



10th ROPME Sea Area Hydrographic Commission Meeting

Jeddah, Saudi Arabia
26-28 November 2024



Meeting Report

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General

The 10th ROPME Sea Area Hydrographic Commission (RSAHC) Meeting was held in Jeddah, a historic port city with a rich maritime heritage that has been a crossroads of civilizations and commerce for centuries.

More than forty participants from IHO Member States, Associate Member States, Observers and the Industry Representatives were present during the three-day meeting.



The event was held in Al-Muhra Meeting Room, at the Ritz Carlton Hotel located at Al-Hamra Corniche, Jeddah.

Day 1

1. Opening Session

1.1. Opening Ceremony and Group Photo

The meeting commenced with a speech delivered on behalf of the General Authority for Survey and Geospatial Information's (GEOSA) President by the RSAHC Chair, as the President was unable to attend due to other obligations. In his address, the GEOSA's President extended his best wishes to the participants, encouraged them to capitalize on the collective knowledge and experience, wishing them a fruitful and productive meeting.

Following the President's speech, a group photograph of the meeting participants was taken.

1.2. Opening Speech by RSAHC10 Chair

The Chair of RSAHC extended a warm welcome to all attendees at the meeting. In his address, he highlighted that the substantial number of participants serves as a clear testament to the global relevance of hydrography and maritime safety information.

He further emphasized that this meeting presents a significant opportunity for participants to engage in knowledge exchange, share their experiences, and enhance collaboration through training and capacity-building efforts.

1.3. Opening Remarks by the IHO Director

The Director of the International Hydrographic Organization (IHO), Mr. Luigi Sinapi, expressed gratitude to GEOSA and its President for their role in hosting the meeting.

In his address, he highlighted the forthcoming implementation of the initial set of S-100 products, which are scheduled to become operational in 2025. He emphasized the necessity

for increased investment in the IHO's capacity-building work program, particularly concerning S-100 initiatives.

1.4. Participants Introduction and Administrative Arrangements

The Chair requested that all participants present a brief introduction of themselves along with the country or organization they represent. Administrative details pertaining to the meeting and its venue were announced thereafter.

2. Meeting Proceedings

2.1. Election of Vice Chair

A nomination form for the position of Vice Chair was circulated to the Member States of the RSA Region by the Chair of the RSAHC prior to the RSAHC10 meeting. However, no responses were received from the Member States.

In the opening session of the RSAHC10 Meeting the Chair called upon Member States of RSA region to propose nomination for the Vice Chair position. In response, the Islamic Republic of Iran offered to take on the role, contingent upon the approval of their nomination by other member states. Since no other Member State came forward to express interest, the Islamic Republic of Iran was subsequently designated as the Vice Chair of the RSA region.

2.2. Review of Actions from RSAHC9

The formal agenda item began with the necessity for member states to submit updated information regarding the status of the 'IHO Yearbook P-5' and 'C-55'. The IHO Director highlighted the importance of this data in evaluating the progress and goals of the IHO strategic plan.

The IHO Director commended the significant engagement of member states during the RSAHC10. He encouraged these states to demonstrate the same level of enthusiasm by voluntarily participating in meetings of IHO working groups and sub-committees, which would benefit the hydrographic community and address future challenges.

The IHO Secretariat has been asked to evaluate the distribution of seats for the RSAHC in the IHO Council, due to the increase in the Commission's membership. This request arose after Pakistan was counted among the RSAHC members and Iraq joined the Commission as a full member.

The IHO Director informed the forum about the various factors that influence the allocation of seats in the Council. He recognized the growth of the RSAHC and proposed that this matter be brought to attention prior to the next Assembly, with the aim of revising the number of seats to ensure adequate representation in the Council, as the allocation of Council seats will be evaluated during the Assembly. He recognized the expansion of the RSAHC and suggested that this matter be raised prior to the next Assembly, with the intention of revising the number of seats to ensure deserved representation in the Council, as the allocation of seats will be reviewed during the Assembly.

Oman, the former chair of the RSAHC, was requested to provide an update regarding the progress made on the 'List of Action from the Last Meeting'. They provided update on pending or ongoing items below;

Oman reported that Iraq has not yet signed the RSAHC statutes, which is necessary for their formal membership in RSAHC.

A circular letter was issued regarding the timely notification of Capacity Building (CB) programs, and Oman is giving a presentation later in the meeting concerning the CB program and additional funding to support it.

The issues related to ENC overlaps within the ROPME Sea Area (RSA) continue to be a matter of concern and are currently under review with support from IC-ENC.

The nomination of a coordinator to facilitate the establishment of a Marine Spatial Data Infrastructure (MSDI) working group within the RSAHC remains unresolved, and Oman has proposed that appropriate measures be taken during the meeting.

Likewise, no progress has been made regarding the appointment of a new S-100 Services Coordinator for the RSAHC, and Oman emphasized that this forum presents an excellent opportunity to deliberate on the roles and responsibilities associated with the S-100 Services Coordinator.

Regarding the nomination of the CSB – GEBCO – Seabed 2030 Regional Coordinator, Oman requested that the Seabed 2030 Director to address this topic during the meeting.

Following Oman's briefing, the IHO Director expressed appreciation for Oman's chairmanship, highlighting its vigorous efforts in addressing unresolved issues, particularly those related to circular letters concerning the nomination of several regional coordinators.

The United Kingdom raised concerns regarding the lack of clarity in Article 5 (e) of the RSAHC Statutes, which pertains to the representation of the region in the IHO Council by the Chair and Vice Chair for a term of three years. Drawing from their experience in attending meetings of other hydrographic commissions, the UK proposed that this statute should be articulated with more detail and clarity.

In relation to the signing of the RSAHC Statutes, Iraq informed the RSAHC Meeting that the process is in progress, however, the delay is attributed to the governmental procedures associated with the transition of authority to the newly established Iraqi Supreme Maritime Authority from the Port Administration.

Regarding the matter of member states beginning to revise their schemes utilizing the INTToGIS Service, the IHO Director stated that the IHO is currently undertaking an upgrade of the INTToGIS system from Version II to Version III, which will be followed by member states contributing their respective information.

The Director of the IHO provided a thorough explanation regarding the High-Level Technical Visit to Iraq and the Technical Visit to Islamic Republic of Iran, which are part of the capacity-building efforts in this region. He recognized that certain circumstances hindered these visits, preventing them from occurring in 2024.

He mentioned that there is potential for these visits to be included in the IHO capacity-building work program for 2026, provided that the concerned state advocates for the matter effectively with the IHO capacity-building program coordinator via the regional capacity-building coordinator.

He remarked that the Regional Hydrographic Commission is responsible for organizing and conducting the Technical Visit by forming an appropriate technical team for the visit. Conversely, the High-Level Technical Visit includes the participation of the IHO Secretariat and the Chairman of the Regional Hydrographic Commission. Furthermore, he recalled his dialogue with the IALA representative about the prospects of an IHO and IALA Joint Technical Visit to Islamic Republic of Iran, which he considers worthy of reevaluation.

The International Association of Lighthouse Authorities (IALA) has confirmed a 'Technical Need Assessment Visit' to Iraq set for April 2025. In contrast, there is currently no definitive

information regarding a Joint Technical Visit with the International Hydrographic Organization (IHO) to Islamic Republic of Iran, as this matter is still being evaluated.

The Chair raised concerns about the unresolved Joint Visit to Islamic Republic of Iran that has been pending for many years and sought a response from Islamic Republic of Iran on this issue.

Islamic Republic of Iran indicated that a Technical Visit does not necessarily need to be conducted as a Joint Visit. It is possible for IALA and IHO to undertake separate visits if that arrangement proves to be more convenient.

Iraq expressed its regret for the missed opportunity of the High-Level Technical Visit to Iraq by IHO Director Mr. Luigi Sinapi, attributing the absence to certain internal circumstances that hindered the visit. The delegate expressed his contentment on the prospect that the visit can be rescheduled in the future. Moreover, he articulated his enthusiasm for the anticipated IALA visit set for April 2025.

In regards to editorial responsibilities, the IHO Director praised the Editor of the IHR for his outstanding contributions, noting the quality, quantity, and variety of the published works. The publications feature technical information, scientific evaluations, general knowledge, and historical narratives pertaining to the IHR. The IHO actively encourages the submission of articles, all of which are subjected to peer review. The Director also called upon Member States to share their experiences and insights to inspire those new to the field. Submissions can be categorized into two levels: the first level is a formal submission that is subject to peer review, and the second level consists of notes that primarily aim to share experiences or achievements relevant to the region. The UKHO shared their experienced in the Editorial Board and also expressed its willingness to share guidance on writing editorial articles.

The Director of the IHO stated that the requirements for Marine Spatial Data Infrastructure (MSDI) and capacity building in the region will be addressed in detail in the formal IHO Report to the Meeting. This report will also include updates on the discussions from the previous Council Meeting. Furthermore, he mentioned an initial discussion with the UK Hydrographic Office (UKHO) to provide insights on MSDI in alignment with the United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM) principles. The UKHO is expected to deliver detailed information in their report to the Meeting.

Concerning the matter related to capacity building, he expressed his anticipation of receiving comprehensive information from the regional coordinator on this subject. It is crucial for the Regional Capacity Building Coordinator to present the most recent developments and current activities within the region. Additionally, it is important to take the necessary steps to prepare a proposal from the region for discussion at the forthcoming Capacity Building Subcommittee Meeting.

Pakistan stated that the MSDI is an emerging initiative in the region, and a primary challenge encountered among organizations, ministries, and nations is achieving agreement on a standardized format. To resolve this issue, it is crucial for developed organizations and countries to provide the essential training, whether through direct interaction or virtual sessions, on the methods of aggregating and presenting data in a cohesive format.

The IHO Director appreciated the comment from Pakistan and stated that regarding opportunities for capacity building in MSDI, the IHO has approved a capacity building program for 2025, which includes relevant information. The IHO Director also proposed the development of inter-regional cooperation to identify necessary funding solutions for capacity building initiatives.

The delegation from the Islamic Republic of Iran presented their experiences regarding the commitment to implement SDI and MSDI within their country. They informed the Meeting

that, following prolonged discussions and debates among many ministries, it was concluded that MSDI is fundamentally equivalent to SDI, with the addition of marine data. As a result, it was agreed, in their country, that the same ministry responsible for SDI would also oversee MSDI.

The UKHO asserted that drawing from their experience, a strong MSDI framework and effective practices can facilitate the implementation of S100.

2.3. IHO Secretariat

The IHO Director, presented IHO Secretariat report. He briefed about status of IHO membership including new IHO member countries. He informed the Meeting that IHO membership has reached to 100 members.

Outcomes of the 8th IHO Council – The IHO Director delivered the outcomes of the 8th IHO Council covering details about; the endorsement of the principle to create IHO S-100 Sea Trial Areas across the globe. The Joint IHO-Singapore Lab report on notable accomplishments in the conversion to S-1xx and the interoperability of dual-fuel ECDIS systems. A capacity-building program has been specifically designed to support S-1xx initiatives. Moreover, there is a commitment to enhance the collaboration between the MSDIWG and the Marine Geospatial Working Group of UN-GGIM. A pilot project is being coordinated to illustrate the operational implementation of S-122. Updates on the activities of the IHO Fund Generation Project Team will be shared. The interim establishment of the IHO Infrastructure Centre in the Republic of Korea is in progress, with a view to permanent establishment subject to Assembly 4 approval. Additional capacity-building activities for 2025 will be financed through the savings accrued in 2024, focusing on S-100 related efforts. The Strategic Plan Review Working Group (SPRWG) has been formed to assess the strategic plan for the years 2027 to 2032.

Capacity Building – The IHO Director reported on the decision of the Capacity Building sub-committee, which decided that activities that received funding but were not carried out in the 2024 Capacity Building Work Plan will not be included in the 2025 Capacity Building Work Plan. The RSAHC has three capacity building activities funded in the 2025 CBWP. The significant capacity building activities requested by regional hydrographic commissions for 2025 focus on the implementation of S-100, provided details on initiative by the IHO to secure capacity building funds from diverse resources.

Maritime Safety Information Services – In relation to Maritime Safety Information (MSI), the IHO Director informed the Meeting about the global coverage, data transmission, integration, and regulatory compliance associated with Iridium SafetyCast. He also proposed recommendations for the implementation of the SafetyCast system, highlighting the necessity of fostering effective communication with the pertinent NAV and MET.

Crowdsourced Bathymetry – General briefing about CSB was given to the Meeting. He told collected information is stored in IHO DCDB data center and the IHO Member States who have participated. He went over the achievements made by the GEBCO since 1903. On the subject of CSB he encouraged member states to contribute more.

S-100 Implementation – The IHO Director elaborated on the implementation plan for S-100 and discussed various strategic issues associated with it. He called upon RSAHC members to engage in the strategic advancements of S-1xx products. Furthermore, he indicated that the IHO secretariat is advocating for Member States to contribute to the increased production of S-100 based products, which encompasses future quality maintenance and distribution protocols.

He communicated the WENDWG's focus on the importance of adopting a capability-based approach to S-100 at the regional level, which is essential for the timely and coordinated implementation of the S-100 Roadmap.

IHO GIS and Databases – A brief overview was presented by the IHO Director regarding the current status of the IHO Yearbook (P-5) and the Status of Hydrographic Surveying and Charting Worldwide (C-55). He encouraged Member States to consistently provide updates for both documents.

The IHO Director finalized the IHO report by presenting statistics related to the organization's social media engagement, along with updates on advancements made to the IHO Portal.

2.4. National Reports

a) Bahrain

Bahrain did not submit their National Report during the Meeting.

b) Islamic Republic of Iran

The National Hydrography Committee is tasked with overseeing hydrographic operations and the development of Electronic Navigational Charts (ENC) and International (INT) Charts within the Islamic Republic of Iran. This Committee is composed of four entities: the Port and Maritime Organization (PMO), which serves as the coordinating body; the National Geographic Center, a civilian organization; the National Geographical Organization, affiliated with the armed forces; and the Maritime Coordination Department.

The PMO is responsible for engaging with international organizations concerning hydrographic responsibilities, with a primary focus on the creation and distribution of nautical charts to enhance the safety of navigation in Iranian waterways and ports. From November 2022 to November 2024, the Committee successfully released 12 new ENCs and made updates to 246 cells.

The PMO is responsible for managing NAVTEX, which includes Navigational Warnings, Meteorological Warnings, Meteorological Forecasts, Search and Rescue Information, as well as warnings related to Pirate Attacks and Shootings.

To meet international obligations, the report underscored the importance of capacity-building requirements associated with S-100 and the transition from S-57 to S-101. In terms of capacity building, the report presented a compilation of recommended training programs as part of the IHO Capacity-Building Program for the years 2024 to 2026.

Additionally, it provided details regarding participation in IHO Working Groups, Geospatial Studies, and the progress made in MSDI.

c) Iraq

Iraq has become a member of the IHO and established the Iraq Supreme Maritime Authority (ISMA) to enhance its maritime governance. The Khor-Alzubair Port has seen the addition of a new jetty, and the country currently operates three survey vessels while acquiring advanced hydrographic surveying equipment. Efforts are ongoing to develop a survey office that adheres to IHO standards, reflecting Iraq's commitment to modernizing its maritime capabilities.

The primary focus for Iraq lies in the reconstruction of its maritime infrastructure and the training of personnel to support these initiatives. There is a strong desire to enhance the production of Electronic Navigational Charts (ENCs), which necessitates further training for staff involved in this process. Additionally, local survey charts for Khor Alzubair Port and its navigational channel have been created, and there is an ongoing effort to update the catalog of internal waterways and port charts. A dedicated department has been established to manage Maritime Safety Information (MSI) in accordance with international conventions, ensuring that Iraq remains compliant with global maritime safety standards. The ISMA is dedicated to achieving international hydrographic standards through collaboration with various organizations and active participation in regional maritime activities.

d) Kuwait

Kuwait did not submit their National Report during the Meeting.

e) Oman

Oman National Hydrographic Office (ONHO) is part of the Royal Navy of Oman and is responsible for hydrographic surveys, production of nautical charts and publications, maintaining the national hydrographic archive, and advising on hydrographic matters. ONHO has made progress in installing new NAVTEX stations to improve navigational warnings coverage, though the existing NAVTEX station is still not operational.

ONHO has published 33 ENC cells and plans to publish 4 more by the end of 2024. It also continues to produce national paper charts. ONHO is responsible for maritime safety information (MSI) dissemination in the Sea of Oman and Arabian Sea, though the Muscat Radio service is currently not operational.

ONHO is undertaking capacity building efforts, including sending officers for hydrography and cartography training courses. Currently, ONHO is dealing with various challenges, including the issue of possessing only one operational survey vessel.

f) Pakistan

National Hydrographic Office (NHO) is the primary authority responsible for conducting hydrographic surveys and publishing nautical charts and ENCs for Pakistan's waters. It represents Pakistan in national and international hydrographic forums.

NHO has carried out surveys of the entire Pakistani coastline and is now focused on resurveying critical areas and conducting new surveys, including in deep sea areas. NHO is effectively fulfilling its NAVAREA IX responsibility for issuing navigational warnings and making ENCs available for commercial shipping.

NHO offers assistance to regional countries in areas like hydrographic surveys, basic survey technician training, and Category B Hydrographic courses. NHO collaborates with the National Institute of Oceanography (NIO) for oceanographic activities, including operating oceanographic survey vessels and maintaining a tide gauge network. NHO has been working on capacity building, with officers undergoing training in Category A and B Hydrographic courses, as well as specialized courses.

g) Qatar

Qatar did not submit their National Report during the Meeting.

h) Saudi Arabia

General Authority for Survey and Geospatial Information (GEOSA) has been actively surveying the Saudi marine areas since its inception, focusing on completing coverage of the Arabian Gulf by 2026. As of now, about 60% of the Arabian Gulf has been successfully surveyed. GEOSA employs several platforms for hydrographic surveys.

The report outlines the preparation and updates of nautical charts, with a current scheme comprising 27 charts specifically designed for navigational purposes. GEOSA has produced various scale charts, including larger-scale charts for harbors and coastal waters, enhancing navigational safety.

In terms of capacity building, GEOSA has organized various training sessions for personnel, including courses on hydrography, other maritime laws, and engaging participants from various government sectors. Collaboration with educational institutions for hydrographic awareness and participation in national exhibitions are also key activities undertaken by GEOSA.

GEOSA also focuses on collecting oceanographic data, operating a National Tide Gauge Network established in 2012. This network includes 12 stations along the coast of Saudi Arabia, ensuring the collection of real-time data.

The report signifies an ongoing commitment to improving hydrographic capabilities and ensuring sustainable development in marine and coastal areas.

i) United Arab Emirates

The Dubai Municipality Survey Department (DMSD) engaged in various hydrographic, oceanographic, and charting services. DMSD emphasizes collecting varied data, including multi-beam surveys, side scan sonar, single beam surveys, and magnetometer readings.

DMSD has developed a variety of products to enhance maritime safety, including paper nautical charts and electronic navigational charts that serve various purposes. Recent updates show that DMSD has made significant strides in nautical charting by producing numerous navigational charts, demonstrating its commitment to improving maritime infrastructure in the region. DMSD ensures that maritime data is available for stakeholders, contributing to enhanced navigational safety and environmental monitoring across the UAE's waterways.

j) France

SHOM is responsible for hydrography and oceanography, providing essential services such as nautical charts, maritime safety, and oceanographic research. The implementation of the Marine Spatial Data Infrastructure (MSDI) includes newly updated layers like the GEBCO worldwide bathymetric Digital Terrain Model and global coastline, as well as specific maritime area charts.

The report focusing on the French national nautical information platform, PING. This platform streamlines the production and dissemination of navigational warnings, regulations, and source information via three strategic modules. Compliance with S-124 specifications aims to enhance compatibility with NAVTEX and EGC systems.

Transformation to latest acquisition techniques provide details about induction of new equipment and achieving successful surveys and reflecting their operational milestones.

Significant strides have been taken toward automating bathymetric knowledge and improving chart production through the Unified Cartographic Source. France plans to advance S-100 Phase 1 products, aiming for the production of electronic navigational charts.

k) United Kingdom

The UKHO's chart portfolio is available on its website and in the UK Generic National Report. Since the last meeting, the UKHO published 11 INT Chart New Editions, 4 INT Adoptions, and 12 New Editions. The UK's chart production includes 121 GB ENC's in the RSAHC region, with updates scheduled from November 2022 to November 2024. The UKHO is advancing its implementation of the S-100 standards, collaborating with manufacturers and stakeholders to ensure readiness for S-100 ECDIS by 2026. The UKHO is also rescheming GB ENC's using a gridded scheme across all scale bands, enhancing user feedback and encouraging other hydrographic offices to align with this scheme.

The UKHO maintains its sailing directions and Admiral publications, with new editions published as necessary. Digital versions of these publications are also available.

The UKHO fulfills Primary Charting Authority responsibilities for several nations in the RSAHC region, actively ensuring the accuracy and reliability of nautical information.

The UKHO has conducted capacity building efforts, including a GEOMAC cartography course and partnerships for IHO Marine Safety Information courses.

Overall, the UKHO's activities illustrate a commitment to enhancing hydrographic services and working collaboratively within the RSAHC region while preparing for the future integration of new data standards.

l) United States

The oversight of hydrographic products and services in the United States is managed by several agencies, including the National Geospatial-Intelligence Agency (NGA), the National Oceanic and Atmospheric Administration (NOAA), the United States Navy (USN), and the United States Army Corps of Engineers (USACE).

New oceanographic and hydrographic vessels are expected to be introduced by 2026. NOAA is in the process of re-gridding its entire suite of S-57 data, while NGA has finalized a global grid of S-57, paving the way for the transition to S-100.

NGA plans to cease the use of traditional paper charts and the US Notice to Mariners from 1 January 2026, moving towards a more limited range of printed electronic navigational charts (CPENC).

Day 2

2.5. NAVAREA IX Coordinator

Pakistan, the NAVAREA-IX Coordinator presented a comprehensive summary of the current status of Maritime Safety Information (MSI) within their designated area.

This included details on navigational and weather warnings, intervals for issuing warnings, and the technologies employed for disseminating these alerts. Additionally, the presentation encompassed statistical data regarding warnings issued in previous years.

Pakistan contributed insights into various communication methods, emphasizing email as the most effective means for dissemination. As NAVAREA IX coordinator, Pakistan made request to the coastal states within the region to ensure timely issuance of navigational warnings, taking into consideration the time to receive and relay these messages to mariners in accordance with established protocols.

While the NAVAREA IX coordinator encouraged active participation from several coastal states in the dissemination efforts, he also recognized the contributions of MENAS (Bahrain) for their proactive involvement in this regard.

The presentation further detailed initiatives aimed at enhancing MSI capabilities and the support provided by the International Hydrographic Organization (IHO), particularly focusing on capacity building and MSI training programs within the RSAHC region.

Recommendations were also made for a scenario-based joint exercise and drill under the auspices of the World-Wide Navigational Warning Service (WWNWS) to assess regional responses in the event of an emergency, alongside IHO support for conducting MSI training for the countries within NAVAREA IX.

2.6. Capacity Building (CB) Status

Ms. Fatemeh Heidari Rad, the capacity building coordinator from Islamic Republic of Iran for the RSAHC region, has taken on the role of the new CB Coordinator and presented the report.

This report presents an overview of Capacity Building (CB) activities and plans in the RSAHC region, detailing completed initiatives, ongoing challenges, and future programs. She informed the forum that the CB plan is reviewed annually, with the RSAHC capacity building coordinator engaging with member states to evaluate their CB needs.

She provided information regarding the number of activities that have been successfully completed since RSAHC9, which include hydrographic survey and nautical cartography programs, as well as collaborative MSI activities with NIOHC. The Technical Visit and High-Level Technical Visit to Islamic Republic of Iran and Iraq, planned for 2024, were not executed and are now being requested for 2026.

The report detailed the challenges, accomplishments, and capacity building program for 2025, along with proposed capacity building initiatives and virtual courses that summarize the following information briefly. It emphasized the importance of enhancing cooperation among member states in engaging with CB programs and in delivering timely information. RSAHC has been actively involved in negotiating and planning collaborative activities with NIOHC to improve CBSC programs. This encompasses initiatives such as a technical visit, a marine spatial planning workshop, and a course on ENC quality and conversion. Recommendations for 2026

and 2027 include technical visits, MSI courses, and S-57 to S-100 conversion courses, which are to be executed as joint efforts between RSAHC and NIOHC.

The report concluded by highlighting the necessity for greater engagement from RSAHC Members in CB Programs and advocates for collaborative CB activities with NIOHC to improve cost-effectiveness.

In response to the report, representatives from France, the UK, and the IHO Director conveyed information regarding training programs that have recently been provided to RSAHC and NIOHC member states or are scheduled for the forthcoming year.

2.7. Training and Capacity Building (CB) Discussions

Islamic Republic of Iran as Training and Capacity Building (CB) coordinator for the RSAHC region presented thorough a table outlining CB requirements, programs, and associated activities.

They emphasized the importance of timely input from Member States to complete procedural formalities, thereby ensuring the smooth implementation of CB initiatives in the RSAHC region.

The Head of the Iranian Delegation requested the IHO Director to consider expanding CB programs, noting the challenges faced by their office in terms of visa issuance and logistical arrangements when participating in international training programs. To mitigate these issues, it was proposed that inviting trainers to conduct in-country sessions could serve as a practical alternative. This approach would not only reduce visa and logistical barriers but also significantly cut travel costs for multiple participants.

The Chair also shared his views on online training methodologies, particularly concerning the structuring and delivery of content, organization of course material, and the promotion of self-learning techniques.

The Capacity Building Coordinator provided an overview of proposed training programs, which include technical workshops as well as short and long courses in hydrography and marine cartography. Member States were requested to submit their priority areas to help align these programs with the IHO Capacity Building Work Program for 2026 and 2027.

Mr. James Harper from IC-ENC joined the meeting via video link and extended an invitation to the CB Coordinator to engage with IC-ENC regarding potential training opportunities that could be offered to the RSAHC region.

Furthermore, the Chair encouraged Member States to specify their requirements for multi-beam training programs, emphasizing that the forum offers a valuable opportunity to communicate CB needs to the IHO through the designated Regional Capacity Building Coordinator.

The delegation from Iraq expressed strong support for face-to-face training formats, citing their greater effectiveness compared to virtual programs.

Skilltrade offered its services for training and capacity building, including physical deployment of instructors to Member States requiring specific training.

Pakistan informed the meeting that it has qualified personnel available to conduct multi-beam training, and offered to share this capability with interested Member States.

The IHO Director encouraged increased collaboration among Member States to identify and address mutual capacity building needs. He also outlined the procedures and sub-committees

involved in the decision-making process for approving CB programs, stressing the importance of adhering to the established protocols as endorsed by the IHO Assembly.

2.8. S-100 Implementation Update

The Oman National Hydrographic Office (ONHO) provided an update on its progress and strategic direction in implementing the S-100 framework, emphasizing the importance of Precision Marine Navigation for safe and efficient vessel navigation. ONHO is aligning its national S-100 implementation plan with the IHO timeline, including a government-wide approach to data quality and management.

A key initiative involves rescheming Oman's Electronic Navigational Charts (ENCs) from the S-57 standard to Gridded ENCs, coordinated through the National Hydrographic Committee.

ONHO is also promoting S-100 awareness through participation in marine-related events, with contributions from key data-holding authorities like the Ministry of Agriculture, Fisheries Wealth and Water Resources.

The development and deployment of S-101 (Electronic Navigational Charts), S-102 (Bathymetric Surface), S-104 (Water Level Information), and S-124 (Navigational Warnings) product specifications have been prioritized.

Activities under S-101 include staff training, ENC cell testing with IC-ENC, and planning for parallel production of S-57 and S-101 charts, with future plans encompassing data migration, full-scale S-101 chart production, quality control, ENC gridding, and evaluation of parallel chart production.

S-102 production and dissemination have started, with testing in selected ports and plans to scale up production, implement quality control, and ensure ongoing maintenance.

ONHO acknowledged challenges such as the accelerated pace of new standards adoption, concurrent support for existing standards, resource constraints, stakeholder coordination, and the introduction of new data types and tools.

To address these, ONHO is actively participating in workshops, strengthening collaboration with Omani authorities, coordinating with the UK Hydrographic Office (UKHO), and managing the organizational impacts of the S-100 transition. ONHO remains committed to the successful implementation of the S-100 framework, underscoring the importance of continued inter-agency cooperation, capacity building, and stakeholder engagement for a seamless transition to next-generation hydrographic standards in Oman.

At the conclusion of the meeting, Oman officially volunteered to serve as the S-100 coordinator for the RSAHC region. This nomination was met with unanimous approval and strong support from all member states present at the meeting.

2.9. IC-ENC – Coverage of ENC

Mr. James Harper, representing the International Centre for Electronic Navigational Charts (IC-ENC), delivered an online presentation outlining the Centre's recent activities, strategic priorities, and the range of support services provided to its global membership.

IC-ENC currently supports 52 hydrographic offices, along with four Value Added Resellers and four Distribution Partners, in the production, distribution, and transition of Electronic Navigational Charts (ENCs) in accordance with S-100 standards. Its support framework includes training programs, online resources, and tailored technical assistance to meet the diverse needs of its members.

The Centre maintains active collaboration with industry partners such as CARIS and Esri to enhance knowledge-sharing and technical capabilities. These partnerships facilitate joint user conferences, training workshops, and access to a Learning Management System that hosts educational content and member discussion forums, fostering a culture of shared learning and professional development.

To uphold data integrity and standardization, IC-ENC undertakes independent validation of ENCs to ensure conformity with S-57 and S-58 standards, as well as its internal quality assurance protocols. This process is supported by specialized tools such as the dKart Inspector.

IC-ENC provides technical assistance for the implementation of multiple S-100 product specifications. This includes support for national coordination and transition planning across several product types, namely S-101 (ENC), S-102, S-104, S-111, S-122, and S-128. In addition, the IC-ENC Activity Fund, which aims to support the implementation of S-1XX standards and capacity-building initiatives.

Member States were encouraged to participate in the upcoming ROMPE/NIOHC ENC Quality and Conversion Course in Oman, and to attend the industry and user conferences organized by CARIS and Esri in collaboration with IC-ENC.

2.10. Developments of Marine Spatial Data Infrastructure (MSDI)

The UKHO provided presentation on Marine Spatial Data Infrastructure (MSDI), focusing on advancements in MSDI and its alignment with international frameworks. The session began with a recap of MSDI concepts and strategic pathways, followed by updates from the latest IHO MSDIWG meeting and associated regional initiatives. A key highlight was the introduction of the IHO MSDIWG Work Plan for 2024–2027, which emphasizes partnerships with the United Nations Committee of Experts on Global Geospatial (UN-GGIM), WG-MGI and the Open Geospatial Consortium (OGC) Marine Domain Working Group.

The presentation highlighted the importance of integrating governance, legal, and financial structures for effective marine geospatial data management, aligning the IHO's four foundational pillars with the UN-GGIM Integrated Geospatial Information Framework's (IGIF) nine strategic pathways. Discussion also touched on outcomes from the 2022 international sessions, focusing on the availability and accessibility of marine geospatial data, the implementation of the UN-IGIF-Hydro, and the role of partnerships in advancing integrated marine geospatial management.

The report discussed progress on IRCC action items, including national MSDI reporting, land-sea interface initiatives, and the adoption of IHO Publication C-17 version 3.0 (October 2023). The meeting noted ongoing collaboration on S-122 Marine Protected Areas with Protected Seas, and recommended updates to C7/44 to reflect MSDIWG contributions for non-navigation uses.

The MSDIWG Work Plan for 2024–2027 was outlined, incorporating themes such as communication, data sharing, governance, standards (including OGC and HSSC), innovation, capacity building, and financial planning. The plan includes maintaining and extending IHO C-17, conducting annual meetings, and promoting stakeholder engagement. Emphasis was placed on integrating terrestrial, marine, and cadastral domains, including a planned side event during the 14th Session of the Committee of Experts in August 2024 in New York City.

Emerging technological trends were also explored, including the application of the S-100 framework, development of digital twins for marine spatial data, and broader stakeholder collaboration. The Federated Marine Spatial Data Infrastructure Pilot (2023–2024, Phase Four) was highlighted as a key initiative in connecting land and sea data across global use cases. The meeting concluded with a proposal to elect an MSDI Ambassador to represent the RSAHC, further supporting regional engagement and implementation.

2.11. Exail (Industry)

Exail presented its advanced technologies and integrated solutions for subsea positioning, hydrographic surveying, sonar systems, and uncrewed autonomous platforms. The presentation highlighted the Delph suite's features, such as LBL array design, navigation post-processing, and 2D/3D visualization tools for effective subsea navigation support.

Various sonar technologies were showcased, including the SAMS mapping sonar, SEAPIX for fish detection, and the Echoes sub-bottom profilers, all designed for fast and reliable operations. The synthetic aperture sonar provides high-resolution subsea mapping. These technologies have been successfully deployed in the RSAHC region and areas like Saudi Arabia.

The DriX series of uncrewed surface vessels, particularly DriX H8, H9, and O-16, were emphasized. These vessels are suited for water depths from 4 meters to 300 meters and come with advanced equipment like multibeam echosounders and acoustic Doppler current profilers. They operate efficiently, with survey speeds of 7 to 10 knots and can last up to 30 days, reducing CO₂ emissions and risk exposure.

The DriX USVs have been used in fish stock assessments near offshore wind farms, utilizing various sonar systems for detailed biomass mapping. The DRI X O-16, equipped with hybrid propulsion and high-capacity data processing capabilities, was also described. Overall, Exail's presentation underscored its strong potential for supporting diverse hydrographic and environmental survey missions.

2.12. Skilltrade (Industry)

Skilltrade presented its role in hydrographic education and professional development since 2000, offering various training programs, including an IHO Category B course and e-learning modules on hydrography and positioning. The Hydrographic Professional Accreditation Scheme (HPAS) was highlighted for helping professionals show their skills according to IBSC S-5 Standards, with pathways for accreditation through education, professional experience, and specialized courses.

The presentation described a modular course structure with three blocks. Block 1 covers basic and advanced hydrography, Block 2 focuses on underwater acoustics and sonar training, and Block 3 includes a geological and geophysical module. After completing Category B training, advanced courses in marine archaeology and cable lay operations are available.

Skilltrade also creates customized programs for organizations worldwide and partners with institutions like the Bangladesh Navy and Nigerian Port Authority. Plans to expand practical

training into the RSAHC region at KAUST in Saudi Arabia are in development. Skilltrade's e-learning platform offers various modules and special enrollment offers to ROPME member states. The organization remains committed to enhancing hydrographic capacity in the region.

2.13. Fugro (Industry)

Fugro highlighted the increasing importance of hydrographic data in the face of climate change and the expanding ocean economy. Fugro, a Geo-data specialist, maps, models, and monitors the environment, providing solutions for energy transition, infrastructure development, and climate change adaptation, employing 11,000 people in 55 countries.

They utilize various assets including specialized service vessels, uncrewed surface vessels (USVs), remote operations centers, remotely operated vehicles (ROVs), and autonomous underwater vehicles (AUVs).

Fugro employs diverse technologies, from satellite-derived bathymetry (SDB) to airborne bathymetry and vessel-based MBES and AUV/ROV-mounted cameras. RAMMS 2.0 features dual lasers, full water column coverage, uncrewed compatibility, reflectance imagery, and improved water clarity depth penetration. The Blue USV fleet and eROVs offer varied capabilities.

Fugro also offers Cat B & Cat A accredited training at Fugro Academy in Plymouth, UK. Fugro has a decade-long partnership advancing Saudi Arabia's hydrographic capabilities.

2.14. G2 Presentation (Industry)

G2 Surveys started as a land survey company in the Netherlands in 2004 before switching to marine surveys in 2005 to serve Europe and Africa. The company expanded with offices in Canada in 2014, serving North and South America, and in Kuwait in 2017, serving the Middle East.

G2 Surveys provides hydrographic services, including bathymetry, geotechnical analysis, geophysics, charting, oceanography, and GIS. These services extend to sandpits, channels, rivers, harbors, beach nourishment, cable and pipeline inspections, dredging support, and archeology.

The company emphasizes education, with employees holding IHO Cat A & B certifications and following HPAS standards.

G2 Surveys also provides hydrographic experience to students and offers supervision and client representation on projects. G2 Surveys International offers solutions such as ping to chart, planning and management, data management QA/QC, and vessels.

They have collaborated with ports, navies, and hydrographic offices globally, including the Albania Navy, the Ministry of Transportation hydrographic office in Kuwait, and the Port of Montevideo in Uruguay.

2.15. ENC regional Coordinator

Islamic Republic of Iran, the ENC regional coordinator presented ENC (Electronic Navigational Chart) coverage and related issues. RSAHC Member States have released 279 ENC, which are available in the IHO Web catalogue. The report breaks down ENC releases by country, including totals and releases since RSAHC9. The action requested is to take note of the report and take any appropriate action.

IC-ENC's overlap report uses categories such as "Live," "Potential," and "Accept" to define different levels of overlap risk and resolution status. Live overlaps exist in the IC-ENC Folio, and potential overlaps are addressed before new data is released. Overlaps categorized as "Accept" are often due to allowable tolerances at international boundaries or are insignificant.

The IC-ENC Overlap Report (Live) from November 2024 identifies overlaps between Iranian ENCs and other producers. Specific overlaps exist between Iranian ENCs (IR) and ENCs from the United Kingdom Hydrographic Office (GB) and Oman (OM). These overlaps are assessed for risk, considering factors like bathymetry consistency, cables, traffic levels, and proximity to the Strait of Hormuz. Actions include requesting GB to clip cells and agreeing on scheming between producers. The report also identifies Iran ENC overlaps on PRIMAR WMS, listing specific overlaps with coordinates and areas, such as those near Bandar-e Lengeh and Jazireh-ye Siri.

The document also addresses overlaps of other producers' ENCs, such as those between India (IN) and Pakistan (PK), detailing overlap areas and coordinates for regions like Gwadar to Dwarka.

2.16. INT Coordinator Report

The RSAHC INT Charts Report, prepared by the INT Charts Coordinator from Islamic Republic of Iran, was presented during the meeting. The report highlights the production of INT charts by member states, noting that Islamic Republic of Iran has produced 46 schemes, with 48 more pending review. Other contributions include Bahrain with 16 schemes, Kuwait with 9, and Pakistan with 3 (with 9 under review). The Sultanate of Oman contributed 25 schemes, and the UKHO produced 40 schemes, with 82 pending review.

Member States were reminded to review their C-55 and IHO Yearbook (P-5) entries annually, submit updates during non-meeting years, and promote the use of INTToGIS services for managing national information. They were also encouraged to obtain IDs and passwords for revising schemes via INTToGIS.

Additionally, the report noted that the issue regarding INT Chart 751 between Pakistan and India remains unresolved. Participants were requested to take note of the report and undertake necessary actions as discussed.

2.17. SEABED 2030 (GEBCO)

The SEABED 2030 initiative, directed by Jamie McMichael-Phillips, aims to energize ocean floor mapping and provide authoritative bathymetric data of the world's oceans. Established as a joint program between the IHO and the Intergovernmental Oceanographic Commission (IOC/UNESCO), the project seeks to inspire 100% seabed mapping by 2030 and compile the GEBCO Map.

As of June 2024, 26.1% of the global ocean has been mapped, a significant increase from 6% in 2017. Within the ROPME region, mapping has progressed to 16.34%, with contributions from five nations and ten organizations. The project recognizes various data types, including sounding sheets and processed grids, and encourages submissions that meet specified resolution criteria.

Key benefits of seabed mapping include enhancing national security, supporting renewable energy initiatives, and informing climate change models. Participants are encouraged to engage in the mapping community and contribute to this vital endeavor.

2.18. ADMIRALTY Virtual Ports

The ADMIRALTY Virtual Ports initiative by UKHO offers an intuitive 3D port visualization tool designed to enhance the experience of port entry and exit for maritime users. This tool allows users to familiarize themselves with realistic scenarios tailored to their vessel, incorporating official authoritative data alongside dynamic environmental conditions.

Key features include realistic 3D visualizations, adjustable environmental settings, and easy accessibility via standard PCs or laptops without the need for additional hardware. The tool aims to improve situational awareness and facilitate rehearsal of port maneuvers, ultimately reducing risks associated with port entry and exit.

The service is delivered via streaming and is available through ADMIRALTY distributors, with a new charging model based on user accounts and usage time. The target audience includes 'tramper' type vessels, technologically advanced users, and those focused on risk reduction.

Demonstrations showcasing various ports, including Southampton, Portsmouth, Cowes, Plymouth, and Liverpool, highlight the capabilities of ADMIRALTY Virtual Ports. The initiative emphasizes collaboration for navigating the maritime future effectively.

2.19. IALA

The report by IALA's was presented by Gerardine Delanoye. IALA became an Inter-Governmental Organization on 22 August 2024 and focused on training and capacity building in AtoN and related areas.

The World Wide Academy focuses on Strategic Goal 2, aiming to ensure all coastal States contribute to a sustainable and efficient global network of Marine Aids to Navigation through capacity building and the sharing of expertise

The Academy aims to ensure that all coastal States can fulfill their obligations related to Marine Aids to Navigation as outlined in SOLAS Chapter V and conform to relevant IALA Standards.

2.20. Reach Subsea (Industry)

Reach Subsea is pioneering the future of subsea services with its Reach Remote 2024 initiative, centered around a 24m unmanned surface vessel (USV)

The design of this vessel addresses key challenges, including space, latency, weather conditions, data volume, maintenance, redundancy, security, and potential disruptive global events, while also incorporating green propulsion

The vessel is equipped with latest data acquisition and multiple communication system.

Reach Subsea provides 24/7 fleet monitoring through "Reach Horizon," a web platform for command and control, integrating Reach systems and 3rd party data, offering live data monitoring, voice integration, and custom user dashboards. Target markets include offshore wind, offshore surveillance, advanced anti-submarine warfare (ASW), pipeline & cable inspection, and geophysical & environmental monitoring. The vision for the future includes greener vessels, smarter AUVs & ROVs, machine learning data acquisition, over-the-horizon remote operations, AI, and digital twins & augmented reality. This initiative aims to provide benefits such as reduced GHG emissions and consumables, technological advancement, improved operational efficiency, efficient use of resources, local employment, attractive jobs, local supply chain stimuli, industry collaboration, and cost reductions, with specific targets of 65% lower CAPEX, 65% lower daily OPEX, and 90% lower emissions. A test and evaluation program is planned as a joint industry project, involving seabed mapping, acoustic/visual pipeline inspection, infrastructure inspection, and gravimetric surveys.

2.21. EOMAP (Industry)

EOMAP, established in 2006, specializes in satellite data analytics and aquatic mapping. With over 50 employees globally, the company focuses on sectors such as environment, energy, coastal engineering, and hydrography. EOMAP offers a range of aquatic earth observation services, including Satellite-Derived Bathymetry (SDB), water quality monitoring, and digital terrain models. Their analytics utilize automatic workflows and advanced image recognition to derive quantitative data from satellite archives, providing insights into aquatic environments.

Key services include Satellite-Derived Bathymetry, which offers bathymetric data at resolutions of 2m and 10m, focusing on shallow water monitoring. The organization provides global data coverage with access to historical satellite data, enabling time-lapse analysis of seabed dynamics. Additionally, EOMAP offers software solutions such as Watcor-X and various online applications for real-time water clarity analysis and bathymetric data processing.

EOMAP has assessed SDB potential for regions like Qatar, Oman, and Saudi Arabia, outlining mapping areas, achievable depths, and accuracy standards. The company also provides training and remote support for users, enhancing capacity in hydrographic offices and naval operations. For further information, EOMAP can be contacted via their website or email.

Agenda RSAHC10 Meeting

1. Registration, opening ceremony, and group photo.
2. Opening remarks by the RSAHC Chairman and IHO Secretariat.
3. Administration arrangements.
4. Approval of the Agenda and Timetable. (Chair/MS).
5. Election of Vice-Chairman for RSAHC. (Chair / MS).
6. Review of action items from the previous meeting RSAHC 9. (Chair / All)
7. Report by IHO Secretariat (IHO).
8. Inputs from RSAHC to the next IRCC (IHO).
9. National reports. (MS & AMS).
10. Review of Status of Hydrographic Surveying and Nautical Charting in the RSAHC. (MS).
11. Promulgation of Navigational Warnings within NAVAREA IX area, MSI in NAVAREA IX and the report of GMDSS. (Pakistan).
12. Capacity Building status and report by Capacity Building Coordinator. (IR of Iran).
13. Training and Capacity Building (MS / IHO).
14. S-100/S-101 – Capacity Building Plan from 2025-2026 (MS / IHO).
15. Progress on the implementation of ENC coverage and other issues. (CB Coordinator).
16. Developments of Marine Spatial Data Infrastructure (MSDI) in the region. (IHO / UKHO).
17. Report by INT Chart Coordinator, report by ENC Regional Coordinator. (IR of Iran).
18. GEBCO – Seabed 2030 – Presentation (Seabed 2030 Director).
19. Partners and Industry Presentation.
20. Other business.
21. Date and venue of next meeting RSAHC11.
22. Approval of List of Actions.
23. Closing remarks by the Chairman.

Discussion List RSAHC10

Items from RSAHC9 Action List, previous undecided agenda items and relevant matters.

	Discussion Items	Responsibility
	General	
1	Update IHO Yearbook P-5 and C-55 annually and Chairman to annually review the status. (RSAHC9-3)	Chair
2	Encourage members to participate in IHO working groups and meetings. (RSAHC9-4)	All

IHO		
3	After counting Pakistan in RSAHC Chairman to request IHO Secretariat to update the number of seats allocated to RSAHC in IHO Council. (RSAHC9-18)	Chair / IHO
4	MS are to obtain their ID and Password and to start revising their schemes using the INTOGIS Service to allow the Regional Coordinator to approve the amendments and generate an updated version of the regional scheme	IHO
5	IALA and IHO Secretariat – to investigate possibility of joint visit to Iraq with IMO support, if possible, in next year.	Iraq / IALA / IHO
6	Circulate letter for MS to consider nomination for editorial duties. (RSAHC9-20)	MS
7	Encourage MS to comment on their needs for Capacity Building; General Bathymetry and Ocean Mapping; Marine Spatial Data Infrastructures; Education and Training That cover Inputs from RSAHC to the next IRCC Meeting.	IHO
8	Review of Status of Hydrographic Surveying and Nautical Charting in the RSAHC.	MS

NavArea / MSI		
9	Establish and maintain effective communications with NAVAREA IX Coordinator. (RSAHC9-6)	MS / Pakistan
10	Member states are to play their role to facilitate establishment of MSI related contacts (point of contact) with coastal states that are not in direct communication with NavArea IX coordinator.	MS
11	Overview of implementation of newly recognized mobile satellite services by MSI providers.	All / Pakistan

Training / CB		
12	To include proposal for S-57 to S-100 course in the RSAHC work plan for 2025 and to identify hosting states.	IHO
13	Provide contributions of online learning material to the Project Team established for the IHO e-Learning Center at KHOA. (RSAHC9-10)	IHO

	Discussion Items	Responsibility
14	MS to consider early notification of CB programs to get required approval from IHO authorities. (RSAHC9-11)	IHO / MS
15	MBES Processing course on identified or agreed regional member states.	IHO / MS
16	Member States are encouraged to engage with industry, which is willing and keen to become involved in regional Capacity Building activities and initiatives.	MS / Industry

S-100 / MSDI		
17	Encourage MS to follow the WEND 100 principles through the active participation at the WENDWG (WORLDWIDE ENC DATABASE WORKING GROUP).	MS
18	Consider nomination of new S-100 Services Coordinator for RSAHC or the expansion of the role of Regional Chart Coordinator to include S-1xx products to achieve substantial coverage of S-101 by 2026. (RSAHC9-17)	MS / Chair
19	Nomination of National S-100 Coordinator for each member state and reporting his information to RSAHC's S100 coordinator to ensure that Members remain updated on the developments related to S-100 standards and activities	MS
20	Encourage MS to actively support the development of priority Product Specifications (PS) of S-100.	MS
21	Circulate letter to consider nomination of a coordinator to promote establishment of MSDI working group within RSAHC. (RSAHC9-16)	Chair
22	MSDI awareness program to be presented in regional MS.	IHO

INT / ENC		
23	Member States to provide their INT charts updates and information to the INT Charts Coordinator frequently and to give all the INT charts reports one month prior to each RSAHC Meetings. (RSAHC9-8)	MS / INT Charts Coordinator
24	Member States required to provide the ENC Coordinator with the necessary information to update the report of the progress. (RSAHC9-13)	MS / ENC Regional Coordinator
25	Member States requested to fill out all the fields of INT Charts tables in IHO web catalogue as much as possible. (RSAHC9-7)	MS
26	UKHO to specify relevant INT charts for each country when reporting to INT Charts Coordinator. (RSAHC9-9)	UKHO
27	ENC Regional Coordinator to send IC-ENC overlap report to all member states. (RSAHC9-14)	ENC Regional Coordinator
28	Member States, where possible, to work bilaterally to resolve ENC overlaps issues within RSAHC. (RSAHC9-15)	MS
29	ENC Coordinator to report the status of the ENC regional scheme to the WENDWG secretary. Moreover, Islamic Republic of Iran is to review ENC	ENC Coordinator

	Discussion Items	Responsibility
	overlaps greater than 5 meter and seek resolution with the relevant MS, reporting any action to the WENDWG secretary.	

Collaboration / GEBCO / CSB		
30	Review collaboration to remove barriers restricting CSB activities within maritime jurisdiction.	All
31	To consider provision of shallow water bathymetric data to IHO-IOC GEBCO program through the IHO DCDB (Data Centre for Digital Bathymetry). (RSAHC9-2)	All
32	Consider nomination of the CSB- GEBCO- Seabed 2030 Regional coordinator. (RSAHC9-21)	Chair / MS

33	Coordinator to monitor and lead the Action List in preparation for the next meeting.	Chairman
34	Venue for the RSAHC11 meeting.	MS

Action List – RSAHC9

No.	Action	Responsibility	Deadline
1	Submit RSAHC10 Post meeting report.	Chairman	15 Dec 2024
2	To consider Making data freely available for inclusion in the IHO DCDB and the widest possible use and to indicate their positions on the provision of CSB data.	All	Ongoing
3	Update IHO Yearbook P-5 and C-55 annually and Chairman to annually review the status.	All / Chairman	Ongoing
4	Encourage members to participate in IHO working groups and meetings.	All	Ongoing
5	Iraq to sign the RSAHC statutes IAW RSAHC statutes article 2 a, and forward to the RSAHC chair (copy to the IHO Secretariat).	Iraq / Chairman	Open
6	Establish and maintain effective communications with NAVAREA IX Coordinator.	All	Ongoing
7	Member States are requested to fill out all the fields of INT Charts tables in IHO web catalogue.	All	Ongoing
8	Member States to provide their INT charts updates and information to the INT Charts Coordinator frequently and to give all the INT charts reports one month prior to each RSAHC Meetings.	All / INT Charts Coordinator	Ongoing
9	UKHO to specify relevant INT charts for each country when reporting to INT Charts Coordinator.	UKHO	Open
10	Provide contributions of online learning material to the Project Team established for the IHO e-Learning Center at KHOA.	All	Ongoing
11	Consider early notification of CB programs to get required approval from authorities.	Chairman / CB Coordinator	Open
12	Circulate letter requesting views/comments for additional funding to RSAHC countries to support CB programs.	Chairman	Open
13	Member States are required to provide the ENC Coordinator with the necessary information to update the report of the progress.	All / ENC Reg. Coord.	Ongoing
14	ENC Regional Coordinator to send IC-ENC overlap report to all member states.	ENC Reg. Coord	30 Dec 2022
15	Encourage relevant Member States to work bilaterally to resolve ENC overlaps issues within RSAHC.	All / ENC Reg. Coord/ Chairman	Ongoing
16	Circulate letter to consider nomination of a coordinator to promote establishment of MSDI working group within RSAHC.	Chairman	30 Dec 2022

No.	Action	Responsibility	Deadline
17	Circulate letter to consider nomination of new S-100 Services Coordinator for RSAHC or the expansion of the role of Regional Chart Coordinator to include S-1xx products.	Chairman	30 Dec 2022
18	After counting Pakistan in RSAHC, Chairman to request IHO Secretariat to update the number of seats allocated to RSAHC in IHO Council.	Chairman / IHO Secretariat	2 Feb 2023
19	To encourage Members for ratification and accession of the Convention on the change of IALA status from a non-governmental organization to an intergovernmental organization.	All	Closed
20	Circulate letter to consider nomination of next personal to take over duties of editorial board.	All	30 Dec 2022
21	Consider nomination of the CSB- GEBCO- Seabed 2030 Regional coordinator.	All	Open

Action List – RSAHC10

No.	Action	Responsibility	Deadline
1	Update IHO Yearbook P-5 and C-55 annually and Chairman to annually review the status.	All / Chairman	Ongoing
2	Encourage members to participate in IHO working groups and meetings.	All	Ongoing
3	Iraq to sign the RSAHC statutes IAW RSAHC statutes article 2 a, and forward to the RSAHC chair (copy to the IHO Secretariat).	Iraq / Chairman	Open
4	After counting Pakistan in RSAHC, Chairman to request IHO Secretariat to update the number of seats allocated to RSAHC in IHO Council.	Chairman / IHO Secretariat	Ongoing
5	Circulate letter to consider nomination of next personal to take over duties of editorial board.	All	
6	Establish and maintain effective communications with NAVAREA IX Coordinator.	All	Ongoing
7	Provide contributions of online learning material to the Project Team established for the IHO e-Learning Center at KHOA.	All	Ongoing
8	Consider early notification of CB programs to get required approval from authorities.	Chairman / CB Coordinator	Open
9	Circulate letter requesting views/comments for additional funding from RSAHC Member States to support CB programs.	IHO	Open
10	Member States are required to provide the ENC Coordinator with the necessary information to update the report of the progress.	All / ENC Regional Coordinator	Ongoing
11	Member States are requested to fill out all the fields of INT Charts tables in IHO web catalogue as much as possible.	All	Ongoing
12	Member States to provide their INT charts updates and information to the INT Charts Coordinator frequently and to give all the INT charts reports one month prior to each RSAHC Meetings.	All / INT Charts Coordinator	Ongoing
13	UKHO to specify relevant INT charts for each country when reporting to INT Charts Coordinator.	UKHO	Open
14	Encourage relevant Member States to work bilaterally to resolve ENC overlaps issues within RSA.	All / ENC Regional Coordinator	Ongoing

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