



# The International Hydrographic Organization

Activities & Capacity Building

Vice Admiral Alexandros Maratos  
*President of the IHB*



## Overview



1. The IHO.
2. International Resolutions
3. IHO Standards
4. Uses of Hydrographic Data
5. Capacity Building



## INTERNATIONAL HYDROGRAPHIC BUREAU



- 1908 International Congress of Navigation, St Petersburg
- 1912 International Maritime Conference, St Petersburg
- 1919 International Hydrographic Conference, London
- 1921 The IHB was established by 24 nations and tasked to support Safety of Navigation and the Protection of the Marine Environment.

At the invitation of HSH Prince Albert 1<sup>st</sup>, a noted marine scientist, it was headquartered in Monaco where it remains today.



## INTERNATIONAL HYDROGRAPHIC ORGANIZATION



1970 – An International Convention changed the name and legal status.

The IHO comprises an International Hydrographic Conference and the International Hydrographic Bureau



## INTERNATIONAL HYDROGRAPHIC BUREAU



## IHO MEMBER STATES April 2005



## IHO MEMBER STATES April 2005

ALGERIA ARGENTINA AUSTRALIA BAHRAIN BANGLADESH BELGIUM BRAZIL CANADA CHILE CHINA COLOMBIA CONGO CROATIA CUBA CYPRUS DENMARK DOMINICAN REP DPR KOREA ECUADOR EGYPT ESTONIA FIJI	FINLAND FRANCE GERMANY GREECE GUATEMALA ICELAND INDIA INDONESIA IRAN ITALY JAMAICA JAPAN LATVIA KOREA-Rep KUWAIT MALAYSIA MEXICO MONACO MOROCCO MOZAMBIQUE MYANMAR NETHERLANDS	NEW ZEALAND NIGERIA NORWAY OMAN PAKISTAN PAPUA NEW GUINEA PERU PHILIPPINES POLAND PORTUGAL RUSSIA SERBIA/MONTENEGRO SINGAPORE SLOVENIA SOUTH AFRICA SPAIN SRI LANKA SURINAM SWEDEN SYRIA THAILAND	TONGA TRINIDAD AND TOBAGO TUNISIA TURKEY UKRAINE UNITED ARAB EMIRATES UNITED KINGDOM URUGUAY USA (NOAA, CNMOC, NIMA) VENEZUELA Pending: BULGARIA CAMEROON IRELAND MAURITANIA MAURITIUS QATAR ROMANIA SAUDI ARABIA
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## IHO - Objectives

➤ The Objectives of the IHO are to:

- Co-ordinate the activities of national hydrographic offices
- Maximise uniformity of nautical charts and documents
- Adopt reliable and efficient methods of carrying out and exploiting hydrographic surveys
- Develop the science of hydrography and techniques used in descriptive oceanography

## IHO – Strategic Issues

➤ The Strategic Issues Approved at the 2000 Extraordinary Conference were:

- Transition to the digital era.
- Achievement of an adequate global hydrographic data coverage.
- Responding to the external environment.
- Achievement of adequate funding.
- Capacity building.
- Providing services other than for navigation.

## COOPERATION AND COORDINATION

### An International Organization with a strong Regional Focus

**15 Regional Hydrographic Commissions  
Hydrographic Committee on Antarctica**

## REGIONAL HYDROGRAPHIC COMMISSIONS

## COORDINATION

The IHO has 17 Committees, Working Groups and Advisory Boards, (5 of which include other International Organizations)

These are tasked to examine important issues and provide guidance and direction for the benefit of all Member States.



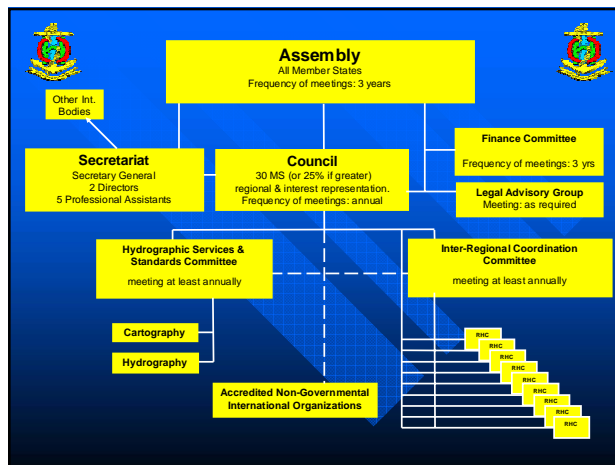
## STRATEGIC PLANNING WORKING GROUP



An SPWG has been reviewing the structure and processes of the IHO. Its report was considered at an:

Extraordinary International Hydrographic Conference

Monaco 11 – 15 April 2005.



## International Conventions and Resolutions



- Safety of Life at Sea (SOLAS) – A revised Chapter V entered into force in July 2002.
- IMO Assembly Resolution 958(23) was adopted in December 2003
- UN General Assembly Resolution A/53/32 adopted in 1998
- UN General Assembly Resolution A/58/240 adopted in 2003



## SOLAS - Chapter V - Regulation 9 Hydrographic Services



Contracting Governments are required to:

- Conduct hydrographic surveys.
- Issue and maintain official charts and publications.
- Provide data management services to support these services.
- Ensure the greatest uniformity possible taking into account, whenever possible, the relevant resolutions and recommendations of the IHO.
- Co-ordinate activities to the greatest possible degree.



## SOLAS - Chapter V - Regulation 2 Definitions



*Nautical chart or nautical publication* is a special-purpose map or book, or a specially compiled database from which such a map or book is derived, that is issued officially by or on the authority of a Government, authorized Hydrographic Office or other relevant government institution and is designed to meet the requirements of marine navigation.\*

\* Refer to appropriate resolutions and recommendations of the International Hydrographic Organization concerning the authority and responsibilities of coastal States in the provision of charting in accordance with Regulation 9.



## IMO Resolution A.958(23) Provision of Hydrographic Services



INVITES Governments, in addition to their existing obligations under SOLAS regulation V/9, to:

- (a) Promote through their national maritime administrations, the use of Electronic Chart Display and Information Systems (ECDIS) together with the use and further production of official Electronic Charts (ENCs);

**IMO Resolution A.958(23)**  
**Provision of Hydrographic Services**

- (b) co-operate, as appropriate, in the collection and dissemination of hydrographic data with other Governments having little or no hydrographic capability;
- (c) promote support for Governments which may request technical assistance in hydrographic matters, in consultation with, and with the assistance of, the Organization and the International Hydrographic Organization;

**IMO Resolution A.958(23)**  
**Provision of Hydrographic Services**

- (d) Establish hydrographic offices where they do not exist, in consultation with the IHO;

**FURTHER INVITES** Governments which are not members of IHO to consider joining that organization;

**UN Assembly Resolution A/53/32**  
**(1998) The Year of the Oceans.**

“Invites States to cooperate in carrying out hydrographic surveys and in providing nautical services for the purpose of ensuring safe navigation as well as to ensure the greatest uniformity in charts and nautical publications and to coordinate their activities so that hydrography and nautical information is made available on a worldwide scale.”

**UN Assembly Resolution A/58/240**  
**(2003) Oceans and the law of the sea.**

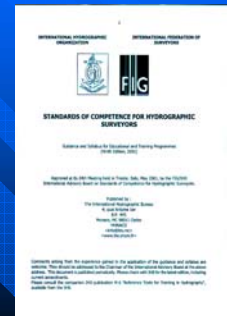
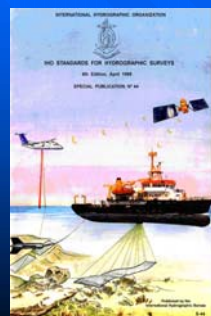
Welcomes the work of the International Hydrographic Organization and its fourteen regional hydrographic commissions and encourages increased membership of the organization, noting the capacity of the organization to provide technical assistance, facilitate training and identify potential funding sources for the development or improvement of hydrographic services.....

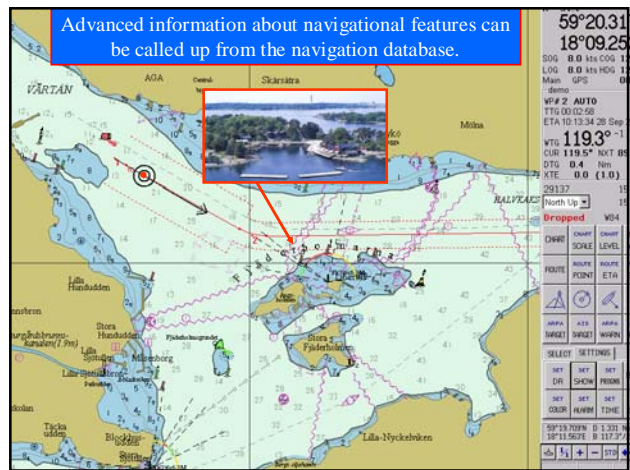
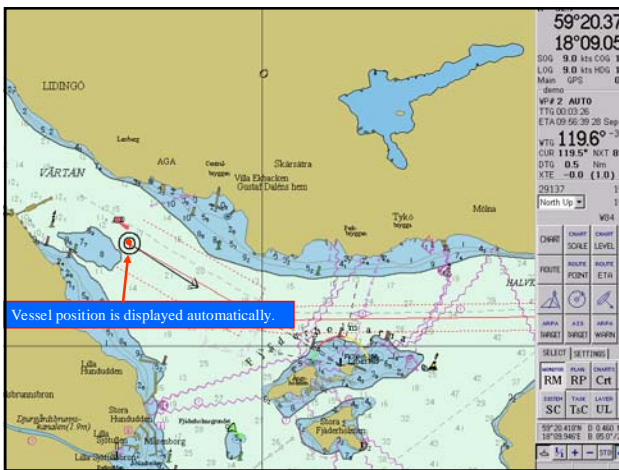
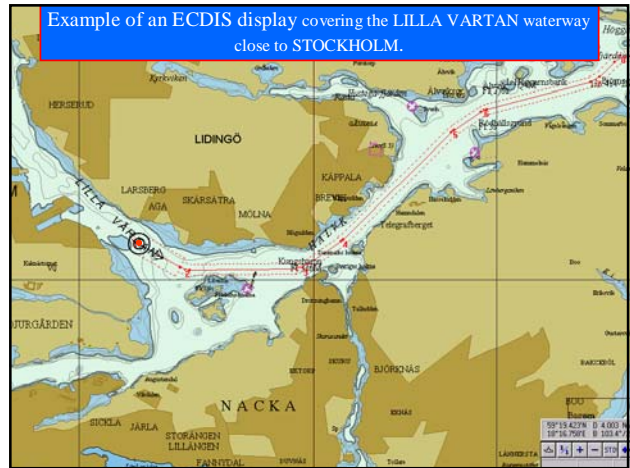
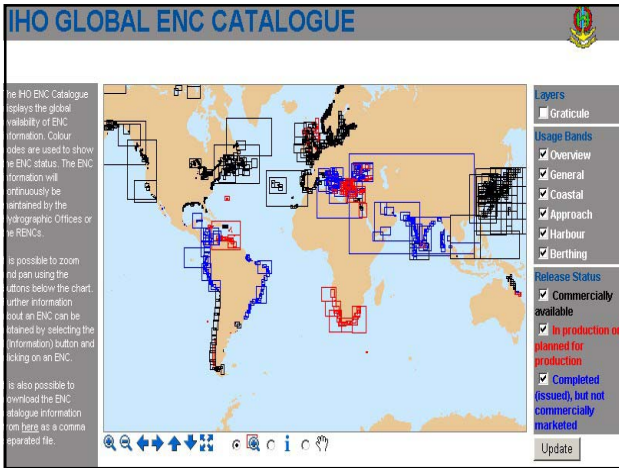
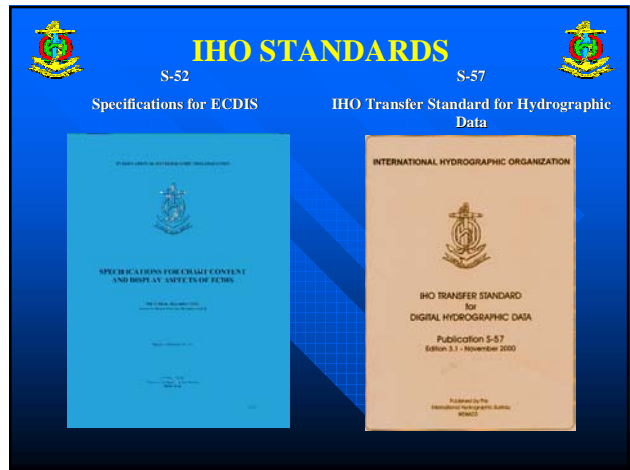
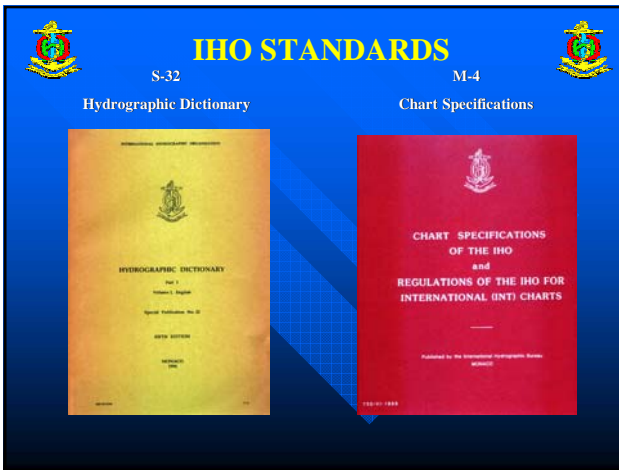
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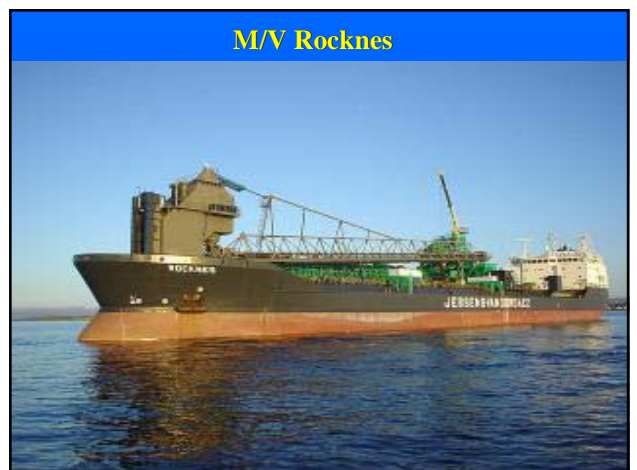
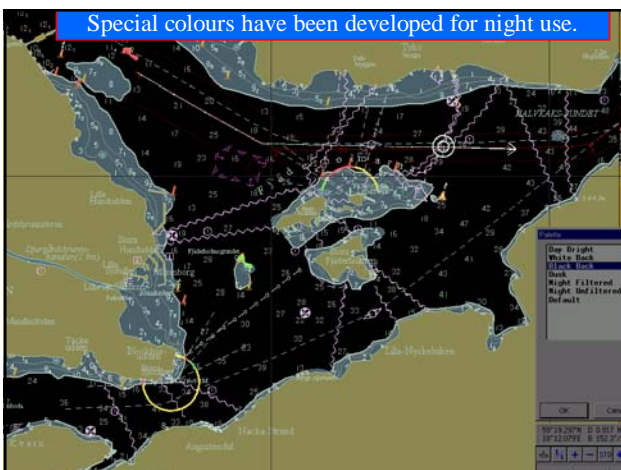
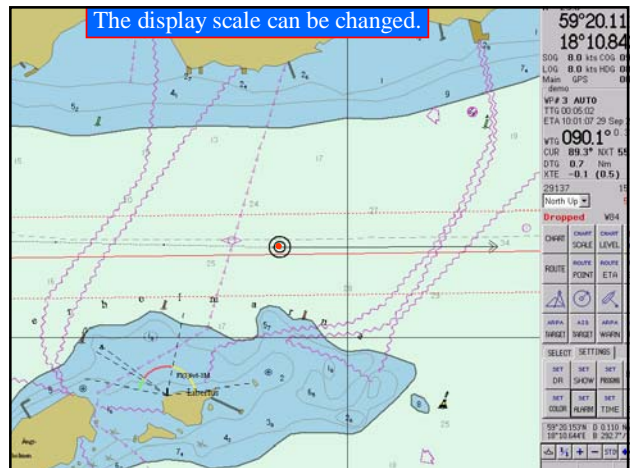
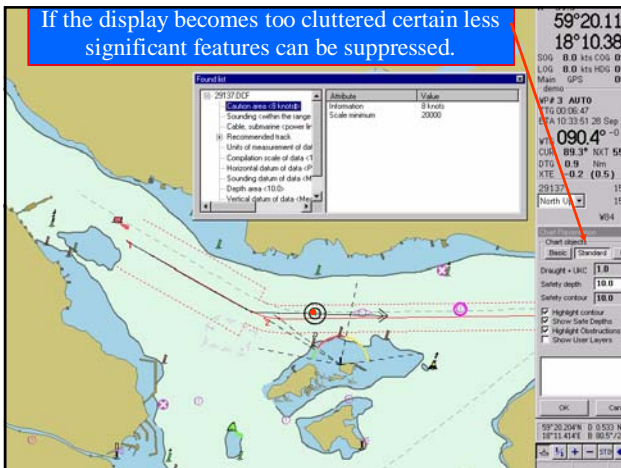
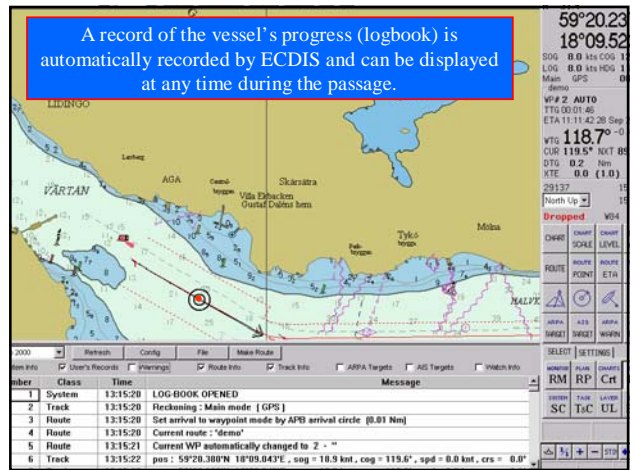
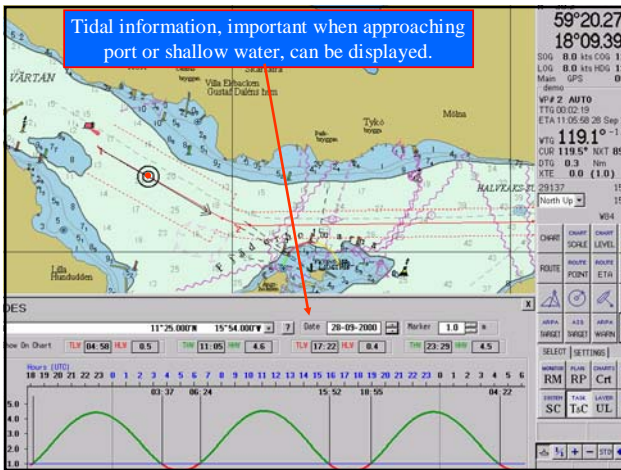
Invites the International Hydrographic Organization and the International Maritime Organization to continue their coordinated efforts, to jointly adopt measures with a view to encouraging greater international cooperation and coordination for the transition to electronic nautical charts and to increase the coverage of hydrographic information on a global basis, especially in the areas of international navigation and ports where there are vulnerable or protected marine areas;

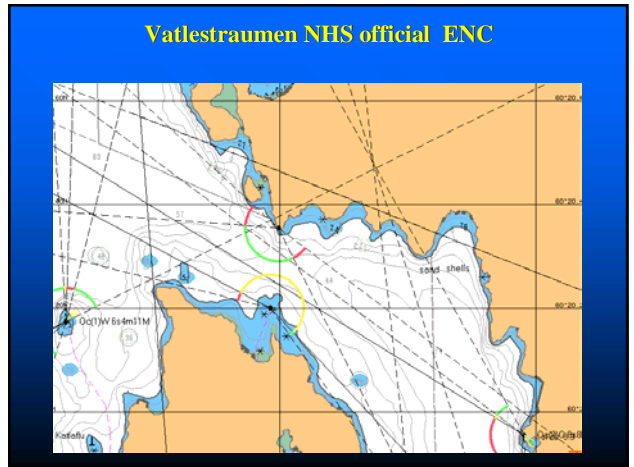
**IHO STANDARDS**

S-44 Standards for Hydrographic Surveys      M-5 Standards for Hydrographic Surveyors











## Uses of Hydrographic Data



- Safety of navigation
- Ocean Modelling
- Coastal and deep water circulation
- Coastal Zone Management and Engineering
- Environmental protection
- Fisheries
- Offshore windfarms
- Oil and Gas exploration
- International boundaries
- Pipeline and cable laying
- National security
- Tsunami warning systems



## HYDROGRAPHY - DEFINITION



*That branch of applied sciences which deals with the measurement and description of the features of the sea and coastal areas for the primary purpose of navigation and all other marine purposes and activities including (inter alia) offshore activities, research, protection of the environment and prediction services.*



## The Growing Requirement to Provide Modern Hydrographic Services



GRAND PRINCESS



The US Capitol Building & Grand Princess to scale.



## The Growing Need for Modern Hydrography in Remote Areas



## The Potential Outcome of Poor Hydrography & Cartography







Inland waters are just as vulnerable!



TO BE AVOIDED!



## Capacity Building

1. Introduction.
2. Definition
3. Strategy
4. Work Programme
5. Fund
6. Projects

## IHO Capacity Building

- IHO Capacity Building Committee formed in 2003 to take forward work formerly performed by TACC.
- Meetings held in IHB (2003) and Suva, Fiji (2004).



## CAPACITY BUILDING



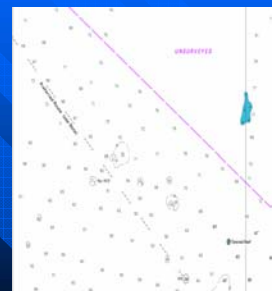
• **Definition:**  
 With respect to the IHO, "Capacity Building" is defined as the process by which the organization assesses and assists in sustainable development and improvement of the states, to meet the objectives of the IHO and the hydrography, cartography and maritime safety obligations and recommendations described in UNCLOS, SOLAS V and other international instruments.

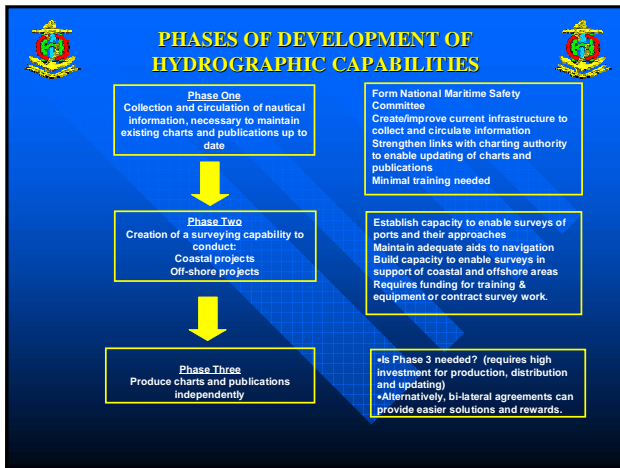


## IHO CB Strategy



- Implements a logical process with 4 steps:  
 AWARENESS  
 ASSESSMENT  
 ANALYSIS  
 ACTION





### IHO CB Strategy

- Philosophy and focus implicit in principles and goals:
- Maintain the aim:
  - ✓ ALL COASTAL STATES TO ACHIEVE CAPABILITY PHASE 1 AND
  - ✓ TO DEVELOP A NATIONAL PLAN FOR APPROPRIATE ELEMENTS OF PHASES 2 AND 3 OR ALTERNATIVE COOPERATIVE ARRANGEMENTS.

### IHO CB Strategy

- Principles
  - Individual national needs for infrastructure should be assessed firmly against the 3 phases of development.
  - Skill and technology transfers.
  - Capacity building projects should be coordinated regionally.
  - States with developing hydrographic services must embrace and support the concept of capacity building
  - The focus should be on achieving enduring output.

### IHO CB Strategy

- Goals
  - Short term
    - » Raise awareness of the importance of hydrography
    - » Priorities for CB action to the UN, FA, NG
    - » IHO Capacity Building Fund
  - Long Term
    - » To enable all coastal states to achieve phase 1 of development and to develop a national plan to put in place appropriate elements of phases 2 and 3.

### IHO CB Fund

- The CB Fund will be used to provide:
  - technical assistance
  - training and education
  - financial assistance for participation in IHO events
  - start up funding for hydrographic elements of projects
- The CB Fund will consist of:
  - an annual contribution from the IHO budget as approved by Member States
  - donations

### Capacity Building Projects

- MEH in the Malacca Straits
- MEDA Project 7 (IHO, IMO, IMA)
- Western African Assistance Team (HOs France, Portugal, UK, USA and IHO)
- EUROMEDIS
- COCATRAM (Central American Commission for Maritime Transport (IHO, INA)
- Lake Victoria Project (IHO, IMO, IALA, EAC)
- Black Sea Project
- Western Indian Ocean Marine Highway Project (Kenya, Mozambique, South Africa, Tanzania, Somalia, Madagascar, Comoros, Mauritius, Seychelles, La Reunion)
- GEBCO-NIPPON Foundation




**THE INTERNATIONAL HYDROGRAPHIC ORGANIZATION**


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