



Organisation
Hydrographique
Internationale

UN-GGIM/WG-MGI

Data Availability and Capacity Building

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1

Data Availability, Priorities and Capacity Building

Data and information, and its products and services (in several different formats and content) has been at the heart of the IHO since its creation.

From standardized charts to a wealth of hydrographic data.

Centenary on 21 June 2021, roots from 1889



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2

Data Availability, Priorities and Capacity Building

The IHO shall have a consultative and technical nature. It shall be the object of the Organization:

- (a) To promote the use of hydrography for the safety of navigation and all other marine purposes and to raise global awareness of the importance of hydrography;
- (b) To improve global coverage, availability and quality of hydrographic data, information, products and services and to facilitate access to such data, information, products and services;



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3

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Objects (continued):

- (c) To improve global hydrographic capability, capacity, training, science and techniques;
- (d) To establish and enhance the development of international standards for hydrographic data, information, products, services and techniques and to achieve the greatest possible uniformity in the use of these standards;



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4

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Objects (continued):

- (e) To give authoritative and timely guidance on all hydrographic matters to States and international organizations;
- (f) To facilitate coordination of hydrographic activities among the Member States; and
- (g) To enhance cooperation on hydrographic activities among States on a regional basis.



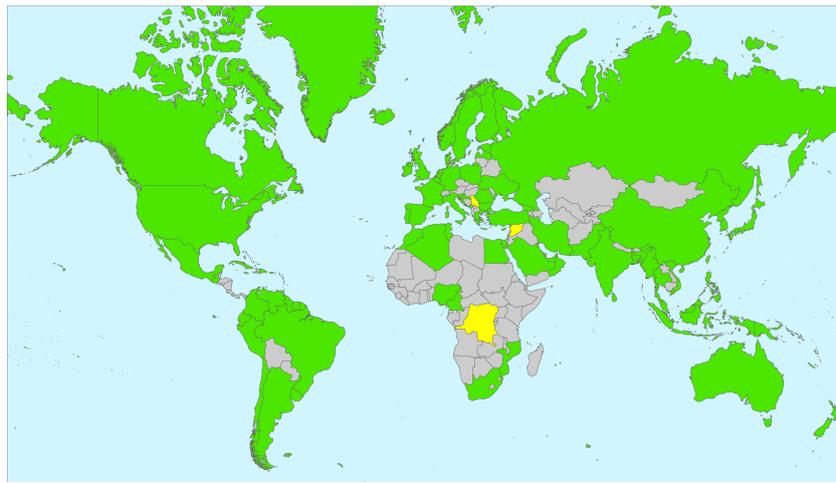
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5

IHO Member States - 2020



IMO/OMI: 174
IOC/COI: 150
IHO/OHI: 93

- IHO Member States / *Etats membres de l'OHI (93)*
- Suspended States / *Etats suspendus (4)*
- Non Member States / *Etats non membres*



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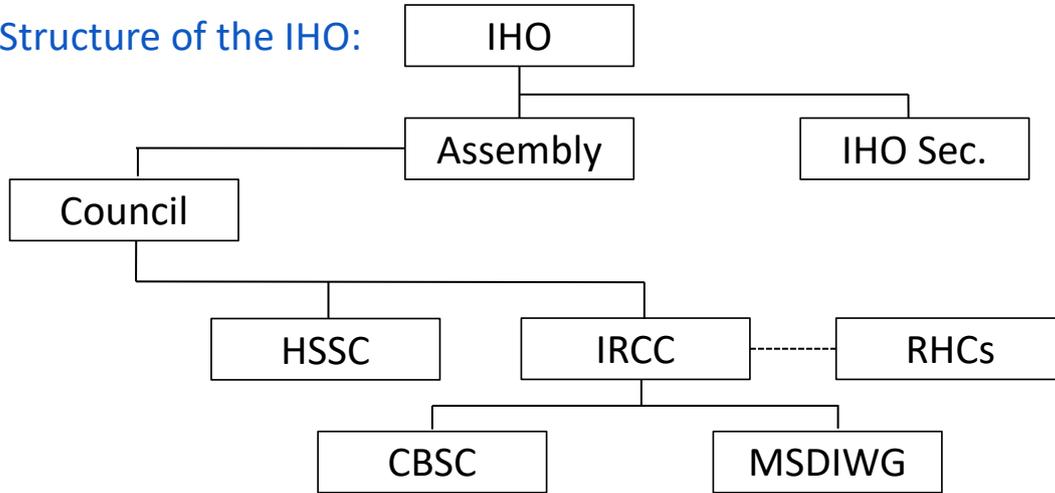
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6

Data Availability, Priorities and Capacity Building

Structure of the IHO:



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7

Regional Hydrographic Commissions

Regional coordination of:

- nautical information
- hydrographic surveys
- production of nautical charts and documents
- training
- technical cooperation
- hydrographic capacity building projects



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8

Data Availability

The IHO contributes to data availability through:

- Development of Standards
- Coordination and cooperation (MSs, RHCs, other international organizations, academia, industry)
- Infrastructure, funding, public relations, communication



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9

Data Availability

Data collection efforts:

- GEBCO and Seabed 2030
- Crowdsourced Bathymetry Initiative
- IHO Data Center for Digital Bathymetry (DCDB)



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10

Standards

Priority of the IHO on Standards:

- IHO S-100 Framework, Strategy, Roadmap and Showcase
- Participate in and contribute to e-Navigation
- Continue cooperation with other international organizations
- Communication on the value of Standards



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11

Data Availability

Data availability through:

- Member States
- Regional ENC Coordinating Centers (RENCs)
- WEND Principles (draft WENS Principles)
- Worldwide Navigational Warning Service (with IMO, WMO)
- GEBCO
- IHO Catalogs (<https://iho.int/en/iho-online-catalogues>)

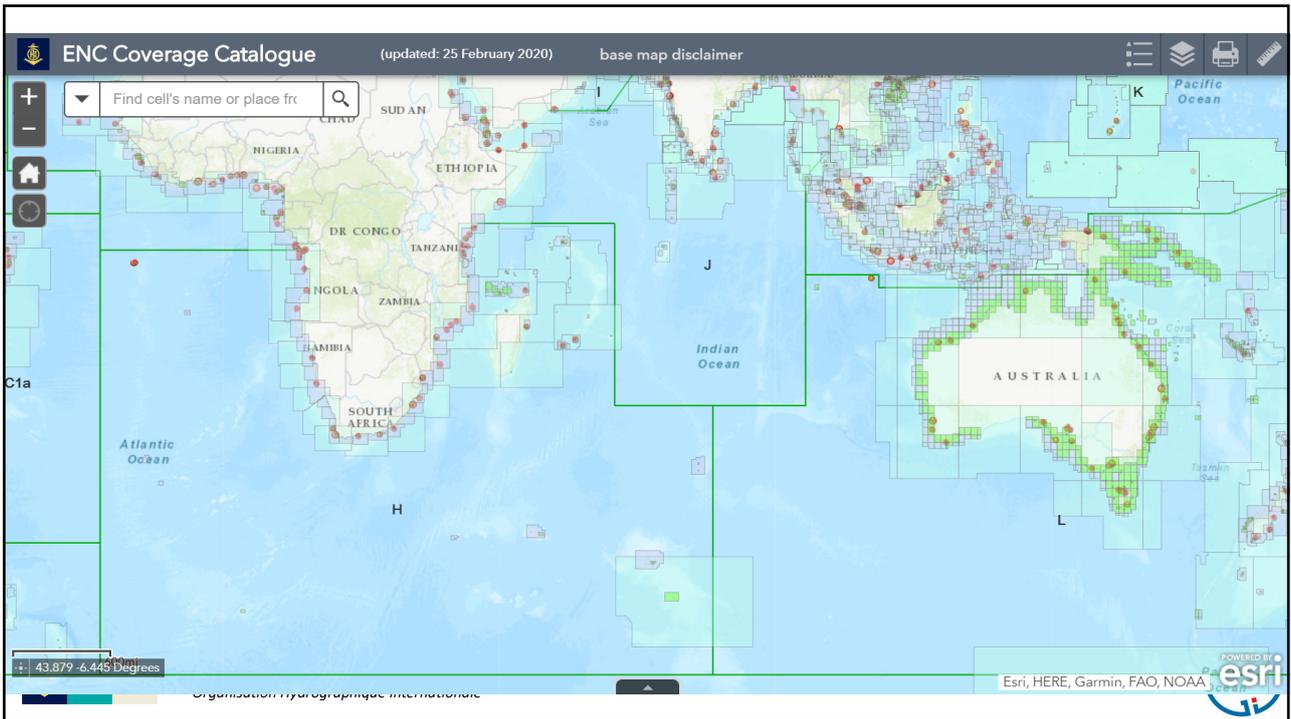


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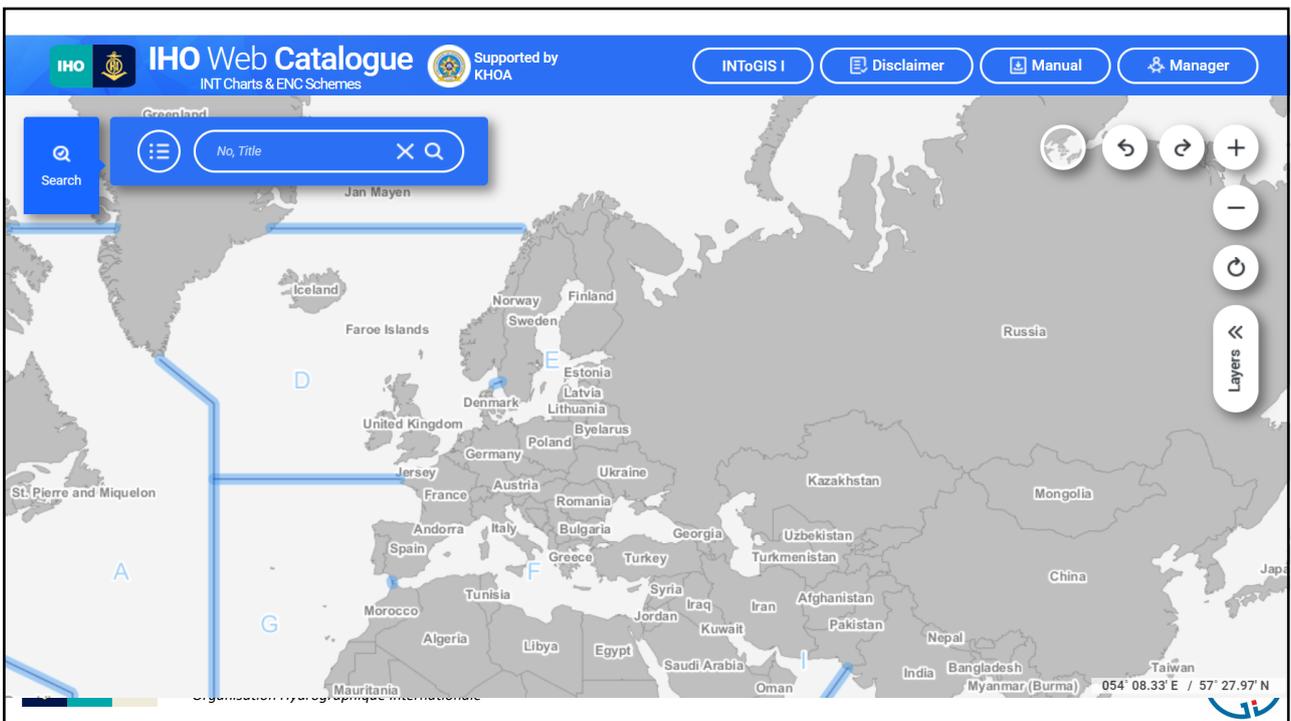
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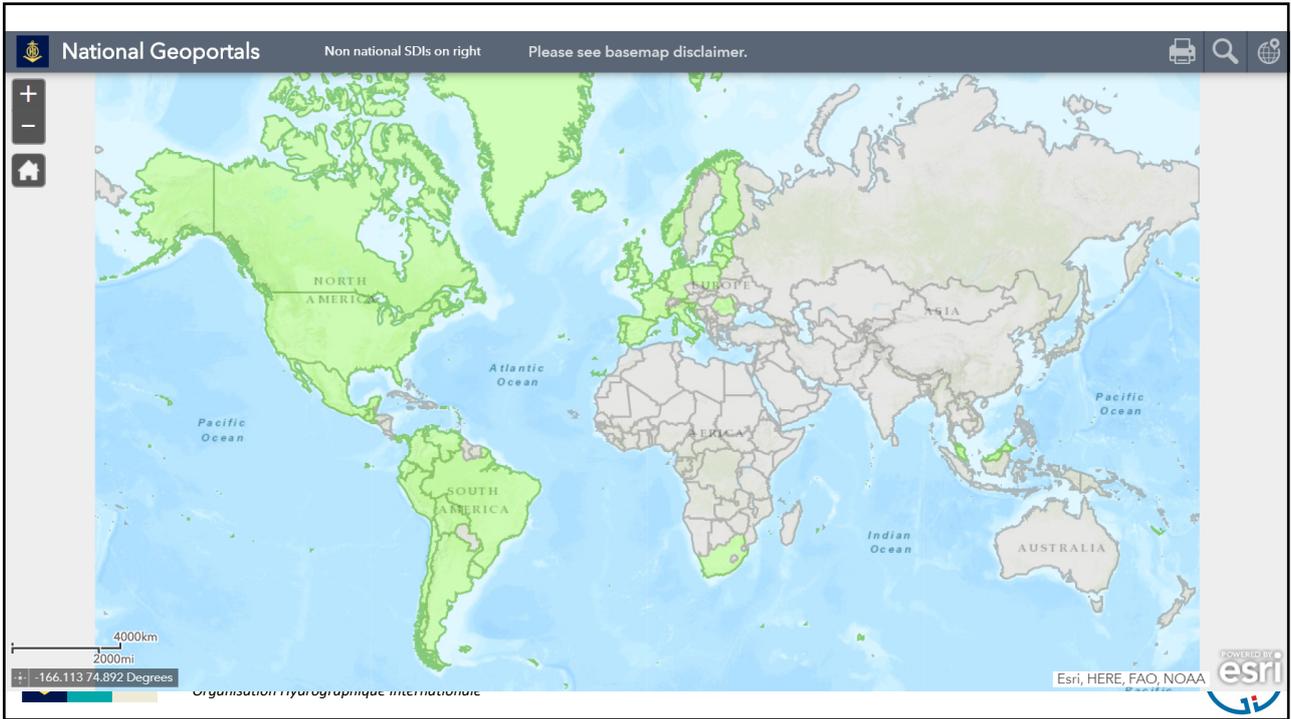
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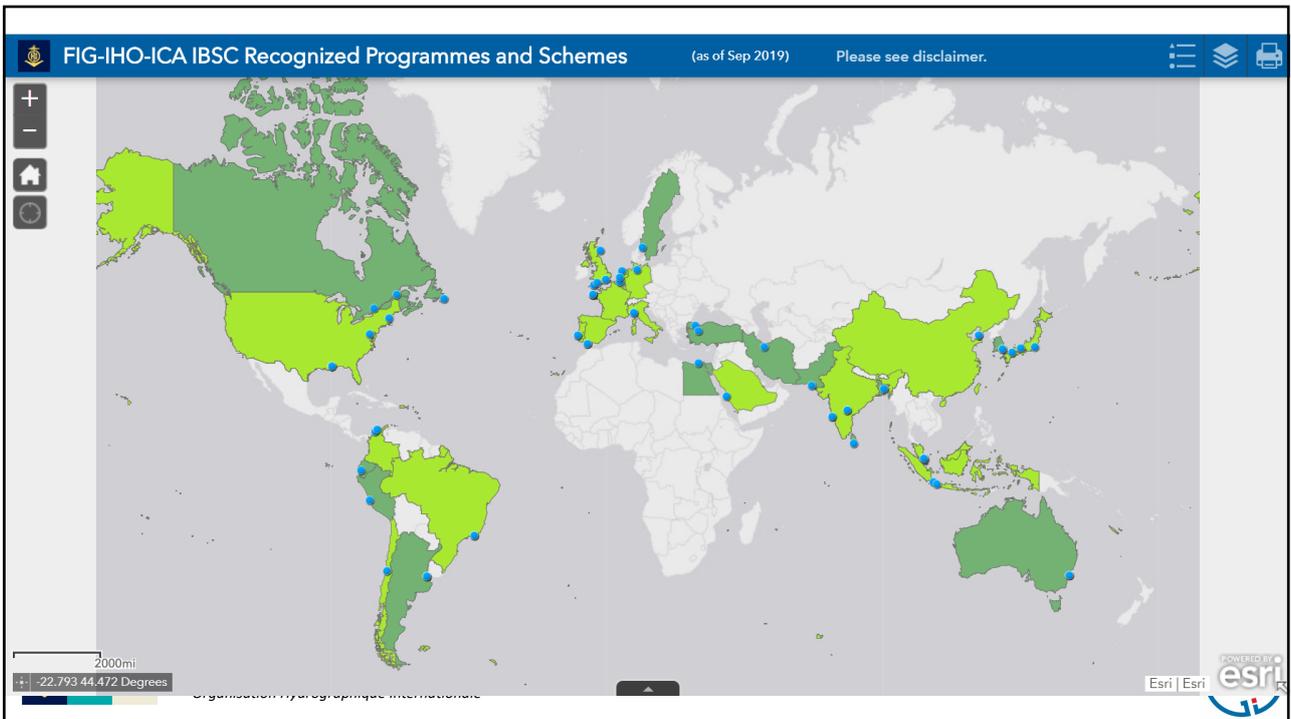
13



14



15



16

Capacity Building

Capacity Building:

- Guided by the IHO CB Strategy
- Supervised by the IRCC
- Executed by the CBSC and the IHO Secretariat
- Coordinated with other international organizations
- Funded by the IHO and donors
- In-kind support from States, Organizations, Academia, Industry



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17

Capacity Building Sub-Committee (CBSC)

Objectives:

- continuously assess hydrographic surveying, nautical charting and nautical information status in nations and regions where hydrography is developing
- establish and maintain close relationships with national agencies and international organizations, to identify funding and technical assistance
- cooperate with Regional Hydrographic Commissions



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18

Capacity Building Cooperation

The IHO participates in the Joint Capacity Building Group:

- | | |
|-------|--------|
| - IHO | - IAEA |
| - IMO | - IALA |
| - WMO | - FIG |
| - IOC | - IMPA |

The FIG-IHO-ICA International Standards of Competence for Hydrographic Surveyors and Nautical Cartographers (IBSC)



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19

Capacity Building Strategy

The 4 As:

- Awareness
Raise priority of Hydrography
- Assessment
Identify and prioritize problems
- Analysis
Identify Projects based on national/regional priorities
- Action
Implementation of Activities. Follow-up



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20

Phases of Hydrographic Capacity Building

- Preliminary (Phase 0)
 - Raise awareness
- Phase One
 - Collection and circulation of nautical information needed to maintain existing charts and publications
- Phase Two
 - Capacity to conduct hydrographic surveys, data gathering and processing
- Phase Three
 - Production of charts and publications



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21

IHO Capacity Building Fund

Fund supports:

- Assessment and awareness (Technical Visits)
- Technical Assistance
- Training and Education
- Financial Assistance
- Start-up Projects

Proposals submitted via Regional Hydrographic Commissions



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22

IHO Capacity Building Priority

- The priority for the IHO is Maritime Safety Information (MSI)
- Implementation steps for MSI:
 - A National Coordinator
 - Contact information
 - National network with stakeholders
 - Legal component



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23

IHO Capacity Building Information

Information is available from the IHO website at:

<https://iho.int/en/capacity-building-and-technical-cooperation>

<https://iho.int/en/education-programme-recognition-0>

<https://iho.int/en/cbsc>

Execution of the IHO CB Work Programme (CBWP) is available from the first link above.



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24

IHO Use Cases

The MSDIWG11 meeting agreed to present the following use cases to the UN-GGIM / WG-MGI:



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25

Use cases:

- i) Management for inland waters in Africa;
- ii) Optimization of sea routes for the shipping industry using standard messages leading to the reduction of fossil fuel consumption and reduction of CO2 emission;
- iii) Response to disasters;
- iv) Oil spill response;
- v) Potential for offshore wind generation;



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26

Use cases (continued):

- vi) Marine Special Planning for the high seas;
- vii) Digital object identifier (DOI) development (academic) and input/linkage to the MSDI;
- viii) Supply chain and BIM (building information management); and
- ix) Global MSDI for the UN System.



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27

Recommendations to the UN-GGIM / WG-MGI

The WG-MGI is invited to:

- i) Continue working with the IHO in matters related to the marine and maritime domains
- ii) Take into consideration the Use Cases above mentioned and work with the IHO to further develop these cases
- iii) Recommend to the UN Member States to identify and work with their national Hydrographic Offices



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28

Recommendations to the UN-GGIM / WG-MGI

- iv. Work with the IHO to identify indicators to monitor the progress of the UN-SDGs
- v. Recognize that Marine SDI is an enabler for data and metadata to be used in Artificial Intelligence
- vi. Continue promoting the use of IHO, ISO and OGC Standards as enablers of data governance
- vii. Consider using the IHO Publication C-17 on Marine SDI
- viii. Take any other action deemed necessary.



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