NEWS BRIEF

NCSR 12

ABS

NEWS BRIEF: NCSR 12

The IMO Sub-Committee on Navigation, Communications and Search and Rescue (NCSR) held its 12th session from May 13 to 22, 2025. This Brief provides an overview of the more significant issues progressed at this session.

KEY DEVELOPMENTS

- Guidelines on the Carriage and Use of Electronic Nautical Publications (ENP)
- Amendments to SOLAS and Guidelines to Introduce VHF Data Exchange
- Developments in GMDSS Services, Including Guidelines on Maritime Safety Information (MSI)
- Guidelines for Software Maintenance of Shipboard Navigation and Communication Equipment and Systems

ABS RESOURCES

- ABS Regulatory News (link)
- ABS Global Marine Services (link)
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- ABS Rapid Response Damage Assessment Program (link)
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- **Amendments to SOLAS Chapters IV and V and Performance Standards and Guidelines to Introduce VHF Data Exchange System**
- **Development of Procedures for the Recognition of Augmentation Systems in the Worldwide Radionavigation System**
- **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**

SEARCH AND RESCUE

- **Development of Global Maritime SAR Services, and Amendments to the IMSAR Manual**
- **Developments in GMDSS Services, Including Guidelines on Maritime Safety Information (MSI)**
- **Revision of MSC.1/Circ. 1657 Procedure for responding to DSC distress alerts by ships**

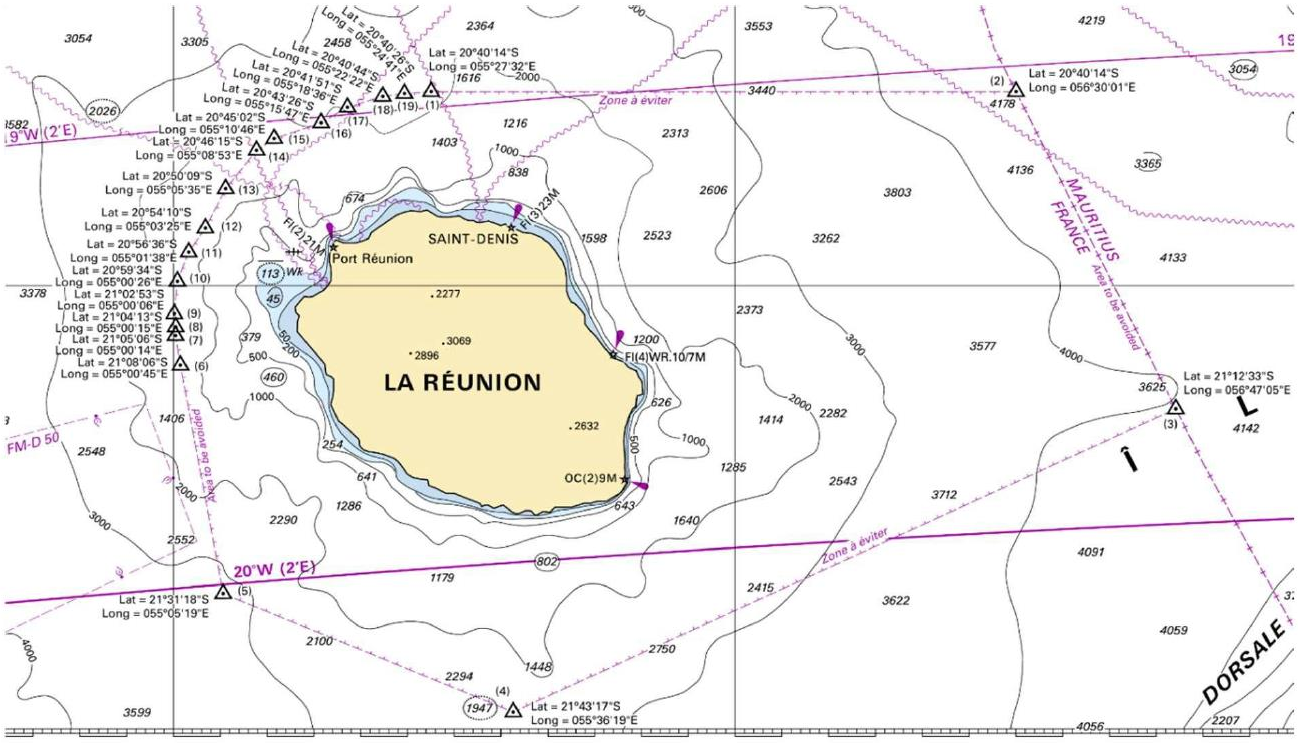
OTHER DEVELOPMENTS

- **Development of Guidelines for Software Maintenance of Shipboard Navigation and Communication Equipment and Systems**

NAVIGATION

Proposed Area to be Avoided off the Coast of Reunion

Due to accident patterns involving cargo ships, especially bulk carriers and coastal fishing vessels (fires, failures, and drifting), France proposed the creation of an area to be avoided (ATBA) off the coast of the island of Réunion in the Mascarene Basin aiming at reducing the risk of maritime accidents, improving the safety of navigation and protecting the marine environment. The main objective was to reduce the risk of grounding and subsequent pollution in the areas of Réunion's coastline most exposed to Southern Ocean weather and intense cyclonic swells, by keeping maritime traffic farther offshore. Furthermore, there is a lack of response capability for assistance to ships in difficulties, hence pushing maritime traffic farther from shore to reduce grounding risks would provide time for the coastal State to organize operational responses.
The ATBA would have minimal to no impact on long sea passage routes transiting past the Island of La Réunion and that the establishment of ATBA would not result in significant deviations from their intended courses.
The Sub-Committee agreed to the proposed area to be avoided off the coast of Réunion, with a view to adoption by MSC 111 (May 2026), for implementation six months after its adoption.



Source: NCSR 12/3/1

Routeing Measures and Ship Reporting Systems

Proposed Amendments to the Existing Mandatory Ship Reporting System in the Adriatic Sea (ADRIREP)

A modification to the existing mandatory ship reporting system in the Adriatic Sea (ADRIREP) was proposed, extending the participant countries to include Albania, Bosnia and Herzegovina, and Greece, and thereby improving maritime safety in the Adriatic-Ionian region.
The main objective of the proposed measure is the simplification and modernization of the ship reporting system, to be achieved by automating the process as much as possible to reduce administrative burden on ships' crews, and enhancing navigation monitoring through the use of modern technologies. It also introduces a new reporting category to include all ships of 10,000 GT and above, justified by their high pollution risk due to fuel capacity. The

electronic reporting is to be accomplished via the existing SafeSeaNet system, with the use of IMO Standard Marine Communication Phrases via VHF being reserved for backup voice communications.

The Sub-Committee agreed to the draft amendments to the existing mandatory ship reporting system in the Adriatic Sea (ADRIREP), with a view to adoption by MSC 111 (May 2026), for implementation six months after its adoption.

Amendments to Existing Mandatory Ship Reporting Systems in and Around the Coasts of European Coastal States

In order to support better maritime risk management with a view to enhancing maritime safety and marine environment protection, in particular for areas declared by IMO as Particularly Sensitive Sea Areas(PSSA), amendments to the existing mandatory ship reporting systems around the coasts of the European coastal states were proposed, in particular in the SOUNDREP and BELTREP areas of the Baltic Sea.
Ships would be required to report relevant information electronically prior to entering the SOUNDREP area under resolution MSC.314(88) and the BELTREP area established under resolution MSC.332.(90), with VHF voice reporting maintained for entry confirmation. The reporting procedures would remain unchanged, and the use of AIS and email for various report components was reaffirmed.
The proposed amendments include the provision of ships' insurance certificates under designator X, which could be submitted via SafeSeaNet, email or via online reporting in advance or, if not feasible, to be reported via VHF upon entry.
Rule compliance monitoring by coastal authorities and measures for non-compliance would remain unchanged, with information on violators to be passed to flag States and port State control as appropriate.

Following extensive discussions, the Sub-Committee agreed to the draft amendments to the existing mandatory ship reporting system for the European coastal states, in particular SOUNDREP and BELTREP, with a view to adoption by MSC 111 (May 2026), for implementation six months after its adoption.

Guidelines on the Carriage and Use of Electronic Nautical Publications (ENP)

Electronic Nautical Publication (ENP) are normally used and viewed through software installed on a computer rather than a dedicated shipboard operational system, such as the Electronic Chart Display and Information System (ECDIS). Thus, the guidelines are intended for digital publications based on existing paper publications used on ships, as opposed to ENP displayed on ECDIS.
The guidelines address the general requirements for the carriage and use of ENP, such as adequate backup arrangements and power supply, rather than defining specific performance standards. They provide guidance for the carriage and use of an ENP system on board in form of requirements for hardware, software, power supply, display, back-up arrangements, and operational requirements for updates, system malfunction, familiarization and cyber risk management. They further contain provisions for documented procedures for operation, inspection and certification documentation required to be verified by the Administration, and recording of the ENP in the relevant SOLAS Safety Certificates.

The Sub-Committee agreed to the draft MSC circular on Guidelines on carriage and use of electronic nautical publications (ENP) system for adoption at MSC 110 (June 2025).

Revision of Performance Standards for Shipborne BeiDou Satellite Navigation System (BDS) Receiver Equipment

The BDS space segment is a hybrid constellation consisting of satellites in three types of orbits, and is capable of providing positioning, navigation and timing (PNT) and data communication services. Specifically, it offers seven different services, including PNT, messaging and international search and rescue (SAR) services worldwide, satellite-based augmentation system (SBAS), ground augmentation system (GAS), precise point positioning (PPP) and regional messaging services in China and its surrounding areas.

The draft revision of the performance standards enables the shipborne BDS receiver equipment to support or integrate new navigation signals and support the use of single-frequency and dual-frequency modes with enhanced positioning accuracy and sensitivity. This will promote the development of equipment in the maritime industry and enable maritime users to utilize the improved services provided by BDS.

The Sub-Committee approved the draft revision of resolution MSC.379(93) on Performance standards for shipborne BeiDou Satellite Navigation System (BDS) receiver equipment with a view to adoption by the MSC 110.

COMMUNICATIONS

Amendments to SOLAS Chapters IV and V and Performance Standards and Guidelines to Introduce VHF Data Exchange System (VDES)

The growing number of reports in recent years of malicious AIS information and AIS spoofing has been a global concern in the maritime community, but the revision of the AIS performance standards would not be able to fully solve this problem due to the limited capacity of its transmission rates. VDES has the necessary bandwidth to effectively introduce authentication by digital signature and encryption. Technical work to introduce VDES in other international organizations has progressed pending the IMO's establishment of the associated regulatory framework. These include the IALA technical guidance and IEC test standards, completion of which would require the adoption of IMO's performance standards on VDES.
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 is under way at IMO as an urgent matter. However, there is a need for a back-up communication link using non-IP based communication. Considering that the S-100 capable ECDIS is allowed to be installed on new ships from 2026, VDES should be introduced to support this initiative as soon as possible, and at the latest by 2029.
To this end, the following regulatory measures were progressed:

Draft Amendments to the 1974 SOLAS Convention and Draft MSC Resolution on Introduction of VDES

The Sub-Committee agreed to amend SOLAS chapter V provisions and appendix, as well as consequential amendments to the 1994 HSC Code and 2000 HSC Code, by adding to any reference to 'AIS' the text 'or VHF data exchange system (VDES)'.

Performance Standards for Shipborne VHF Data Exchange System (VDES) and Guidelines for the Operational Use of Shipborne VHF Data Exchange System (VDES)

In order to minimize the impact of consequential amendments to various other IMO documents, the Sub-Committee agreed on a resolution on *Performance standards for VHF data exchange system (VDES)* to facilitate the introduction and implementation of the VHF data exchange system (VDES) into the IMO regulatory framework:
The resolution provides:

> *'References made to the carriage and use of "automatic identification system" or "AIS" in the IMO regulatory framework should also be understood as references to the AIS component of VDES, as defined in the resolution.'*

Along with the amendments to SOLAS chapter V, the 1994 HSC Codes and 2000 HSC Code, the Sub-Committee finalized the draft MSC circular on *Guidelines for the operational use of shipborne VHF data exchange system (VDES)*.
VDES has four components comprising of Automatic Identification System (AIS), Application Specific Messages (ASM), VHF Data Exchange terrestrial (VDE-TER) and VHF Data Exchange satellite (VDE-SAT). The purpose of VDES is to exchange digital data between ships, ship to shore directly or via satellite in addition to fulfilling the requirements of AIS.

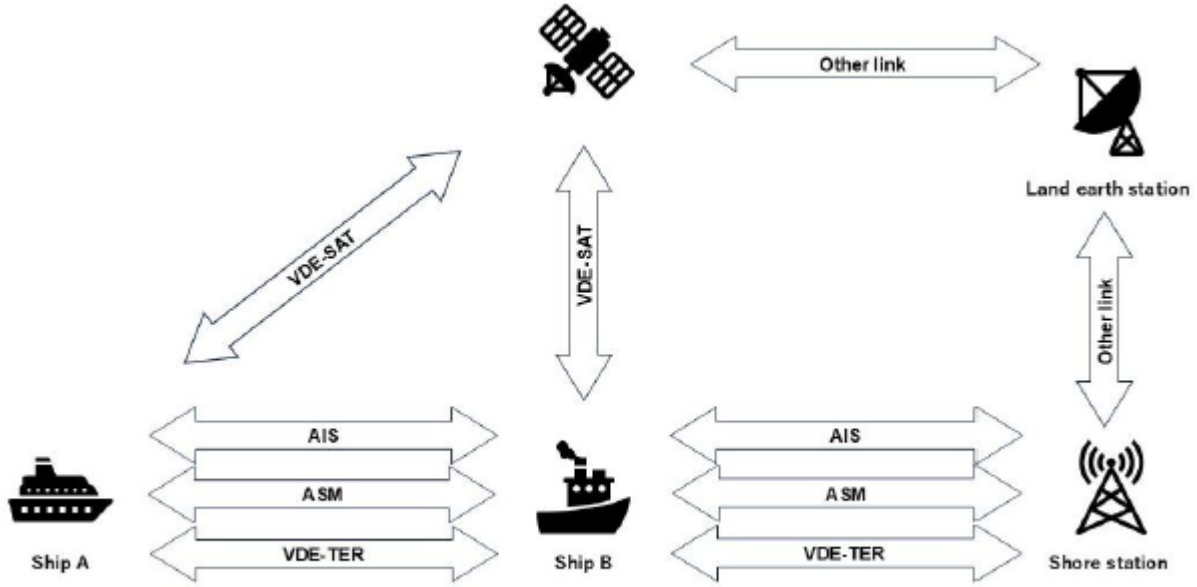


Figure 1 – VDES overview

Source: NCSR 12/WP.6

The guidelines provide guidance on the operational use of VDES, human machine interface, messages and applications, cybersecurity, and integrity and authentication.
Since the AIS component of VDES is equivalent to AIS as defined in SOLAS regulation V/19, it should be operated and used in accordance with the guidance contained within resolution A.1106(29) *Revised guidelines for the onboard operational use of shipborne automatic identification systems (AIS)*.

Date for Entry into Force

As the finalized amendments should be prioritized for adoption as soon as possible, the Sub-Committee agreed that the entry-into-force date of SOLAS amendments should be 1 January 2028, within the four-year SOLAS amendment cycle, and that the Sub-Committee should recommend the amendments to SOLAS and associated instruments for approval by MSC 110 as an urgent matter, with a view to adoption by MSC 111, to meet the entry-into-force date of 1 January 2028.

Development of Procedures for the Recognition of Augmentation Systems in the Worldwide Radionavigation System (WWRNS)

The IMO has recognized the following systems as Worldwide Radionavigation Systems: Global Positioning System (GPS), Global Navigation Satellite System (GLONASS), Galileo, BeiDou Navigation Satellite System (BDS), Indian Regional Navigation Satellite System (IRNSS) and Japanese Quasi-Zenith Satellite System (QZSS). However, the accuracy and integrity of the data provided by some of these systems could be enhanced using augmentation techniques.
Radionavigation systems and global navigation satellite systems (GNSS) are assessed and recognized following the procedures and criteria set out in resolutions A.915(22) and A.1046(27), but procedures and/or criteria for the recognition of augmentation systems as part of the WWRS have not been established.
Consequently, amendments to the annex of resolution A.1046(27) were developed to include the appropriate procedures and requirements for recognition of augmentation systems.
Additionally, the Sub-Committee recommended the development of performance standards for shipborne radionavigation augmentation receivers in a generic goal-based manner to be future-proof, outlining the minimum functional requirements to assist future technological advancements. The scope of such functional requirements could include cyber security, resilience, operational feasibility and interoperability.

The Sub-Committee finalized the draft MSC resolution on amendments to the annex of resolution A.1046(27), laying down the procedures and requirements for the recognition of augmentation systems in the WWRNS, for consideration and subsequent adoption by MSC 111 (May 2026).

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

The International Hydrographic Organization's (IHO) S-100 Universal Hydrographic Data Model1 is the IMO's agreed standard for sharing and using maritime geospatial data. It provides a universal and flexible data model for a wide range of hydrographic, environmental, and maritime safety information, enabling improved data sharing, navigation safety, and environmental sustainability. A framework using Internet Protocol (IP)-based connectivity to exchange standardized and interoperable digital maritime services is required to ensure seamless data distribution between shore-based facilities and ships equipped with S-100 electronic chart display and information systems (ECDIS).
The Sub-Committee considered the draft MSC circular on guidance to establish a framework for data distribution and global IP-based connectivity for radiocommunication links required for the distribution and exchange of S-100 data between shore-based facilities and ships. The draft guidance follows a goal-based approach and sets out quality of service objectives to achieve a secure, standardized and reliable connectivity between shore-based facilities.

Given the number and significance of the changes made during this session, and items left for further consideration, the draft guidance was not yet considered ready for finalization. A correspondence group on S-100 framework was established in order to progress the development of the guidance intersessionally and to develop a list of elements associated with the implementation of S-100 capable ECDIS.

SEARCH AND RESCUE

Development of Global Maritime SAR Services, and Amendments to the IMSAR Manual

Development of Global Maritime SAR Services

In order to improve the entries of information on search and rescue services into the IMO's GISIS Global SAR Plan, the Sub-Committee considered the *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.*

The Sub-Committee, having supported the guidance and improved the text of the guidance to align with the IAMSAR Manual, finalized and approved the draft COMSAR circular on *Revised 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*.

Proposed Draft Amendments to the IMSAR Manual

As part of the latest revision of the IMSAR manual, the Sub-Committee reviewed the proposed draft amendments for the latest update of the IMSAR manual, anticipated to be published in 2028. Proposed draft amendments considered for inclusion in the IMSAR manual include topics on the psychology of emergency, which may also be issued as an IMO circular, optimization of homing operations for 406 MHz distress beacon and automatic identification system (AIS) signals, and guidance on submarines and passenger submersible craft and related SAR issues.

The Sub-Committee instructed the Joint IMO/ITU Joint Working Group to progress the revision of the IMSAR manual and report back to NCSR 13 (June 2026).

Developments in GMDSS Services, Including Guidelines on Maritime Safety Information (MSI)

Consideration of NAVDAT Implementation Issues

Following the review of the NAVDAT manual by the Joint IMO/ITU Expert Group, the Sub-Committee reviewed the draft revised NAVDAT manual, including a table for the mapping of message priorities between NAVTEX and NAVDAT system and proposed amendments to the draft NAVDAT manual.

Due to time constraints, the Sub-Committee was not able to complete the review of the NAVDAT manual, and invited the IHO and WMO to further review the draft NAVDAT manual and advise at the time of the next NCSR 13 session (June 2026).

Draft Amendments to the SOLAS Convention, including any Necessary Consequential Amendments to Related Instruments

The Sub-Committee considered amendments to the SOLAS Convention and resolution MSC.509(105)/Rev.1 on *Provision of Radio Services for the Global Maritime Distress and Safety System* (GMDSS) to clearly state the requirement for dissemination of MSI and SAR related information through all operational recognized mobile satellite services (RMSSs). To that end, amendments to SOLAS regulation IV/5 and adding references to the amended SOLAS regulation IV/5 in SOLAS regulations V/4 and V/5, together with revision of resolution MSC.509(105)/Rev.1, were considered to fulfill the purpose.

The Sub-Committee approved the amendments to SOLAS regulations IV/5, V/4 and V/5, and the draft revision of resolution MSC.509(105)/Rev.1 on *Provision of Radio Services for the Global Maritime Distress and Safety System (GMDSS)*, with a view to approval in principle at MSC 110 and subsequent adoption at MSC 111.

Revision of MSC.1/Circ. 1657 *Procedure for responding to DSC distress alerts by ships*

Noting discrepancies between the *Procedure for responding to DSC distress alerts by ships* (MSC.1/Circ.1657) and the relevant provisions of Recommendation ITU-R M.541-11 as well as of those in Recommendation ITU-R M.585-9, the Sub-Committee approved the revision of the MSC.1/Circ. 1657 to enhance consistency and alignment, for submission for adoption at MSC 111 (May 2026).

OTHER DEVELOPMENTS

Development of Guidelines for Software Maintenance of Shipboard Navigation and Communication Equipment and Systems

The Sub-Committee considered a draft MSC circular on guidelines for software maintenance of shipboard navigation and communication equipment and systems, aiming to improve the efficiency, effectiveness, safety and security of shipboard software maintenance by introducing a standardized, controlled and transparent process.

The guidelines may be applied on a voluntary basis, and provide guidance for:

- Training and certification of service technicians by manufacturers
- Guidance for the manufacturer
- Guidance for the contracted service provider and certified service technicians
- Guidance for the (shipping) company
- Additional guidance on remote software maintenance
- Electronic service reporting

The Sub-Committee finalized and approved the draft MSC circular on *Guidelines for Software Maintenance of Shipboard Computer-Based Navigation and Communication Equipment and Systems*, with a view to approval by MSC 110.

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