

Meso American & Caribbean Sea Hydrographic Commission (MACHC)
9th Meeting, Niterói, Rio de Janeiro, Brazil, October 9th – 10th, 2008

Report of WEND matters

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Reference: MACHC Chairman e-mail of Aug 29th 2008.

1. Introduction

The MACHC Chairman decided to nominate the Brazilian delegate to the 11th WEND meeting as the MACHC representative.

2. Developed work

2.1 Participants

68 participants from different Hydrographic Services (28), representing 12 Regional Hydrographic Committees (60), who are members of WEND, SPWG¹, IC-ENC, and HCIWWG, representatives of the IHB (3), and observers (5) from the RENCs PRIMAR and IC-ENC, from CLIA², and from the RTCA.

2.2 Events and Agenda

During the period, activities concerning the WEND, ECDIS Stakeholders Forum (ESF-4), SPWG, IC-ENC and HCIWWG took place concomitantly. This report is restricted to the activities concerning the WEND, and the related ones of IC-ENC and ESF-4.

The Committee discussed the following issues:

- Revision of the Lists of Actions concerning previous events (the 10th WEND, X-WEND, 2nd EDCIS Stakeholders Forum);
 - Registration of the trademark of the acronym "ENC";
 - Results of the work developed by the WEND Work Group;
 - NAV-54: the mandatory ECDIS carriage and *E-Navigation*, and correlated issues, such as the new S-66 publication (Facts About Electronic Charts and Carriage Requirements);
 - *Status* of the ENC coverage: Reports from the Regional Hydrographic Committees; PRIMAR and IC-ENC Reports and the IHB Report;
 - Consistency of the ENCs: The experience of the Baltic Sea Hydrographic Commission and the East Asia Hydrographic Commission;
 - WEND principles: Report, presented by the IHB, of problems found in the available ENCs;
- Presentation of a proposal for the revision of Principles made by a WEND WG;
- Relationship with the industry: 4th ECDIS *Stakeholders* Forum (ESF-4);
 - Transference of the WEND tasks to the new Inter-Regional Coordination Committee (IRCC);
- and
- Other issues: Presentation made by the USA on the status of the Digital Navigational Charts (DNC) within the United States;

2.3 Relevant aspects

a) Regional Hydrographic Committees (RHC):

i. The XVIth International Hydrographic Conference, in its Resolution No 16, decided that "... the Regional Hydrographic Committees must yearly report to WEND..." the status of the coverage range and the quality of the ENCs within their regions. The MACHC has not sent in the Report. Its representative presented an overview of the situation in the region and asked that the information be included in the Report; and

ii. The CHRs were required to set up a program for the production of ENCs, prioritizing the charts of small scale, covering the main routes and ports.

b) National Hydrographic Services:

i. Some Hydrographic Services keep distribution and updating services, including Navigation Warnings, just in the official language of their countries. Once this is a world service, it is

¹ SPWG: Strategic Planning Work Group;

IC-ENC: International Centre of Electronic Navigational Chart;

HCIWWG: Hydrography and Cartography Inland Waters Work Group.

² CLIA: Cruise Lines International Association

RTCA: Radio Technical Commission for Aeronautics

essential that it also be provided in English. The Hydrographic Services of South America were used as an example for this purpose;

ii. Some of the difficulties faced by the users of digital navaids is the insufficient normalisation (or, at times, conflicting normalisation) of the issue on the part of the coastal states.

c) Coverage of the ENC's:

i. The IHB informed that the world coverage of the ENC's in JULY 2008, according to the definition decided by the IMO during the NAV-54 meeting, is the following:

- Small Scale (planning) – 94%;
- Medium Scale (coastal proximity) – 68%;
- Large Scale (ports) – 65%.

ii. The IHO must send a yearly report to the IMO about the situation of the ENC's;

iii. The main obstacle for the coverage of the ENC's within some regions, mainly from Africa, is the lack of updated data.

d) Quality of the ENC's:

i. The major factors which compromise the quality of the ENC's are the poor use of the SCAMIN³ and the lack of coordination among the Hydrographic Services, principally concerning the limits of the cells, in case of unacceptable overlapping;

ii. The Baltic Sea Hydrographic Commission presented a Project for the harmonization and enhancement of the ENC's produced by the countries of the Region which can be perfectly adapted to the MACHC. The documentation is available with their representative who is authorised to pass it on to whomever requests it;

iii. The lack of updating of the ENC's has turned out to be a cause for the degradation of the quality of the ENC's, compromising the prestige not only of the Hydrographic Service but also of the entire hydrographic community. The IC-ENC has recently interrupted the distribution of the ENC's produced by two Hydrographic Services, requesting that the distributors warn their users that they are not reliable;

iv. The Hydrographic Services are strongly urged to set up an International Quality Certification System for the production of the ENC's;

e) Distribution of the ENC's:

i. Some Hydrographic Services do not use the RENC's for the distribution of their ENC's. It has been observed that the non participation in a RENC, presently, turns out to be a risk for the quality of the ENC's;

ii. The distribution of the ENC's by the RENC's implies some costs which can only be covered as the ENC's are commercialised. In case there is little commercialization of the ENC's, the Hydrographic Service shall have a permanent negative balance before the RENC's;

iii. The distributors request the permission distribute unencrypted versions of the ENC's ("SENC format"), once it makes the loading of the ECDIS more flexible and easier.

f) Price of the ENC's:

i. The ENC distributors insist on alternatives of licensing the cells and prices, such as, shorter periods and "pay per use";

ii. Japan, distributes their ENC's directly and they presented the price model they have been using to do that, this mode is an alternative to the prices charged by the current RENC's;

iii. The IC-ENC will stop pricing the ENC's per cell unity; they are going to start doing it according to the size of the cells. This alteration is going to affect the administration fees charged.

g) WEND principles. The Committee approved of the "Guidelines for the Implementation of the WEND Principles", which are attached to this Report;

h) With the transition for the new structure of the IHO (closing of the WEND activities, transferring two tasks to the Inter-Regional Coordination Committee - IRCC), it is recommended that the electronic chart policy be elaborated by a Work Group under the coordination of the IRCC;

i. Miscellaneous: During the NAV-54, the IMO issued a non-numbered Circular Letter of the IMO "Guidance on Transitioning from Paper Chart to ECDIS Navigation", which lies the foundations for the establishment of national norms for the navigation with digital resources.

2.4 Resolutions and recommendations

a) **Chair ESF-4** to raise the issue of customizing S-63 at ESF-4 to seek stakeholder confirmation that no further action is required.

b) **IHB** to monitor and report regularly on status of global ENC production and availability obtaining input from RENC's, RHC's and other relevant sources.

c) **IHB** to inform Member States by CL that the assistance of the DC is always available to approach the relevant authorities (including at senior governmental levels) using appropriate diplomatic, inter-governmental or other points of contact to raise the levels of awareness and commitment to provide appropriate hydrographic services, especially ENC coverage. **IHB** to then take

³ SCAMIN is a number of attributes which define the way in which the ENC must be built, observing a minimum value of the scale of the chart.

appropriate action based on individual responses, taking note of the drafting notes prepared by WEND-11 Drafting Group in response to X-WEND-1 Action 5.

d) **IHB** to prepare a submission to IMO MSC inviting IMO to remind its MS of their obligations under SOLAS V/9.

e) **IHB** to prepare for MSC85 and MSC86 in relation to carriage requirements for ECDIS.

f) The **RTCA delegate** to convene a Correspondence Group on *Data Chain Certification Concept*.

g) The **RTCA delegate** to present the *Data Chain Certification Concept* to CHRIS-20.

h) **IHB** to recommend that CHRIS members be invited to participate in the correspondence group on *Data Chain Certification Concept*.

i) The **RTCA delegate** to present a progress report from the Correspondence Group on *Data Chain Certification Concept* to IRCC-1.

j) **IHB** to issue CL informing MS of the new edition of the South China Sea ENCs.

k) **IHB** to invite CHRIS/HSSC to consider developing guidelines for the preparation and maintenance of small/medium scale ENC schemes and determine whether they should be included in S-65 or a new document similar to M-11.

l) **IHB** to invite relevant RHCs and INT chart coordinators to coordinate the development of small/medium scale ENC schemes.

m) **IHB** to consider the potential use of the IHO Chart Catalogue on the web in support of the development of small/medium scale ENC schemes.

n) **Chair ESF & IHB** to prepare a CL highlighting ESF-4 feedback relating to licensing, pricing and distribution of ENCs.

o) **IHB** to propose the inclusion of a discussion on ENC licensing, pricing and distribution under the umbrella of the 4th EIHC.

p) Chair WEND & IHB to prepare a transition report, circulate the draft to WEND-11 participants and then submit final report to IRCC.

q) Chair WEND to recommend to IRCC to consider establishing a WEND TG with the TORs and ROPs agreed by the WEND-11.

3. Conclusions and Recommended Actions

a) In the present scenario, in order for a Hydrographic Service to keep technically updated – as well as to be able to influence decisions which involve high investments and fund raising –, it is indispensable to set up bilateral cooperation arrangements with other Hydrographic Services for knowledge and technology interchange. With this objective in mind, it is recommended that MACHC work hard in order to have a representative on the new WEND work group which is being created by the IRCC.

b) That the ENC is not a product, but it is a service! A world scale service, and not only regional or national, with interdependence among various actors. The ENC itself does not substitute for the paper navigational chart. It has its own operational system which, even though compared to a paper navigational chart, works in a distinct way, within a specific culture. This culture and system are not fully recognised by some Members States, and it requires a greater involvement and commitment of diverse actors (Committee, Work Groups, etc.), for the elaboration of codes to the licensing and distribution systems, as well as the production, quality and updating, so as to make for the development of a consistent and updated MACHC performance within this sector.

MACHC is invited to take note of this Report and produce a Work Plan aligned with the Resolutions and Recommendations made.

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Enclosure:

Annex - *GUIDELINES FOR THE IMPLEMENTATION OF THE WEND PRINCIPLES*

Annex

11TH WEND COMMITTEE MEETING Tokyo, 2-5 September 2008

GUIDELINES FOR THE IMPLEMENTATION OF THE WEND PRINCIPLES

Proposal of the Drafting Group

The International Hydrographic Organization (IHO) is encouraging the transition from paper charts to electronic navigation through its support of a carriage requirement for ECDIS. It follows that the IHO should ensure that mariners are well served by adequate ENC services.

Noting that there are significant improvements required related to coverage, consistency, quality, updating and distribution of ENCs for many parts of the world and that this needs urgent attention, the Wend committee invites IHO Member States to apply the following guidelines for the implementation of the Wend principles (Technical Resolution K2.19).

1. Responsibilities of Coastal States

1.1. A mandatory carriage requirement for ECDIS means a consequential obligation on Coastal States to ensure the provision of ENCs.

1.2. If the coastal State is the issuing authority (in terms of SOLAS V 2.2) then responsibility for the ENCs should lie with it regardless of whether the production and maintenance is undertaken with the assistance of commercial contractors or another Member State.

1.3. Where agreement is given to another Member State to produce and issue ENCs on behalf of a Coastal State the producing / issuing Member State should carry the responsibility for the ENC.

1.4. States providing source data to another State for the compilation of ENCs should advise that producer State of update information in a timely manner.

1.5. Member States should take into consideration the complexity and resource requirements of the ENC production and maintenance task in relation to their own capabilities and options when deciding how to best ensure the provision of ENCs for their waters.

1.6. Subject to appropriate agreement, it is acceptable for a Member State or a group of Member States to produce ENCs as an interim measure to fill gaps in existing coastal States' coverage to promote contiguous coverage. Such ENCs should be withdrawn when adequate coverage is made available by the coastal State.

1.7. The S-57 standard requires that there is no overlap of ENC data within usage bands. ECDIS systems will operate unpredictably in areas where overlapping ENC data is present; for this reason overlapping ENC data is not acceptable in end-user services. Where overlapping coverage exists the producing States should recognize their responsibility and take the necessary steps to resolve the situation. In situations where overlapping data cannot be resolved through negotiation, the ENC producer(s) can anticipate that an end user service provider may need to take action itself to eliminate the overlap or discontinue services until the issue is satisfactorily addressed. Any such action to eliminate overlap should be communicated in advance to the affected ENC producer(s) and be based on guidelines that emphasize navigation safety, such as the following:

1. Scale of the data compiled in the ENC,
2. Currency of data in the ENC - i.e. most recent surveys, shoalest soundings, wrecks, rocks, and obstructions,
3. Avoidance of dividing navigationally significant features between producers. For example, Traffic Separation Schemes should be handled by one producer or the other.

1.8. Exceptionally, a Member State may create additional ENCs to facilitate unified coverage where such production is undertaken specifically to address issues inhibiting provision of ENC coverage for the safety of navigation in accordance with the long term aims of the WEND Principles. A Member State undertaking such production should have very valid reasons for its actions and, beforehand, should have made reasonable efforts to negotiate with and come to some agreement with the State that has jurisdiction over the area in question. RHCs should place a high priority on filling ENC gaps.

1.9. In order to ensure uniform quality and consistency of the WEND, Member States should cooperate in accordance with clause 1.3 of the WEND Principles.

1.10. To ensure that the WEND database is maintained to the highest quality standard Member States that identify an error or any other deficiency in an issued ENC, or that receive information indicating such a deficiency, must bring this to the attention of the ENC producer so that the problem can be resolved at the earliest opportunity. Member States should act to ensure that appropriate actions are taken so that the safety of navigation is not compromised.

2. Reference Standards and Implementation

2.1. Harmonization means the uniform implementation of S-57 and other applicable standards, according to common IHO implementation rules as described in S-58, S-65 and the S-57 Encoding Bulletins.

2.2. Member States not wishing to join a RENC should make appropriate arrangements to ensure that their ENCs meet WEND requirements for consistency and quality and are widely distributed.

3. Capacity Building and Cooperation

3.1. Assistance to coastal States may cover aspects such as development of an ENC production capability, ENC quality and the role of RENCs in ENC validation and distribution.

3.2. It is essential that coastal States have established cartographic capability and infrastructure prior to undertaking ENC production and maintenance tasks themselves so as to ensure that the ENCs within the WEND database meet the high quality standards necessary to fulfil SOLAS requirements.

3.3. IHO Member States should consider ENC related projects as high priority capacity building initiatives.

4. Integrated services

4.1. Member States and RENCs should cooperate to ensure that ENCs are harmonised to the same quality standards thereby facilitating integrated services.

4.2. Member States only need to consider the use of S-63 if they intend to deliver a service to end users. Data Servers (i.e. service providers) and equipment manufacturers are responsible for implementing S-63 and form part of the 'S-63 trusted circle' (i.e. are entrusted to protect the ENCs and the encryption process).