

Southern African and Islands Hydrographic Commission

Seminar on National Obligations for the Provision of Safety of Navigation Services

The International Hydrographic Organization

Summary

- Introduction
- The need for hydrography
- Uses and benefits
- The meaning of inadequate hydrography
- Who is responsible for hydrography
- The IHO
- Conclusion

Introduction

Hydrography is ... the measurement and description of the physical features of oceans, seas, coastal areas, lakes and rivers ... the prediction of their change over time, for ... safety of navigation and in support of all other marine activities, ... economic development, security and defense, scientific research, and environmental protection (S-32).

Introduction

Hydrography is not:

- Nautical chart (a product)
- Bathymetry (determination of depth)

Hydrography is an ensemble of activities from which data we can derive many different types of information, products, services

Hydrography supports :

- Safety of navigation
- Protection of marine environment
- National infrastructure development
- Coastal zone management
- Marine exploration
- Resource exploitation – minerals, fishing
- Maritime boundary delimitation (UNCLOS, others)
- Maritime defence and security
- Disaster management

... Safety of Navigation



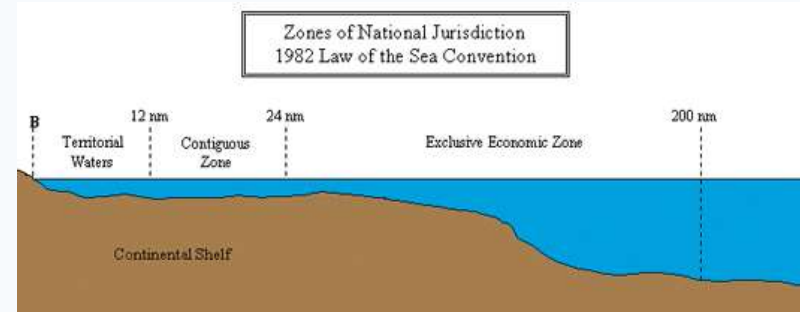
... *Protection of the marine environment*

- dumping
- oil spill
- industrial pollution



... Coastal zone management

- resource management
- industrial pollution
- port development
- areas of national jurisdiction



... *Transport*

>98% goods by volume



... *Tourism*

- a growing market
- larger ships
- new destinations



... *Natural resources*

- fishing
- seabed



... Security and defence



... *Natural disaster management*

- inundation modelling
- sea level monitoring
- Tsunami forecasting
- relief planning



The meaning of inadequate hydrography

Inadequate hydrography means:

- risk of marine accidents increases
 - environmental pollution
 - loss of life
- shipping lacks confidence in ports and routes
- international trade is limited
- missed economic opportunities
- environmental impacts
- potential liability and litigation

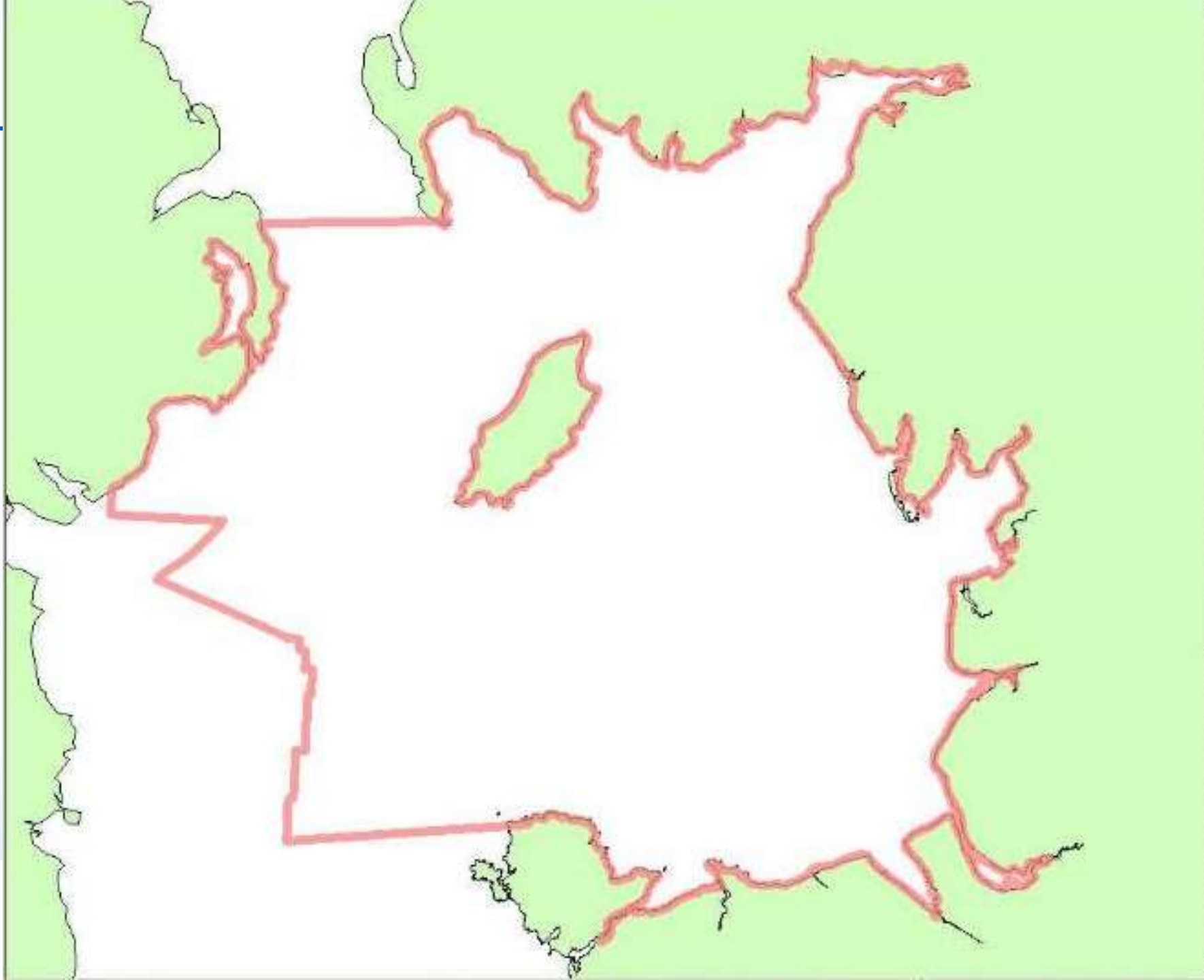
The meaning of inadequate hydrography

What is the cost of:

- under-developed ports?
- using complex and hazardous shipping routes?
- lack of planning data for the coast and seas?
- imprecise disaster planning models?
- limited sea room for patrol vessels?

Wider use of hydrographic data

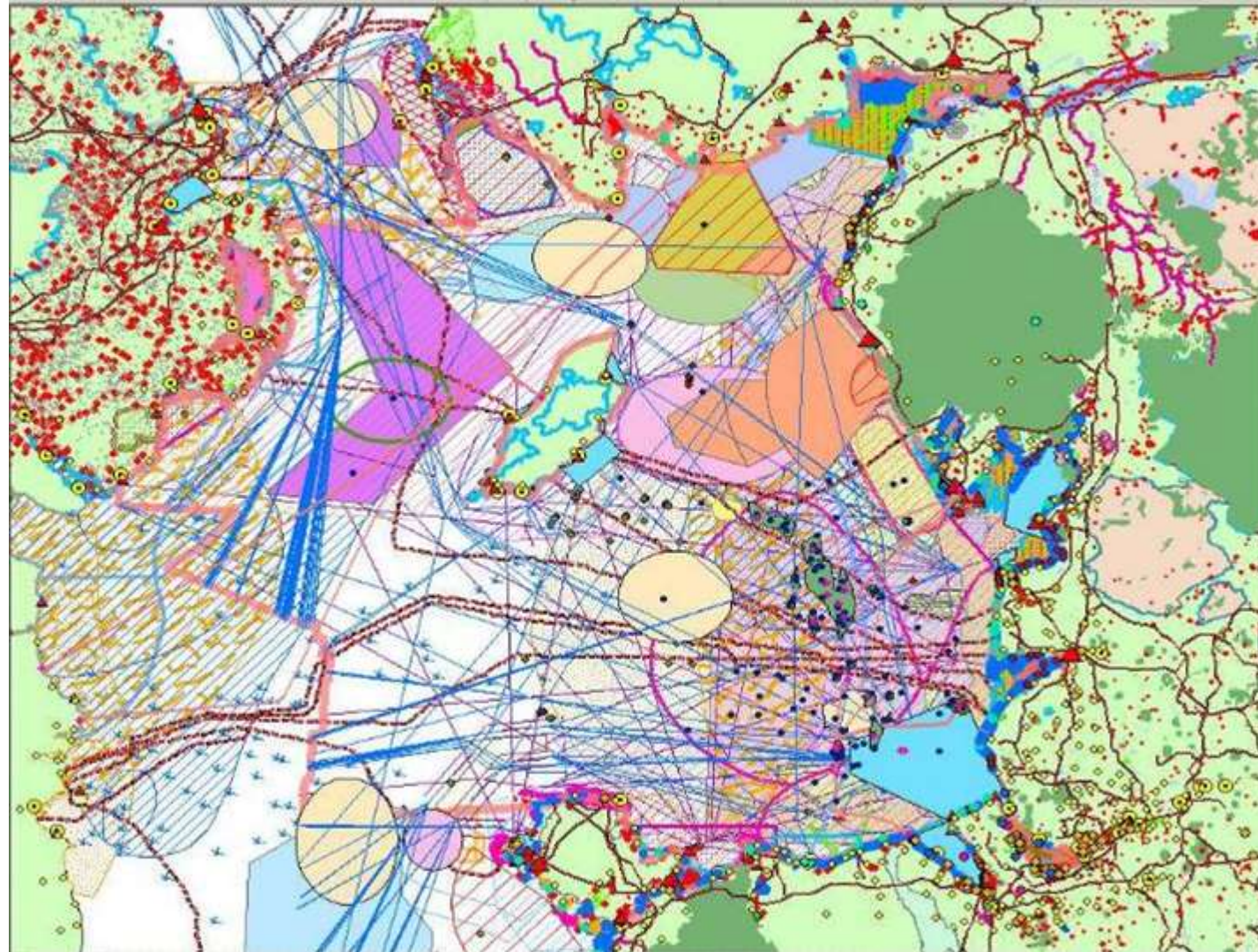
- Marine Spatial Planning (MSP)
- Integrated Coastal Zone Management (ICZM)
- Strategic Environmental Assessment (SEA)
- Shoreline Management Plans (SMP)
- Emergency Response
- Offshore Renewable Energy
- Aggregates Extraction
- Oil and Gas
- Infrastructure Development (e.g. Ports and harbors)
- Economic Development (e.g. Tourism)
- E-Navigation



Marine Spatial Planning (MSP)

Source: Defra Irish Sea Planning Pilot - 2006

- Land Use
- Tourism
- Oil & Gas
- Mariculture
- Coastal Defence
- Ports & Navigation
- Military Activities
- Culture
- Conservation
- Dredging & Disposal
- Submarine Cables



■ Fishing

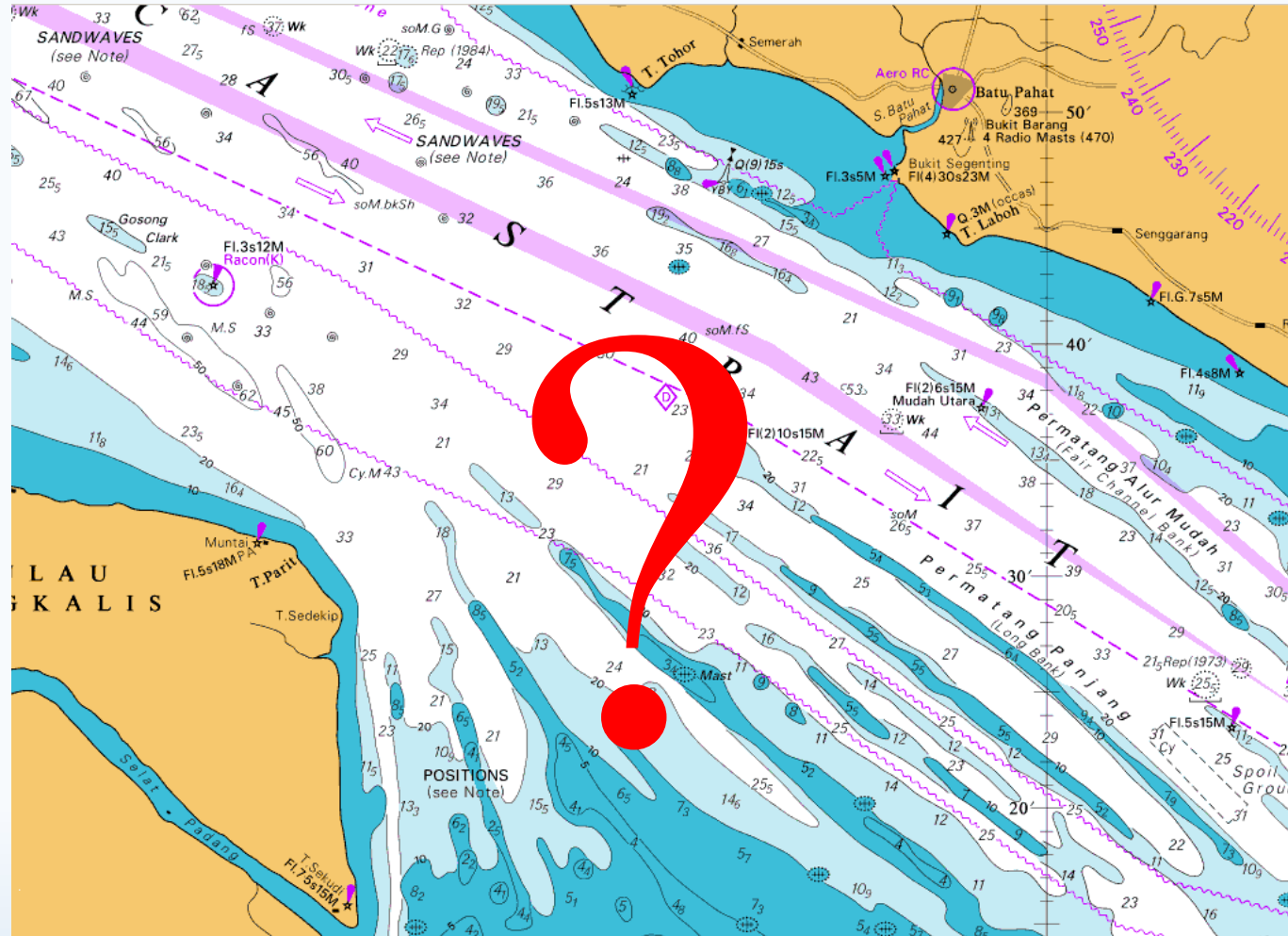
■ Renewable Energy

■ Marine Recreation

■ Mineral Extraction



Who is responsible for Hydrography?



Who is responsible for Hydrography?

– Coastal States –

International Obligations

Mariners' Obligations

Convention on the Safety of Life at Sea (SOLAS) Chapter V

SOLAS V/19 – Carriage requirements for Nav equipment

- ...shall carry nautical charts and publications ...
- ...issued officially by or on the authority of a Government, authorized Hydrographic Office or other relevant government institution
- ... [adhering to] IHO specifications and guidelines

SOLAS V/27 – Nautical charts and nautical publications

- ...adequate and up to date

Governmental Obligations

SOLAS V/9 – *provision of hydrographic services*

- Contracting governments undertake to arrange to collect and compile hydrographic data, and to publish, disseminate and update all nautical information necessary for safe navigation;
- Obtain uniformity in charts and nautical publications and to take into account whenever possible the relevant international resolutions and recommendations, adopted by the IHO; and
- Co-ordinate activities and ensure global availability of hydrographic and nautical publications

Governmental Obligations

SOLAS V/4 – *navigational warnings*

- ...take all steps necessary to ensure that, when intelligence of any dangers is received from whatever reliable source, it shall be promptly brought to the knowledge of those concerned and communicated to other interested Governments

SOLAS Chapter 5 regulations 9 and 4

This means each State must ensure that :

- hydrographic surveys are carried out
- appropriate nautical charts and other nautical publications are available and up to date
- Maritime Safety Information (MSI) is promulgated

SOLAS Chapter 5 regulations 9 and 4

Provision of hydrographic services and navigational warnings:

- ... are International Obligations under Treaty Law
- ... apply to ALL Contracting Governments

Other Governmental Obligations

UN Resolution A.53/32 - *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 available on a world-wide scale

UNCLOS 1982

Charts are required to support:

- Establishing baselines
- Delimiting Sea Areas (Territorial Sea, EEZ, Continental Shelf, etc.)
- Identifying traffic separation schemes
- Identifying sea lanes transit and innocent passage routes
- Deploying submarine cables and pipelines
- Conducting drilling on the seafloor
- Conduct of Marine Scientific Research

Meeting Governmental Obligations

SOLAS V/9 and V/4 can be satisfied:

- directly via government
- through bi-lateral agreement with other States
- using commercial support providers
- (in whole or in part)

Overall responsibility and obligation to ensure that a national hydrographic service is provided remains with the Government

The IHO



What is the International Hydrographic Organization ?

.... **intergovernmental** consultative and technical organization

.... established in **1921**

.... to support **safety of navigation** and the **protection of the marine environment**

The Mission of the IHO is;

... to facilitate the provision of **adequate and timely hydrographic information**

... for world-wide **marine navigation** and other purposes

... through the co-ordination of the endeavors of **national hydrographic offices**

History of the IHO

- 1899** International **cooperation** in the field of hydrography began with a **Conference held in Washington**
- 1908** International **Congress of Navigation**, St Petersburg
- 1912** International **Maritime Conference**, St Petersburg
- 1919** International **Hydrographic Conference**, London ...

History of the IHO



History of the IHO

- 1921** IHB established - based in Monaco
- 1970** International Convention: established
- 2005** Protocol of Amendments to the IHO Convention
- 2016** Revised IHO Convention entered into force on 8 November
- 2016** International Hydrographic Bureau (IHB) changed to the IHO Secretariat
- 2017** IHO held its first Assembly and Council meeting

IHO Secretary-General and Directors



The IHO Secretariat Staff

Personnel

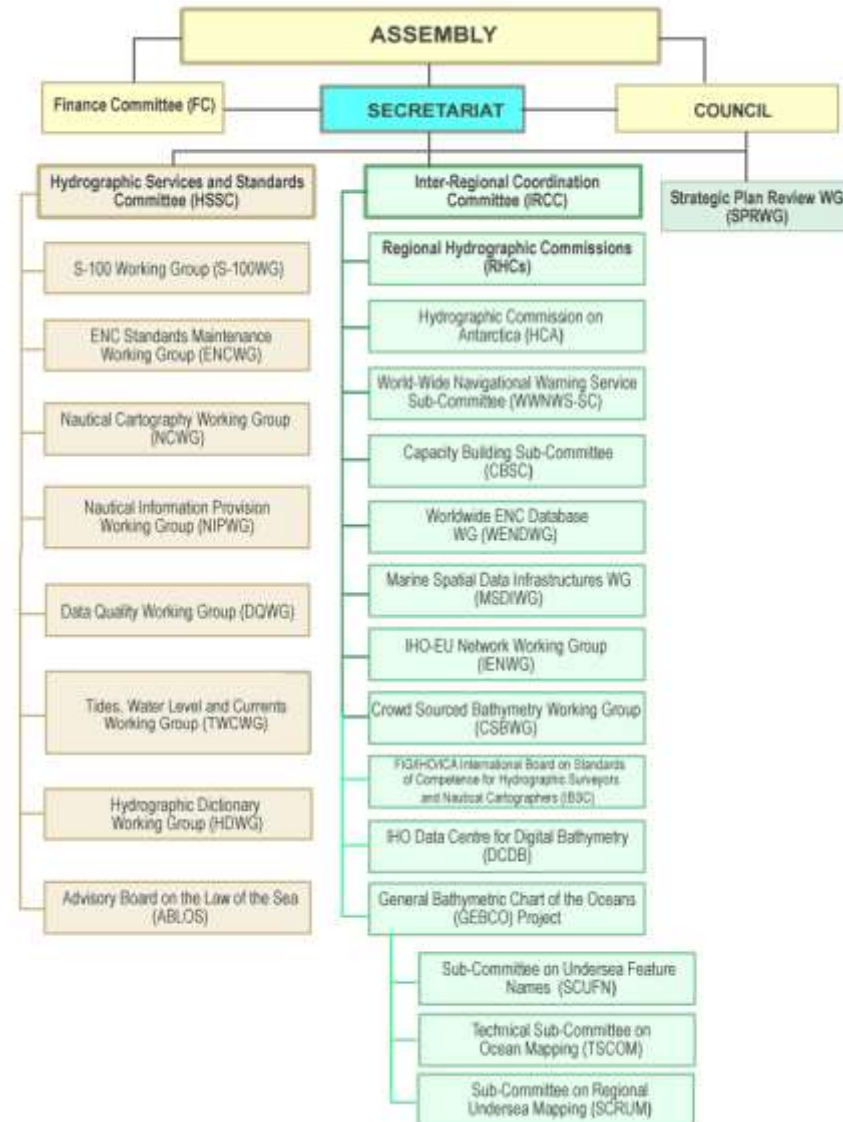
- 1 Secretary-General and 2 Directors
- 4 Assistant Directors
- 3 Translators
- 10 Supporting Staff
- 3 Seconded Staff (Japan, Peru, ROK)

Assembly, Council, Committees and Working Groups

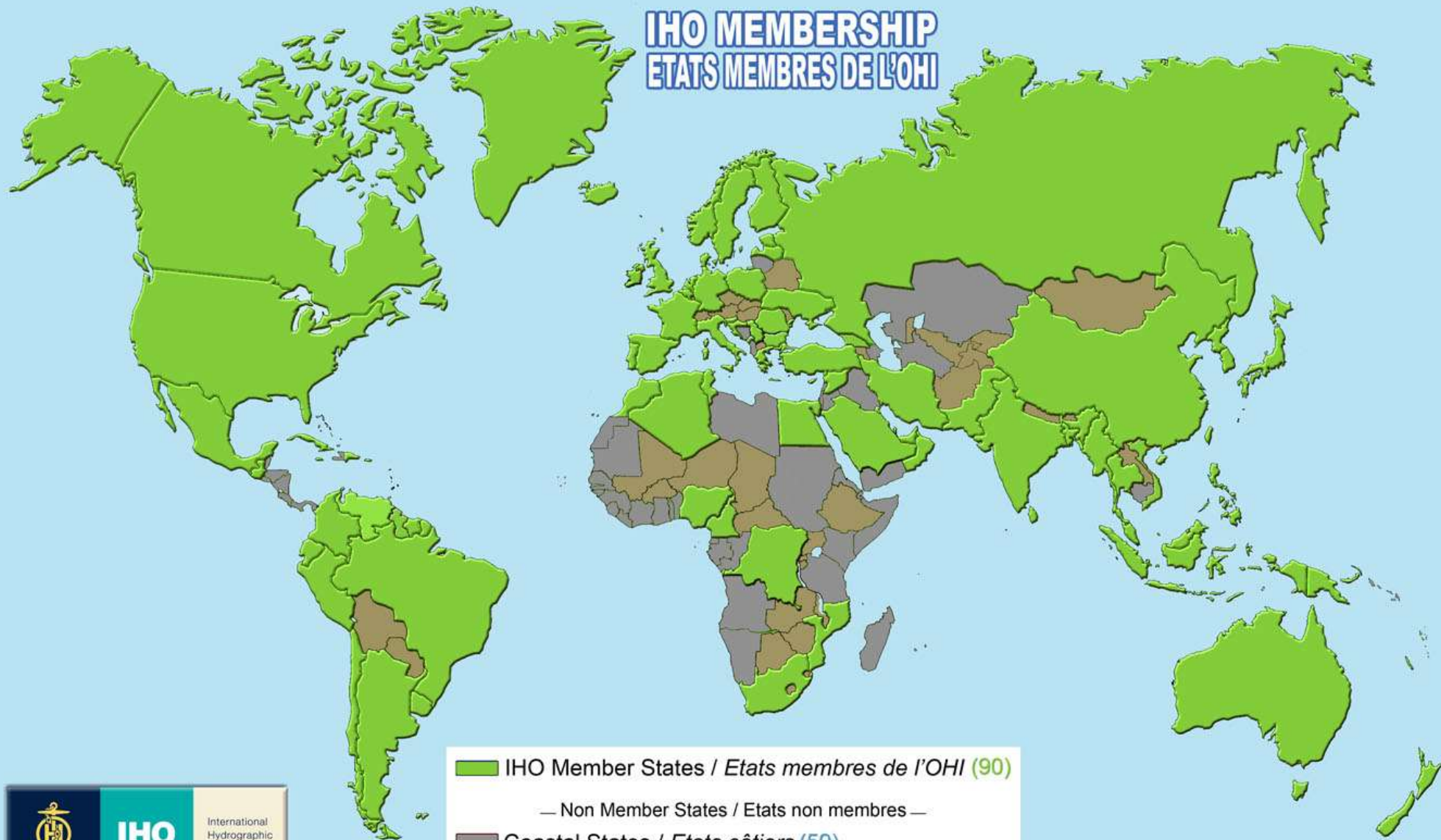
Technical Programme; to develop, maintain and extend technical standards, specifications and guidelines that enable the provision of standardised products and services that meet the requirements of mariners and other users of hydrographic information.

The **Capacity Building Programme** seeks to assess and advise on how countries can best meet their international obligations and serve their own best interests by providing appropriate hydrographic and nautical charting services.

This is done primarily through the **Regional Hydrographic Commissions** - established by IHO Member States.



IHO MEMBERSHIP ETATS MEMBRES DE L'OHI

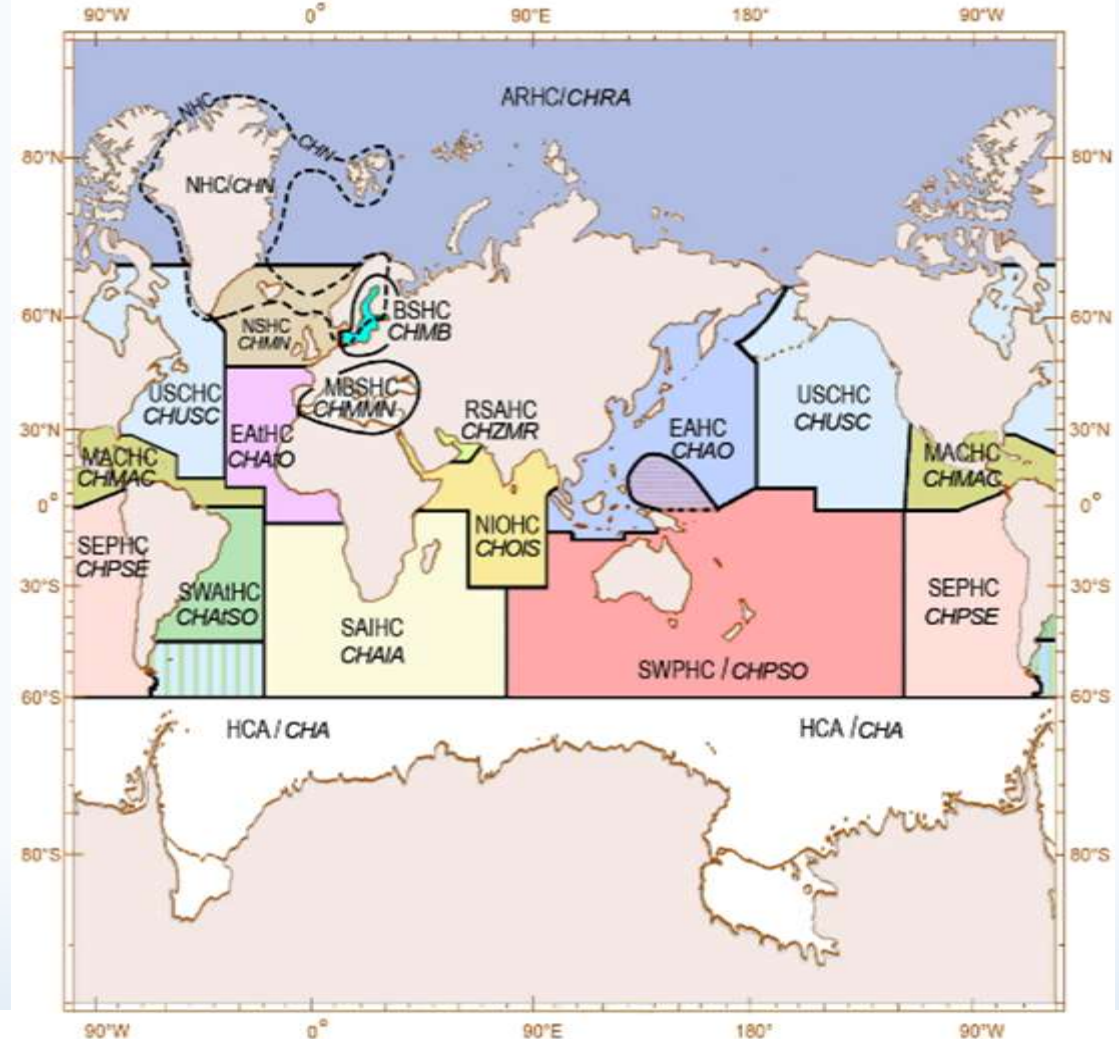


IHO Member States / Etats membres de l'OHI (90)
— Non Member States / Etats non membres —
Coastal States / Etats côtiers (59)
Inland States / Etats continentaux



Regional Hydrographic Commissions

- 15 RHCs
+ Hydrographic Commission on Antarctica
- Regional coordination of
 - charting schemes
 - capacity building and assistance
 - bilateral cooperation
 - technical cooperation
 - training



IHO Secretariat, here to help you!

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