

Supplementary materials for July 2026

Contents

➤	International	Maritime	Organization	Meeting	Highlights	
						3
I.	IMO Technical Cooperation Committee (TC), 76th session (TC 76)					3
	1.	About TC				3
	2.	TC 76 Highlights				3
	3.	TC 76 Agenda				4
	4.	TC 76 Meeting Summaries				5
	(1)	Integrated Technical Cooperation Programme (ITCP) 2025 report (Agenda Item 3)				5
	(2)	Approved the Implementation plan for the IMO Capacity Development Strategy (Agenda Item 4)				6
	(3)	Digital Transformation of IMO Technical Assistance (Agenda item 5)				6
	(4)	Enhancing regional presence (Agenda item 6)				7
	(5)	Women in Maritime (Agenda item 8)				7
	5.	Recommendation for TC 76				8
	6.	Next Meeting Schedule				9
	7.	References				9
➤	International	Maritime	Organization	Meeting	Highlights	
						10
II.	IMO Sub-Committee on Navigation, Communication and Search and Rescue (NCSR), 13th session (NCSR 13)					10
	1.	About NCSR				10
	2.	NCSR 13 Highlights				11
	3.	NCSR 13 Agenda				12
	4.	NCSR 13 Meeting Summaries				13
	(1)	Routeing measures and ship reporting systems (Agenda Item 3)				13
	(2)	Long-Range Identification and Tracking (LRIT) (Agenda Item 4)				14
	(3)	Global Maritime Distress and Safety System (GMDSS) (Agenda item 5)				15
	(4)	IMO Position on the 2027 World Radiocommunication Conference (Agenda item				

6)	15
(5)	Development of Global Maritime Search and Rescue (SAR) Services, Including the Harmonization of Maritime and Aeronautical Procedures and Amendments to the IAMSAR Manual (Agenda item 7).....16
(6)	Development of Guidelines for EPIRBs Implementing Two-Way Communication via the SAR/Galileo Return Link Service (Agenda item 8).....17
(7)	Development of Guidance on a Framework for Data Distribution and Global IP-Based Connectivity between Shore-Based Facilities and Ships Supporting ECDIS S-100 Products, and Operational Guidance for Route Exchange (Agenda item 9)18
(8)	Performance Standards for Augmentation Systems in Radionavigation Receivers (DFMC SBAS) (Agenda item 10)19
(9)	Development of a transition plan for the introduction of digital technologies for VHF voice communication (Agenda item 9).....20
(10)	Development of Performance Standards for Ranging Mode (R-mode) in Radionavigation Receivers (Agenda item 13)21
5.	Recommendation for NCSR 1322
6.	Next Meeting Schedule.....23
7.	References.....23

➤ International Maritime Organization Meeting Highlights

I. IMO Technical Cooperation Committee (TC), 76th session (TC 76)

The 76th session meeting of the TC committee was held from June 8 to 12th, 2026.

1. About TC¹

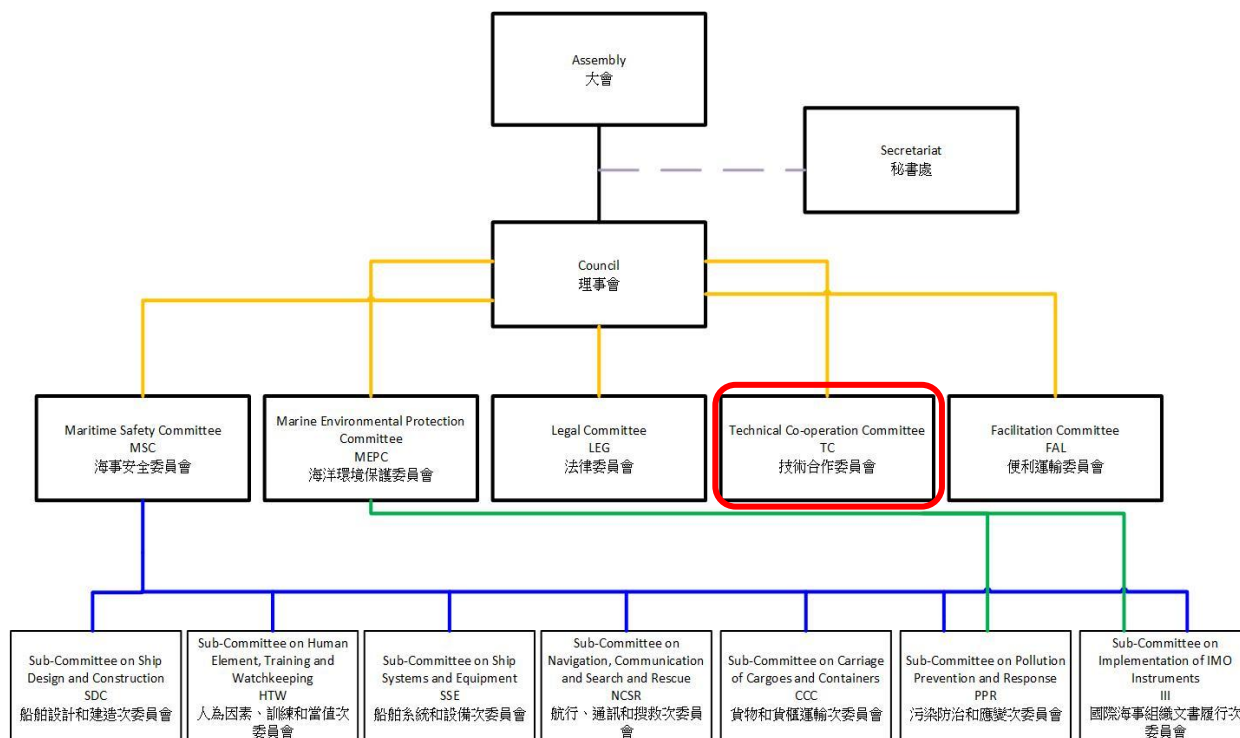


Figure 1 Organization Structure of IMO (TC) (Source: by CIMCS-NKUST)

The Technical Cooperation Committee (TC) is primarily responsible for overseeing the implementation of the International Maritime Organization (IMO) 's capacity-building plans and technical cooperation projects. As an implementing or cooperating agency, the IMO ensures its support for the United Nations Sustainable Development Goals (SDGs) and the 2030 Agenda for Sustainable Development.

2. TC 76 Highlights

- (1) Approved the Implementation plan for the IMO Capacity Development Strategy and

¹ IMO. Technical Cooperation Committee (TC). <https://www.imo.org/en/mediacentre/meetingsummaries/pages/tc-default.aspx>

strengthened outcome-oriented management;

- (2) Promote digital transformation assisted by IMO technology to enhance transparency and information sharing;
- (3) Digital Transformation of IMO Technical Assistance to Enhance Transparency and Information Sharing
- (4) Strengthen the regional deployment mechanism to align regional priorities with national needs;
- (5) Report on the implementation results of the 2025 Comprehensive Technical Cooperation Programme (ITCP), with an implementation rate of 72%, and continuous promotion of training activities;
- (6) To promote women's participation in the maritime sector and their leadership roles, TC 76 officially recognizes the Global Maritime Women's Association (WIMA) network to facilitate gender equality among maritime women.

3. TC 76 Agenda²

Item No.	Agenda
1	Adoption of the agenda
2	Decisions of other bodies
3	Technical cooperation planning and reporting
4	The 2030 Agenda for Sustainable Development
5	The Capacity-Development Strategy
6	Review and implementation of the regional presence and coordination scheme
7	Integration of IMSAS audit outcomes into technical cooperation activities and projects
8	Capacity Development: Empowering all women and the promotion of diversity, equality, equity and inclusion (DEEI) in the maritime sector
9	Advancing maritime education and training for the global maritime Sector

² IMO. TC 76 meeting document TC 76/1/1..

Item No.	Agenda
10	Technical cooperation evaluation and reporting on the implementation of the recommendations
11	Application of the Committees' method of work
12	Work programme
13	Election of Chair and Vice-Chair for 2027
14	Any other business
15	Consideration of the report of the Committee on its seventy-sixth session

4. TC 76 Meeting Summaries³

TC 76 was held from 8 to 12 June 2026, at the IMO Headquarters in London, UK. The meeting was hybrid, with in-person participation and livestreaming to the public.

The meeting established 3 working groups: one responsible for Maritime Autonomous Surface Ships (MASS), another for GHG Safety, and the third for reviewing the financial architecture of the LRIT system. On the other side, a Drafting Group on Amendments.⁴

Group Type	Main Task
Working Group (WG)	WG1: 2030 Agenda for Sustainable Development

(1) Integrated Technical Cooperation Programme (ITCP) 2025 report (Agenda Item 3)

TC 76 has discussed the implementation progress of the IMO Integrated Technical Cooperation Programme (ITCP) 2025 report. The Committee noted that of the 163 technical cooperation activities originally planned for 2025, 118 have been successfully executed, representing a 72% execution rate. This included 70 training courses and workshops that trained a total of 1,766 individuals; 22 fellows completed scholarship

³ International Maritime Organization (IMO). Technical Cooperation Committee - 76th session (TC 76), 8-12 June 2026. <https://www.imo.org/en/mediacentre/meetingsummaries/pages/tc-76th->

⁴ Refer to IMO TC 76 meeting document TC 76/1/1.

programs at the World Maritime University (WMU) and the IMO International Maritime Law Institute (IMLI), and 154 officials participated in technical activities.

TC supported targeted initiatives to improve domestic ferry safety, strengthen maritime training, and address maritime fraud. It also emphasized that tailored assistance should be provided to Small Island Developing States (SIDS) and Least Developed Countries (LDCs).

(2) Approved the Implementation plan for the IMO Capacity Development Strategy (Agenda Item 4)

TC 76 has approved a new Implementation Plan for the IMO Capacity-Development Strategy, with a stronger emphasis on performance monitoring and on delivering measurable results.

Building on the Strategy adopted at TC 75, the Implementation Plan sets out training activities, regional outreach initiatives, partnerships, and targeted assistance, organized under 11 thematic programs, to support Member States in the effective implementation of IMO instruments.

The Implementation Plan will be driven by the needs and priorities of Member States, taking into account direct requests for assistance, audit findings, regional assessments, and emerging maritime challenges. Particular attention will be given to Small Island Developing States (SIDS) and Least Developed Countries (LDCs).

The Plan introduces a strengthened results-based management approach, including the development of Key Performance Indicators (KPIs) and monitoring tools. It will also draw upon project evaluations, audit findings and digital platforms to enhance transparency and accountability in the delivery of IMO capacity-development activities.

TC supported the continued development of programme-level KPIs and invited the Secretariat to report on further progress at future sessions.

(3) Digital Transformation of IMO Technical Assistance (Agenda item 5)

TC 76 has endorsed the continued development of digital tools and platforms to enhance the efficiency, transparency, and data sharing of IMO technical cooperation. These digital tools include the [IMO Technical Cooperation Portal \(TC Portal\)](#), which incorporates the TC Dashboard and the TC Request Management System.

TC 76 welcomed the IMO Secretariat's ongoing efforts to strengthen the institutional framework supporting the delivery of technical cooperation. This includes further development of digital tools and monitoring and evaluation systems, as well as advancing the revision of the TC Manual to support the planning, implementation, monitoring, and reporting of IMO technical cooperation activities.

(4) Enhancing regional presence (Agenda item 6)

TC 76 has emphasized the vital role played by the IMO “Regional Presence Scheme” in supporting the delivery of technical cooperation activities and strengthening engagement with Member States at regional and national levels. The scheme deploys Regional Coordinators in developing regions to provide proactive, frontline support, assisting Member States in implementing IMO standards and regulations.

Member States called for a strengthened and more visible regional presence, while stressing that technical cooperation activities must be aligned more closely with regional priorities, audit outcomes, and national needs.

The Committee noted that regional forums, including the Asia-Pacific Heads of Maritime Safety Agencies Forum (APHoMSA), the Conference of the Association of African Maritime Administrations (AAMA), and the Meeting of Directors and Heads of Maritime Administrations for the Caribbean (DIHMAR), can serve to inform regional discussions.

(5) Women in Maritime (Agenda item 8)

TC 76 welcomed the continued efforts to strengthen and support the global Women in Maritime Associations (WIMA) network, recognizing it as an important platform for promoting women’s participation in the maritime sector and their advancement into leadership roles. The Committee also approved the formal recognition of the WIMA network within the IMO Technical Cooperation Programme, thereby further strengthening its role in supporting gender equality and capacity development across the maritime sector.

The WIMA network is a professional network established by IMO to address gender inequality in the maritime industry. There are currently eight regional WIMAs worldwide, with membership spanning Africa, the Arab States, Asia, the Caribbean, Latin America and the Pacific, and representing approximately 152 countries. The Committee encouraged Member States to engage more closely with the WIMA network.

The TC Committee also welcomed the continued implementation of the IMO Gender Equality Marker framework, which supports the integration and tracking of gender equality considerations across technical cooperation activities. TC 76 requested the IMO Secretariat to explore gender-responsive funding benchmarks for consideration at future sessions, with a view to further mainstreaming gender equality within IMO capacity-development programmes.

In addition, the Committee advanced preparations for the next Global Maritime Gender Survey, which will launch in 2027 and be jointly conducted by the IMO and the Women's International Shipping & Trading Association (WISTA). Drawing on data provided by IMO Member States and private-sector stakeholders, the survey will provide important insights into gender diversity across the maritime sector.

Member States were invited to review the questionnaire and submit comments or proposed amendments to the Secretariat by 31st December 2026. The next survey is scheduled to be launched on 18th May 2027. To support participation, IMO will organize workshops and outreach activities in 2027 for Member State focal points and industry representatives.

5. Recommendation for TC 76

- **the Implementation Plan for the IMO Capacity-Development Strategy:**

TC 76 has approved the Implementation Plan for the IMO Capacity-Development Strategy, with Member States' needs, audit findings and emerging maritime challenges serving as key drivers for implementation. The competent authority may wish to monitor how IMO further links capacity-building activities to the effective implementation of mandatory instruments, as a reference for assessing Taiwan's institutional capacity and the supporting measures for incorporating international requirements into domestic law.

- **the IMO TC Portal and TC Dashboard**

TC 76 has continued to advance the development of the IMO Technical Cooperation Portal, the Technical Cooperation Dashboard and the Technical Cooperation Request Management System, with a view to enhancing information sharing and transparency. The competent authority may follow the development of these digital tools as a reference for the future

management of international regulatory monitoring, the progress of domestic regulatory implementation and training records.

- **the Regional Presence Scheme and regional coordination mechanisms**

TC Committee has emphasized the importance of the Regional Presence Scheme and regional coordination mechanisms, and highlighted the role of regional forums such as the Asia-Pacific Heads of Maritime Safety Agencies Forum (APHoMSA). The competent authority may continue to monitor shared regional concerns in the Asia-Pacific regarding the implementation of IMO instruments and maritime capacity-building, as supplementary information when determining priorities for domestic implementation.

- **Gender Equality Marker: The Women in Maritime Associations (WIMA) network**

At this session, TC has formally recognized the Women in Maritime Associations (WIMA) network and continued to promote the Gender Equality Marker and the development of gender-responsive funding benchmarks. When planning maritime education, training and workforce-development measures, the competent authority may draw appropriate reference from IMO's approach to integrating diversity and gender equality into its capacity-development programmes.

6. Next Meeting Schedule

TC 77 is scheduled to be held from June 7th to 11th in 2027.

7. References

- (1) International Maritime Organization (IMO), Technical Cooperation Committee - 76th session (TC 76), 8-12 June 2026.
<https://www.imo.org/en/mediacentre/meetingsummaries/pages/tc-76th-session.aspx>

➤ International Maritime Organization Meeting Highlights

II. IMO Sub-Committee on Navigation, Communication and Search and Rescue (NCSR), 13th session (NCSR 13)

The 13th session meeting of the NCSR sub-committee was held from June 22 to 26th, 2026.

1. About NCSR⁵

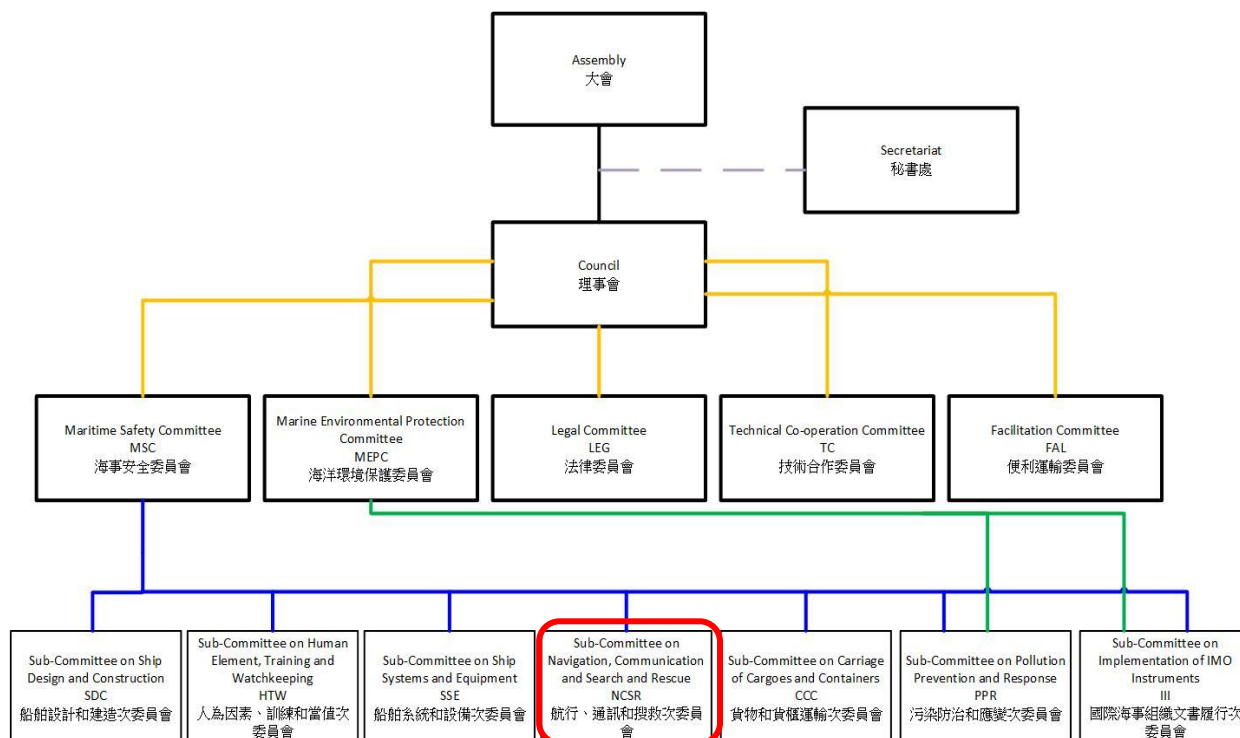


Figure 2 Organization Structure of IMO (NCSR) (Source: by CIMCS-NKUST)

The Sub-Committee on Navigation, Communication and Search and Rescue (NCSR) primarily deals with matters relating to navigation and communications, including the review and approval of ships' routing measures and ship reporting systems; carriage requirements and performance standards for navigational and communication equipment; the Long-Range Identification and Tracking (LRIT) system; and the development of e-navigation.

NCSR also addresses matters relating to search and rescue (SAR) and the Global Maritime Distress and Safety System (GMDSS), including the recognition of service providers.

⁵ IMO. Sub-Committee on Navigation, Communications and Search and Rescue (NCSR).
<https://www.imo.org/en/mediacentre/meetingsummaries/pages/ncsr-default.aspx>

Joint bodies reporting to the NCSR Sub-Committee include the ICAO/IMO Joint Working Group on the Harmonization of Aeronautical and Maritime Search and Rescue, and the IMO/International Telecommunication Union (ITU) Joint Experts Group on Maritime Radiocommunication Matters.

2. NCSR 13 Highlights

- (1) Finalized draft amendments to the European ship reporting systems and United States ships' routing measures. The draft amendments will be submitted to MSC 112 for adoption and are expected to be implemented six months after their adoption.
- (2) Finalized a draft MSC circular containing guidance on the transition from analogue to digital Very High Frequency (VHF) voice communications. The proposed transition scheme will retain selected existing analogue VHF channels to ensure the continuity and integrity of essential Global Maritime Distress and Safety System (GMDSS) distress, urgency and safety communications. The draft MSC circular will be submitted to MSC 112 for approval.
- (3) Finalized a draft MSC circular providing guidance on the establishment of a framework for data distribution and global Internet Protocol-based connectivity between shore-based facilities and ships supporting S-100 ECDIS products. The draft MSC circulars will be submitted to MSC 112 for approval.
- (4) Continued its work on the draft NAVDAT Manual and the roadmap for introducing the Digital Navigational Data System (NAVDAT). It updated the NAVDAT implementation roadmap and identified a series of technical, operational and regulatory actions that must be completed before implementation.
- (5) Finalized draft amendments to [resolution MSC.471\(101\)](#) to introduce the Two-Way Communication (TWC) capability provided through the Galileo Search and Rescue Return Link Service (SAR RLS) as an optional supplementary function for 406 MHz float-free Emergency Position-Indicating Radio Beacons (EPIRBs).

3. NCSR 13 Agenda⁶

Item No.	Agenda
1	Adoption of the agenda
2	Decisions of other bodies
3	Routeing measures and ship reporting systems
4	Updates to the LRIT system
5	Developments in GMDSS services, including guidelines on maritime safety information (MSI)
6	Response to matters related to the ITU-R Study Groups and ITU World Radiocommunication Conference
7	Development of global maritime SAR services, including harmonization of maritime and aeronautical procedures and amendments to the IAMSAR Manual
8	Development of guidelines for EPIRB which implement the two-way communication service via the SAR/Galileo Return Link service as a complement to EPIRB performance standards (resolution MSC.471(101))
9	Development of guidance to establish a framework for data distribution and global IP-based connectivity between shore-based facilities and ships for ECDIS S-100 products (2.12) and operational guidance for route exchange
10	Development of performance standards for dual frequency multi-constellation satellite-based augmentation systems (DFMC SBAS) and advanced receiver autonomous integrity monitoring (ARAIM) in shipborne radionavigation receivers
11	Development of a transition scheme for the introduction of digital technology for Very High Frequency (VHF) voice communications
12	Revision of the Performance standards for gyro-compasses (resolution A.424(XI)) and Guidance for navigation and communication equipment intended for use on ships operating in polar waters (MSC.1/Circ.1612)
13	Development of performance standards for Ranging mode (R-mode) in radionavigation receivers
14	Unified interpretation of provisions of IMO safety, security, environment, facilitation, liability and compensation-related conventions
15	Biennial status report and provisional agenda for NCSR 14
16	Election of Chair and Vice-Chair for 2027
17	Any other business

⁶ IMO. NCSR 13 meeting document NCSR 13/1/1 . .

Item No.	Agenda
18	Report to the Maritime Safety Committee

4. NCSR 13 Meeting Summaries⁷

NCSR 13 was held from 22 to 26 June 2026, at the IMO Headquarters in London, UK. It was a hybrid meeting, with in-person participation and livestreaming to the public.

The meeting established 3 working groups: WG 1 responsible for Agenda Items 5, 6, 9, and 11; WG 2 for Agenda Items 10, 12, and 13; and WG 3 for Agenda Items 7 and 8. An Expert Group working on Ships' Routing.⁸

Group Type	Main Task
Working Group (WG)	- WG1: Working group on Agenda Items 5, 6, 9, and 11; - WG 2: Working group on Agenda Items 10, 12, and 13; - WG 3: Working group on Agenda Items 7 and 8.
Expert Group (EG)	EG: working on Ships' Routing

(1) Routeing measures and ship reporting systems (Agenda Item 3)

The Sub-Committee considered proposals submitted under International Convention for the Safety of Life at Sea (SOLAS) Chapter V concerning ships' routing systems and mandatory ship reporting systems⁹, including amendments to existing IMO-adopted systems and the expanded use of digital reporting platforms such as SafeSeaNet. Main discussion are as follow:

①. European Ship Reporting Systems

Electronic reporting through the [SafeSeaNet platform](#)

⁷ International Maritime Organization (IMO). Sub-Committee on Navigation, Communications and Search and Rescue (NCSR). <https://www.imo.org/en/mediacentre/meetingsummaries/pages/ncsr-default.aspx>

⁸ Refer to IMO. IMO. NCSR 13 meeting document NCSR 13/1/2.

⁹ Ships' routeing measures and ship reporting systems contribute to enhancing the safety of navigation and protecting the marine environment. Ship reporting systems further improve navigational safety by providing real-time information on vessel movements. SOLAS Chapter V designates IMO as the sole international body responsible for establishing such systems, thereby ensuring the safety and efficiency of navigation at sea.

(<https://www.emsa.europa.eu/ssn-main.html>) is expected to become the primary reporting method, significantly reducing congestion in VHF voice communications. In addition, new mandatory reporting requirements relating to insurance certificates were introduced, covering the International Convention on Civil Liability for Oil Pollution Damage, 1992 (CLC 1992), the International Convention on Civil Liability for Bunker Oil Pollution Damage, 2001 (Bunkers Convention), and the Nairobi International Convention on the Removal of Wrecks, 2007 (WRC).

However, these reporting requirements apply only where the flag State is a Party to the relevant convention. In other words, the scope of reporting is being expanded beyond navigational safety considerations to encompass regulatory compliance obligations.

②. The U.S. Routeing Measures

Newly added or amended Traffic Separation Schemes (TSS) and associated routeing measures were developed primarily to establish or expand precautionary areas in connection with offshore energy activities. The purpose is to prevent newly installed offshore energy structures from obstructing established shipping fairways and traditional navigation routes. These measures are primarily technical and aim to maintain the safety and efficiency of navigation. The draft amendments have been finalized and will be submitted to MSC 112 for adoption, and are expected to be implemented six months after adoption.

(2) Long-Range Identification and Tracking (LRIT) (Agenda Item 4)

NCSR 13 has approved the IMO Strategy on Maritime Digitalization and the associated work plan for its development, as prepared by FAL 50 in March 2026, and agreed to submit the Strategy to MEPC 85 in November 2026 for consideration and approval.

Also encouraged Member States and international organizations to participate in the Correspondence Group on the Development of the IMO Strategy on Maritime Digitalization and to provide comments and input on the action plan through the Correspondence Group.

(3) Global Maritime Distress and Safety System (GMDSS) (Agenda item 5)

NCSR has updated the implementation roadmap¹⁰ for the Digital Navigational Data System (NAVDAT). The roadmap is intended to serve as a living document, to be updated in light of future developments. It adopts a phased implementation approach but does not prescribe a fixed timetable.

The roadmap covers the development, testing and standardization of NAVDAT and envisages its gradual introduction alongside the existing shore-based Navigational Telex (NAVTEX) system, which is currently used to broadcast Maritime Safety Information (MSI) and search and rescue-related information.

New medium-frequency (MF) NAVDAT transmitters are expected to support the transmission of both NAVTEX and NAVDAT messages. By contrast, high-frequency (HF) NAVDAT transmitters may be deployed as a standalone solution dedicated exclusively to transmitting NAVDAT messages.

It should also be noted that the following NAVDAT-related performance standards and recommendations have already been developed:

- [Resolution MSC.569\(109\)](#);
- Resolution MSC.509(105)/Rev.2;
- Recommendation ITU-R M.2010-3 ([ITU-R M.2010.3](#));
- Recommendation ITU-R M.2058-2 ([ITU-R M.2058-2](#)); and
- Recommendation ITU-R M.2443-0 ([ITU-R M.2443-0](#)).

However, the relevant IEC testing standards for NAVDAT equipment have not yet been finalized.

(4) IMO Position on the 2027 World Radiocommunication Conference (Agenda item 6)

NCSR 13 agreed on the draft IMO position on agenda items relevant to maritime services for the 2027 World Radiocommunication Conference (WRC-27)¹¹. The draft

¹⁰ NAVDAT is a shore-to-ship digital broadcasting system designed to transmit navigational warnings, weather forecasts, safety-related messages, and search and rescue information over the medium-frequency (MF) and high-frequency (HF) bands.

¹¹ ITU World Radiocommunication Conference 2027 will be held on 18 October – 12 November 2027, and take place in Shanghai, China. Official website: <https://www.itu.int/wrc-27/>

position is intended to ensure that any amendments to the Radio Regulations do not constrain the Global Maritime Distress and Safety System (GMDSS) or other maritime safety services, and that safety-critical communications remain adequately protected and maintained.

The draft IMO position will be submitted to MSC 112, scheduled for December 2026, for approval. It has also been forwarded to the International Telecommunication Union (ITU) and will subsequently be finalized by NCSR 14 and MSC 113.

(5) Development of Global Maritime Search and Rescue (SAR) Services, Including the Harmonization of Maritime and Aeronautical Procedures and Amendments to the IAMSAR Manual (Agenda item 7)

Based on the outcomes of the 32nd meeting of the ICAO/IMO Joint Working Group on the Harmonization of Aeronautical and Maritime Search and Rescue (JWG 32), NCSR 13 continued work on amendments to the 2028 edition of the International Aeronautical and Maritime Search and Rescue Manual (IAMSAR Manual).

The IAMSAR Manual remains an important reference publication jointly developed by IMO and ICAO, which is also a mandatory shipboard document under the SOLAS Convention. In particular, Volume III of the IAMSAR Manual is subject to inspection, and ships are required to carry the latest edition on board. The current 2025 edition of the IAMSAR Manual entered into effect on 1 January 2026.

The main outcomes of the meeting were as follows:

①. Amendments to the IAMSAR Manual:

NCSR 13 progressed draft amendments to Volumes I, II, and III of the 2028 edition. The proposed amendments cover matters including Radar Search and Rescue Transponders (Radar SARTs), the psychology of emergencies, and the activation locations of the Ship Security Alert System (SSAS) in accordance with SOLAS Chapter XI-2.

②. Submersibles and submarines:

The Sub-Committee agreed to update Volumes II and III to include guidance concerning submarine rescue and submersible craft. It was clarified that monitoring submarine operations does not fall within the responsibilities of Rescue Coordination Centres (RCCs). The meeting also noted that the precise role of RCCs in coordinating underwater search and rescue responses may vary depending on national policy

decisions.

③. Global SAR Plan and the Global Integrated Shipping Information System (GISIS):

To improve the provision of information by Member States, the Joint Working Group agreed to promote greater awareness of the existing guidance in COMSAR.1/Circ.61 and to introduce automated system notifications to remind competent authorities to periodically review and verify their information.

④. RCC documentation:

NCSR 13 finalized draft amendments to SAR.7/Circ.17, updating the minimum list of documents and publications to be maintained by maritime or joint rescue coordination centres.

The draft amendments to the IAMSAR Manual will be further developed through JWG 33, with a view to finalization and inclusion in the 2028 edition of the Manual. Following approval of the revised SAR.7/Circ.17, MSC 112 will be invited to endorse the action taken.

(6) Development of Guidelines for EPIRBs Implementing Two-Way Communication via the SAR/Galileo Return Link Service (Agenda item 8)

NCSR 13 agreed to draft amendments to the Performance Standards for Float-Free Emergency Position-Indicating Radio Beacons (EPIRBs) Operating on 406 MHz, adopted by [resolution MSC.471\(101\)](#). The draft amendments introduce the Two-Way Communication (TWC) capability provided through the Galileo Search and Rescue Return Link Service (SAR RLS) as an optional functionality.

The TWC capability will enable confirmation that a distress alert has been received and allow the bidirectional exchange of predefined messages between Rescue Coordination Centres (RCCs) and persons in distress.

The ICAO/IMO Joint Working Group was instructed to develop operational guidance for EPIRBs incorporating the two-way communication service and to submit recommendations to the NCSR Sub-Committee, as appropriate. The draft amendments will be submitted to MSC 112 for approval.

(7) Development of Guidance on a Framework for Data Distribution and Global IP-Based Connectivity between Shore-Based Facilities and Ships Supporting ECDIS S-100 Products, and Operational Guidance for Route Exchange (Agenda item 9)

According to the resolution [MSC.530\(106\)/Rev.1](#), Electronic Chart Display and Information Systems (ECDIS) incorporating S-100 functionality may be installed on a voluntary basis from 1st January 2026 and will become mandatory for all newly installed ECDIS equipment from 1st January 2029.

To support the transition to the next generation of S-100 products, IMO has recognized the need to establish a robust framework enabling secure and standardized IP-based data exchange between shore-based facilities and ships. Such a framework will facilitate the real-time integration of hydrographic, environmental and navigational safety information, thereby enhancing maritime safety and situational awareness while supporting improvements in operational efficiency.

NCSR 13 progressed the development of the regulatory framework necessary to support the safe implementation of the next generation of ECDIS. S-100-enabled ECDIS is intended to support safe navigation by displaying electronic navigational charts in real time and integrating regularly updated digital information provided through maritime information services.

Based on the preceding technical work, NCSR 13 finalized the following draft MSC circulars:

①. Data Distribution Framework (IP-Based Connectivity)

The draft Guidance to establish a framework for data distribution and global IP-based connectivity for shore-based facilities and ships supporting ECDIS S-100 products has been completed.

The guidance also emphasizes the need to implement appropriate cybersecurity measures, including network segregation, to protect shipboard systems against external threats. The meeting further clarified that there is currently no mandatory requirement for ships to be equipped with IP-based connectivity or continuous Internet access.

②. Operational guidance for digital route exchange

The draft circular on Operational guidance for digital route exchange is intended to facilitate the secure and efficient exchange of route plans between ships and shore-based services. The meeting also noted that digital route exchange is entirely voluntary and does not replace any mandatory ship reporting requirements.

The development of the above guidance follows the adoption in 2022 of the revised ECDIS Performance Standards under [resolution MSC.530\(106\)](#), which enabled the introduction of the next generation of electronic navigational charts. The revised Performance Standards will apply to ECDIS equipment installed on or after 1 January 2029. During the transitional period from 1 January 2026 to 1 January 2029, ECDIS equipment may comply either with the existing Performance Standards under [resolution MSC.232\(82\)](#) or with the revised Performance Standards.

The new draft MSC circulars will be submitted to MSC 112 for approval.

(8) Performance Standards for Augmentation Systems in Radionavigation Receivers (DFMC SBAS) (Agenda item 10)

In May 2026, MSC 111 adopted amendments to the Worldwide Radionavigation System under resolution A.1046(27), establishing procedures and requirements for augmentation systems. Such systems can enhance the performance of Global Navigation Satellite Systems (GNSSs) by improving their accuracy, reliability and availability.

Based on this framework, NCSR 13 initiated the development of performance standards for dual-frequency multi-constellation satellite-based augmentation systems (DFMC SBAS) and Advanced Receiver Autonomous Integrity Monitoring (ARAIM) in shipborne radionavigation receivers. The work will continue through a correspondence group ahead of NCSR 14 (April 2027).

NCSR 13 agreed that explanatory text concerning ARAIM single-frequency and dual-frequency operations, as well as the characteristics of the Integrity Support Message (ISM), would be useful in developing the draft performance standards and should be retained as footnotes. By contrast, the proposed functional requirements relating to accuracy, integrity, availability, continuity and functionality were considered overly detailed and prescriptive and would require further revision.

NCSR has agreed to re-establish the correspondence group to further develop and

finalize the draft performance standards, ensuring that they remain goal-based and technology-neutral, and to report to NCSR 14 in spring 2027.

(9) Development of a transition plan for the introduction of digital technologies for VHF voice communication (Agenda item 9)

In recent years, the number of available voice channels in the maritime Very High Frequency (VHF) mobile band has gradually decreased, leading to channel congestion, particularly in areas of heavy maritime traffic. Therefore, there is a need to improve spectrum efficiency while maintaining safety-of-life communications, including the distress, urgency, and safety services provided under the Global Maritime Distress and Safety System (GMDSS). Accordingly, MSC 109 agreed to include a new output on the development of a transition scheme for introducing digital technology into VHF voice communications, with a target completion year of 2027.

NCSR 13 agreed to a draft MSC circular setting out a phased transition scheme from analogue VHF voice communications to digital VHF voice communications. The scheme provides for the gradual introduction of digital channels. To ensure maritime safety and avoid disruption to GMDSS distress, urgency and safety communications, the existing assignments of analogue Channels 06, 13, 16, 75 and 76, together with Channel 70 for Digital Selective Calling (DSC), AIS 1 for AIS Search and Rescue Transmitters (AIS-SARTs), and AIS 2 for AIS-SARTs, will be retained.

Additional digital VHF channels will also be identified within the frequency bands currently allocated to the maritime mobile service, in accordance with Appendix 18 of the ITU Radio Regulations. During implementation, efforts will be made to minimize the financial burden on ships and shore-based authorities.

The indicative timeline is outlined as follows:

- ①. 2025–2028: Development of the transition scheme;
- ②. 2028–2031: Development of the regulatory framework and technical standards;
- ③. 2032–2045: Phased implementation and gradual replacement and retirement of equipment.

The draft MSC circular will be submitted to MSC 112 for approval.

(10) Development of Performance Standards for Ranging Mode (R-mode) in Radionavigation Receivers (Agenda item 13)

MSC 110 (June 2025) agreed to develop performance standards for Ranging Mode (R-mode) in radionavigation receivers and to consider whether resolution A.1046(27) should be amended to accommodate the use of R-mode as part of the Worldwide Radionavigation System (WWRNS).

NCSR 13 finalized the draft performance standards for shipborne R-mode receiver equipment. The standards specify the minimum requirements for shipborne receivers to provide positioning capability independent of the Global Navigation Satellite System (GNSS). The principal outcomes were as follows:

①. Voluntary backup system:

It was agreed that R-mode should be regarded as a voluntary complementary backup system to GNSS, rather than as a standalone system intended to operate independently.

②. No formal IMO recognition required:

As R-mode is a terrestrial backup system intended to enhance navigational resilience, IMO recognition was considered unnecessary.

③. Equipment standards:

The finalized standards ensure that R-mode receivers can process both medium-frequency (MF) and Very High Frequency (VHF) signals and provide reliable alerts. These include an alert within five seconds after loss of position or when a new position cannot be calculated for more than two seconds.

The standards focus solely on R-mode functionality, while recognizing that such receivers may in the future be integrated with other shipborne radionavigation systems. NCSR 13 also agreed that amending resolution A.1046(27) to incorporate R-mode would be premature at this stage.

In other words, the system serves as a backup system designed to ensure that vessels can continue to navigate safely using land-based signals in the event of satellite system disruptions. This draft performance standard will be submitted to MSC 112 for adoption. NCSR 13 also agreed that it is still too early to amend Resolutions A.1046(27) and MSC.599(111) at this stage, and invited interested Member States to submit proposals for new deliverables to the MSC.

5. Recommendation for NCSR 13

- **Finalized draft MSC circulars concerning global IP-based data exchange:**

NCSR 13 has finalized draft MSC circulars concerning global IP-based data exchange, secure connectivity frameworks and operational guidance for digital route exchange for ECDIS S-100 products, for submission to MSC 112 for approval. As the implementation of S-100-enabled ECDIS will involve electronic navigational charts, shore-based information services, ship–shore data exchange and cybersecurity, the competent authority may continue to monitor IMO discussions on the implementation elements of S-100 ECDIS, data distribution frameworks and ship–shore connectivity requirements. Such developments may serve as a reference when assessing how Taiwan’s digital navigational information services should interface with the emerging international framework.

- **A transition scheme for the introduction of digital Very High Frequency (VHF)**

NCSR 13 also has finalized a draft MSC circular setting out a transition scheme for the introduction of digital Very High Frequency (VHF) voice communications. It confirmed that selected existing analogue VHF channels and GMDSS-related channel assignments would continue to be retained, even as digital VHF voice communications are gradually introduced, in order to maintain the continuity of distress, urgency and safety communications. This development indicates that maritime radiocommunications are moving towards greater digitalization and improved spectrum efficiency. The competent authority may therefore monitor the further development of relevant IMO and ITU standards and assess their potential implications for shipborne radio equipment, shore station facilities and GMDSS operations.

- **To integrate NAVDAT into the GMDSS and update the roadmap for the introduction of NAVDAT services**

Continued its work on the integration of NAVDAT into the GMDSS and updated the roadmap for the introduction of NAVDAT services. However, the NAVDAT Manual and associated implementation matters remain subject to further work at NCSR 14. As a shore-to-ship digital broadcasting system capable of transmitting text, images, S-100 products and other digital data, NAVDAT may in future affect the manner in which maritime safety information, meteorological information and search and rescue information are disseminated. The competent authority may treat NAVDAT as a medium- to long-term issue in the digital

transformation of the GMDSS and continue to monitor developments concerning NAVDAT performance standards, IEC testing standards, coast station deployment and updates to the GMDSS Master Plan.

- **Amendments to the IAMSAR Manual, R-mode, DFMC SBAS/ARAIM**

Made progress, or initiated further work, on matters including two-way communication for EPIRBs, amendments to the IAMSAR Manual, R-mode, DFMC SBAS/ARAIM, fibre-optic gyro-compasses, bridge alert management and VDR performance standards. Although most of these matters have not yet resulted in immediate mandatory requirements, they demonstrate that IMO is progressively strengthening navigational resilience, search and rescue effectiveness, bridge human-machine interfaces and access to casualty-related data. When reviewing relevant domestic regulations, the competent authority may include these issues within its monitoring of international regulatory trends, as a basis for future assessments of equipment standards, operational requirements and training needs.

6. Next Meeting Schedule

NCSR 14 is scheduled to be held from April 26th to 30th in 2027.

7. References

- (1) American Bureau of Shipping (ABS), News Brief: NCSR 13. <https://ww2.eagle.org/en/rules-and-resources/regulatory-updates/regulatory-news/ncsr-13-brief.html>
- (2) Bureau Veritas (BV), Navigation, Communications and Search and Rescue Sub-Committee 13th Session (NCSR 13) Summary Report. <https://marine-offshore.bureauveritas.com/newsroom/navigation-communications-and-search-and-rescue-sub-committee-13th-session-ncsr-13-summary>
- (3) Det Norske Veritas (DNV), The IMO sub-committee on navigation, communications, search and rescue (NCSR 13) <https://www.dnv.com/news/2026/the-imo-sub-committee-on-navigation-communications-search-and-rescue-ncsr13/>
- (4) InterManager, Summary report on IMO Sub-Committee on Navigation, Communication and Search and Rescue 13th session (NCSR 13). <https://www.intermanager.org/wp/wp-content/uploads/2026/06/IMO%20SUB-COMMITTEE%20ON%20NAVIGATION,%20COMMUNICATIONS%20AND%20SEARCH%20AND%20RESCUE,%2022-26%20JUNE%202026.pdf>
- (5) Lloyd's Register (LR), NCSR 13 Summary Report. <https://maritime.lr.org/NCSR-13-Summary-Report>