

**INTERNATIONAL HYDROGRAPHIC
BUREAU**



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INTERNATIONAL**

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International Hydrographic Organization Report on Capacity Building

We would like to thank you for your above referenced letter. We are very honoured to be able to contribute to the General Assembly in 2010. Please find herewith the IHO's contribution to the first part of the report ""Capacity-building in ocean affairs and the law of the sea, including marine science"

In order to fulfill its mission and objectives, the International Hydrographic Organization (IHO) has identified and defined several strategic directions. One of which is to strengthen the role and effectiveness as an intergovernmental technical organization that shall respond efficiently and effectively to the needs of the maritime community, governments, science and industry for hydrographic data, information, products and services.

To achieve global coverage and availability of high quality official hydrographic data, information, products and services necessary for safety of navigation at sea and for non-navigational uses, the IHO needs to raise global awareness of the importance of hydrography on issues affecting safety of navigation at sea, protection of the marine environment, maritime security and economic development.

In order to better support the needs of Member States to fulfill their present roles and in meeting future demands to support national initiatives aimed at developing and enhancing hydrographic infrastructure, the IHO has strengthened its capacity building programme encouraging bilateral and regional cooperation on hydrographic and related matters.

As it can be noted, Capacity Building has been identified as a strategic objective within the IHO Strategic Plan. The IHO Capacity Building Programme and its activities are under the administration of the Capacity Building Sub Committee that is part of the Inter Regional Coordination and Support Programme under the responsibility of the IHO Inter Regional Coordination Committee.

1 Relevant capacity-building activities conducted and in progress.

Based on the permanent assessment of the worldwide status of the hydrographic surveying and nautical charting, the IHO considers capacity building initiatives to cover all needs, but particularly, support is provided to regions that are hydrographically least developed. These areas are the South West Pacific; Africa and the Caribbean and Central America.

The development of hydrographic capabilities consider three phases:

- 1) Maritime Safety Information management.
- 2) Hydrographic survey capabilities.
- 3) Cartographic production capabilities.

Phase one is a "must" for all maritime nations that should be capable of receiving and passing to relevant regional centres, hydrographic information crucial to safety to navigation, protection of the marine environment, development and safety. Phase two constitutes the capability to conduct hydrographic surveys of different characteristics and for different purposes, but basically, to keep existing charts updated with reliable bathymetric and safety to navigation information. It includes the gathering, processing and validating data. The third phase refers to the transformation of processed data into a nautical chart. This last phase can be worked out through bilateral arrangements, as it requires a quiet sophisticated and expensive infrastructure.

The IHO Capacity Building Program has been concentrated in technical and advisory visits, also known as phase "zero" with the main objective to raise awareness at governmental level on the importance of hydrography and on the benefits of establishing a national agency responsible for hydro-cartographic matters. These visits are paid to countries requesting such visits, by teams of experts who, after the mission, will provide a report including a description of the hydrographic national status; will offer some conclusions and propose some recommendations.

Over the past years these visits have been concentrated in Africa, South West Pacific and the Caribbean Sea and Central America, but have also included some countries in Asia and the Mediterranean.

In terms of provision of capacity building, it is to be noted that several short courses, seminars and workshops have been organized for the benefit mainly of the countries in the priority regions already identified. These events have addressed different subjects, among which we can distinguish the following: Maritime Safety Information; Survey Operations (hands-on training); Basic Hydrographic Survey; Multibeam Surveys; Chart Production including Electronic Navigational Charts (ENC); Quality Control and Quality Assurance on ENC production and on Multibeam Survey and processing; and hydrographic aspects of maritime boundaries, baselines and extended continental shelf, a program which is supported by the Advisory Board on the Law of the Sea (ABLOS) that integrates the IHO with the International Association of Geodesy (IAG). It is worth mentioning that two recent seminars to raise awareness at a regional level have been organized and provided in the South West Pacific and in the Southern African and Islands regions.

The effort to provide capacity building has been a joint effort with the International Maritime Organization (IMO) and the Intergovernmental Oceanographic Commission (IOC). In fact the IHO officers in charge of capacity building matters are in permanent contact with IMO, IOC and the World Meteorological Organization (WMO) partners to optimize the effect of each institution's capacity building programme.

The funding for the capacity building part the IHO is responsible for, comes from the regular IHO budget and the gracious contributions provided by two IHO members, earmarked for initiatives identified in the annual capacity building programme.

2 Capacity-building needs of developing countries.

The hydrographic offices of the Contracting governments to SOLAS must be able to provide to the mariners the hydrographic services specified in Regulation 9 of Chapter V of this convention. This

constitutes the general scope, nevertheless, there are other resolutions adopted by the IMO to ensure safety to navigation and protection of the marine environment that also need to be considered, as for example, the recently adopted mandatory carriage of Electronic Chart Display and Information System (ECDIS) that enters into force in 2012 for SOLAS vessels and becomes mandatory to other vessels in a defined timing, and uses the ENC's produced by the IHO Member States Hydrographic Offices.

Developing countries' needs can therefore be identified in the following areas: technical visits, training and access to technology.

Technical visits are found to be absolutely important mainly for those countries without an established national hydrographic agency or for those who need support to identify and implement the improvement of existing basic hydrographic units. The need is to build a sustainable funded national structure tailored to the particular needs and challenges of each relevant individual country. Without the formal establishment of a national hydrographic unit, chances are that any support might not achieve the expected results.

Training needs are variable, but it is recommended to follow the three hydrographic development phases. In this sense, the training to ensure the provision of maritime safety information (MSI) is a priority. This is a national activity that no third party may assume. This training is at the operational level. The IHO has delivered 5 of these courses over the last three years and has programmed to deliver two more in 2010 for the South West Pacific and the Southern African Islands regions.

With regard to phase two of hydrographic development, the IHO considers delivering, in 2010, two-week basic hydrographic surveying courses in the regions, to benefit the countries participating in the regional hydrographic commission of Southern Africa and Islands; North Indian Ocean; Meso America and Caribbean Sea; South East Pacific; South West Atlantic and South West Pacific. These short courses have been requested by countries of the mentioned regions.

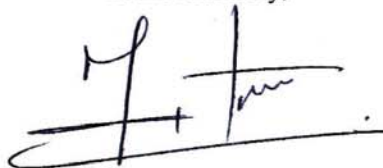
Finally and associated to phase three of hydrographic development, the IHO in 2010 considers in its capacity building program, the delivery of three basic short courses on marine cartography, including ENC and the basis of ENC production. The focal point of these courses will be Asia, South West Pacific and Meso American and Caribbean regions. A longer course on Marine Cartography (5 weeks) will also be delivered, in this case it will be open to applicants with previous experience. (Annex A provides a list of IHO courses to be held in 2010)

One important need from developing countries is the access to the new technologies. Unfortunately the IHO is not yet prepared to contribute to the provision of software nor hardware, unavoidable elements that are required to put in practice the training received. In this aspect, the IHO would like to call for bilateral or multilateral agreements so that developing countries could have access to the basic instruments, equipment and software. It is recognized that in the overall capacity building process, this is a missing link that is urgently required.

The IHO stands ready to continue contributing to the development of the hydrographic capabilities of its Member States as well as of those maritime countries which are not IHO members aiming at establishing such capabilities.

On behalf of the Directing Committee

Yours sincerely,

A handwritten signature in black ink, appearing to be 'A. Maratos', written over a horizontal line.

Vice Admiral Alexandros MARATOS
President

IHO 2010 Capacity Building Programme

ACTIVITY	REGIONAL HYDROGRAPHIC COMMISSION INVOLVED	COUNTRIES INVOLVED
Technical Visits	MBSHC	Syria – Libya - Israel
	EATHC	Gabon - Cameroon Guinea Bissau
	EAHC	Brunei - Cambodia
	MACHC	El Salvador
	SWPHC	Cook Islands - Kiribati
Marine Safety Information Course	SAIHC	Angola, Malawi, Madagascar, Mauritius, Mozambique, Namibia, Seychelles, Tanzania, Kenya , South Africa & Uganda)
	SWPHC	Solomon Islands, Tuvalu, Cook Islands, Samoa, Tonga, Kiribati, PNG, Tokelau, Niue, Vanuatu, Palau, Nauru, Marshall Islands, Fiji, Micronesia (Federal States of),
Port & Shallow Water Survey Workshop	SAIHC NIOHC	Angola, Malawi, Madagascar, Mauritius, Mozambique, Namibia, Seychelles, Tanzania, Kenya , South Africa & Uganda). Bangladesh, Egypt, India, Myanmar, Saudi Arabia, Sri Lanka, Thailand, Pakistan.
	MACHC SEPHC SWATHC	Antigua & Barbuda, Bahamas, Barbados, Belize, Costa Rica, Dominica, Dominican Republic, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Nicaragua, Panama, St. Kitts & Nevis, St. Lucia, St. Vincent & Grenadines, Suriname and Trinidad & Tobago. Cuba, Mexico, and Venezuela. Chile – Colombia - Ecuador - Peru, Argentina – Brazil – Uruguay
Basic Hydrographic Survey Course	SWPHC	Solomon Islands, Tuvalu, Cook Islands, Samoa, Tonga, Kiribati, PNG, Tokelau, Niue, Vanuatu, Palau, Nauru, Marshall Islands, Fiji, Micronesia (Federal States of),
Hydrographic Survey 2 week field training.	MACHC	Honduras – Guatemala – Belize (national hydrographic teams).

Marine Cartography Course	Open to all	Bangladesh, El Salvador, Fiji, I.R. of Iran, New Zealand, Oman, Papua New Guinea, Solomon Islands, South Africa and Sri Lanka
Basic ENC and ENC Production course	EAHC	China – Indonesia – Japan - Rep of Korea – PDR of Korea – Malaysia – Philippines – Singapore – Thailand.
	MACHC	Antigua & Barbuda, Bahamas, Barbados, Belize, Costa Rica, Dominica, Dominican Republic, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Nicaragua, Panama, St. Kitts & Nevis, St. Lucia, St. Vincent & Grenadines, Suriname and Trinidad & Tobago.
Hydrographic aspects on the UNCLOS	EAHC	China – Indonesia – Japan - Rep of Korea – PDR of Korea – Malaysia – Philippines – Singapore – Thailand.

- MBSHC = Mediterranean and Black Sea Hydrographic Commission
EAHC = Easter Atlantic Hydrographic Commission
EAHC = East Asia Hydrographic Commission
MACHC = Meso American and Caribbean Sea Hydrographic Commission
SWPHC = South West Pacific Hydrographic Commission
SAIHC = Southern Africa and Islands Hydrographic Commission
NIOHC = North Indian Ocean Hydrographic Commission
SEPHC = South East Pacific Hydrographic Commission
SWATHC = South West Atlantic Hydrographic Commission