



# RSAHC10

## IHO Secretariat Report

**Rear Admiral Luigi SINAPI**  
**IHO Director**



**ROPME**

Regional Organization for the Protection  
of the Marine Environment



**ROPME**

Regional Organization for the Protection  
of the Marine Environment



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# IHO MEMBERSHIP & REGIONAL APPLICATION FOR IHO MEMBERSHIP

- In November 2023, **CABO VERDE** became the **99<sup>th</sup> IHO Member State** (4.033 km<sup>2</sup> land, 5.934 km<sup>2</sup> sea)



- In May 2024, **KIRIBATI** became the **100<sup>th</sup> IHO Member State** (811 km<sup>2</sup> land, 5,1 million km<sup>2</sup> sea)



***Recommendation - RSAHC is invited to encourage and propose to the IHO Secretariat High Level Visits also to those non-coastal States not yet IHO Member States and support the IHO Secretariat in the future initiative in the Caspian Sea region, if the situation allows.***



# IHO OUTCOMES OF THE 8TH MEETING OF IHO COUNCIL (1 OF 6)

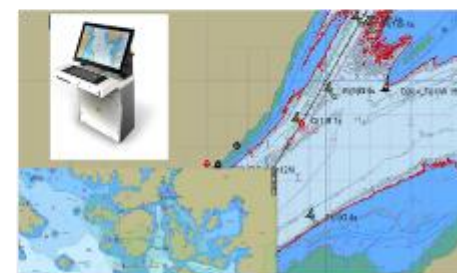
International  
Hydrographic  
Organization

- Decision C8/11: The Council endorsed the principle of creating ***IHO S-100 Sea Trial Areas around the world*** (Canada on St Lawrence River).
- Action C8/12: Council tasked the IHO ISO Cell through HSSC to consider the possibility of developing some ***Guidelines for IHO S-100 Sea Trials Areas***.
- Decision C8/17: The Council noted the ***achievements of the Joint IHO-Singapore Lab*** (conversion S-57 to S-101, S-131 Database, Interoperability S-101 and S-102 on a prototype S-100 ECDIS, availability of ENC's S-57 and S-101 on a dual-fuel ECDIS onboard the Italian Tall Ship Amerigo Vespucci for her circumnavigation, etc.).

IHO Council, Secretariat, 15-17 October 2024



<https://iho.int/en/8th-council-meeting-2024>





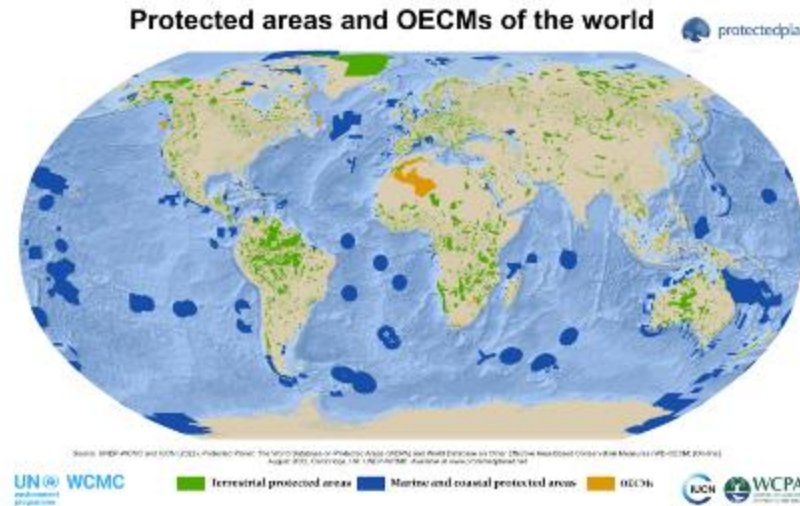


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# OUTCOMES OF THE 8TH MEETING OF IHO COUNCIL (3 OF 6)

International  
Hydrographic  
Organization

- Action C8/26: The Council tasked the MSDIWG through the IRCC, in liaison with the NIPWG, Protected Seas, ECDIS OEMs, GIS software manufacturers, the UN, IUCN, and IHO Member States, **to coordinate a pilot project aiming to demonstrate the operational implementation of S-122.**



Alignment of S-122 to the 30 by 30 initiative could support the sustainable use of MPAs and provide a global standard for the measurement of progress towards the target by 2030.

- Decision/Action C8/27a&b: The Council noted the update on the activities of the *IHO Fund Generation PT*, other initiatives regarding additional funding (**RENCs**, **IENWG** and the **Joint IHO/IMO/IALA/IOC/WMO/FIG/AIEA/IMPA CB initiative** in particular) and invited the IRCC to expand the scope of the Fund Generation Team to consider options for charging the IHO digital standards services.
- Decision C8/33: The Council approved the proposed **amendments to Annex 4 of the S-100 Roadmap (Dual Fuel Concept for S-100 ECDIS).**



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# OUTCOMES OF THE 8TH MEETING OF IHO COUNCIL (4 OF 6)

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Organization

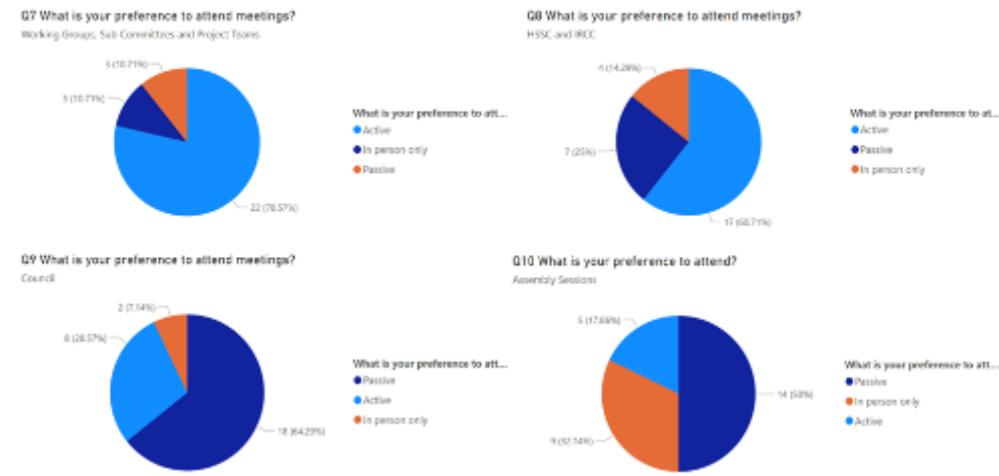
- Decision C8/37 – Action C8/38: The Council agreed on the interim establishment of the ***IHO Infrastructure Centre in the Republic of Korea (ROK) starting in 2025*** under the supervision of the IHO Secretariat and HSSC (supported by the S-100 ICE PT), and that the permanent establishment of the IHO Infrastructure Centre in the ROK should be finally decided by the Assembly (A-4).
- Decision C8/45: The Council noted the proposed theme for the *2025 World Hydrography Day* by the Secretary-General which is: “***Seabed Mapping: Enabling Ocean Action***”.
- Action C8/48: The Council welcomed the proposal from the IHO Secretariat and agreed with the proposed *engagement in the Blue Economy and Finance Forum June 2025 in Monaco and UNOC 2025 in Nice*, encouraged Member States to take advantage of the alignment of IRCC-17 to the Blue Economy and Finance Forum and the UNOC 2025, and to engage early with national delegations to participate accordingly.





- Decision C8/52: The Council invited the Capacity Building Sub-Committee (CBSC) through the IRCC to consider **priorities of additional CB activities for 2025 covered by the 2024 savings with a focus on S-100 related CB activities**.
- Decision C8/57: The Council established the **Strategic Plan Review Working Group (SPRWG)**, agreed to nominate US (Benjamin Evans), NZ (Adam Greenland), and DK (Hendrik Justus Stang) as Chair, Vice-Chair and Secretary of the SPRWG, respectively, and endorsed the proposed TORs and ROPs of the SPRWG. With the *IHO CLs 38/2024 and 41/2024 the SPRWG was established and the ToRs approved*.
- Action C8/62: The Council endorsed the principles of the proposed **IHO Resolution on “Inclusive participation in IHO meetings”** submitted by the ad hoc drafting group and invited the group to add an Annex with (minimum) practical Guidelines derived from the outcome of the survey to assist Member States to host and facilitate online meetings. IHO Resolution and associated Guidelines will be sent to the IHO Member States via CL for their approval.

Attendance Preferences - Chairs (28 responses includes RHC chairs)

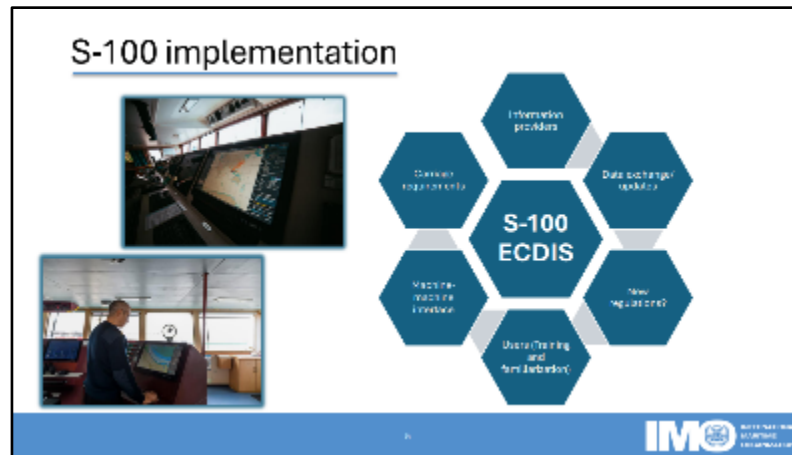




# IHO OUTCOMES OF THE 8TH MEETING OF IHO COUNCIL (6 OF 6)

International  
Hydrographic  
Organization

- Decision C8/72 – 73 – 74: The Council commended the Head Operational Safety, Maritime Safety Division, for his very enlightening ***presentation on S100 Implementation from an IMO perspective***. Compliance with the S-100 standards would be required not only for ECDIS systems, but for many other types of equipment used on board ship. In the immediate future, the IMO Maritime Safety Committee would consider proposals for a ***new output to develop guidance for a framework for data distribution and global internet protocol (IP) based connectivity***, to standardize the exchange of dynamic data between ship and shore over the internet. Compliance with the IEC standard 63173-2 on secure communication between ship and shore (SECOM) was recommended. ***Future events that are in the interest of IHO Member States: a. MSC 109 (2-6 Dec 2024) – b. NCSR 12 (13-22 May 2025) – c. HTW 11 (10-14 Feb 2025) – d. MSC 110 (18-27 June 2025).***







## RECOMMENDATIONS

***8.1 RSAHC members to note the updated version 3.0 of the S-100 Implementation Roadmap Ed. October 2023 (and the new version 4.0 to be issued by November 2024), the version 1.0 of the Guidelines on the Implementation of the WEND-100 Principles and its Appendix, with particular attention to the creation of a new role of S-100 Regional Coordinator or the expansion of the role of Regional Chart Coordinator to include S-1xx products.***

***8.2 RSAHC members are invited to note the progress of the IHO and the Hydrographic Community on the S-100 implementation and to share their national strategies regarding the establishment of national S-100 committees (or similar entities), as appropriate.***

***8.3 RSAHC is invited to represent their requests in the field of Capacity Building, especially those activities related to the implementation of S-100.***

***8.4 RSAHC is invited to continue providing input to IRCC for measuring the IHO Strategic Performance Indicators (SPI) related to the IHO Strategic Plan (2021-2026) and contribute to the works of the SPRWG established to review the IHO Strategic Plan for the period 2027-2032.***

***8.5 RSAHC members are invited to contribute to the IHO Resolution and annexed Guidelines (when issued via IHO CL) on “Inclusive participation in IHO meetings”.***



# IHO CAPACITY BUILDING PROGRAMME 2024

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Hydrographic  
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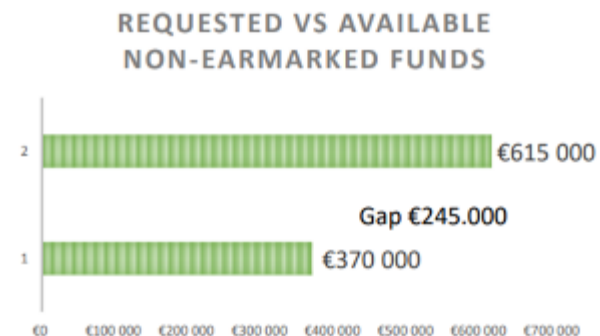
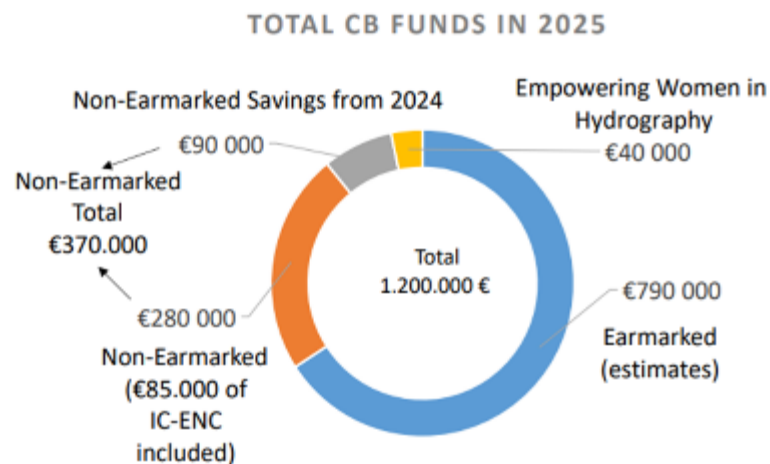
- The funded activities which were not executed in the 2024 CBWP will not be carried over to the 2025 CBWP. In 2024 the CBWP has returned to the pre-COVID practice of not carrying over incomplete activities from year-to-year.
- The **2024 CBWP has 293,265 euros for non-earmarked projects** and 790,223 € for earmarked projects.
- **The total of funds available for 2024 is 1,083,488 €.**
- RSAHC has three funded CB activities in the 2024CBWP:
  - ✓ **A-06 High Level Technical Visit to Iraq (from 2023 A-04)**
  - ✓ **A-11 Technical Visit to Iran (former 2019 A-12, 2020 A-11, 2021 A-14, 2022 A-17, 2023 A-15)**
  - ✓ **P-08 MSI with NIOHC (training on establishment of MSI structure and basic MSI procedure)**



# IHO CAPACITY BUILDING PROGRAMME 2025

International Hydrographic Organization

- The **2025 CBWP has 280,000 euros for non-earmarked projects and 790,000 € for earmarked projects.**
- The **total of funds available for 2025 is 1,070,000€.**



The so far uncovered CB requests for S-100 related activities amount to ~€188.000.

- RSAHC has three funded CB activities in the 2025CBWP:
  - ✓ **A-02 Technical Visit to Kuwait**
  - ✓ **P-10 ENC Quality and conversion course (S-57 to S-101 Conversion) with NIOHC**
  - ✓ **P-14 Marine Spatial Planning Workshop with NIOHC**



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# CAPACITY BUILDING PROGRAMME 2025 (BREAKDOWN)

Percentage of S-100 requested activities out of the annual amounts of NON-EARMARKED activities:

2021	2022	2023	2024	2025
5%	9%	13%	18%	45%

## APPROVED 2025 IHO CBWP

Updated: 4/9/2024

IHO WP Element: Capacity Building Assessment - Technical and High-Level Visits					
No.	Events	Responsible	Budget	Status	Resources
A-01	Technical visit to Gabon	EAIHC	7,000 €	Led by Date	IHO
A-02	Technical Visit to Kuwait	RSIHC	5,680 €	Led by Date	IHO-ROK
A-03	Technical visit to S. Tomé e Príncipe	EAIHC	7,000 €	Led by Date	IHO-ROK
A-04	Technical Implementation Visit by UK	EAIHC	7,000 €	Led by Date	IHO-ROK
A-05	Technical Visit – Republic of Zambia	SAIHC	4,000 €	Led by Date	IHO-ROK
A-06	High Level Technical Visit to Guatemala	MACIHC	5,000 €	Led by Date	IHO-ROK
A-07	Technical Visit - Bahamas	MACHC	5,000 €	Led by Date	IHO-ROK
P-01	ROK Category "A" Programme	Secretariat	0 €	(TBC at PMB15) Led by USM, Hattiesburg, USA 1 August 2025-1 August 2026	ROK
P-02	ROK Category B Nautical Cartographers Program	Secretariat	0 €	(TBC at PMB15) Led by KHOA, Busan, ROK	ROK
P-03	IHO-NF GEOMAC (Geospatial Marine Analysis and Cartography)	Secretariat	331,149 €	Led by UKHO, Tauton, UK	Nippon
P-04	Training for Trainers - Basic Hydrography	Secretariat	0 €	(TBC at PMB15) Led by KHOA, Busan, ROK	ROK
P-05	Training Center Visit (TCV) and International Cooperation Agency Visits (ICAV) in EAIHC countries	EAIHC	25,000 €	Led by Dates	IHO
P-06	Seminar on Raising Awareness of Hydrography	NIOHC	17,250 €	Led by Dates	IHO-ROK
P-07	Raising Hydrographic Awareness (for SAIHC Associate and Non-Members)	SAIHC	20,100 €	Led by Dates	IHO-ROK
P-08	Seminar on Raising Awareness of Hydrography	MACHC	33,000 €	Led by Dates	IHO
P-09	Technical Workshop on Hydrographic Contracts and Maritime Law	SWPHC	6,000 €	Led by Dates	IHO-ROK
P-10	ENC Quality and conversion course (S-57 to S-101 Conversion)	NIOHC / RSAHC	32,900 €	Led by Dates	IC-ENC
P-11	S-101 Workshop – Electronic Navigational Chart / S-102 Workshop Bathymetric Surfaces	SEPRHC	30,247 €	Led by Dates	IC-ENC
P-12	MBES Acquisition and Processing Survey Course	SWAHC	16,360 €	Led by Dates	IHO
P-13	S57-S101 Conversion Training	MBSHC	20,650 €	Led by Dates	IC-ENC
P-14	Marine Spatial Planning Workshop	NIOHC / RSAHC	37,900 €	Led by Dates	IHO
P-15	Hydrographic Survey with Unmanned Survey Vessels (USVs)	MBSHC	20,650 €	Led by Dates	Not funded yet
P-16	Tides and Water Level Workshop	SWAHC	17,600 €	Led by Dates	Not funded yet
P-17	Data Conversion, Validation and Release of S-100 Products	MBSHC	20,650 €	Led by Dates	Eventually by IC-ENC
P-18	MSDI and Database Management (5 days)	RSIHC	41,660 €	Led by Dates	Not funded yet

→	P-19	S-57 to S-101 conversion and S-100 production Course	SWAHC	21,100 €	Led by Dates	Eventually by IC-ENC
→	P-20	MSDI and Database Management Training	MBSHC	18,340 €	Led by Dates	Not funded yet
→	P-21	Introduction to Tides and Water Levels Workshop	MACHC	26,400 €	Led by Dates	Not funded yet
→	P-22	S102, S104 & S111 Training	MBSHC	20,650 €	Led by Dates	Eventually by IC-ENC
→	P-23	ENC Quality and conversion course (S-57 to S-100 Conversion)	MACHC	32,900 €	Led by Dates	Eventually by IC-ENC
→	P-24	Introduction to S100 and S1xx Products	MBSHC	20,650 €	Led by Dates	Eventually by IC-ENC
→	P-25	S100 Migration Planning	MBSHC	20,650 €	Led by Dates	Eventually by IC-ENC
→	P-26	Basic S100/S101 Production Course-10 days	RSIHC	32,895 €	Led by Dates	Eventually by IC-ENC
→	P-27	Seminar on Interpretation and Enhancement of MSI	EAIHC	19,950 €	Led by Dates	Not funded yet
→	P-28	Training on the Production of S-102 Bathymetric Surfaces	EAIHC	18,700 €	Led by Dates	Eventually by IC-ENC
		Subtotal of P (Provision)	-	906,351 €		

Resources:

IHO = IHO budget

IHO-ROK = ROK contribute to Non-Earmarked projects

IC-ENC = International Centre for Electronic Navigational Charts

ROK = IHO/ROK Programme of Technical Cooperation

Nippon = IHO-Nippon Foundation GEOMAC Project

Total	947,031 €	Non-Earmarked Activities	
IHO	136,510 €	Subtotal IHO	
IHO-ROK	59,780 €	Subtotal ROK (non-earmarked)	
IC-ENC	83,797 €	Subtotal IC-ENC	
SubTotal	280,087 €		
Earmarked Activities			
ROK	0 €	Subtotal ROK	
Nippon	331,149 €	Subtotal Nippon	
SubTotal	331,149 €		
Not Funded Yet			
Not funded yet	335,795 €		



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## CAPACITY BUILDING – NEW INITIATIVES

International  
Hydrographic  
Organization

- A. CREATION OF THE ***IRCC FUND GENERATION PT***
- B. ***TIGHT LIAISON WITH THE TWO RENCs*** (IC-ENC approved an “***OPT-IN Fund***” and PRIMAR approved an “***PRIMAR S-100 CB Fund***” to support IHO CBWP)
- C. RE-ACTIVATION OF THE ***JOINT IHO/IMO/IALA/IOC/WMO/FIG/AIEA/IMPA CB INITIATIVE*** (“***TO DELIVER AS ONE***” ... ***PRIORITY 1: S-100 IMPLEMENTATION ACTIVITIES***)
- D. ***CLOSE LIAISON WITH IMO*** FOR FINANCING S-100 CB ACTIVITIES PROPOSED BY THE RHCs
- E. ***RESEARCH FOR OPTIONS FOR CHARGING THE IHO DIGITAL STANDARDS SERVICES TO INCREMENT THE IHO CB FUND***



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## CAPACITY BUILDING PROGRAMME – COURSES

International  
Hydrographic  
Organization

- **CAT A courses at USM sponsored by ROK** (2 candidates selected for 11<sup>th</sup> course 2023/2024; 2 candidates selected for 12<sup>th</sup> course 2024/2025 starting in August 2024 with IHO CL 05/2024).
- **Cat B course in Hydrography** from 17 June to 1 November 2024 **at KHOA-ROK** (10 candidates selected – **1 from I.R. of Iran** – with IHO CL 15/2024).
- **GEOMAC Cat B course in Nautical Cartography at UKHO** sponsored by **Nippon Foundation** (7 candidates selected with IHO CL 17/2024).



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# CAPACITY BUILDING – EWH PROJECT

International  
Hydrographic  
Organization

## IHO EWH WEBPAGE



Education  
and Training

Training onboard  
Survey ships

IHO Working Groups  
and Committees

Participation at International fora

Training at the Hydrographic Offices

Seminars & Webinars



**Establishment of a *Diversity, Equity and Inclusion (DEI) Project Team* (see call issued with the IHO CL 42/2024)**

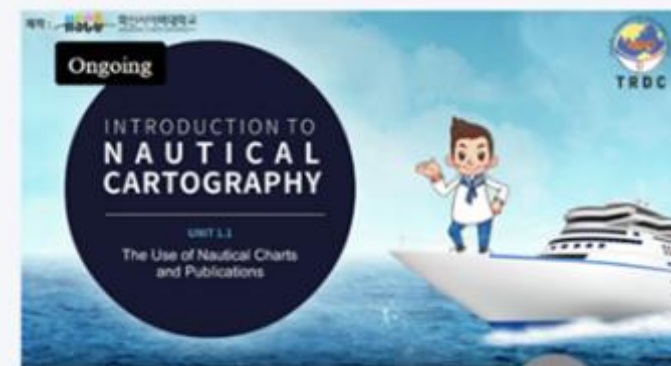


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# CAPACITY BUILDING – E-LEARNING CENTRE

International  
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## Popular Courses



- **IHO e-Learning Center**: <https://elearning.iho.int> - IHO CL 24/2023 Steering Committee established - A General Manager Group formed from the SC - Seek for e-Learning material from Member States and partner organizations





## RECOMMENDATIONS

***17.1 RSAHC members are invited to continue follow and evaluate the possibility to contribute to the CB Programme and focus their requests on the S-100 implementation.***

***17.2 RSAHC members are invited to participate at the EWH project and provide proposals via the specific webpage (<https://iho.int/en/basic-cb-sc-ewh>) set up under the Capacity Building Sub-Committee (CBSC) for this project, and respond to the IHO CL 42/2024.***

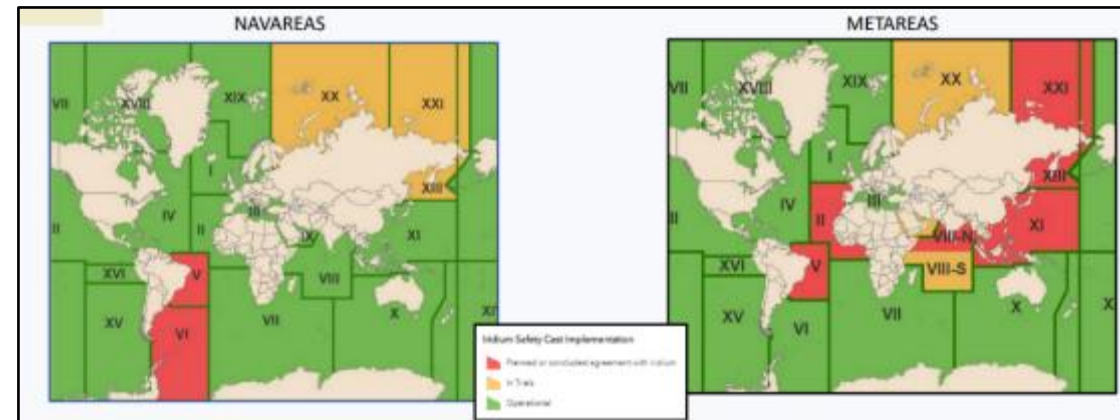
***17.3 RSAHC members are invited to provide contributions of online learning material to the Project Team established for the IHO e-Learning Center at KHOA.***



# IHO MARITIME SAFETY INFORMATION SERVICES

International Hydrographic Organization

- The *Iridium SafetyCast* service became SOLAS carriage compliant from 1 January 2020. WNWWS agreed that the use of all IMO RMSSs should be mandatory. A Letter from WNWWS and IRCC Chairs will be issued soon for relevant Member States to implement all IMO recognized mobile satellite services.
- Update of C-55 to showcase the GIS database
- **2024 Coastal States MSI capacity to be 89,2%** (IHO SPI 3.1.1 target is 90% by 2026).
- S-124, Edition 2.0.0 was endorsed by WNWWS and submitted to HSSC for approval.
- Paper submitted to MSC109 on developing guidelines for the use of IP based transfer methods for S-100 products such as S-124.



**IHO SPI - Coastal States by NAVAREA**

NAVAREA	Coastal States with MSI Capacity	Total Coastal States
NAVAREA XI (Japan)	21	21
NAVAREA XII (United States)	9	10
NAVAREA XIII (Russian Federation)	1	1
NAVAREA XIV (New Zealand)	12	12
NAVAREA XV (Chile)	1	1
NAVAREA XVI (Peru)	1	1
NAVAREA XVII (Canada)	1	1
NAVAREA XVIII (Canada)	1	1
NAVAREA XIX (Norway)	1	1
NAVAREA XX (Russian Federation)	1	1
NAVAREA XXI (Russian Federation)	1	1
<b>WWNWS</b>	<b>190</b>	<b>212</b>

IRCC18  
Santa Cruz Island - Galapagos, Ecuador, 10 - 12 June 2024

**SPI = 89.2%**



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MARITIME SAFETY INFORMATION SERVICES

## RECOMMENDATIONS

***RSAHC members are invited to:***

***20.1 Encourage all information providers (NAV and MET Area Coordinators and RCCs) to use the SafetyCast system and progress towards declaring full operational status.***

***20.2 Establish and maintain effective communications with the relevant NAV and MET Area Coordinators to ensure the timely provision of MSI, by following the guidance provided in S-53 – Joint IMO/IHO/WMO Manual on Maritime Safety Information, to ensure the necessary facilities and capabilities are provided and maintained for the gathering and communication of MSI within their area of national responsibility.***

***20.3 Contribute to the reflection on the actual status of MSI provision within Coastal States for a more appropriate definition of SPI 1.3.1, in the light of the revision of the IHO Strategic Plan (see Recommendation 8.4).***

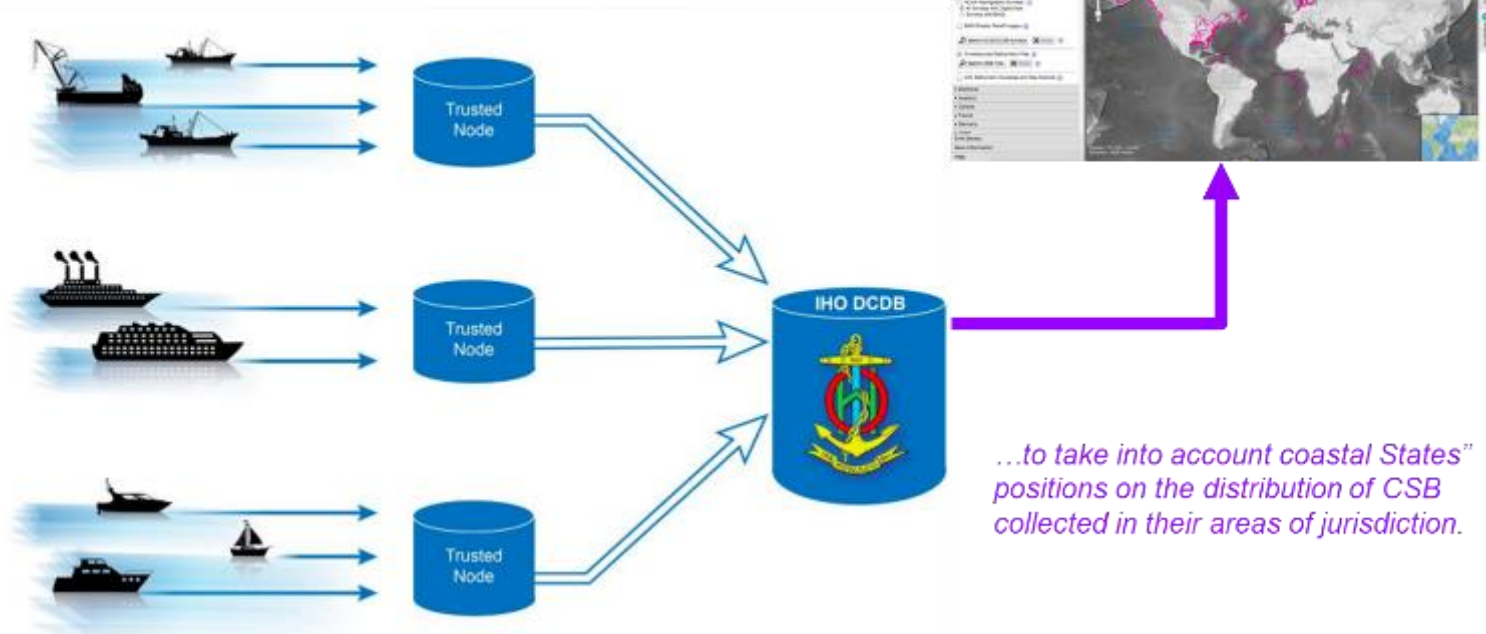


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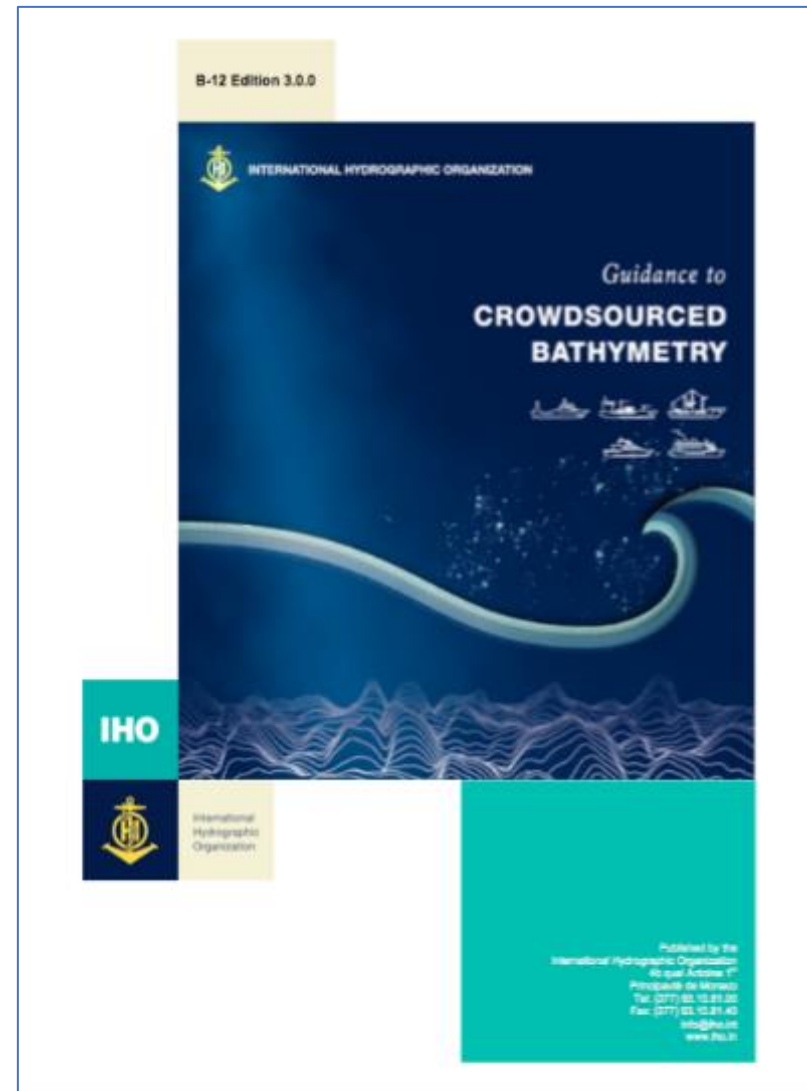
# CROWDSOURCED BATHYMETRY – GEBCO – SEABED 2030

International Hydrographic Organization

*Crowdsourced bathymetry (CSB) is the collection and sharing of depth measurements from vessels, using standard navigation instruments, while engaged in routine maritime operations.*



*...to take into account coastal States' positions on the distribution of CSB collected in their areas of jurisdiction.*





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# CROWDSOURCED BATHYMETRY – GEBCO – SEABED 2030

International  
Hydrographic  
Organization

Coastal states were requested by the IHO to indicate their position on the public sharing of CSB data collected within waters subject to their national jurisdiction.

To date, 37 coastal states (green) have replied positively to IHO CL 21/2020 & IRCC CL 1/2020



## RSAHC IHO Member States:

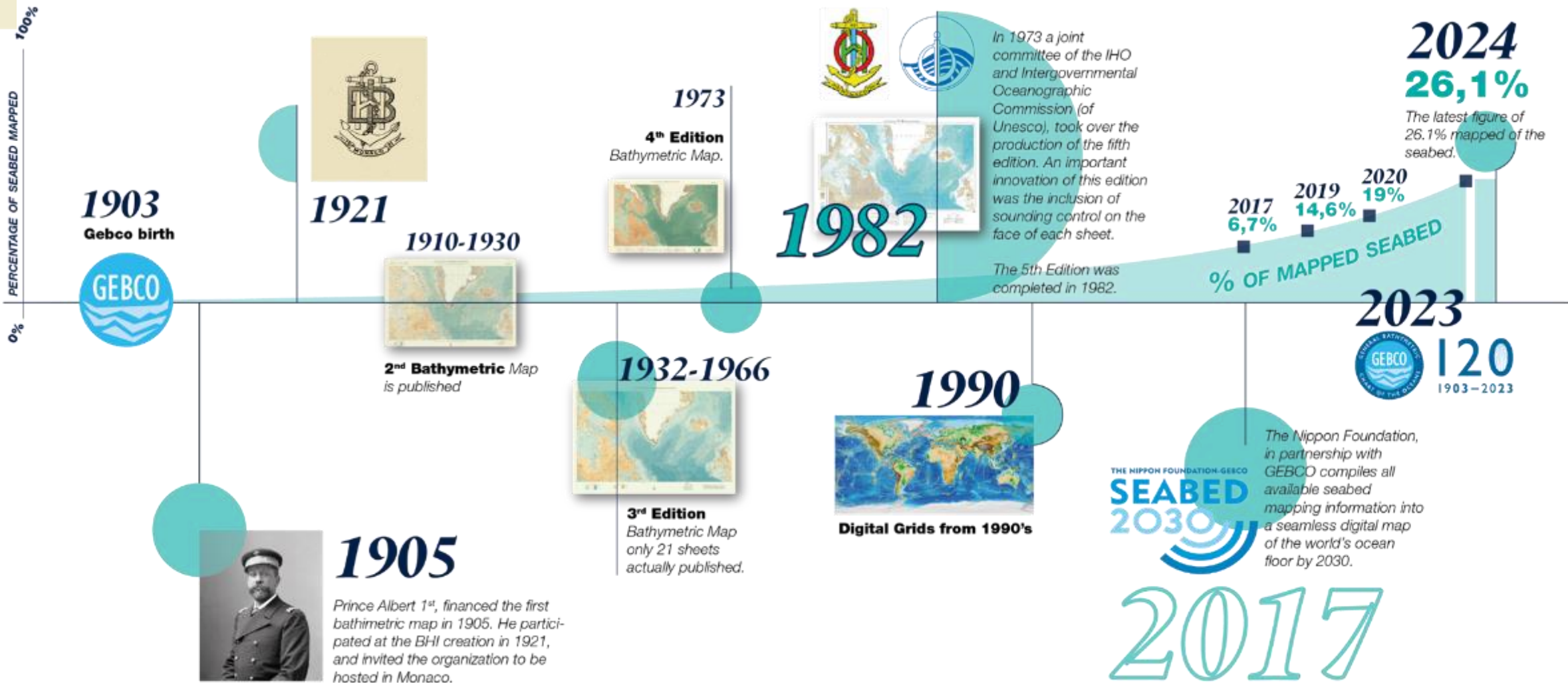
Bahrain, IR of Iran, Iraq, Kuwait, Oman, Pakistan, Qatar, **Saudi Arabia**, United Arab Emirates



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# CROWDSOURCED BATHYMETRY – GEBCO – SEABED 2030

International Hydrographic Organization





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# CROWDSOURCED BATHYMETRY – GEBCO – SEABED 2030

International Hydrographic Organization

H.S.H Prince Albert II at the IHO Assembly on 2nd May 2023

**“Data coverage has now grown from 6% to 25% of total ocean area.”**



120th GEBCO Anniversary celebrations at the 32nd Assembly of IOC-UNESCO (Paris, June 2023)



120th GEBCO Anniversary celebrations at the MAP the GAPS SYMPOSIUM (Monaco, November 2023)



MAP the GAPS SYMPOSIUM



**26,1% ON 21 JUNE 2024**

**26,1% is the latest percentage of ocean floor mapped, marking an increase of 4,34 million square kilometers of new data - equating to an area the size of the European Union**



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# CROWDSOURCED BATHYMETRY – GEBCO – SEABED 2030

International  
Hydrographic  
Organization

## RECOMMENDATIONS

***25.1 Consider the impacts of the increasing global societal and United Nations (UN) driven need to complete the picture of the seafloor as well as the potential benefits to individual coastal States.***

***25.2 Make data freely available for inclusion in the DCDB and the widest possible use, in accordance with IHO Resolution 1/2017.***

***25.3 Nominate the CSB-GEBCO-Seabed 2030 Regional Coordinator.***

***25.4 Consider to respond to the IHO CL 21/2020 and IRCC CL 1/2020 to indicate their positions on the provision of CSB data.***

RHC	% 2024
ARHC	20.34
BSHC	47.14
EAHC	12.32
EAHC-K	40.54
EAtHC	33.54
HCA	15.49
MBSHC	54.23
MACHC	29.32
NHC	46.85
NIOHC	12.11
NSHC	55.16
ROPME	6.34
SEPRHC	19.04
SWATHC Reg. c1b	26.87
SWATHC	42.27
SWPHC	16.06
SAIHC	17.27
USCHC-Pacific	26.44
USCHC-Atlantic	39.88





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# IHO – U.N. DECADE & U.N. OCEAN CONFERENCE 2025 (UNOC25)

International  
Hydrographic  
Organization

## UN OCEAN DECADE:

Two satellite-events: OECD-IHO on *“The seabed data we need for the ocean we want”* and IMO-WMU-IHO on *“Empowering Women for the Ocean Decade: Achieving Gender Equality in Ocean Sciences and Policy Making”*

## UNOC25:

Initial contacts with the Principality of Monaco and the Foundation Prince Albert II for identifying themes to be presented in the *“Blue Economy and Finance Forum”* (BEFF) in Monaco on 7-8 June 2025 and at UNOC25 (9-13 June 2025). **CBSC23 & IRCC17 will be held in Monaco at the IHO Secretariat in May/June 2025.**

**RECOMMENDATION:** RSAHC is invited to take note of the engagement of the IHO Secretariat in the UN initiative and the items for further consideration.





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# TECHNICAL PROGRAM AND S-100 IMPLEMENTATION

International Hydrographic Organization

- As presented in CL 43/2023, the HSSC intends to adhere to the following schedule:

TASK	IHO CL issue date	MS Response due
<i>S-100 Edition 5.2.0</i>	IHO CL 18/2024 (Jan 2024)	IHO CL 27/2024Rev1 (Jun 2024)
<i>S-100 Phase 1 Endorsement</i>	IHO CL 39/2024 (Oct 2024)	<b>December 2024</b>

### Phase 1 / Route Monitoring

**Phase 1  
Route Monitoring Mode**

- S-101 ENC
- S-102 Bathymetry
- S-104 Water Level
- S-111 Surface Currents
- S-124 Navigational Warnings
- S-129 UKC Management

**Critical Framework**

- IHO Geospatial Information Registry
- S-98 Interoperability Specification
- S-100 Universal Hydrographic Data Model
- S-128 Catalogue of Nautical Products
- S-164 Test Data Set for S-100 and ECDIS Type Approval



### Phase 2 / Route Planning

**Phase 2  
Route Planning Mode**

- S-122 Marine Protected Areas
- S-123 Marine Radio Services
- S-125 Marine Aids to Navigation (AtoN)
- S-126 Marine Physical Environment
- S-127 Marine Traffic Management
- S-131 Marine Harbour Infrastructure
- S-411 Ice Information (WMO)
- S-412 Weather and Wave Hazards (WMO)

+ S-100 Products used in Monitoring Mode

- S-100 Ed. 5.2.0 was adopted with the IHO CL 27/2024Rev1. The “operational” editions of the Phase I S-100-based Products Specifications (S101, S-102, S-104, S-111, S-124, S-129) were endorsed by HSSC with HSSC CL 02/2024.

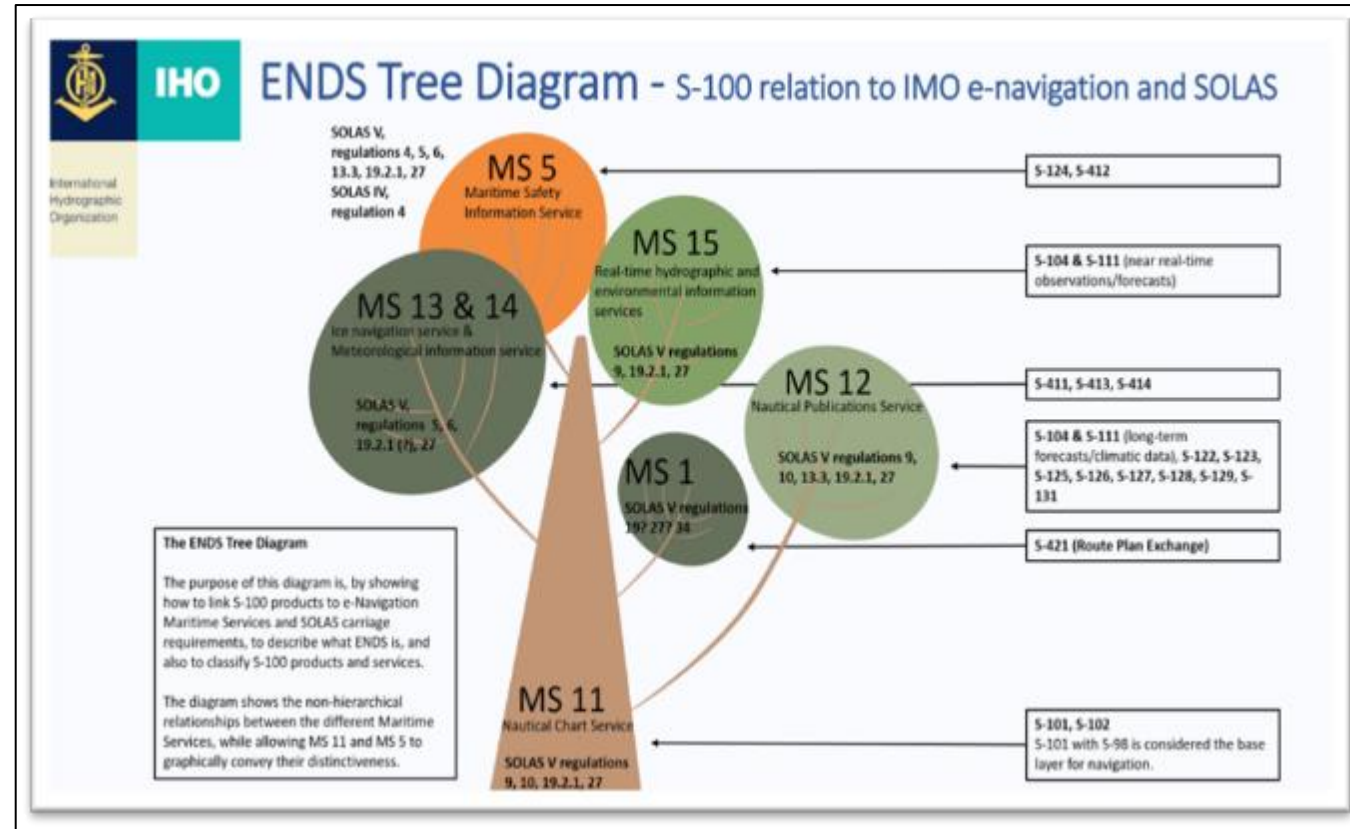


# IHO TECHNICAL PROGRAM AND S-100 IMPLEMENTATION

International Hydrographic Organization

- Future progression on the implementation of the S-100 Roadmap will be regularly reported by IHO to IMO (NCSR). From 2025 onwards, these reports will be based on respective IHO Member States and Regional Hydrographic Commissions reports and will provide the geographic coverage of S-101, other S-1xx products, ENDS schemes, and production plans per Charting Regions by digital means.

- INTToGIS III remains the one-stop-shop platform to support the RHCs.
- RENCs confirmed that they had started to design the much more complex description of the diagram applicable to ENDS (Electronic Navigation Data Services) in the S-100 eco-system.





- WENDWG highlighted the importance of defining a S-100 capabilities-based approach at regional level for a timely and harmonized implementation of the S-100 Roadmap.
- At IRCC16, WENDWG was tasked to invite the RHCs representatives to develop their schedule to meet the 2026 IMO target (S-100 ECDIS) and share their own roadmap at the next WENDWG meeting to be held in February 2025.
- WENDWG also established an ad-hoc S-11 - Part C drafting team to develop a proposed Edition 1.0.0 of S-11 Part C *“Guidelines for the Coordination and Management of the Development of S-100 Electronic Navigational Data Services (other than S-101 ENCs)”*.



## **RECOMMENDATIONS**

**35.1 RSAHC Members are kindly requested to respond to the IHO CL 39/2024.**

**35.2 RSAHC is kindly requested to implement the WEND recommendations and to develop a proper schedule to meet the 2026 IMO target (S-100 ECDIS) and share the own roadmap at the next WENDWG meeting via the regional representative to the WENDWG.**

**35.3 RSAHC Members are encouraged to liaise bilaterally to solve overlaps in the Region.**



# IHO IHO GIS AND DATABASES

International  
Hydrographic  
Organization

- Yearbook (P-5) and Status of Hydrographic Surveying and Charting Worldwide (C-55) are regularly updated.
- The IHO Online Form system has been used since March 2019 IAW IHO CL20/2019 and CL03/2020.
- An Esri-based GIS solution has been implemented for the efficient visualization of geospatial data.

Country	P-5 –Yearbook Last update received	C-55 Last update received
Bahrain	September 2019	February 2020
I.R. of Iran	May 2023	February 2022
Iraq	December 2021	May 2017
Kuwait	November 2024	January 2020
Oman	August 2023	March 2019
Pakistan	October 2024	June 2024
Qatar	September 2024	February 2019
Saudi Arabia	June 2022	June 2019
UAE	February 2023	January 2010

***RECOMMENDATION - RSAHC is invited to review their entry in the IHO Yearbook P-5 and C-55 and to provide the IHO Secretariat with the appropriate updates or to report no change (CL 20/2019 refers).***



# IHO IHO OUTREACH

International  
Hydrographic  
Organization

- The IHO website had a total of 988,000 in the first 10 months of 2024. The LinkedIn page grew to 10,500 followers by 15 November 2024 and reached total post impressions of 168,329 in the first 10 months of 2024.
- The Secretariat has increased its presence on social media through articles and news about its working groups, committees and subcommittees, especially in the framework of the UN Ocean Decade and the next appointment for the Ocean (UNOC2025).



**Council Members Discuss Progress in Transition to Smart Navigation and More**



**IHO DCDB - temporary app during NCEI outage**



**The digital twin of the navigable waters: paving the way for e-navigation**



# IHO IHO OUTREACH – NEW IHO PORTAL

International Hydrographic Organization

- The IHO Secretariat is updating the IHO website with the implementation of **a new IHO Portal** to be used for the registration on IHO events from October 2024 to the end of March 2025. Detailed arrangements to set preferences on which one of the two to be used during the transition phase, will be coordinated with the Chairs of the IHO Working Groups and Project teams as well as the Regional Hydrographic Commissions. After 31 March 2025, all event preparations should exclusively use the new IHO Portal (**IHO CL 44/2024 refers**).

The screenshot shows the IHO website interface. At the top, there is a language selection bar with 'ENGLISH' selected. Below it is a navigation menu with 'ABOUT IHO' highlighted. A large banner image of a coastline with the text 'About the IHO' is visible. A yellow arrow points to an 'Important Notice' section titled 'System Decommissioning and Transition to New Platform'. The notice states that the Document Archive system will be decommissioned by the end of 2024 and a new system will launch in January 2025. It provides login information for the current system: Name: IHO-public-archive, Password: IHO-archive-98000. A yellow box labeled 'Document Archive' is also present. On the right side, there is a 'News' section with two articles: 'The digital twin of the navigable waters: paving the way for e-navigation' and 'Winner of the first Ex Abyssis ad Alta Award announced'. At the bottom, there is a search bar with the text 'Looking for something specific?' and a 'Chat button'.





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## IHO OUTREACH – WHD 2025 & IHR

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Hydrographic  
Organization

- As announced with IHO CL 43/2024, the proposed theme for WHD 2025 is ***“Seabed Mapping – Enabling Ocean Action”***
- Dr Patrick Westfield from Germany was confirmed for additional 2 years as IHR Editor until 2026. The Review is focused in facilitating interdisciplinary knowledge exchange in applied science, as hydrography encompasses fields such as geophysics, oceanography, geodesy, acoustics, cartography, remote sensing and others. IHR volumes from the entire collections (1923 to 2018) are available online <https://journals.lib.unb.ca/index.php/ihr>



## RECOMMENDATIONS

***47.1 RSAHC Members are invited to take note of the content of the IHO CL 44/2024 and the links to the guidance document of the new IHO Portal.***

***47.2 RSAHC Members are invited to respond to the IHO CL 43/2024 with reference to the proposal of the 2025 WHD.***

***47.3 RSAHC Members are encourage to contribute to the IHR and propose articles/notes for the publication on the Review.***



**IHO**

## **ACTION REQUESTED OF RSAHC**

International  
Hydrographic  
Organization

- a) Note this report**
- b) Consider all the Recommendations proposed in this report**
- c) Take any other actions as considered appropriate**



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