

**REPORT of the 1st IHO SEMINAR FOR THE EAthC  
NATIONAL HYDROGRAPHIC COMMITTEE CHAIRMEN  
Trieste, Italy, 10 – 14 October 2005.**

## **General**

The East Atlantic Hydrographic Commission (EAthC), and the Capacity Building Committee of the IHB conducted a one-week Seminar for the Chairmen of National Hydrographic Committees (or equivalent) of the countries in the region of the EAthC, as a follow-up action of its previous successful meetings.

The Seminar's objective was to raise awareness at governmental level of the importance of Hydrography to safety of navigation and national economic development, and to explore initiatives of common regional interest. In particular the seminar was arranged to aid in the development and / or the improvement of the existing Hydrographic capabilities in the West and Central African Region following a special request made by several United Nation Assembly resolutions.

The initiative was jointly organised by the IHB and the Chairman of the East Atlantic Hydrographic Commission (EAthC), with the strong support of some IHO Member States of the Commission and other international organizations. Coordination was made with the International Maritime Academy (IMA), the seminar taking place on the 10-14 October 2005 at the IMA premises in Trieste Italy. As well as a number of IHO Member States contributing to this initiative were the following organizations: IOC, PMAWCA and FIG.

Representatives from Benin, Ghana, Gambia, Guinea Bissau, Senegal and Togo attended the Seminar.

## **Program**

Speakers were from Chile (1); Croatia (2); France (3); Portugal (1); Spain (1); UK (3); IOC (1); FIG (1); PMAWCA (1) and IHB (1). The program of the Seminar covered 5 days; the first three days were focused on 6 general aspects, Units 1 to 6:

- Unit 1: Introduction to the Seminar.
- Unit 2: Generalities associated with Hydrography.
- Unit 3: The Organization of a National Hydrographic Office.
- Unit 4: Application of Hydro-Cartographic Products and Services.
- Unit 5: Economic benefits associated to Hydro-Cartographic Products and Services.
- Unit 6: The National Hydrographic Committee or equivalent.

And the next two days were focuses on regional aspects, divided in two Units:

- Unit 7: Regional Situation and Opportunities.
- Unit 8: Development of the basis for Regional Project(s).

## **Contents of the Seminar.**

### **Opening Remarks:**

Captain Gorziglia, IHB Director, welcomed all participants and explained the mission of the IHO and its main governing bodies. He expressed that “capacity building” has been always one of the most important activities of the organization. He provided information on the activities of the Regional Hydrographic Commissions and the Capacity Building Committee. He indicated that the Seminar has been especially organized for the countries in the EatHC region, and invited participants to take advantage of this opportunity.

Professor Iginio Marson, President of the IMA, welcomed participants to the Academy and expressed the Academy’s satisfaction for having been considered to run such an important event. He explained that a Seminar with such an objective was absolutely in line with the aim of the Academy and all effort has been put in place to provide an adequate support to the development of the event.

L’ingénieur général Michel Le Gouic, represented the EatHC and outlined the efforts and progress since its inception in 2001.

### **Presentations and Units.**

#### **Unit 1: Introduction to the Seminar.**

Captain Gorziglia, IHB Director and Chairman of the CBC explained to the participants the objective of the Seminar and its origin. He made reference to UN resolutions requesting IHO to make a special effort towards improving the situation of Coastal African States. Then he referred to the concept under the definition of Hydrography, in the context of the IHO, making especial emphasis on the traditional uses of hydrography, associated to navigation, safe to navigation both, for military purpose as well as for shipping, and protection of the marine environment.

Afterwards he referred in general terms to other applications of Hydrography; what was the international scenario, in terms of regulations, recommendations and resolutions adopted by several international organizations, such as UN and IMO.

He briefed the participants on the objectives of other international organizations whose work is related to the work under the IHO responsibility, and therefore close relationship exists. Finally he outlined the responsibilities of Member State signatories of SOLAS, with regard to Regulation 9 “Hydrographic Services”.

#### **Unit 2: Generalities associated with Hydrography.**

##### a) Objective and specifications of hydrographic surveys

Captain Barritt (UK) referred to this matter making reference to existing publications that provide information, especially S-44. He emphasised the need of each nation to establish a prioritised national survey plan, defined with the needs of end users, reflecting SOLAS obligations and including routine re-surveys were applicable.

He explained that some or all parts of the process could be out-sourced and he pointed out that example national survey plans and of survey specifications are freely available on the internet. Then he indicated that IHO and its Regional Hydrographic Commissions (RHCs) can advise on the best option for a coastal state

b) Phases of a Hydrographic Survey

Captain Barritt explained the different phases a Hydrographic Survey. Starting from liaisons with other national authorities and the calibration of the equipment to be used, he continued stating that an analysis of the research area was crucial as well as the objective of the product. He explained it was prudent to examine ancillary observations. The definition of the instrumentation to be used should be considered in the light of the end product required.

c) Instrumentation and methodologies used.

IEC Guillam (FR) and Mr. Verrier (UK) jointly made this presentation. The first one referred to the situation at sea, and the second one as regard to the situation ashore. It was emphasized the different criteria to select instrumentation and the methodologies used.

d) Data Processing.

The concept of data processing was presented by Mr Verrier (UK). He made emphasis on the importance of assessing new data as key information found during the process could have an effect on safety to navigation. A system should be put in place to issue urgent notice to mariners and to update existing charts and publications.

e) Hydrographic and Cartographic products and services.

This matter was covered by Mr Verrier (UK). The presentation provided details on the products that are vital to the mariner. Certainly they should be updated and cover the expectation of a safe navigation. Emphasis was made in the fact that the chart is a tool that the mariner's life depends on; therefore it cannot be risked to put a product, which could put lives in danger.

f) Nautical Publications.

Again Mr Verrier (UK) presented this topic. The main publications were considered, such a Sailing Directions, List of Radio Signals, Tides and List of Lights. An overview of many other publications was also provided.

g) Importance of Updates.

Mr Varrier (UK) presented this subject making emphasis on the importance of accurate Nautical Information, the mechanisms that can be used to distribute accurate nautical information and he illustrated the kinds of data that are important. Technological Developments.

Under this part, both, IEC Guillam (FR) and Mr Varrier (UK) made reference to the new technologies in use. Mainly a wide description was made of Multibeam Echo-Sounder techniques and on ENC, but especial emphasis was also made on the help electronic equipment and digital databases provide.

### **Unit 3: The Organization of a National Hydrographic Office.**

Both, the representative of Chile, Lt Silva and the representatives of Croatia, Dr. Grzetic and Captain Bradaric gave presentations on their Hydrographic Offices. A clear picture on the responsibilities assigned by law in each country, as well as the organization, regulations, infrastructure, personnel, technology available, training and funding issues were explained in great detail.

**Unit 4: Application of Hydro-Cartographic Products and Services.**

## a) Shipping

This part was presented by Captain Barritt (UK). He made reference to the importance of safe shipping routes and the identification of the course that should be followed, based on the characteristics of the waters. The service a port provides should be made available to the mariner and it was highlighted that the quality of charted information helps to sell the port as a chosen regional hub.

## b) Defense

Captain Barritt (UK) highlighted the application of hydrography to several patrol operations that a maritime country could decide to implement, such as fisheries, customs, anti-terrorist, and he made reference to regional humanitarian operations in case of evacuation of endangered people.

## c) Maritime Delimitation

IGA Le Gouic (FR) provided a very detailed analysis of UNCLOS and the potentiality a maritime state has as regard to extending its area of interest. He made especial emphasis that the establishment of maritime boundary following UNCLOS and the technical guidance by the Continental Shelf Commission requires hydrographic activities. Also, he highlighted that the delimitation of the maritime border between countries contributes to avoid different types of conflict between States.

## d) Environmental protection

Commander Gamundi (SP) presented this matter. He referred to MARPOL Convention and the establishment of Special Areas, such as Particularly Sensitive Sea Areas, Restricted Areas and Marine Reservations. He emphasized that only through the proper knowledge of the hydrographic characteristics of any area, its definition, administration and control could be made properly.

## e) Natural hazard mitigation

Captain Gorziglia, citing the recent tsunami events, made a presentation referring to the importance of ocean and coastal bathymetry in the awareness phases of natural hazards. He highlighted the importance of local coastal cities to prepare tsunami inundation maps for planning purposes, mainly for establishing evacuation routes with emphasis on the contribution of hydrography to save lives.

## f) Fisheries and Aquaculture

Commander Gamundi (SP) presented this topic, highlighting the economic importance of these two activities and the need to have areas clearly indicated in the charts. The position as well as the signalling was considered very important to assure the installations being free from collisions. Bathymetry was also indicated to be crucial for the definition of appropriate areas to establish farms.

## g) Tourism

Commander Gamundi made a presentation highlighting tourism issues as regard to hydrography. Mainly he pointed out the need to have leisure nautical charts providing different and complete information to assure a safe use of the sea and to facilitate the activity. It was emphasized that it can be the same official nautical chart, but with different other layers.

## h) Coastal Zone Management

IGA Le Gouic was in charge of presenting this matter. He made an especial reference to the definition of ICZM, as the coastal area is the location for several independent activities, all taking advantage of the favourable conditions available. Littoral protection and the management of the littoral land were highlighted as activities of increasing concern. He stated that all activities have an economic component and either private or public users need

littoral geographic information, where hydrography is a key component. Another element raised was the importance to characterize the coast in order to identify the most convenient use to be assigned to this limited resource.

i) Non-living resources

Mr. Johnston (FIG) gave a presentation including the activities associated to the exploration and exploitation of the sea bottom resources. He made a detailed description of the components of all these activities, where technology as well as the investment has a considerable cost. The engineering aspects of these activities require a very detailed description and knowledge of the seafloor. It was highlighted the importance of the data gathered during the research operations and the requirement to chart all underwater installations as they could be damaged by surface vessels anchoring or conducting trawling.

j) Marine scientific research

Mr. Travin (IOC) referred to the efforts IOC is doing to improve the MSR capabilities through capacity building. An IOC capacity building strategy has been established to guide this effort. It was emphasized the degradation of marine resources and the augmentation of the effects of natural hazards has been faster than the capacity to manage and preserve the resources.

### **Unit 5: Economic benefits associated to Hydro-Cartographic Products and Services.**

Mr. Johnston (FIG) was in charge of delivering this presentation. Firstly he referred to the work of FIG Commission 4 Hydrography in supporting and promoting capacity building and its relationship to the IHO, concluding in that Capacity Building is possible and also necessary to become aware of the significance of the contribution of hydrography to all activities that take place in the ocean and seas. He highlighted that capacity building should be sustainable otherwise the initial effort is lost. Afterwards he referred to the organizational structure of the private sector involved in maritime affairs and provided figures of the evolutions of different activities. Also he provided a description of the characteristic of both, the industry and the government sector. It was made clear that we must identify possible projects that Hydrography could get support with, such as Environmental, Navigation (SOLAS) and Trade & Commerce (fighting poverty etc). In this endeavour, the Hydrographic Industry should be considered an important partner and contributor to a nations development.

### **Unit 6: The National Hydrographic Committee or equivalent.**

Captain Gorziglia (IHB) referred to the objectives of a national component that could act as an advisor body to the government in coordinating the hydrographic effort. On one side he identified those governmental agencies providing data and on the other side all those agencies acting mainly as users of the data. He provided examples on how the constitution of a NHC has taken place recently in some countries and provided some guidance on which have been its priorities in terms of work program.

### **Unit 7: Regional Situation and Opportunities.**

This session discussed and reviewed the situation in the West African region using examples of cooperation and collaboration to outline successful projects and initiatives.

One such initiative is the project to develop potential Maritime Routes up and down the West African coast (Autoroutes Maritimes Ouest Afrique). This session included a period when the

participants break out of the presentation and form work groups to assess the situation and develop possible scenarios for further work.

In fact this session was not particularly successful as there was a tendency to jump straight into developing routes rather than assessing the risks and local conditions that might impact on any such decisions. Also a number of the participants felt it was inappropriate to develop the project further without sufficient representation and involvement of more of the Member States.

Madame Backo, the Secretary General of the African Ports Association presented her perspective and that of the Ports to the issues relating to hydrography, responsibility, benefits and the investors in such activities. This was most useful as it effectively represented a User and Client for the Hydrographic data and services being discussed during the seminar.

### **Comments.**

Overall the seminar was useful as it promoted Hydrography, FIG and enabled the attendees to appreciate the issues relating to these activities within the West African region. A shortcoming was the somewhat split objectives apparent from the IHB and SHOM in that the former was simply creating awareness and an understanding with the attendees regarding Hydrography whereas the EatHC chairman was interested in pursuing the concept of developing specific maritime routes along the west African coast from Morocco to the Bight of Benin.

The latter objective did not sit well within the audience who were primarily focussed on ports and harbours rather than international maritime issues and with a split between the Francophile and Anglophile States there was not the necessary harmony and understanding to progress this project.

As regards the input and contribution of FIG, I felt this was useful as it offered a quite distinctive perspective not otherwise covered. In particular the offshore hydrocarbon exploration and exploitation activities in West Africa seemed to be underestimated and an area where the Member States could develop regimes to encourage and promote the collection and even management of Hydrographic data. Whether the opportunities shall be recognised and captured is unclear but at least some positive aspects were delivered.

FIG meets in Accra, Ghana in 2006 and it was suggested that this would offer a good forum to pursue further these topics and to strengthen the message that Hydrography was a key element in the West African nations development of and sustained economy.

After 5 days all delegates and attendees had a much better perspective and understanding of the situation in West Africa, the current issues and challenges that faced the development of Hydrography in the region and good relationships created between those present.

G Johnston  
November 2005