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MINISTÈRE DE LA DÉFENSE

SERVICE HYDROGRAPHIQUE
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DIRECTION DE LA STRATEGIE,
DE LA PLANIFICATION ET
DES RELATIONS EXTERIEURES

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NHC Seminar Report

Subject : Report of the Seminar organized on the occasion of the 7th Conference of the Southern Africa and Islands Hydrographic Commission of the International Hydrographic Organization.

Reference : SAIHC CL 01/2009 dated 21 April 2009.

Enclosures : Annex 1: List of participants to the seminar.
Annex 2: Seminar programme.
Annex 3: Questionnaire statistics.

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The 7th Conference of the Southern Africa and Islands Hydrographic Commission (SAIHC) was preceded by a seminar for Chairmen of National Hydrographic Committees, National Maritime Safety Committees or equivalents, held in La Réunion, France, on Monday 14 and Tuesday 15 September 2009. The objectives of the seminar were to raise awareness of the importance of hydrography and to identify the way to establish a hydrographic structure in Coastal States.

Participants

Salustiano Ferreira, Manuel Narciso (Angola); Anfane Said (Comoros); Gilles Bessero, Jean Laporte and Gwladys Theuillon (France); Rija Andriamihamina, Bruno Razafindrazaka-Andriamparantsoa (Madagascar); Michael Mzunzu, Daniel Gondwe (Malawi); Mohammed Roojee (Mauritius); Humberto Mutevuie, Ilidio Goenha (Mozambique); Tony Raw (Namibia); Noralf Slotsvik (Norway); Ventura Soares (Portugal); Michael Rosette (Seychelles); Igniatious Nhnyete (Tanzania); Paul Canham, Graham Denslow (UK); Stanley B. Harvey, Jerry Gathof (USA).

The representatives of South Africa could not attend the meeting because of unforeseen events. In consequence, Gilles Bessero acted as chair of the seminar.
Other participants from various organiszations attended the seminar: Alexandros Maratos (IHB), Neil Guy (GEF-WIO/MHD /CMC), Raj Prayag (GEF-WIO/MHD /CMC & Indian Ocean Commission), Gurpreet Singhota (IMO), Dimitri Travin (UNESCO/IOC).
Survey companies were also represented by Maarten Peters (Caris); Art Kleiner, Aubrey Price (C&C Technologies); Michael Bergmann, John K. Klippen, Justin Hornby (Jeppesen); Ephan Potgieter (Underwater Surveys). Exhibits were presented by the survey companies (Caris, C&C Technologies, Jeppesen, Underwater Surveys).

The list of attendees including all participants' details is attached in annex 1.
The final programme of the seminar is given in annex 2.
Participants were requested to fill a questionnaire in order to better understand their expectations from this seminar. Statistics resulting from this questionnaire are given in annex 3.

All the presentations given during the seminar have been copied on a CD-ROM which will be distributed to the attendees.

Monday 14 September

Introductory words: welcome and opening address

Jean-Marie Coupu, Head of Maritime Affairs in La Réunion (France), welcomed the participants on behalf of the Préfet of La Réunion and whished the participants a fruitful seminar.

Gilles Bessero, acting chair of the seminar and representative of France, the hosting nation, in the International Hydrographic Organization, gave the opening address. He noted that hydrography in the SAIHC region is complex whereas the maritime stakes are huge. He recalled the objectives of the seminar: to raise awareness of the importance of hydrography for safety of navigation and national economic development, and to identify the way to establish a hydrographic structure in developing countries. He stressed that regional and bi-lateral co-operation under the aegis of the International Hydrographic Organization (IHO) and in liaison with other organizations is the key to achieve this realistically and sustainably by promoting and assisting in the development of national hydrographic committees.

Alexandros Maratos, President of the Directing Committee of the International Hydrographic Bureau, emphasized that the two official languages of the IHO, English and French, well fit in with the seminar attendees. He gave the new definition of hydrography as approved during the 4th Extraordinary International Hydrographic Commission in June 2009. He stressed that hydrography is not only a necessity but also an obligation.

Presentation of the objectives of the seminar *(Alexandros Maratos, IHB)*
The main objective of the seminar is to make sure that countries within the region are well aware that the provision of hydrographic services is an international obligation under treaty law affecting all Member States of the International Maritime Organization (IMO) and that they take the necessary steps to meet their obligation, noting that most African countries are IMO Member States but are not IHO Member States. The importance of hydrography for

safety of navigation and national economic development was raised through data collection, charts production and maritime safety information. More than 80% of the world goods by volume are transferred by maritime transport. Penalties for inactivity in hydrography were reminded: risk of increase in marine accidents, lack of confidence from shipping companies in ports and routes, limitation of international trade, missed economic opportunities, environmental impacts, liability and litigation. He invited delegates to express assistance requests in order to establish their own hydrographic capability to meet their obligations under SOLAS Regulations.

Morning session

Importance of nautical information

Hydrography: International Obligations on States (*Alexandros Maratos, IHB*)

Obligations and commitments under SOLAS and UN Resolutions were developed and States responsibilities were stressed:

- Mariners obligations
  SOLAS (V/19) carriage requirements for navigation equipment,
  SOLAS (V/27) nautical charts and publications,
- Government obligations
  SOLAS (V/9) provision of hydrographic services,
  SOLAS (V/4) navigational warning.

The lecturer highlighted the role of IHO in assisting countries of the SAIHC area to meet their SOLAS obligations. These obligations could be met directly via governments, bi-lateral assistance from other States or using commercial support providers.
Hydrographic survey is a necessity if Coastal States are to meet their obligations under the SOLAS Convention for safety of life at sea and protection of the environment but it is also an important means to facilitate economic development. The benefits of hydrography for Coastal States were then presented.

Roles and Functions of the IHO (*Alexandros Maratos, IHB*)
Roles, functions and organization of the International Hydrographic Organization, the International Hydrographic Bureau (IHB) and the Regional Hydrographic Commissions (RHC) were explained.
The benefits of RHC membership (as Member States, associate members or observers) were emphasized in relation to benefiting from Capacity Building assistance. IHO membership should be similar to IMO**.**

IHO Capacity Building and Developing Hydrographic Capabilities (*Alexandros Maratos, IHB*)
The building of hydrographic capacity allows Coastal States of the SAIHC region to meet their SOLAS international obligations. Capacity Building Funds, activities and work program were introduced. Capacity Building principles and processes are built around the four following steps: awareness (raising importance of hydrography), assessment (identification), analysis (prioritization) and action. The last step, corresponding to the building of hydrographic capacity was then developed:

- Collection and circulation of information to maintain existing charts and publications: every State can (and must) get to this phase.

- Creation of a survey capability. This phase requires the State's commitment to sustain capability and funding for personnel and equipment or contract surveys. IHO CBSC can assist in training/technology transfer.
- Production of charts and publications. Independent national capability at this level requires high levels of investment and continuous support in the long term.

In order to conduct hydrographic activities, each country shall determine what infrastructure already exists for Maritime Safety Information, hydrographic survey and provision of navigational charts. This can be achieved through assessment visits, technical workshops and seminars, various projects (including co-operation with other International Organizations). Examples of bilateral assistance to improve hydrographic capabilities were given.

IMO Objectives and its role in the safety of navigation (*Gurpreet S. Singhota, IMO*)
The IMO and IHO co-operation was outlined. IHO's involvement to promote safety of navigation and protection of the marine environment through Capacity Building, the development of international standards for hydrography, inputs to IMO's technical bodies… was highlighted. Inversely, IMO whose mandate is related to safety of navigation and protection of environment can promote hydrography but cannot take decisions instead of governments. SOLAS Chapter V Resolutions were developed. Current status of long-range identification and tracking of ships (LRIT) implementation was given.

In order to answer the question raised by the President of the IHB Directing Committee "Why IMO Members are not IHO Member States and how to improve IHO membership in Africa?" a discussion closed the first theme.
The complexity to apply for IHO membership was stressed.
Following a question of the representative of Mozambique, the feasibility to include IHO in the UN structure was discussed (because IMO which depends on UN and IHO are closely linked). It was recalled that this issue had been addressed by the IHO Strategic Plan Working Group (SPWG) which identified three options: statu quo, join the UN structure as a specialized body and join the IMO. After analysis, it seemed not appropriate for IHO to join the UN system with the risk to get embroiled in political issues. It was agreed that the IHO should remain an independent intergovernmental organization of its own right. This decision does not affect the close link between IMO and IHO.
The main obstacle to join IHO remains the lack of resources (manpower and equipment). Malawi stressed the difficulty to access training. It was recalled that training facilities is not restricted to military structures. In Seychelles, the hydrographic tasks which requires a lot of resources is considered as a load. In consequence, it is not identified as a priority for the government. In numerous Coastal States of the SAIHC region, it is difficult to identify the proper hydrographers to be trained, to find them a job at the end of the training period and to keep them in the national hydrographic structure. The problem of sustainability was raised.

Afternoon session

The basic activities of hydrographic offices: the IHO M-2 publication related to National Maritime Policies and Hydrographic Services.

The importance of accurate nautical information *(Paul Canham, UK)*
Phase I of the Capacity Building: collection and circulation of information to maintain existing charts and publications

The lecturer developed the context and stakes. Penalties for inactivity and benefits for accurate nautical information (charts, publications and services) were highlighted.
Under the framework of safety of navigation, nautical charts and publications support the mariner for passage planning and navigation and provides port and harbour information. Safety of navigation also depends on the distribution of available, accurate and timely nautical information through urgent radio navigational warnings (RNW) and documentation updates.
The definition of Maritime Safety Information and the content of nautical information were given. NAVAREA warnings were developed. In the SAIHC region, South Africa acts as NAVAREA VII coordinator and India as NAVAREA VIII coordinator.
The importance of maintaining nautical charts and publications up-to-date was stressed. This task is carried out through Notices to Mariners for a permanent, temporary or preliminary update and through New Editions.
To conclude, a vast amount of nautical information, services and products is available to the mariner. The importance of keeping products up-to-date was stressed in relation to the international obligations and responsibilities of Coastal States. Relevant information must be provided to the charting authority.

Methods and instruments to optimize surveys *(Jean Laporte, France)*
Phase 2 of the Capacity Building: creation of a survey capability
The different steps of the roadmap to establish a prioritized survey plan was presented. Works to be achieved shall be identified and prioritized, regarding what exists and what needs to be done, the resources and the user needs. Once the national survey plan is formulated, the survey proceeding is articulated around the following axis: review of information available, delineation of area to be surveyed, selection of the appropriate equipment, validation and storage of data. Strategy adopted for a survey depends on the objectives and means available.

Nautical chart production *(Graham Denslow, UKHO)*
Phase 3 of the Capacity Building: production of charts and publications
User requirements shall be established. Different users have different needs (scale, accuracy). IHO M-2 publication and the benefits of establishing a national chart series were introduced. Chart scheming and chart content were highlighted. The different steps of the chart production were presented: compilation, verification, validation, printing, distribution and maintenance up-to-date. Existing charts (accuracy, age, quality, data source) shall be identified with critical evaluation. The importance of source data types was stressed.

Data management – a separate activity? *(Noralf Slotsvik, Norway)*
Nautical information must be available timely and up-to-date.
Coastal States of the SAIHC with limited in-house capability resort to external partners (co-operation, regional programs contracts) for surveying and chart production. Nevertheless, sometimes no data is available at the national hydrographic office whereas a lot of information already exists from various sources. In consequence, data management should be a core activity of the national hydrographic infrastructure, while data collection and nautical products can be shared with other partners. In addition to the three phases of the IHO M-2 publication developed previously, the establishment of a data management solution should be the second step in the national maritime policies and hydrographic services process.

A discussion on the necessity to transmit existing nautical information (from local port authorities, industry...) to national hydrographic office and/or national charting authorities (under SOLAS Chapter V Regulations) closed this theme. The objective is to make the nautical information available. Agreements between countries and charting authorities should

be formalized. The example of South Africa was given to illustrate a working interaction between hydrographic office and ports.

The Organization of a National Hydrographic Office

Economic impact and benefits of hydrography *(Stanley Harvey, USA)*
Noting that the maritime traffic increases and that hydrography in Africa is often inadequate (unsuitable scale and accuracy, documentation not up-to-date…), the objectives are to convince governments to invest in hydrography as an enabler of economic growth and to obtain governments' commitment. To demonstrate this important issue, the various benefits of hydrography that impact numerous domains were developed: marine transportation and safety of navigation, marine resources, environmental concerns, maritime boundaries, law enforcement and defence.
In conclusion, investing in hydrography saves lives, supports national security and economic prosperity and contributes to protection of the environment.

US naval oceanography *(Stanley Harvey, USA)*
The organization of the different hydro-oceanographic services in the United States was explained. NAVOCEANO activities, fleet, equipments were presented. Involvement in Capacity Building and training opportunities were highlighted.

IHPT *(Ventura Soares, Portugal)*
Activities assigned to the national hydrographic offices were identified: navigation aids, MSI, cartography, surveying. In term of Capacity Building, resources shall be made available; partners and funding shall be established to implement a hydrographic structure. IHPT perspectives of co-operation with African Portuguese speaking countries are based on education, training and technical assistance. The specification by hydrographers of adapted fleet and equipment even modest is the key to develop a hydrographic capability.

INAHINA *(Ilidio Goenha, Mozambique)*
Created in 1989, INAHINA is the young national hydrographic service and light house authority of Mozambique. Organization, policies, budget, personnel management and training were highlighted.
The paper chart production process was described and the use of S-44 IHO standard requirements was mentioned. However, INAHINA experiences difficulties in keeping pace with the evolution of IHO standards due to the training requirements, budget constraints and upgrading of equipment especially for ENC production. One solution to overcome this difficulty is the co-operation with other hydrographic offices.

Tuesday 15 September

Morning session

Application of hydro-cartographic products and services

Restructuring of a national hydrographic service *(John Klippen, Jeppesen)*

The Hydrographic Institute of the Republic of Croatia (HHI) and the Norwegian Hydrographic Service (NHS) defined the CRONO HIP (CROatian-NOrwegian Hydrographic Information Project) joint project which aims at providing the HHI with new technologies and methods for data collection, data management and chart production.

MINTEC – Maritime Infrastructure New Technology for production/management of ENC and paper Charts *(John Klippen, Jeppesen)*

The MINTEC program will provide the Norwegian Hydrographic Service (NHS) with an interface to existing back-office system and all means for production and maintenance of ENC and paper charts. Production and maintenance are based on sources and revisions collected from the primary data base and other miscellaneous formats. The MINTEC system will also support data handling through OGC (Open GIS Consortium) services (Web Map Services, WMS, and Web Feature Services, WFS).
General information on the project was given.

SDI developments in Europe (*Paul Canham, UK*)

The European directive INSPIRE (INfrastructure for SPatial Information in Europe) which aims at establishing an infrastructure for marine and geographic data was described. This will promote access to metadata, interoperability of spatial data sets, network services, data sharing, …
The role of the IHO Marine Spatial Data Infrastructure Working Group (MSDIWG) was also highlighted
The UK Marine Environmental Data and Information Network (MEDIN) was presented. The objective is to improve knowledge of, access to and dissemination of marine data across all sectors related to the marine community in United-Kingdom.

Introduction to MSDI: SHOM practical experience, the INFRAGEOS project *(Jean Laporte, SHOM and Maarten Peters, Caris)*

The benefits of marine spatial data infrastructures (MSDI) in hydrographic offices were highlighted. The example of INFRAGEOS-H project which aims at procuring an interoperable data base management system capable of providing better access to optimised georeferenced databases and improved information processing was given. The INFRAGEOS-H project is the first step in a broader process consisting of grouping together within a coherent system all SHOM databases.

Jeppesen Marine: navigational and logistic solutions *(Justin Homby, Jeppesen)*

A presentation of Jeppesen company, products and services was given.

Distribution of hydrographic data & products *(Paul Canham, UK)*

Admiralty products and the corresponding distribution network were presented. Based on the example of IC-ENC, RENC organization and benefits of membership were highlighted.

These presentations gave raise to a question. Which benefits can Coastal States gain from these tools acknowledging that the principal difficulty for national hydrographic services is to access existing data from port authorities, industry...? Moreover, are these sophisticated infrastructures suitable for developing countries where maritime safety has a low priority compared to other needs and where it is difficult to persuade the appropriate government authority?

Regional initiatives, projects and opportunities

Western Indian Ocean GEF - Marine Highway Development & Coastal and Marine Contamination Prevention Project *(Neil Guy, GEF-WIO/MHD/CMC)*
The West Indian Ocean is a region characterized by a high maritime traffic (30% of world crude oil), howling winds and strong currents with marine resources and fisheries. In order to increase the safety of navigation and the protection of environment, the marine highway and coastal and marine contamination prevention project was created. The main objectives are the building of capacity in the region and the assistance of countries to undertake technical work needed to meet their national obligations under the SOLAS Regulations. The project components and progress were described.

Capacity Building for countries in transition *(Neil Guy, GEF-WIO/MHD/CMC)*
To complete the Capacity Building theme already developed during the seminar, elements of context were given to better understand the situation in Africa. Despite of SOLAS Chapter V Regulations, maritime safety has a low priority in developing countries. African States need assistance with maritime safety information. The services necessary to improve trade and to ensure the safety of life and the environment need to be updated. Most ports, port approaches and critical areas in Africa need urgent and adequate hydrographic surveys. Confidence of international shipping in the information available is low.

Afternoon session

Regional initiatives, projects and opportunities (continued)

Western Indian Ocean GEF - Marine Highways: project presentation *(Raj Prayag, GEF-WIO/MHD /CMC & Indian Ocean Commission)*
The marine highway development and marine and costal contamination prevention project was presented according to the following axis: environmental challenges, risks, objectives and regional coordination. The project implementation is articulated around different components:

- Development of a regional marine highway and institutions
- Capacity Building for prevention of coastal and marine contamination
- Building capacity for regional oil spill response
- Port state control, fisheries monitoring, and project coordination and management

Components implemented by the Indian Ocean Commission were highlighted.

The Indian Ocean Commission today and tomorrow *(Raj Prayag, GEF-WIO/MHD /CMC & IOC)*
The Indian Ocean Commission's organization, budget, strategy, partnerships and funding were explained. Perspectives for the future were developed.

Improving Emergency Response to Ocean-based Extreme Events through Coastal Mapping Capacity Building in the Indian Ocean *(Dimitri Travin, UNESCO/Intergovernmental Oceanographic Commission)*
COAST-MAP-IO project goals, benefits, main achievements, sponsors, partnerships and perspectives were presented.

Manufacturers' presentation
A presentation of C&C technologies company, products and services was given.

Seminar assessment and conclusion

The seminar chair thanked the speakers for their thorough presentations.
In accordance with procedure 5 developed by the IHO Capacity Building Sub Committee which provides guidelines and rules to assess the performance and success of all Capacity Building efforts, the chair organized a wrap-up session to collect feedback, to determine if participants expectations were met, to asses the seminar and to identify future perspectives.
As the assessment should be carried out according to performance indicators rated on a scale from 0 (low) to 5 (high), attendees from developing Coastal States were requested to evaluate the following points.

Question 1: Did the seminar raise the importance of safety of navigation and are you aware of this issue?
All polled people gave a five. Nevertheless most participants were already aware of this issue and of the national obligations under SOLAS Regulations.

Question 2: Will this seminar help you in the establishment or development of a hydrographic infrastructure in your country?
All polled people gave a five. Most countries have already established a hydrographic infrastructure; the issue is to determine a roadmap to go further. Several countries raised the difficulty to be recognized at the governmental level as a proper hydrographic institution. The practical issue is a permanent need.

Question 3: What are the next steps to consolidate what already exists?

- Angola: organization of a SAIHC Conference in Angola to raise national authorities' awareness, reporting on progresses following the technical visit two years ago.
- Comoros: establishment of the service itself and outside assessment through technical visits.
- Madagascar: access to training and equipment.
- Malawi: assistance in training required (software update and equipment) and funds.
- Mauritius: training (especially for very shallow waters in lagoons) and equipment.
- Mozambique: outside assessment to evaluate which strategy to meet IHO standards (S44, S57).
- Namibia: organization of the visit of IHB in Namibia upon invitation (IHB to contact Namibian authorities and details to be provided by Namibia) and training (category A hydrographers).
- Seychelles: manpower allocated for hydrography and budget, continuous support for awareness at the government level.
- Tanzania: raising Tanzanian authorities and government awareness about the needs of hydrography, whereabouts of the head of the national hydrographic committee (Dr Dubi?).

It was noted that supporting nations in the region may not be able to sustain nine additional hydrographic offices. Only a regional approach in term of co-operation will help Coastal States in the SAIHC region to meet their maritime obligations. Mutualization of efforts and equipment will permit a gain of productivity for countries that have common interests.

In term of Capacity Building, the regional approach appeared necessary for all participants, nevertheless the training and the development of hydrographic infrastructures required to support particular needs and national specificities must be taken into account to bring a benefit to all. A better understanding of the local needs can be achieved through the IHO

technical visits and assessments. Co-operation must encourage the projects best suited to the situation of beneficiaries. For example, to allow hydrographers to follow course in their native language is a necessity. Moreover, States do not advance homogeneously in the establishment of a national hydrographic infrastructure. Countries that already perform a hydrographic activity need help; those that try to deliver services need continuous support effort and advice; those that do nothing need assistance to create a minimal capacity.

Representatives from supporting countries and industry acknowledged that training and assistance can be customized to each country.

One major concern is the sustainability of technology transfers. Training hydrographers and eventually giving them a survey boat is not sufficient. It is essential to make sure that Capacity Building will not cease at the end of co-operation programmes. On-site training, donation of the minimum equipment to enable specialists to perform their job, maintenance, faultless commitment of the beneficiaries themselves who bring the most precious contribution are the conditions of successful co-operation programmes. Moreover, supporting countries only accept to train those who will effectively work as hydrographers employed by their States in national offices.

Participants were invited to express their requirements yearly through the SAIHC point of contact of Capacity Building matters in accordance with the CBSC procedures related to request of Capacity Building Funds.

Developing Coastal States in the SAIHC region have to decide the level of national commitment to meet their international obligations. One of the roles of the International Hydrographic Organization is to help developing States to establish their own capability to provide at least updated hydrographic information to a charting authority in order to meet their SOLAS obligations and therefore fulfil their State responsibilities.

- Regional and bi-lateral co-operation is the key to acquire survey capabilities.
- The South Africa and Islands Hydrographic Commission is the regional hydrographic forum.
- The SAIHC is the access point for IHO Capacity Building and associated Funds even for non IHO Member States.

The recommendations from the seminar can be summarized as follows:

- To continue in raising the awareness of IMO members on their (rights and) SOLAS obligations and to adopt a coherent, sustainable and consistent approach in liaison with IMO.
- To obtain government commitment to push that message forward in order to get the visibility and the recognition needed to take on and exercise hydrographic responsibilities.
- To promote and assist in the development of national hydrographic committees (national commitment).
- To facilitate the development of bilateral agreements with supporting countries and transition mechanisms (one size does not fit all).
- To involve industry in capacity development programmes.
- To develop partnerships with regional maritime related fora and organizations.
- To develop replicable programmes of work to be used by donor agencies.
- To encourage associate members in joining the IHO.

ANNEX 1

Details of the seminar participants

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ANNEX 2
Seminar programme

Seminar for Chairmen of National Hydrographic Committees, National Maritime Safety Committees or equivalents

programme / timetable: 14 –15 September 2009

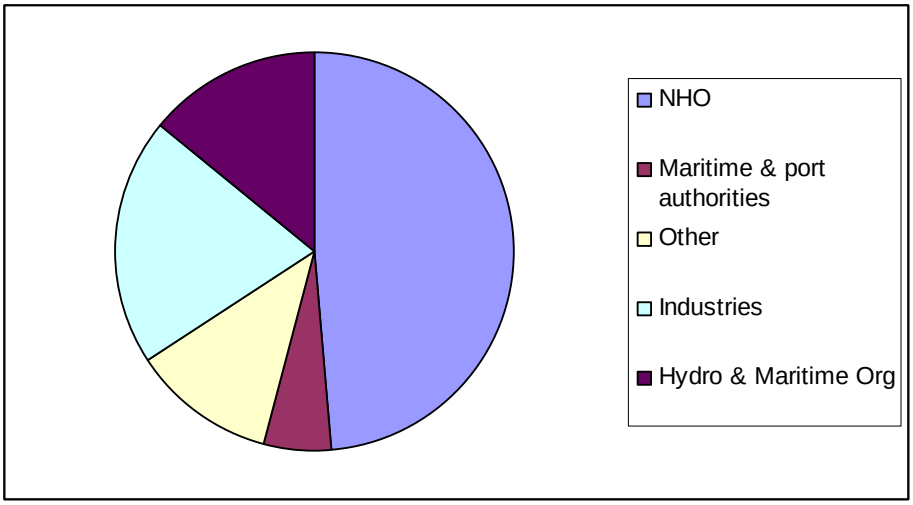
09:00	**Day 1**	
09:30	Welcome Address by Host Nation	
09:45	**IHB Opening Speech** Objectives of the seminar	IHB
10:00	*Coffee Break*	
10:30	**Morning Session** Importance of nautical information Hydrography: International Obligations on States Role and Function of the IHO IHO Capacity Building and Developing Hydrographic Capabilities IMO Objectives and its role in the safety of navigation	 IHB IHB IHB IMO
12:30	*Lunch*	
14:00	**Afternoon Session I** The basic activities of hydrographic offices: the IHO M-2 publication related to National Maritime Policies and Hydrographic Services The importance of accurate nautical information (phase 1 – MSI) Methods and instruments to optimize surveys (phase 2 – national hydrographic office development) Nautical chart production (phase 3 – charts production)	 UKHO (UK) SHOM (France) UKHO (UK)
15:30	*Coffee Break*	
16:00	**Afternoon Session II** Data management – a separate activity? Economic impact and benefits of hydrography The Organization of a National Hydrographic Office USA – Navoceano Portugal - IHPT Mozambique - INAHINA	 NHS (Norway) Navoceano (US)
17:00	Questions & Discussion	

09:00	**Day 2**	
	Morning Session I	
09:00	<u>Application of hydro-cartographic products and services</u>	
	Case Study 1: CRONO HIP joint project	Jeppesen
	Case Study 2: MINTEC	Jeppesen
	Case Study 3: INSPIRE – data interoperability	UKHO (UK)
	Case Study 4: SHOM Maritime Spatial Data Infrastructure - INFRAGEOS	SHOM (France) & Caris
10:30	*Coffee Break*	
	Morning Session II	
11:00	<u>Application of hydro-cartographic products and services (continued)</u>	
	Navigational and logistic solutions	Jeppesen
	Distribution of hydrographic data & products	UKHO (UK)
	<u>Regional initiatives, projects and opportunities</u>	
	Western Indian Ocean GEF - Marine Highways	GEF-WIO/ MHD /CMC
	Capacity Building for countries in transition	
12:30	*Lunch*	
	Afternoon Session I	
14:00	<u>Regional initiatives, projects and opportunities</u> (continued)	
	Western Indian Ocean GEF - Marine Highways: project presentation	GEF-WIO/ MHD /CMC & IOC UNESCO
	The Indian Ocean Commission today and tomorrow	
	Improving Emergency Response to Ocean-based Extreme Events through Coastal Mapping Capacity Building in the Indian Ocean	
	<u>Manufacturers presentations</u>	C&C Technologies
15:30	*Coffee Break*	
	Afternoon Session II	
16:00	Questions & Discussion	all
	Closure	

ANNEX 3

Questionnaire statistics

Your role in hydrographic activity and services in your State



What are you hoping to gain from this seminar?

Answers can be classified into four main categories.

- To improve my knowledge in hydrography and to prospect for solution to implement a hydrographic infrastructure in my country
- To better understand the needs in hydrography in the region
- To propose relationship and co-operation for the developing countries (Hydrographic offices and organizations)
- To make new contact and provide assistance in equipment or management to SAIHC Members (manufacturers)