Supplementary materials for June 2025

Contents

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➢ **International Maritime News**

I. **IMO's role in protecting the world's oceans**

2025. IMO's Hot Topics from:
https://www.imo.org/en/MediaCentre/HotTopics/Pages/oceans-default.aspx

The 2025 UN Ocean Conference (UNOC) was held on 9-13 June 2025, in Nice, France. The Secretary-General of the International Maritime Organization (IMO), Mr. Arsenio Dominguez, also led a dedicated team to attend the conference. The team attended a series of side events related to ocean governance, maritime decarbonization, and sustainable shipping. (More info. for UNOC.)

Source: IMO.

IMO's World Maritime Day theme for 2025 is "Our Ocean, Our Obligation, Our Opportunity". The celebration runs through the year, and it will culminate in the official observance of World Maritime Day on 25 September 2025. Protecting the maritime environment and ensuring sustainable shipping are both important missions for the IMO. IMO is addressing critical issues affecting our oceans.

Therefore, the organization has continuously discussed and updated maritime conventions through proposals, promoted international cooperation by establishing partnerships. IMO has developed and adopted mandatory regulations, along with recommendations and guidelines, to protect the marine environment from the potential impacts of shipping activities.

➢ **Protecting the ocean through regulation:**

1. **International Convention for the Prevention of Pollution from Ships (MARPOL)**

   The MARPOL Convention is one of the key conventions to protect the oceans by preventing and minimizing pollution from shipping. MARPOL was initially adopted in 1973, includes annexes addressing the prevention of pollution from ships by oil, chemicals carried in bulk, packaged goods, sewage, and garbage. The Protocol of 1978 was adopted in response to a spate of tanker accidents in 1976-1977. The combined instrument (MARPOL 1973/78 Protocol) entered into force on 2 October 1983.

   The Convention classified the major types of pollution developed from ships with strict controls on operational discharges into 6 Annexes (Figure 1):

   (1) Annex I (Regulations for the Prevention of Pollution by Oil);

   (2) Annex II (Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk);

   (3) Annex III (Prevention of Pollution by Harmful Substances Carried by Sea in Packaged Form);

   (4) Annex IV (Prevention of Pollution by Sewage from Ships);

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(5) Annex V (Prevention of Pollution by Garbage from Ships); and

(6)　　Annex VI (Prevention of Air Pollution from Ships).

Figure 1 MARPOL Convention Annex I to VI

2.　International Convention for the Safety of Life at Sea (SOLAS)

The SOLAS Convention is one of the most important treaties for maritime safety. It establishes minimum safety standards for ships, including lifesaving equipment, fire protection, navigation, and operational safety. It has been updated and amended on numerous occasions; the Convention in force today is sometimes referred to as SOLAS, 1974, as amended.

Flag States are responsible for ensuring that ships under their flag comply with the requirements, and a number of certificates are prescribed in the Convention as proof that this has been done. Control provisions also allow governments of the Contracting States to inspect ships of other countries if there are clear grounds for believing that the ship and its equipment do not substantially comply with the requirements of the Convention - this procedure is known as port State control.

Figure 2 SOLAS Convention Chapter I to XV

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The current SOLAS Convention includes Articles setting out general obligations, amendment procedure, and so on, followed by an Annex divided into 15 Chapters (Figure 2). The newly added Chapter XV (Safety measures for ships carrying industrial personnel) entered into force on 1 July 2024.

3.　International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC) and OPRC-HNS Protocol (2000)

The OPRC Convention establishes measures for the prevention of, preparedness for, and response to oil pollution incidents. It requires countries to develop contingency plans and establish cooperation between states and international organizations for oil spill response. The OPRC-HNS Protocol (2000) extends this framework to cover hazardous and noxious substances (HNS) in addition to oil. Learn more information from OPRC.

4.　International Convention on the Control of Harmful Anti-fouling Systems on Ships (AFS Convention)

The AFS Convention regulates the use of harmful anti-fouling systems (the substance used to prevent marine organisms from attaching to the hull of the ships) to protect the marine environment from chemicals that can be harmful to marine life. Learn more information from the AFS Convention.

5.　International Convention for the Control and Management of Ships' Ballast Water and Sediments (Ballast Water Management Convention)

The Ballast Water Management Convention was adopted in 2004, which aims to prevent the spread of harmful aquatic organisms and pathogens through ballast water discharge. The Convention is divided into Articles and an Annex, which includes technical standards and requirements in the Regulations for the control and management of ships' ballast water and sediments.

It requires ships to manage ballast water through treatment systems, ballast water exchange, and the safe disposal of ballast water and sediment to prevent the introduction of invasive species into new marine environments. All ships are also required to carry a ballast water record book and an international ballast water management certificate. (Learn more from the BWM Convention.)

6.　The Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships (Hong Kong Convention)

The Hong Kong Convention entered into force on 26 June 2025, which is aimed at ensuring that ships, when being recycled after reaching the end of their operational lives, do not pose any unnecessary risk to human health and safety or to the environment.

Regulations in the new Convention covered the design, construction, operation, and preparation of ships, so as to facilitate and ensure environmentally sound recycling, without compromising the safety and operational efficiency of ships. Ensuring the operation of ship recycling facilities in a safe and environmentally sound manner,

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and the establishment of an appropriate enforcement mechanism for ship recycling, incorporating certification and reporting requirements.

While the ship recycling yards will be required to provide a Ship Recycling Plan, to specify the manner in which each individual ship will be recycled, depending on its particulars and its inventory. The Contracted Parties will be required to take effective measures to ensure that ship recycling facilities under their jurisdiction comply with the Convention. IMO had finalized a series of guidelines to assist in the Convention's implementation.

7. International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW)

The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW), 1978, was adopted by the International Conference on Training and Certification of Seafarers on 7 July 1978.

The STCW Convention sets qualifications for the training, certification, and watchkeeping of seafarers, ensuring they meet specific safety standards at sea, which is essential for preventing accidents, spills, and other incidents and protecting the ocean environment.

The 1995 STCW Conference adopted the Seafarers' Training, Certification and Watchkeeping (STCW) Code. The 2010 amendments (the Manila Amendments) to the Convention and Code were adopted by resolutions 1 and 2, respectively, by a Conference of Parties to the STCW Convention, held in Manila, Philippines, in June 2010 (the 2010 STCW Conference). (Learn more about STCW)

8. London Convention and Protocol (LC/LP)

The London Convention and Protocol (LP/LP) mainly regulate the dumping of waste and harmful materials into the ocean to protect the marine environment. Besides to addressing pollution from ships, the Protocol adopts a precautionary approach to land-based waste and supports climate change mitigation through carbon capture and subsea sequestration.

➢ **Ocean areas of action:**

As part of IMO's efforts to protect the marine environment and ensure sustainable shipping practices, IMO has implemented several essential conventions through key areas of action**.**

1. Marine Litter

Marine plastic pollution is one of the most serious environmental concerns at present. Through MARPOL Annex V (Prevention of Pollution by Garbage from Ships), IMO aims to prevent pollution by banning the discharge of most types of garbage from ships, including plastics, and setting standards for waste management. At the MEPC 83 (April 2025), the IMO adopted the 2025 Action Plan to Address Marine Plastic Litter from Ships (2025 Action Plan).

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The updated plan mainly aims to achieve a reduction of the contribution from fishing vessels and other types of ships to marine plastic litter, to enhance public awareness, education, and seafarer training, and to improve understanding of the contribution of ships to marine plastic litter.

Also, to improve the effectiveness of port reception facilities and treatment in reducing marine plastic litter, and lastly, to strengthen international cooperation.

2. Protecting marine biodiversity

Protecting and restoring marine biodiversity is also one of the important actions of the IMO. By implementing IMO's global regulatory framework on marine environment protection, IMO is supporting global efforts to address some of the challenges the planet faces through strengthened international cooperation.

(1) Invasive aquatic species:

Such invasive aquatic species mainly enter new marine areas through ballast water from ships and the biological fouling attached to the hulls. These invasive species may pose a threat to the biodiversity of the local waters.

To address this issue, the Ballast Water Management Convention (2004) requires ships to implement practices and treatment systems to prevent the transfer of invasive species from one ecosystem to another.

(2) Biofouling

The undesirable accumulation of microorganisms, plants, algae, and animals on submerged structures (especially ships' hulls) is a major pathway for the spread of invasive aquatic species. It may lead to serious risks to marine biodiversity and ecosystem balance. At the MEPC 83 (April 2025), a new output agreed to develop a legally binding framework for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species.

Before the new framework came out, the 2023 Biofouling Guidelines will continue to provide a globally consistent approach to managing biofouling on ships.

3. Underwater Radiated Noise (URN)

The underwater noise is mainly generated by human activity may be related to commercial shipping. The international community recognizes that underwater radiated noise (URN) from commercial ships may have both short and long-term negative consequences on marine life, especially marine mammals.

The IMO Marine Environment Protection Committee 82nd session (MEPC 82, Oct. 2024) approved the URN Action Plan, which is aimed at addressing barriers to the uptake of the Revised URN Guidelines. Its goal is to further prevent and reduce underwater radiated noise from ships, and it will keep on being reviewed and revised over time if as necessary.

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Additionally, there will be a three-year Experience Building Phase for the Revised Guidelines running until MEPC 85 in 2026, with a possible two-year extension to develop best practices. It allows for practical experiences to be gathered and best practices to be developed in applying the Guidelines.

IMO also launched a project—Global Partnership for Mitigation of Underwater Noise from Shipping (GloNoise Partnership), in collaboration with the United Nations Development Programme (UNDP) and the Global Environment Facility (GEF), addressing the impact of underwater noise on marine species. Learn more about the GloNoise Partnership project.

4. Particularly Sensitive Sea Areas

A Particularly Sensitive Sea Area (PSSA) is an area that needs special protection through action by IMO because of its significance for recognized ecological, socio-economic, or scientific reasons, and which may be vulnerable to damage by international maritime activities.

IMO has a process to designate PSSAs, which are subject to associated protective measures such as mandatory ship-routing systems. Currently, there are 17 areas(plus two extensions) protected in this way, including those covering UNESCO World Heritage Marine Sites, such as the Great Barrier Reef in Australia, the Galápagos Archipelago in Ecuador, the Papahānaumokuākea Marine National Monument in the United States, and the Wadden Sea which is an intertidal zone in North Sea between Denmark, Germany, and Netherlands. Designating Special Areas and PSSAs fully align with the goal of Sustainable Development Goal 14 (SDG 14) target to increase coverage of marine protected areas. Learn more about the PSSA here.

5. Clean air and climate action

Pollution from the air – emissions from shipping – can directly impact the ocean, making the ocean warmer and more acidic. IMO is actively working to reduce the shipping industry's carbon footprint. The International Convention for the Prevention of Pollution from Ships (MARPOL), specifically Annex VI, sets limits on air pollution from ships and energy efficiency measures to limit greenhouse gas emissions, which contribute to global climate change.

In 2023, IMO adopted the updated 2023 IMO Strategy on Reduction of GHG Emissions from Ships, aiming for net-zero GHG emissions by or around 2050. The strategy includes setting a checkpoint for 2030 (20-30% reduction compared to 2008 levels) and 2040 (70-80% reduction compared to 2008 levels), along with a 40% reduction in carbon intensity by 2030.

In terms of marine alternative fuels, it is expected that zero-emission and near-zero emission GHG fuels will account for at least 5% of shipping energy by 2030, while striving for 10% if possible. It proposes the development of a marine fuel standard and a GHG emissions pricing mechanism to accelerate the transition to low-carbon fuels.

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To support implementation, IMO runs capacity-building programs and global projects. Read more on IMO's work to cut GHG emissions from ships here, and Carbon Capture and Storage (CCS).

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➤ International Maritime Organization Meeting Highlights

I. The Sub-Committee on Navigation, Communication and Search and Rescue, 12th session (NCSR 12)

The 12th session meeting of NCSR is held from May 19th to 23rd, 2025.

1. About NCSR[1]
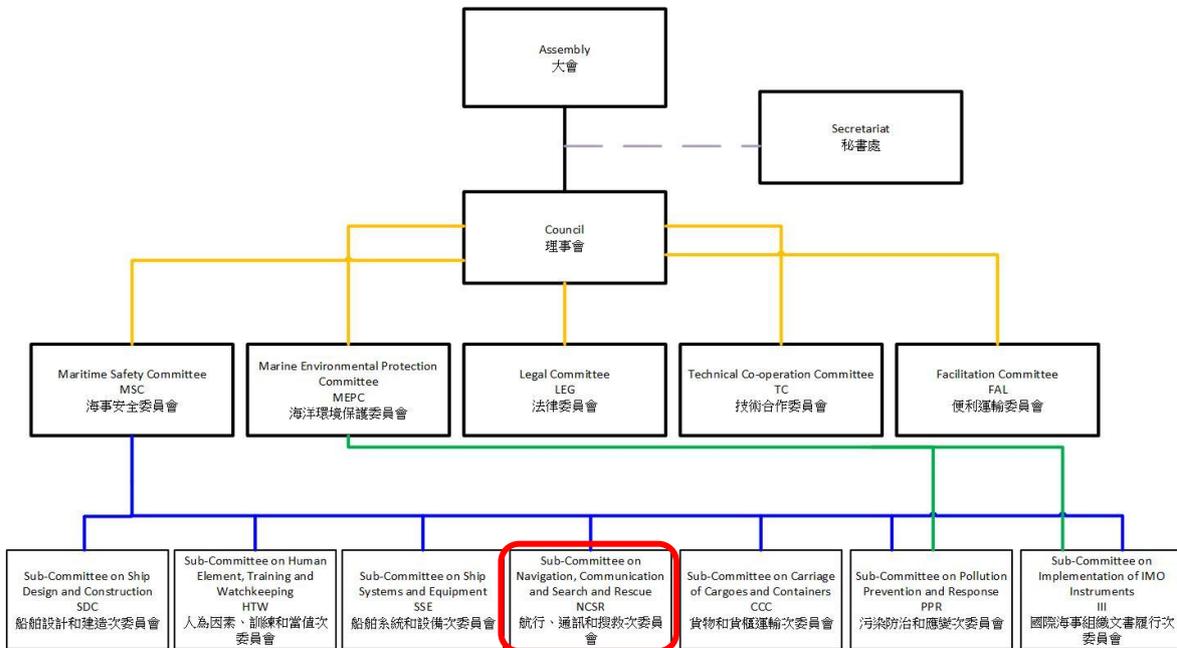
Figure 3 Organization Structure of IMO (NCSR)

IMO NCSR Sub-Committee mainly deals with matters that are related to navigation and communication, including the analysis and approval of ship 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. Other things, like search and rescue matters and the Global Maritime Distress and Safety System (GMDSS), including recognition of service providers.

There are two joint working groups that report to the NCSR Sub-Committee, including the International Civil Aviation Organization (ICAO)/IMO Joint Working Group on Harmonization of Aeronautical and Maritime Search and Rescue and the Joint IMO/ International Telecommunication Union (ITU) Experts Group on Maritime Radiocommunication Matters.

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[1] IMO. Sub-Committee on Navigation, Communications and Search and Rescue (NCSR).
https://www.imo.org/en/MediaCentre/MeetingSummaries/Pages/NCSR-default.aspx

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2. NCSR 12 Highlights

(1) Finalized the draft amendments to Integrating VDES into SOLAS - introducing the VHF data exchange system.

(2) Finalized the draft MSC circular -Guidelines for software maintenance of shipboard computer-based navigation and communication equipment and systems;

(3) Finalized new draft Guidelines on the carriage and use of the electronic nautical publications (ENP) system;

(4) Agreed on the draft amendments to SOLAS regulations related to the dissemination of maritime safety information (MSI) and SAR-related (search and rescue) information through all operational recognized mobile satellite services;

(5) With further progress on developing the guidance for establishing a framework for data distribution and global IP-based connectivity for shore-based facilities and ships supporting ECDIS S-100 products.

3. NCSR 12 Agenda

Table 1 NCSR 12 Agenda

Item No.	Agenda
1	Adoption of the agenda
2	Decisions of other IMO bodies
3	Routeing measures and ship reporting systems
4	(a) 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 procedures and requirements for the recognition of augmentation systems in the Worldwide Radionavigation System
9	Development of amendments to SOLAS chapters IV and V and performance standards and guidelines to introduce VHF Data Exchange System (VDES)
10	Development of guidelines for software maintenance of shipboard navigation and communication equipment and systems
11	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))
12	Development of guidelines for the use of electronic nautical publications (ENP)
13	Revision of the Performance standards for shipborne BeiDou Satellite Navigation System (BDS) receiver equipment (resolution MSC.379(93))
14	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
15	Validated model training courses
16	Unified interpretation of provisions of IMO safety, security, environment, facilitation, liability and compensation-related conventions
17	Biennial status report and provisional agenda for NCSR 13
18	Election of the Chair and Vice-Chair for 2026
19	Any other business
20	Report to the Maritime Safety Committee

(Source: IMO/ NCSR 12/1/1)

4. NSCR 12 Meeting Summaries[2]

NCSR 12th session held at the IMO Headquarters in London from May 19th to 23rd, 2025. There are 3 Working Groups (WGs), 1 Experts Group (EG), and a draft Group (DG) formed at NCSR 12.

Each group was tasked to deal with actions emanating from allotted agenda items, in a manner to best distribute the workload as follows:

- Working Group 1 (WG 1) to deal with Agenda items 6, 10, and 14;
- Working Group 2 (WG 2) to deal with Agenda items 8, 9, and 12;
- Working Group 3 (WG 3) to deal with Agenda items 5, 7;
- The Experts Group (EG) to deal with Agenda item 3 - Routing measures and ship reporting systems.
- The draft Group (DG) to deal with Agenda items 12, 13, and 15.

(1) Routeing Measures and Ship Reporting Systems

NCSR 12 agreed on the following draft measures, with a view to adoption by the

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[2] IMO. Sub-Committee on Navigation, Communications and Search and Rescue (NCSR), 12th session, 13 – 22 May 2025. https://www.imo.org/en/MediaCentre/MeetingSummaries/Pages/NCSR-12th-session.aspx

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Maritime Safety Committee 111th session (MSC 111, June 2026):

- Established an area to be avoided (ATBA) [3] "off the coast of Réunion" in the Mascarene Basin, to reduce the risk of maritime accidents, improve the safety of navigation, and also to protect the marine environment;

- Amendments to the existing mandatory ship reporting system in the Adriatic Sea (ADRIREP), expanding the existing system to improve maritime safety in the region and facilitating ship reporting requirements by using electronic means;

- Amendments to existing mandatory ship reporting systems in and around the coasts of European coastal States; and amendments to existing mandatory ship reporting systems "In the Sound between Denmark and Sweden" (SOUNDREP) and "In the Storebælt (Great Belt) traffic area" (BELTREP), adding new reporting requirements to provide evidence of existence of insurance for maritime claims, as well as civil liability certificates.

(2)　Digital navigational data system (NAVDAT)

On the 109th session of the Maritime Safety Committee (MSC 109, Dec. 2024), IMO had adopted a new performance standard for NAVDAT[4] equipment as Resolution MSC.569(109).

It introduced NAVDAT into the IMO regulatory framework. NAVDAT is confirmed as one of the radio equipment as a receiver or receivers capable of receiving MSI and search and rescue related information, relating to the SOLAS Ch. IV (Radiocommunications) Regulation 7.1.4[5].

NAVDAT can communicate texts, images, graphs, and data to compatible receiving equipment on ships, at speeds much higher than navigational telex (NAVTEX), which can also be used as support equipment for NAVTEX, the enhanced group call (EGC), and high-frequency direct-printing telegraphy (HF NBDP). However,

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[3] The specific water area which could be very dangerous, or perhaps it's a Particularly Sensitive Sea Area (PSSA) with sensitive ecological or socio-economic or scientific reasons and which may be vulnerable to damage by international maritime activities which is necessary for ships to be avoided.

[4] NAVDAT is intended for broadcasting digital data, including information related to MSI and SAR, on middle-frequency (MF) and high-frequency (HF) bands, from shore to ships.

[5] Regulation 7 Radio equipment (For all ships, included cargo ships > 300 gross tonnage). Regulation 7.1.4: "*a receiver or receivers capable of receiving MSI and search and rescue related information throughout the entire voyage in which the ship is engaged;*"

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the requirement for the NAVTEX receiver equipment is not yet mandatory.

NCSR 12 had a discussion on the NAVDAT service and agreed that initial proposals related to the introduction and administration of a global NAVDAT system, renaming of the IMO NAVTEX Coordinating Panel, and related draft terms of reference.

NCSR 12 also urged Member States to ensure that METAREA and NAVAREA Coordinators have completed the required training and testing that declare the Iridium SafetyCast service operational as soon as possible; and those not presently conducting testing or trial activities to progress the implementation of such service.

A planning roadmap was updated in preparation for the implementation of the NAVDAT service and forwarded to the IMO/ITU Experts Group for consideration. The draft of the NAVDAT manual was agreed upon and will be forwarded to the International Hydrographic Organization (IHO) and World Meteorological Organization (WMO) for review.

NCSR 12 has agreed the draft MSC circular on IMO Terrestrial Broadcast Services Coordinating Panel, including its terms of reference with a view to approval by the Committee; and further review for approval by MSC 111.

(3)　Dissemination of MSI and SAR-related information

IMO had agreed to develop the draft amendments to the SOLAS Convention to state clearly the requirement for dissemination of maritime safety information (MSI) and search and rescue (SAR) related information through all operational recognized mobile satellite services (RMSS) before 31 December 2026. Since January 2000, both Inmarsat and Iridium have been recognized for use in the Global Maritime Distress and Safety System (GMDSS).

NCSR 12 agreed to the draft amendments to SOLAS Regulations IV/5 (Provision of radiocommunication services), V/4 (Navigational warnings), and V/5 (Meteorological services and warnings) to explicitly require the dissemination of information related to maritime safety information (MSI) and search and rescue (SAR) through all operational RMSSs.

NCSR 12 also agreed on the draft amendments of the resolution

MSC.509(105)/Rev.1 on Provision of Radio Services for the Global Maritime Distress and Safety System (GMDSS).

The draft amendments will enter into force on 1 January 2028, once it be approved by the MSC 110 (June 2025), and adopted by MSC 111 (May 2026).

(4) Response to matters related to the ITU-R Study Groups and ITU World Radiocommunication Conference (WRC)

IMO submitted a position paper for the ITU World Radiocommunication Conferences (WRC) on matters concerning maritime services. They noted the views of other delegations that the matter related to the introduction of digital technology for VHF voice communications should be added to the draft IMO position under agenda item 10 for inclusion in the agenda of WRC-31

NCSR 12 noted the considerations from the Joint IMO/ITU Experts Group[6] on the outcome of the ITU World Radiocommunication Conference 2023 (WRC-23) and considered the preliminary in preparation for ITU WRC 27. The NCSR subcommittee finalized the draft IMO position on relevant WRC 27 agenda items concerning matters relating to maritime services. The relevant amendments will be made as an MSC Resolution and submitted to be viewed by MSC 111 (May 2026) for further approval.

(5) Procedure for Responding to Digital Selective Calling (DSC) Distress Alerts by Ships

NCSR 12 had agreed to the draft amendment on *Procedure for responding to DSC distress alerts by ships* (to be disseminated as MSC.1/Circ.1657/Rev.1).

The revision of DSC distress alerts with the Recommendation ITU-R M.541-11 on Operational procedures for the use of digital selective calling equipment in the maritime mobile service, which will be submitted to MSC 111 (May 2026) for approval.

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[6] IMO works closely with the International Telecommunications Union (ITU) on issues that concern maritime radiocommunication services. This collaboration is supported by the Joint IMO/ITU Experts Group on Maritime Radiocommunication Matters which meets inter-sessional between meetings.

The Group reports to the NCSR Sub-Committee and, as appropriate, to meetings of the relevant Study Groups and/or Working Parties of ITU-R. The Group also conducts its work on the basis of Terms of Reference agreed by the NCSR and endorsed by the Maritime Safety Committee (MSC).

(6)　Finalized the Guidance for updating information on the Global SAR Plan

NCSR 12 had approved a guidance on Radiocommunications and Search and Rescue (COMSAR) circular, *Guidance for entering and updating information on search and rescue services into the Global SAR Plan and on how to get access to the information for operational use*.

According to SOLAS, contracting members are required to provide the IMO with details of their search and rescue (SAR) services and the delimitations of their SAR regions. The Global SAR Plan module in the Global Integrated Shipping Information System (GISIS) allows Member States to submit and update this information using an authorized IMO account. The guidance explains how to update SAR data in GISIS and access it for operational use.

(7)　Worldwide Radio Navigation System (WRNS)

NCSR 12 had a review of the document NCSR 12/8 (Australia et al.), which aimed to establish procedures and requirements for recognizing augmentation systems as part of the Worldwide Radio navigation System (WWRNS)[7].

Although the global navigation satellite systems (GNSS) serve as a primary source of positioning, navigation, and timing (PNT) information in the maritime domain, the NCSR acknowledged that standalone GNSS may not fully meet the accuracy, integrity, and continuity requirements for operations such as port approach and coastal navigation.

As such, augmentation systems like Satellite-Based Augmentation System (SBAS) [8] and advanced receiver autonomous integrity monitoring (Receiver Autonomous Integrity Monitoring, RAIM) [9]are increasingly utilized. However, a formal recognition framework at the IMO level was lacking.

In addition, the NCSR agreed to recommend initiating a new output at NCSR 13 for the development of performance standards for dual-frequency, multi-constellation

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[7] A global system composed of one or more radionavigation systems recognized by the IMO, enabling ships to reliably obtain positioning, navigation, and timing (PNT) information during international voyages.

[8] SBAS (Satellite-Based Augmentation System): An augmentation system that improves the accuracy, integrity, availability, and continuity of existing GNSS (e.g., GPS) signals by transmitting correction data calculated by ground stations via geostationary satellites to users.

[9] RAIM (Receiver Autonomous Integrity Monitoring): A function within a GNSS receiver that autonomously analyzes the received satellite signals to detect errors and monitor the integrity of the positioning data.

satellite-based augmentation systems (DFMC SBAS) and Advanced Receiver Autonomous Integrity Monitoring (ARAIM), based on the newly developed procedures and requirements. The working schedule will be set up in June 2026, once approved by the MSC.

Accordingly, the Group developed a draft MSC resolution to revise the annex to Assembly resolution A.1046(27) (Worldwide Radionavigation System) to include relevant procedures and operational requirements for augmentation systems. This revised annex is expected to replace the current one and is scheduled for adoption at MSC 111.

(8)　VHF Data Exchange System (VDES) [10]

At the last meeting, NCSR 11 (June 2024), it was agreed that the installation of VDES would not be mandatory. Although discussions were planned on the proposed amendments to SOLAS chapter V (Safety of Navigation), the draft performance standards for VDES, and operational guidelines for VDES, due to time constraints, these matters were deferred for intersessional consideration by a correspondence group, with the aim of finalizing them at NCSR 12 (May 2025).

During NCSR 12, in order to recognize VDES as a viable replacement for AIS, some relevant regulations were reviewed alongside the proposed amendments to SOLAS chapter V, such as regulation 13.15 of the 1994, 2000 High-Speed Craft (HSC) Code, the draft amendments and related certification were finalized.

The proposed amendments related to VDES are scheduled for urgent approval at MSC 110 (June 2025) and will be made as MSC circulars, which include the performance standards for VDES, operational guidelines for VDES, the new MSC

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[10] VHF Data Exchange System (VDES) is a digital communication system that operates over the VHF band to provide secure and reliable data exchange, for example between ships and between ships and shore. VDES includes four components:

　(1) Automatic Identification System (AIS) component for the identification and tracking of vessels, along with additional communication capabilities;

　(2) Application-specific message (ASM) component;

　(3) Terrestrial component for VHF data exchange (VDE-TER);

　(4) Satellite component for VHF data exchange (VDE-SAT).

VDES offers a high level of availability and security, using both terrestrial and satellite components (including AIS).

resolution on the introduction of VDES within the IMO framework, etc. The amendments are expected to be adopted at MSC 111 (May 2026) and enter into force on 1 January 2028.

(9) Software maintenance of shipboard computer-based navigation and communication equipment and systems

At MSC 107 (June 2023), the need to develop requirements for software maintenance of navigation and communication equipment and systems regulated under SOLAS chapters IV (Radiocommunications) and V (Safety of Navigation) was raised. It was agreed that the matter would initially be addressed through the development of non-mandatory guidelines, which may subsequently evolve into mandatory requirements. Accordingly, a draft set of guidelines was proposed with the aim of enhancing operational efficiency, safety, cybersecurity, and regulatory compliance through standardized procedures for software maintenance.

NCSR 12 had finalized the new draft *Guidelines for the software maintenance of shipboard computer-based navigation and communication equipment and systems*, which aimed to ensure a controlled and standardized approach to software maintenance. It is, however, important that any software installed in accordance with these guidelines should not compromise the type approval of the relevant equipment or systems.

It will be submitted to MSC 111 (May 2026) for approval and is expected to be released in the form of an MSC circular.

(10) Finalized the draft MSC circular on Guidelines on carriage and use of Electronic Nautical Publications (ENP) system

SOLAS Regulations V/19.2.1.4 and V/19.2.1.5 require all ships to carry the nautical charts and nautical publications, including back-up arrangements if this function is partly or fully fulfilled by electronic means, to plan and display the ship's route for the intended voyage and to plot and monitor positions throughout the voyage. Publications may be carried in the form of electronic media.

NCSR 12 had finalized the draft MSC circular on Guidelines on carriage and use of electronic nautical publications (ENP) system, and will be further approved by the MSC 111. The new guidelines aim to promote the effective use of electronic nautical publications, covering aspects such as the general requirements for carriage and

operation of ENP on board a vessel, adequate backup arrangements, and power supply.

(11) Revised the performance standards for the BeiDou Navigation Satellite System (BDS)

BeiDou Navigation Satellite System (BDS) is a satellite navigation system, independently developed and operated by China, that was recognized by IMO as a component of the World-Wide Radionavigation System (WWRNS) to assist in the navigation of ships in ocean waters. The BDS space segment, consisting of a hybrid constellation of satellites in three types of orbits, delivers strong performance, particularly in low-latitude areas, due to its higher number of satellites in high orbits, offering better anti-shielding capabilities. BDS provides multi-frequency navigation signals globally, including near-earth areas up to 1,000 kilometers, with enhanced service accuracy through signal combination.

NCSR 12 finalized a revision of Resolution MSC.379(93) on "Performance Standards for Shipborne BeiDou Satellite Navigation System (BDS) Receiver Equipment" to align the performance standards with the current service and performance of BDS. The revised performance standards are expected to be adopted at MSC 111 (May 2026).

(12) Guidance for global ECDIS S-100 data connectivity

NCSR 12 reviewed the draft of a guidance to establish a framework for data distribution and global IP-based connectivity for shore-based facilities and ships supporting Electronic Chart Display and Information Systems (ECDIS) S-100 products[11].

The development of the guidance follows the adoption of a revised version of the ECDIS Performance Standards (Resolution MSC.530(106)) in 2022, which enables the next technical generation of Electronic Navigational Charts.

The revised version 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 with the current standards (Resolution MSC.232(82)) or the

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[11] S-100 is a new standard for digital marine data developed by the International Hydrographic Organization (IHO) and used in systems like ECDIS (Electronic Chart Display and Information System) to help ships navigate safely. It supports e-navigation by combining different types of information like depth, currents, and weather in one system, helping seafarers make better decisions and improving safety at sea.

new performance standards.

There will be progress in a Correspondence Group until NCSR 13 (June 2026) on the guidance for an IP-based S-100 data distribution framework.

(13) Model training course validated

NCSR 12 validated Model Course 3.14 on SAR Mission Coordinator (IAMSAR Manual Volume II). The course provides specific training for those designated to perform the duties and responsibilities of a search and rescue mission coordinator.

At the same time, NCSR 12 established a review group to revise Model Course 3.15 on SAR On-scene Coordinator (IAMSAR Manual Volume III), with a view to validation at NCSR 14.

5. Recommendations for NCSR 12

> **On the Issue of Integrating VDES into SOLAS:**

During NCSR 12, the Sub-Committee had finalized the draft amendments on SOLAS chapter V (Safety of Navigation), the draft performance standards for VDES, and operational guidelines for VDES. The proposed amendments related to VDES will be submitted for approval by the Maritime Safety Committee at its upcoming session (MSC 110), with a view to adoption by MSC 111 in 2026 and entry into force on 1 January 2028.

Considering the updated new requirements on the ship equipment, so far our domestic regulations, such as the *Ship Equipment Rules* and the *Vessel Inspection Rules*, have not yet considered VDES as a mandatory equipment, or clearly stipulated related equipment inspection requirements.

It is suggested to keep on following the draft amendment to the SOLAS chapter V, and take considering to add the VEDS-related provisions into the article, such as adding equipment lists and performance requirements in *Ship Equipment Rules* Part 7: Radiocommunications Equipment; while the *Vessel Inspection Rules*, can consider adding new inspection items and technical indicators for reference.

On the other side, with a suggestion that the authorities can further consider an assessment to be made on whether it is necessary to upgrade the communication equipment between ships and the onshore control center to enhance the encrypted

communication and data exchange capabilities between ships and the shore.

6. Next Meeting Schedule

NCSR 13 is scheduled to be held from June 22nd to 26th, 2026.

7. Reference

- American Bureau of Shipping (ABS), News Brief: NCSR 12. https://absinfo.eagle.org/acton/ct/16130/s-10d3-2505/Bct/q-0d8a/l-0d89:3681/ct1_0/1/lu?sid=TV2%3AnHSBaUvii

- Det Norske Veritas (DNV), IMO Sub-Committee on Navigation, Communications, Search and Rescue. News from DNV. https://www.dnv.com/news/imos-sub-committee-on-navigation-communications-search-and-rescue/

- InterManager, IMO Sub Committee NCSR 12, 13-22 May 2025. https://www.intermanager.org/2025/05/imo-sub-committee-ncsr-12-13-22-may-2025-166946/

- IMO, Sub-Committee on Navigation, Communications and Search and Rescue (NCSR), 12th session, 13 – 22 May 2025. https://www.imo.org/en/MediaCentre/MeetingSummaries/Pages/NCSR-12th-session.aspx

- Korea Register (KR), IMO News Brief NCSR 12. http://www.krs.co.kr/TECHNICAL_FILE/NCSR%2012%20News%20Brief%20(E).pdf

- Lloyd's Register (LR), NCSR 12 Summary Report. https://maritime.lr.org/NCSR-12-Summary-Report

II. The Technical Cooperation Committee (TC) 75th session (TC 75)

The 75th session meeting of TC is held from June 2nd to 6th, 2025.
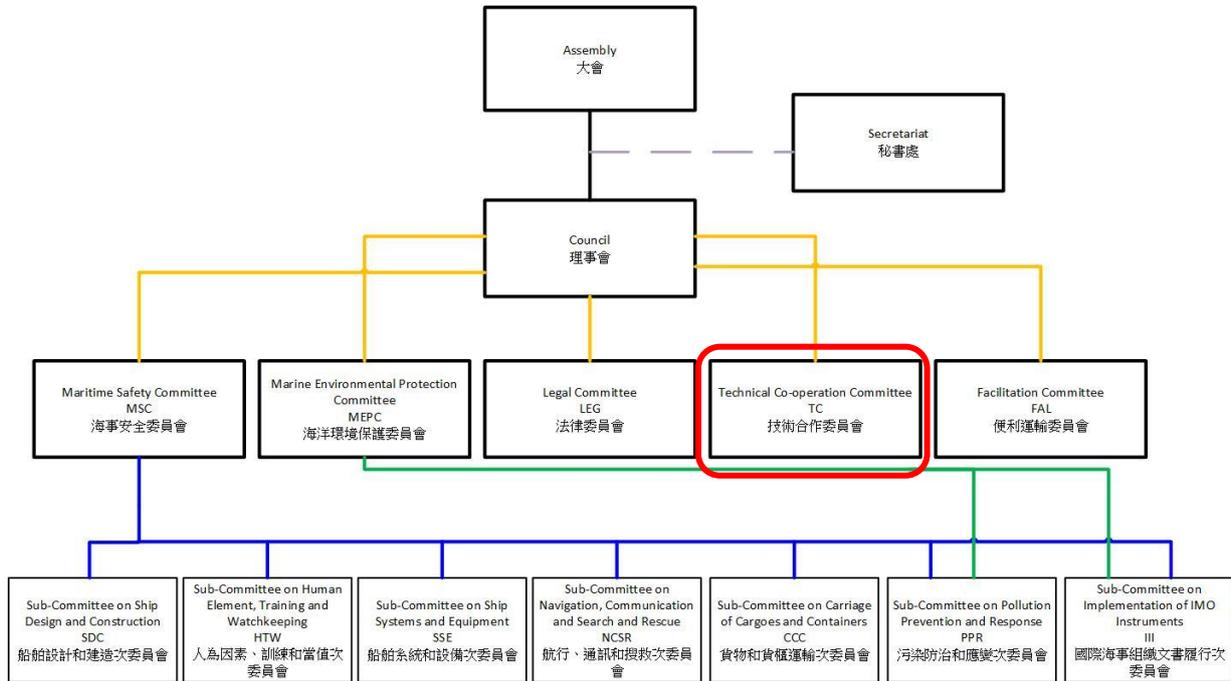
1. About TC[12]

Figure 4 Organization Structure of IMO (FAL)

The Technical Cooperation Committee (TC) supervises the capacity-building programme and the implementation of technical cooperation projects for which the acts of the International Maritime Organization (IMO) serve as the executing or cooperating agency, ensuring that IMO supports the United Nations Sustainable Development Goals and the 2030 Agenda for Sustainable Development.

2. TC 75 Highlights

(1) Approved the draft on Capacity Development Strategy, and the associated draft Assembly resolution, emphasizing results-oriented planning, monitoring, and evaluation;

(2) Approved the revisions made to the SMART indicators, targets, and milestones linked to the IMO 2030 Agenda for Sustainable Development;

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[12] IMO. Technical Cooperation Committee (TC).
https://www.imo.org/en/MediaCentre/MeetingSummaries/Pages/TC-Default.aspx

(3) Approved the Integrated Technical Cooperation Programme (ITCP) for the 2026-2027 biennium with a revised thematic programme structure.;

(4) Agreed to the Global Strategy for the IMO Women in Maritime Associations 2024-2029; and will keep enhancing gender equality capacity development for women in maritime.

3. TC 75 Agenda

Table 2 TC 75 Agenda

Item No.	Agenda
1	Adoption of the agenda
2	Work of other bodies and organizations
3	Technical Cooperation Planning and Reporting (a) Annual Report for 2024 (b) Integrated Technical Cooperation Programme (ITCP) and Technical Cooperation Fund Allocation for 2026 and 2027
4	Resource mobilization and partnerships
5	The 2030 Agenda for Sustainable Development
6	The Capacity-Building Decade 2021-2030 Strategy
7	Regional presence and coordination
8	IMO Member State Audit Scheme
9	Capacity-building: Strengthening the impact of women in the maritime sector
10	Global maritime training institutions
11	Status of implementation of the recommendations from the report of the evaluation of the ITCP activities for the period 2020-2023
12	Application of the Committee's method of work
13	Work programme
14	Election of Chair and Vice-Chair for 2026
15	Any other business
16	Consideration of the report of the Committee on its seventy-fifth session

(Source: IMO document TC 75/1/1)

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4. TC 75 Meeting Summaries[13]

The TC 75th session took place at the IMO Headquarters, in London, England, in a hybrid format with online meeting function, from June 2nd to 6th, 2025. There were 2 Working Groups (WG) and 1 Draft Group (DG) formed from the meeting, which are as follows:

- Working Group 1 (WG 1) deals with the 2030 Agenda for Sustainable Development.

- Working Group 2 (WG 2) deals with the Capacity-building Decade 2021-2030 Strategy.

- Draft Group (DG) deals with the Revision of outputs

(1) Technical cooperation 2024 annual report

According to the TC 2024 annual report, TC 75 noted that the delivery rate of ITCP implementation had reached 80%, with 181 activities delivered out of a total of 226 programmed activities, including 24 advisory and needs assessment missions and 79 training courses and workshops, resulting in the training of approximately 1,090 participants worldwide.

The percentage of females in fellowship activities was 56%, which represented a positive outcome in supporting training opportunities for women. However, the percentage of females attending training and high-level activities (28% and 38% respectively) showed that including women in all maritime activities could still be improved.

The total expenditure on TC activities in 2024 had reached $21.5 million of the $32.9 million budget, representing a financial delivery rate of 65%.

The TC Fund, which supported the expenditure on ITCP activities, was the most significant at $5.9 million, representing 27% of the total funds spent in 2024.

The TC committee confirmed the effort made by the IMO Secretariat on the annual report, also encouraged member states, the public, and everyone related to the maritime sectors to enhance gender equality through the IMO e-Learning platform, using hybrid tools and digital platforms that expand the scope of technical cooperation. Starting in 2025, TC decided to implement the policy tool Gender Equality Markers (GEMs)[14].

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[13] IMO. Marine Environment Protection Committee (MEPC 83), 7 to 11 April 2025
https://www.imo.org/en/MediaCentre/MeetingSummaries/Pages/MEPC-83rd-session.aspx

[14] Gender Equality Markers (GEMs) is a tool to track financial allocations and expenditures according to their contribution to gender equality and/or women's rights (GEWE). It has the potential to document investments being made in GEWE by the entire UN system and by individual entities. It can help identify where the investments are happening and where there are gaps. In 2023, CEB endorsed the Data standards for United Nations System-wide reporting of financial data with the gender marker as the 7th standard. This standard is being applied system-wide with a transitionary period of 3 years. Sources:

On the other side, TC 75 approved the Integrated Technical Cooperation Programme (ITCP) for the 2026-2027 biennium, with a revised thematic programme structure on the inclusion of additional areas for technical assistance identified through the analysis of CASRs.

Also requested the IMO Secretariat to conduct a holistic review of the identified areas for additional technical assistance through audits and to determine the need for new technical assistance initiatives or impact programmes;

Reviewed the current mechanisms to better integrate audit outcomes in the planning and programming of the ITCP, including through customized training and the strengthening of legal and institutional capacity-building to facilitate the prevention of maritime fraud.

(2)　Resource mobilization and partnerships

TC 75 had noted that a total of over $16.7 million had been pledged since the last session, resulting in the overall activities projects included: Phase II of Green Voyage 2050; SMART-C LC/LP; Glo-litter Partnerships, etc.

In 2024, IMO concluded 46 new partnership arrangements 2024, resulting in 149 current partnership arrangements as of 31 December 2024. Also agreed to support standardized partnership reporting and communication procedures, and to establish a single financial tracking mechanism and digital platform.

IMO Secretariat is now working on the development of a digital tool, including the technical cooperation Portal (TC Portal), TC Dashboard, TC Request Management System (TCRMS), and budget report, in order to provide transparency to enhance the benefits in terms of data-driven planning and reporting.

(3)　the 2030 Agenda for Sustainable Development

TC established a Working Group on the 2030 Agenda for Sustainable Development during the session, which will be working on the document TC 75/5/1, reviewing the suggestions for the SDG indicators, targets, and milestones.

TC agreed to the proposal on the five SDGs that had been previously linked to the IMO strategic directions. IMO's technical cooperation work also strongly contributes to SDG 4 (Quality education). The other SDGs already linked are: SDG 5 (Gender equality); SDG 9 (Industry, Innovation, and Infrastructure); SDG 13 (Climate action); SDG 14 (Ocean); and SDG 16 (Peace, Justice and Strong Institutions).

TC 75 also approved revisions made to the SMART indicators[15], targets, and milestones linked to the identified SDGs (TC 75/WP.5), and had a request for the IMO

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https://gendercoordinationandmainstreaming.unwomen.org/building-block/gender-equality-marker

[15] SMART indicators are the data reference for standards, the data collection within IMO's mandate for technical cooperation, in support of the 2030 Agenda for Sustainable Development and the 2020 world maritime theme, Sustainable Shipping for a Sustainable Planet. The baseline indicator will be 2019, and further targets and milestones will be set out that are linked to the identified SDGs. SMART consists of 5 indicators: "Specific, " "Measurable," "Achievable," "Realistic, " and "Time-bound."

Secretariat to integrate the information and report to TC 78. The report data will be used as a reference for the 2023/2027 standard setting.

(4) Capacity-Building Decade 2021-2030 Strategy

TC 75 approved the draft Capacity Development Strategy and the associated draft Assembly resolution for submission to the IMO Assembly at its 34th session (A 34, November 2025).

This draft revised comprehensive strategy is combined with:

(1) the existing Capacity-Building Decade 2021-2030 Strategy (resolution A.1166(32));

(2) the Revised financing and partnership arrangements for an effective and sustainable integrated technical cooperation programme (resolution A.1167(32));

(3) the draft Strategy for resource mobilization for IMO's technical cooperation activities (TC 68/4(a)).

The Strategy aims to support Member States, including developing countries, in particular SIDS and LDCs, in:

(1) the adoption, implementation, and enhancement of compliance with IMO instruments;

(2) addressing the needs of Member States; and

(3) achieving the maritime aspects of the 2030 Agenda and SDGs, through a focus on supporting the development and implementation of robust national maritime policies and strategies predicated on harnessing the full potential of the maritime economies while taking into account the protection of the marine environment and sustainable shipping practices.

The aim of the Strategy is "to achieve and sustain excellence in the effective and efficient development and implementation of IMO instruments by all Member States, and to build resilience to address future challenges facing the maritime industry[16]". TC 75 also approved a related Guidance for the Secretariat to consider when developing the implementation plan.

(5) IMO Member State Audit Scheme (IMSAS)

TC noted the progress of the technical cooperation work related to the IMO Member

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[16] The key objectives of the Capacity Development Strategy are:

Objective 1: Improve effective implementation of IMO instruments;

Objective 2: Expand the suite of capacity development offerings;

Objective 3: Enhance international and regional cooperation and partnerships;

Objective 4: Improve effective management, coordination and delivery of capacity development and technical cooperation.

Objective 5: Secure and mobilize sustainable funding and resourcing.

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State Audit Scheme (IMSAS). The Scheme provides Member States with an objective assessment of how effectively they are applying relevant IMO treaties. As of the date of TC 75, 83% of IMO Member States and Associated Members, a total of 148, have been audited under the first audit cycle.

TC 75 also noted that since the establishment of this programme in 2006, a total of 1,866 individuals from 165 Member States and Associate Members had been trained through 88 regional, sub-regional and national workshops and training courses under the ITCP, and identified the need for a more targeted approach to technical assistance.

Considering the analysis of audit outcomes under IMSAS (consolidated audit summary reports (CASRs). There are five main areas of recurrent findings and observations where further assistance was needed, which are as follows:

(1) Implementation;

(2) Enforcement;

(3) Improvement;

(4) Delegation of authority;

(5) Initial actions/legislation.

TC 75 also agreed on the inclusion:

(1) additional areas for technical assistance identified through the analysis of CASRs in the ITCP for the 2026-2027 biennium;

(2) requested the IMO Secretariat to conduct a holistic review of the identified areas for additional technical assistance through audits and to determine the need for new technical assistance initiatives or impact programmes;

(3) requested the Secretariat to review the current mechanisms with a view to better integrating audit outcomes in the planning and programming of the ITCP;

(4) requested the Secretariat to ensure that the recurrent audit shortcomings were adequately addressed through the ITCP activities, programmes, or projects;

(5) and requested the Secretariat to provide regular updates and impact assessments on ITCP activities, programmes, and projects undertaken to address recurring shortcomings.

(6) Capacity development for women in maritime

TC 75 had learned from the latest activities delivered through IMO's Women in Maritime programme, as part of IMO's efforts to enhance gender equality in the maritime sector and advance Sustainable Development Goal 5.

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TC 75 had noted the activities delivered through IMO's Women in Maritime Programme over the past year:

(1)　including supporting capacity development for women in maritime;

(2)　support for the IMO Women in Maritime Associations (WIMAs); and

(3)　a range of specific activities implemented by the thematic long-term projects to advance SDG 5.

The report, [IMO-WISTA Women in Maritime Survey 2024](), which is conducted by IMO and the Women's International Shipping and Trading Association Limited (WISTA), was published in May. The data reveals ongoing gender disparity, underscoring the continuing need for targeted efforts to improve gender diversity in the sector.

TC 75 also agreed to include on its agenda an expanded output on "Capacity Development: Empowering all women and the promotion of diversity, equality, equity and inclusion in the maritime sector", with 4 sessions needed to complete the item, the target completion will be by the year 2029.

5. Recommendations for TC 75

➢ The TC committee had agreed to the proposal for the 2030 Agenda for Sustainable Development on the five SDGs that had been previously linked to the IMO strategic directions. IMO's technical cooperation work is also strongly related to the SDGs. There are six priorities SDGs, which are SDG 4 (Quality education); SDG 5 (Gender equality); SDG 9 (Industry, Innovation, and Infrastructure); SDG 13 (Climate action); SDG 14 (Ocean); and SDG 16 (Peace, Justice and Strong Institutions).

Somehow, the authorities associated with shipping, ports, environment, energy, and education, etc., could consider taking part in the IMO's sustainable development strategy and the priority practices along with the SDGs objectives, or even adjust the indicators to the future maritime policies, to make them more forward-looking and in line with international standards.

Additionally, the SDGs indicators can also be classified to assess whether the current domestic norms are conducive to achieving the maritime sustainable development goals. The SDGs also provide a common framework for cross-ministerial coordination and international cooperation. Through the corresponding common indicators, it helps to establish an interdepartmental cooperation platform and international participation strategy, and improve policy consistency and resource integration efficiency.

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6. Next Meeting Schedule

The next meeting of the Committee TC 76 will be held in 2026, and the schedule will be further updated.

7. References

- IMO, Technical Cooperation Committee - 75th session (TC 75), 2-6 June 2025. https://www.imo.org/en/MediaCentre/MeetingSummaries/Pages/TC-75th-session.aspx

- IMO, Draft Report of The Technical Cooperation Committee on its Seventy-Fifth Session, TC 75/WP.1/Rev.1

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