 days before the next meeting rough draft of the terms of reference for the Committee of Building of Capacities of the MACHC.
  - c. To present with term February of 2006 proposal of how selecting in the MACHC its representatives the future Council of the IHO.
  - d. To complement and to review 30 days before the next meeting the modification proposal of the Statutes presented by USA so that it includes the other elements rose during the present meeting.
2. Changing is approved by consensus the denomination of the Electronic Chart Working Group to Electronic Chart Committee - ECC, subject to the proposal that the Work group makes formed to propose the internal structure of the Commission;
3. All the requests of support and supplies in the matter of creation of capacities expressed in the meeting will be compiled by the Chairman of the MACHC until the 15 of March to be sent to the IHB for their consideration by the CBC before the 1<sup>st</sup> April. The information will be loaded in the page Web of the Commission in agreement with the decided format;
4. The inclusion of Brazil in Commission MACHC is approved by consensus;
5. One remembered make a new attempt of technical visit to Belize on the part of the IHO associated to the GoH project, which was by the Hurricane "Katrina".
6. Considering the technical visit planned by the IHO to the States Island of the Caribbean, in March 2006, it was offered to Surinam to consider such opportunity. Surinam confirmed on the matter directly to the IHB during November 2005.
7. To recommend to the IHB, to support the requirement of Honduras and Dominican Republic to make a technical visit to the new authorities of high level, recently chosen with a view to elevating its sensitivity on the importance of the Hydrography for the Marine Security and the necessity to give fulfilment to the acquired international commitments on the subject (Possibly in March of 2006);
8. Asked for all the present countries to send before the 30 of May of the 2006 to the Chairman of the MACHC the national contributions to include in the Plan of Work of the IHO for period 2008 - 2012. The Chairman will compile the contributions and a participative document will circulate them to all the countries with a view to preparing before 1<sup>st</sup> August 2006 but the possible thing that it is sent to the IHO.
9. Signature of the statutes. From 1<sup>st</sup> January of 2006, who have not even signed the statutes, they will be placed in a list aside from the members of MACHC, like "in process constituting itself in members";
10. Remembers ask for the Members of the MACHC to use the format proposed by the IHO to standardize

the national information that appear to the Regional Hydrographic Commissions;

11. Agreement make in the next meeting of the MACHC a revision of the subject to establish or not a RENC in the region that facilitates the distribution of the ENC. For previous the each country in internal form it will have to evaluate its own situation with respect to the ENC and their position before the raised subject;
12. To designate to Mexico like the next Chairman of the MACHC, responsibility to transfer from next the 30 of March 2006 on the part of Colombia in agreement with the established thing in the Statutes.
13. To make the Seventh Meeting of the MACHC in October 2-6, 2006 in Acapulco, Mexico, being considered uniting this activity with the Seminary for the Presidents of the National Hydrographic Services of the Region that will be supported by the Committee of Building of Capacities of the IHO and that this programmed for the second semester of the 2006, assigning 2 to him to 3 days for such event.
14. To the countries members, the recommendation to use the offer made by the NGA of USA to advice and to support to the countries of the region in the implementation of system GMDSS and the installation of stations NAVTEX in the region.

## ANNEX A

### TERMS OF REFERENCE FOR THE WORK GROUP ON RESTRUCTURATION OF THE MACHC

- Ref.      A) Proposals to the Extraordinary Meeting of the MACHC.  
              B) Administrative Resolutions of the IHO.  
              C) Protocol of amends of the IHO.

The Extraordinary Meeting of the MACHC decides to establish a Work group integrated by representatives of Colombia, Mexico, Venezuela, USA and UK, presided over by Venezuela so that it studies and it proposes an internal basic structure that contributes to improve the effectiveness and efficiency of the Commission.

The terms of Reference of the Work group will be:

1. - To propose one structures basic commits so for the Commission that it allows to facilitate and to optimize its work. Such structure will have to consider the existing groups and a group dedicated specially to the subject of Building of Capacities and in addition, to have present the opinions expressed by the participants in the Extraordinary Meeting.
2. - To review the statutes of the MACHC to the light of the structural changes of the adopted IHO and in process of adoption (for example participation in the Council of the IHO); as well as of the changes proposed by USA and Mexico; the entrance from Brazil to the MACHC and those that are derived from proposal 1.
3. - To propose the changes to the Statutes that could take effect immediately and those that could take effect when the modifications to the Convention of the IHO are ratified by the corresponding quorum.

Notes:

- A) Each one of the bodies, whose necessity is identified, will have to be proposed with their corresponding terms of reference, rules of procedure, regularity of reports, regularity of meetings, members, and others).
- B) The first rough draft of these documents will have to circulate to the command post of the MACHC for commentaries before the 20 of February of the 2006. The final version will have to circulate 30 days before 7 Meeting of the MACHC for its consideration and approval.

## **ANNEX B**

### **SUMMARY**

#### **MEETING OF ELECTRONIC CHART COMMITTEE TASK GROUP 1: CAPACITY BUILDING PILOT PROJECT GULF OF HONDURAS NOVEMBER 10, 2005 VERACRUZ, MEXICO**

##### Meeting Participants

Carlos Portillo, Honduras/Empresa National Portuaria—Ministry of Transportation  
Javier Diaz, Honduras/Empresa National Portuaria—Ministry of Transportation  
Tyrone Hidalgo, Guatemala/Maritime Department of Defense  
Gilbert Swaso, Belize Ports Authority  
Katie Ries, U.S. /NOAA  
Percy Pacheco, U.S. /NOAA  
Meg Danley, U.S. /NOAA  
Kathryn Mork, U.S. /NOAA  
Eric Villalobos, U.S./Naval Oceanographic Office  
David Doyle, U.S. /NGS  
Edward Allen, U.S. /NGS  
Paul Fielding, UK Hydrographic Office  
Katie Jones, UK Hydrographic Office  
Mike Boyd, UK Hydrographic Office  
Jose Luis Frias, Mexico/INEGI  
Federico Bermejo, IHB  
Derrick Peyton, CARIS

##### 1. Meeting Objective

The objective of the meeting was to address the chart production element in the Gulf of Honduras (GoH) Project Hydrographic Implementation Plan and to determine the detailed steps for finalizing and advancing the action plan. The GoH Project is anticipated to be operational early next year. The meeting was held in conjunction with the IHO Mesoamerican Caribbean Hydrographic Commission meeting (November 7-10 2005). Over the course of the one-day meeting, the participants addressed issues related to priority areas for paper chart updates and ENC production and the required bilateral agreements in order to accomplish this work. A key consideration was to ensure that capacity building and associated training, and institutional arrangements were woven into all activities so that these capabilities will endure beyond the life of the GoH Project. Below is information obtained at the meeting along with some meeting actions.

##### 2. Priority Chart Information by Country

*The information below was captured partially. It needs to be reviewed and revised.*

a) Belize (Paper and ENC Chart Priorities)

	EXISTENT CHARTS					FUTURE CHARTS	
Priority Area	Scale	Date	Chart No.	Owner	Recent or Planned Surveys in Priority Area	Chart Production	
Harbor & Approach (Belize City and approaches)	1:40K	10/89	?	UKHO	HYCOOP (order 2) (Date: 1998)	- Paper (Date: ?) - ENC (Date: ?)	
					HYCOOP (order 1) (Date: 2001)	- Paper (Date: ?) - ENC (Date: ?)	
					New Surveys as part of GoH project (Date: 2006)	- Paper (Date: ?) - ENC (Date: ?)	
					Mexico Survey off coast of Belize (Date: ?)	- Paper (Date: ?) - ENC (Date: ?)	
Big Creek	Belize asked if Approach Chart could be produced	?	?	UKHO is to explore			
Coral Reef MIO	1:125K (3 charts-paper) Partial coverage of reef	?	?	UKHO		(need to determine desired scale for producing MIO)	
	1:500K	01/06	INT4132				

b) Guatemala (Paper and ENC Chart Priorities)

	EXISTENT CHARTS					FUTURE CHARTS	
Priority Area	Scale	Date	Chart No.	Owner	Recent or Planned Surveys in Priority Area	Chart Production	
Approach-Puerto Barrios	1:65K – 1:25K	?	?	UKHO	Ports Authority-Guatemala (order 2) (Date: ?)	- Paper (Date: ?) - ENC (Date: ?)	
	1:50K	11/95	INT28164		New Surveys as part of GoH project (Date: 2006)	- Paper (Date: ?) - ENC (Date: ?)	
Approach-Santo Tomas de Castilla	1:15K	3/04	INT28165	NGA	New Surveys as part of GoH project (Date: 2006)	- Paper (Date: ?) - ENC (Date: ?)	
	1:7.5K	?	GUA2	Guatemala			
	1:50K	?	GUA3	Guatemala			

c) Honduras (Paper and ENC Chart Priorities)

	EXISTENT CHARTS				FUTURE CHARTS	
Priority Area	Scale	Date	Chart No.	Owner	Recent or Planned Surveys in Priority Area	Chart Production
Harbor-Puerto Cortez	1:30K	?	?	UKHO	HYCOOP (no side Scan Sonar) (Date: 1998)	- Paper (Date: ?) - ENC (Date: ?)
	1:12.5K	?	?	UKHO	New Surveys as part of GoH project (Date: 2006)	- Paper (Date: ?) - ENC (Date: ?)
	1:30K	?	INT28170	NGA		
Harbor-Port of Tela	1:20K	?	INT28161	NGA	Port Authority (order 1) (Date: 2005)	- Paper (Date: ?) - ENC (Date: ?)

3. Bilateral Agreement Actions

- Belize to visit UKHO in January 2006 to sign bilateral agreement.
- UKHO to determine if visits to Guatemala and Honduras in February 2006 are possible to have further discussions/finalize agreements.
- Agreement in legal and policy review in Guatemala and Honduras. Provide official response back to UKHO by mid -December.
- The 3 countries need to consult with high-level officials to determine if data can be made available before bilateral agreement (and translated version) is in place by mid- December.
- Provision (clause?) to be added to agreements for the UKHO to provide Belize, Guatemala, and Honduras with digital files/software used to create charts for future chart production.
- UKHO to provide each country's Charting Authority the chart proof for approval, and copies of paper and raster charts as part of the bilateral agreement.

4. Training Needs / Opportunities

- UKHO offers to include one representative from Belize, Guatemala, and Honduras in its 5-week Hydrographic course on July 2006 and will provide invitations/registration info.
- UKHO willing to explore organizing a regionally- based technical course depending on need.
- IHB to ensure Belize, Guatemala, and Honduras receive invitations to Nicaraguan Hydrographic Course and explore possible travel support via IHO/CBC funds.
- Navy to Navy assistance for Hydro Surveys (countries can apply for Security Assistance Funds through U.S. Embassies) – details available in The Naval Oceanographic Office (NAVOCEANO) Mobile Training Team web site at <https://www.navo.navy.mil/pao/other/nmtt.htm>  
Also included in Attachment A are the specific points of contact in the U.S. Embassies to whom requests for Security Assistance Funding should be directed. This was provided by Eric Villalobos, who can answer any further questions regarding the Mobile Training Team support.

5. Specific Meeting Actions

- Create inventory of all available charts in the region by January 2006 (NOAA with assistance from NGA and UKHO).
- Determine potential dates for paper chart updates and ENC production and related costs to finalize GoH plan (UKHO)

- Determine if/when source data for existing charts can be made available to UKHO (if not already) for ENC production (NGA)
- Provide summary of Status of National Hydrographic Committee (NHC) effort by mid-December 2005 (Belize, Guatemala, and Honduras)
- Provide list of activities for the detailed action plan in regard to the formation of the NHC effort by mid-December 2005 (Belize, Guatemala, and Honduras)
- Provide budget costs (if any) for the NHC effort by mid-December 2005 (Belize, Guatemala, and Honduras)
- Provide background detailed budget breakdown for survey costs by mid-December 2005 (Belize, Guatemala, and Honduras)
- Provide list of activities and cost estimates for ENC production (UKHO) and for some data availability (NGA) by January 2006
- Provide cost estimates on visits to countries by January 2006 (IHO, UK, and NAVOCEANO)
- Identify who in the countries need to be aware of the Action Plan by January 2006 (Belize, Guatemala, and Honduras)
- Complete Action Plan by January 2006 (NOAA )
- MACHC Chair and each country to send plan to COCATRAM by February 2006 (MACHC, Belize, Guatemala, and Honduras)
- Visit Belize for survey planning in February 2006 (Eric Villalobos).
- Belize to invite COCATRAM to participate in meetings with Villalobos.
- Decide on names/agencies to be included on Action Plan Cover Page (Ministries, Committees, others) by January 2006 (Belize, Guatemala, and Honduras).

For Belize most likely Ministry of Transportation.

For Guatemala the NHC (currently 2 Ministries).

For Honduras the NHC (currently the Port Authority/Ministry of Transportation).

#### ATTACHMENT A

#### U.S. EMBASSY POINTS OF CONTACT FOR SECURITY ASSISTANCE FUNDING REQUESTS

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 Time Zone: 0800am EST = 0700am GMT-6  
 Work Week: Monday through Friday  
 Fiscal Year: 01 April through 31 March  
 Messages: CHUSMLO BELIZE CITY BH

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## ANNEX C

### SUMMARY

#### **MEETING OF ELECTRONIC CHART COMMITTEE TASK GROUP 2:**

#### **PRODUCTION AND DISTRIBUTION OF ENC**

**NOVEMBER 10 2005**

**VERACRUZ, MEXICO**

Chair: LCDR Rafael Ponce, Mexico

**1. PROGRESS ON ACTION ITEMS FROM 2004 MEETING IN CARTAGENA (SEPTEMBER 2004). LEE ALEXANDER (TECHNICAL ADVISOR) BRIEFLY REVIEWED THE PROGRESS MADE TO DATE.**

- a) Establish link between IHO and MACHC-ECWG websites.

Action: USA-NOAA

Status: Done

- b) For ENC Inventory of Ports and Routes, prepare a more detailed:

- Table: Listing to include:
  - i. national priority & type of ships
  - ii. ENCs produced (number of, navigational purpose, availability, dates, etc.)
  - iii. see example for Cuba
  - iv. Environmentally Sensitive Sea Areas
- Area Coverage Map – showing Coastal, Approach, Harbour
  - i. contact each ECWG member for input/verification (see USA-NOAA submission)
  - ii. send out revised table/coverage map in early 2006
- Environmental Sensitive Sea Areas Map

Action: Tech Coordinator

Status: Partially done. Further updating will be done with individual HOs outside of the TG2 meeting. For the time being, this is considered a dynamic activity with continuous input/updates.

- c) Identify key Pacific coast ports within MACHC that warrant ENC production. Send letter/e-mail to:

- Member States
- Chart distribution organizations/companies (e.g., IC-ENC, Primar Stavanger, UKHO, Marine Press of Canada)
- Cruise Ship companies

Action: EC Comm Chair/Vice Chair send a message drafted by Technical Coordinator

Status: Postponed.

- d) Contact cruise ship companies for their update regarding priority ports/routes. Update inventory based on their response.

Action: Tech Coordinator

Status: Done, but no further response/update from what was initially provided in 2003 by Marine Press of Canada and International Council of Cruise Lines (ICCL).

- e) Verify Small-scale (INT) ENC cell boundaries; circulate for review/acceptance.

Action: Tech Coordinator

Status: Done. However, some confusion existed over what country would actually produce ENC cells based on these cell boundaries rather than the area contained on a paper chart. Need further coordination with INT Chart Committee.

- f) Contact RENCs and Chart Distribution companies regarding offer to establish a mechanism to perform small-scale (INT) ENC validation and consistency checks.

- IC-ENC and Primar Stavanger
- ChartWorld, Marine Press of Canada

Action: ECWG Chair/Vice Chair send a message drafted by technical coordinator

Status: Started by Tech Coordinator. Will be re-initiated.

- g) Post small-scale (INT) ENC cells on MACHC-ECWG website.

Action: USA-NOAA

Status: Three currently posted.

- h) HYCOOP Data

- Encourage HOs to provide an “official” response to HYCOOP letter
- Ask NGA if MS can convert DNC data to ENCs

Action: ECWG Chair/Vice Chair through messages drafted by technical coordinator

Status: a) Accomplished by some HOs. b) Need draft letter.

- i) Alternatives for Accomplishing ENC Production

- send to all ECWG member HOs
- ask that a response or comments be provided to ECWG Chair

Action: Tech Coordinator and ECWG Chair and Vice Chair

Status: Partially done (initial draft provided to ECWG Chair)

- j) Based on request for ENC training guidance from TG1, draft a response.

Action: ECWG Chair through messages drafted by technical coordinator

Status: GoH Project training requirements are being defined by TG1.

- k) Task Group on ENC Distribution options for MACHC:

- Provide a Task Assignment list to Chair (Venezuela)

Action: Tech Coordinator and ECWG Chair

Status: Done

- Prepare report for next meeting; distribute prior to meeting

Action: ENC Distribution TG Chair (Venezuela) and technical coordinator

Status: Done

- l) For Gulf of Honduras Project, determine the types/level of training needed for each country.
- will be based on input provided from TG1
  - tie into capacity building and S-55 initiative

Action: Technical Coordinator

Status: Ongoing

## **2. COMPLETING REGIONAL CHART/ENC COVERAGE (SMALL-SCALE ENC PROD/DISTRIBUTION)**

Erich Frey (USA-NOAA) provided a short demonstration on web-based ENC distribution. INT 4015 and 4016 (US Charts) are now posted and available for download (as ENCs) from the MACHC web site. INT 4013 (Mexico) will be added within the month. INT 4022 and 4023 have been completed, and the mechanics of how to make them available is under discussion. Others will be added as they become available.

The Chair led a brief discussion on:

- a) What should be the next steps for completing MACHC regional coverage
- b) Status on data access requests (HYCOOP Letter)

A USA-NGA representative noted that they have hard copy coverage of (some) areas and can make them available in 'GEOTIFF' form. They are somewhat outdated, but can be updated via Notices to Mariners. NGA also noted that they can make DNCs available in those areas where they are being produced, but that they would be in VPF format—not IHO S-57.

## **3. PARTNERING WITH THE PRIVATE INDUSTRY FOR ENC PRODUCTION**

Lee Alexander (Technical Coordinator) introduced some potential ways that the private sector could assist HOs in producing ENCs:

a. Commercial survey data (not produced under contract with HO)

- HOs could ask for/receive a copy of source data resulting from commercial surveys (e.g., results of post dredging surveys in ports or near terminal facilities).
- HOs would need to perform QA/validation on the data quality.
- If deemed acceptable, this data could be included in official chart/ENC.

Chair mentioned that this approach has been used in Mexico, where 3<sup>rd</sup> party data is validated by the Mexican HO for a "fee." If accepted, this data then becomes "official" and used in charts.

b. Hydro survey data (produced under contract with HO)

- This is data that is intended for producing official nautical charts and ENCs.
- The private sector could assist in terms of 3<sup>rd</sup> party validation/QA of ENCs that were produced from this data.

Previously, this offer was made by Marine Press of Canada and SevenCs on behalf of the Cruise Line Industry in some key Caribbean/Gulf of Mexico ports.

c. Unofficial survey (3<sup>rd</sup> party data) and non-official ENC production

- A port authority or shipping company performs a post-dredging survey.
- This survey data is then used to produce a large-scale 'unofficial' ENC.

- The HO is then asked to validate or issue and maintain this ENC as ‘official’.

Only a few occurrences of this have occurred (e.g., Kingston, Barbados and Port Canaveral, USA).

The Chair moderated a spirited discussion of the pros and cons of the latter concept (item “c” above). To explore this concept further, Lee Alexander suggested that a Testbed Project could be conducted in conjunction with the Gulf of Honduras Project. However, the general consensus was that this matter needs to look at carefully and analyzed on a case-by-case basis. In particular, there were concerns about:

- How a HO would perform QA/validation on data it did not collect or specify.
- The liability of ‘official ENC’ that was not produced by an HO.

Although some MS felt that this concept is workable, the general consensus was that the ECWG should not support the concept, at this time.

Capt. Hugo Gorziglia (IHB) commented that the “rules” are changing in terms of who and how data is produced in conformance to IHO standards. What needs to be looked at is how to control the production process. This is new and as such, a testbed could be a useful way to gain experience on this matter.

#### **4. ENC TRAINING**

Due to time constraints, there was very little discussion of this topic. Potentially, this could be performed in coordination with GoH Project.

#### **5. ENC DISTRIBUTION OPTIONS**

Capt. Luis Ojeda (Venezuela) described the outcome of the visit to IC-ENC and to Primar-Stravanger. He noted that Venezuela, Mexico and Colombia recommend that the Sub-TG go with IC-ENC on a 1-3 year trial. It was agreed that TG 2 make this recommendation to the ECWG, and that this be forwarded on to the full MACHC for consideration.

- a. Short-term approach - Recommendation of TG2: go with 1-3 years of experience with IC-ENC and then re-evaluate. Possibly become an “IC-cicle” within the MACHC.
- b. Long-term approach - Study the establishment of a RENC for MACHC.

#### **6. NOTE OF FRANCE.**

France informed by means of official note No. 111 EPSHOM/CH/CA/NP, with date March 6 2006 that the French ENC FR250020 has been produced and released to PRIMAR Stavanger for distribution. According to the small scale ENC scheme established by the MACHC Commission, this chart corresponds to paper chart FR7475 (publication 2005 – scale 1: 1000000 – corresponding to paper chart INT 4022) with the following data coverage limits:

Western limit:  $66^{\circ} 30' 00.0''$  W

Eastern limit:  $59^{\circ} 21' 00.0''$  W

Northern limit:  $19^{\circ} 42' 00.0''$  N

Southern limit:  $09^{\circ} 30' 00.0''$  N

For this ENC, navigational purpose (2: General) has been set according to IHB Circular Letter 47/2004 (“Improving ENC consistency”).

**ANNEX D**  
**REPORT INTERNATIONAL CHART COMMITTEE - INT**  
**NOVEMBER 2005**  
**VERACRUZ, MEXICO**

Reported on the present state into chart INT. Finding with some problems or weaknesses as they are:

- a) Deficiency of communication and clarity for the elaboration,
- b) Establishment of dates of completion of charts,
- c) Absence of definition of which one will have of charts once finished,
- d) To define the convenience free of having charts to the members of the MACHC.

Statements that already are the charts INT of scale 1:1, 000.000 following ones:

- a) INT 4015 elaborated by NOAA.
- b) INT 4016 elaborated by NOAA.
- c) INT 4013 elaborated by MEXICO.

After to have carried out a situation analysis, it is considered the following proposals:

- a) Commitment of elaboration of the cartography of smaller scale of 1:1, 000.000, in paper.
- b) Once finished the chart, would be sent a copy to all the Members States for its revision and observations.
- c) To finish of this phase, it is would make available of the full Members States of the MACHC, the nautical chart in several formats of impression, so that any Member can print it, once modified with corresponding stamp office.
- d) It is will present a model of "Agreement" to sign, within the Statutes of the Commission, where it authorizes the supplier of the chart, the right to print it.
- e) Once finished stage one, would set out a new program elaboration of chart INT, on 1:500,000 scale and to follow the same procedure that with the smaller scale.
- f) The cartography on largest scale to the one of 1:500,000, to leave it like national production, so that the Members States decide or they distribute them according to his commercial agreements.

On consensus the previous thing was accepted, therefore it was come to determine that Member States would be in charge to publish the charts INT and that Members would be the collaborators, according to Annexed 1.

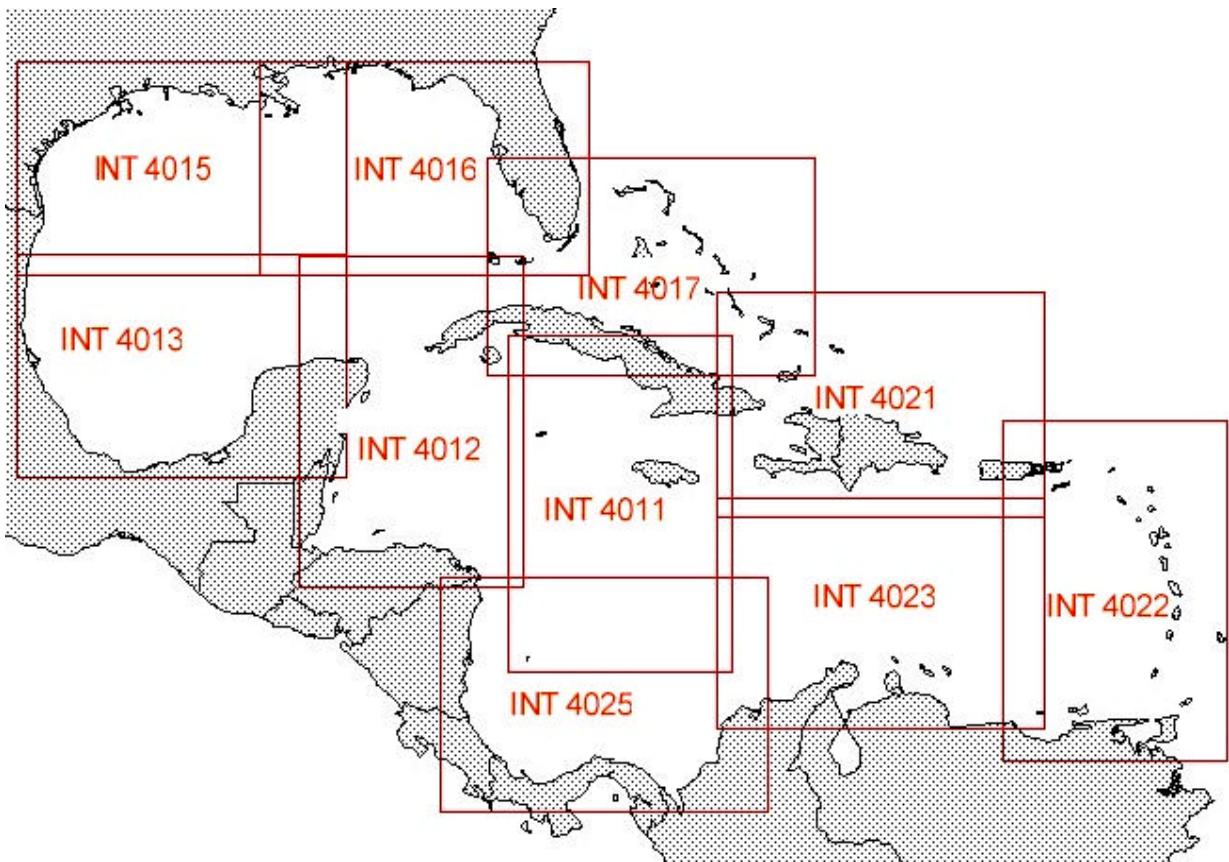
In order to the incorporation from Brazil to the MACHC and the acceptance of this new proposal of work, slopes had left the following tasks:

- a) To determine the limits of new charts of 1:1, 000.000 and 1:500,000, it advise to the Members States, making the necessary questions to determine the publisher and or the collaborating, as well as the date attempt of finish of the elaboration of nautical chart INT.
- b) To determine the limits of new charts of 1:1, 000.000 and of the 1:500,000, in order to the increase of the cover area of the MACHC, taking into account Brazil's cartography.
- c) To propose an "Agreement", so that the publishing Member States yield the impression rights to the Member States of the MACHC.
- d) To establish the format of impression adequate for the interchange of charts INT.

**ANNEX 1**  
**CHARTS INT 1:1,000,000**

CHART	STATE PRODUCER	STATE CONTRIBUTOR	LIMITS		DATE EDITION	STATUS
			LAT.	LONG.		
INT. 4011	UK	CUBA COLOMBIA			2006	BEGINING ENERO 2006
INT. 4012	MEXICO	CUBA			JUNIO 2006	
INT. 4013	MEXICO				READY	RELEASE P/REVISION
INT. 4015	USA/NOAA				READY	IN THE WEB
INT. 4016	USA/NOAA				READY	IN THE WEB
INT. 4017	CUBA	USA				USA contact Cuba.
INT. 4021	CUBA	FRANCIA				
INT. 4022	VENEZUELA	FRANCIA DOMINICANA BRASIL			2006	
INT. 4023	VENEZUELA	COLOMBIA			2006	LAST 2006
INT. 4025	COLOMBIA	PANAMA COSTA RICA NICARAGUA			2006	

**CHART INT 1:1, 000,000**



**ANNEX E.**  
**LIST OF ASSISTANTS**

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