



NEWS BRIEF





NEWS BRIEF: NCSR 10

The IMO Sub-Committee on Navigation, Communications and Search and Rescue (NCSR) held its 10th session from May 10 to 19, 2023. This Brief provides an overview of the more significant issues progressed at this session.

KEY DEVELOPMENTS

- Delays Affecting Availability of New GMDSS Equipment Compliant with Revised Performance Standards
- Amendments to ECDIS Standards to Facilitate Digital Exchange of Ships' Route Plans
- Ship Reporting System in the Pentland Firth
- Implementing the Digital Navigational Data System (NAVDAT)
- Improving Safety of Pilot Transfer Arrangements

ABS RESOURCES

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1701 City Plaza Drive Spring, TX 77389 USA P 1-281-877-6000 F 1-281-877-5976 ABS-WorldHQ@eagle.org www.eagle.org

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NAVIGATION

Amendments to ECDIS Performance Standards (Resolution MSC.530(106)) to Facilitate a Standardized Digital Exchange of Ships' Route Plans

The Sub-Committee agreed on amendments to the *Performance Standards for Electronic Chart Display and Information Systems (ECDIS)* (Resolution MSC.530(106)), based on proposals to include in the standard a way to digitally exchange ships' route plans. This change is intended to reduce the workload of bridge and shoreside personnel while at the same time increasing safety of navigation. A standardized and cyber-secure method for route exchange from ship-to-shore and from shore-to-ship would also increase port efficiency and allow slowsteaming, Just In Time Arrival (JIT) and reduce turnaround times in the port which is beneficial for the environment and the reduction of costs, in line with the IMO Initial GHG Strategy. This may also become a feature facilitating automated or autonomous (MASS) operations in the future.

Amendments have been made to the route planning provisions of the ECDIS performance standards to require capabilities of sending and receiving of route plans in a standard format (in accordance with IEC 61174/ IEC 63173-1) to facilitate secure machine-machine communication (in accordance with IEC 63173-2). The exchanged route plan should include a route schedule including estimated time of departure and estimated time of arrival as soon as they can be determined with reasonable accuracy. A proposal was made to include in the performance standard the function of ship-to-ship exchange of route plans, but the Sub-Committee determined this to be out of scope at this stage.

Next Steps: The amendments to Resolution MSC.530(106), applicable to both new and existing ECDIS installations, will be presented to MSC 108 (May 2024) for further consideration and approval.

Designation of the North-Western Mediterranean Sea as a Particularly Sensitive Sea Area

At MEPC 79 (Dec. 2022), the Committee agreed in principle to the designation of the North-West Mediterranean Sea as a Particularly Sensitive Sea Area (PSSA). This area is proposed to be established to protect cetaceans from the risk of ship collisions, ship-generated pollution and to increase awareness of a critically important area for the fin whale and the sperm whale. The proposed PSSA is limited by the coastline of France, Italy, Monaco and Spain and includes areas under the jurisdiction of coastal States. The large size and high shipping traffic of this PSSA were acknowledged, but it was also noted that due to the significance of the ecological, socio-economic and scientific values of the area, several existing national and international protective measures are already implemented in this area. The designation of a PSSA and the additional associated measures will contribute to protecting cetaceans, minimizing the risk of ship strikes and support scientific research on the matter. The Committee's formal approval for designation of the NW Mediterranean PSSA had been held pending further development and approval of associated protective measures (APMs) to be developed by the NCSR Sub-Committee.

At this session, the Sub-Committee agreed to the following recommendatory APMs for the NW Mediterranean PSSA:

- Mariners should navigate with caution within the NW Med PSSA, in areas where large and medium cetaceans are detected or reported and reduce their speed to between 10 and 13 knots as voluntary speed reduction (VSR). However, a safe speed should be kept, so that proper and effective action could be taken to avoid collision and any possible negative impacts on ship's maneuverability.
- 2) Mariners should keep an appropriate safety distance or speed reduction measure from any large and medium cetaceans observed or detected in close quarter situation. The safety distance or speed reduction measure should be adapted to the actual navigation circumstances and conditions of the ship.
- Mariners should broadcast on VHF or other available means on scene, the position of medium and large cetaceans observed or detected within the designated PSSA and transmit the information and the position to designated coastal Authorities; and



 Mariners should report any collision with cetaceans to designated coastal Authorities, which should forward this information to the International Whaling Commission (IWC) global cetacean ship strikes database.



Figure 1. Proposed North-West Mediterranean Sea PSSA [Source: SHOM; MEPC 79/10]

Next Steps: As the MEPC has already agreed in principle to the designation of the North-West Mediterranean Sea as a PSSA, the proposed AMP's for the NW Mediterranean PSSA will be sent to MEPC 80 (July 2023) for urgent consideration and approval. These will be included in the final MEPC resolution establishing the NW Mediterranean PSSA.

Recognition of the Ship Reporting System in the Pentland Firth (PENTREP)

The Sub-Committee agreed to a proposal for a new ship reporting system to be implemented in the Pentland Firth area of the United Kingdom, under the established practices of SOLAS Chapter V Regulation 11. Pentland Firth is located in the northern part of the United Kingdom and it separates the Orkney Islands from the Scottish mainland. The passage through Pentland Firth is approximately 15 nautical miles long and is 7 nautical miles wide at its widest. Due to the conditions of strong winds, strong tidal streams and violent and confusing seas which are regularly encountered in this area, navigation through the Firth requires careful preparation and particular attention at all times. A long history of regular vessel casualties in this area supports the establishment of a ship reporting system.

The PENTREP reporting system will apply to all ships of 300 gross tonnage and over. The following reports are to be provided to the Shetland Coastguard:

- 1) Entry Report (notifying specific vessel information upon entering the Pentland Firth)
- 2) Defect Report (notifying of any damage or safety conditions onboard the vessel)



Figure 2. United Kingdom with Pentland Firth highlighted. [Source: NCSR 10/3]



3) AIS will be the primary mechanism for exit reports on ships exiting the area

Shetland Coastguard will provide vital information on navigational and meteorological warnings, and weather forecasts to vessels entering the area, as required.



Figure 3. Boundaries of the PENTREP reporting area [Source: NCSR 10/3]

Next Steps: This proposal will be presented to MSC 108 (May 2024) for further consideration and approval, with implementation to begin six months after its approval. Once approved, detailed information will be distributed as an SN (Safety of Navigation) circular.

Improving Safety of Pilot Transfer Arrangements

The Sub-Committee received several proposals for amendments to requirements for pilot transfer arrangements, acknowledging a continued worldwide record of pilot transfer accidents and observations of unsafe transfer arrangements. The proposals focused on amendments to the pilot transfer regulations within SOLAS Chapter V Regulation 23, as well as supporting documents Resolution A.1045(27) and MSC.1/Circ.1428, to enhance maintenance and inspection practices and clarify requirements for pilot ladders used in combination with accommodation ladders. Due to time constraints, this subject was not able to be discussed fully at this session of the Sub-Committee, and a correspondence group has been established to continue work intersessionally. This work aims to produce SOLAS amendments to be adopted before 1 July 2026, for entry into force on 1 January 2028.

Next Steps: Work on developing amendments to SOLAS Chapter V Regulation 23 and associated instruments will be progressed intersessionally and discussed further at NCSR 11 (June 2024).

Introduction of VHF Data Exchange System (VDES)

The Sub-Committee considered a proposal for inclusion of the VHF Data Exchange System within the scope of SOLAS Chapter V and the Global Maritime Distress and Safety System (GMDSS). VDES can provide two-way high-speed data exchange between satellites, ships and shore. The terminals are simple, small and the equipment is easily fitted onboard ships. Because of its functionality, VDES could provide an alternative to the current Automatic Identification System (AIS) onboard vessels and the current proposal includes allowing for possible substitution of the mandatory carriage requirement of AIS by the AIS component of the VDES.



VDES is designed to include not only the current capabilities of the AIS and Application Specific Messages (ASM), but also additional channels (both terrestrial and via satellite) to enable the digital exchange of information for a wide variety of applications for safety, security, protection of marine environment and other applications related to the maritime community. Its many advantages may facilitate IMO goals related to e-navigation and efficient global ship-to-shore and ship-to-ship communication, but the current discussion is limited to the initial introduction of VDES into SOLAS Chapter V and as a permissible substitute for AIS, with supporting performance standards for this equipment type. A correspondence group has been established to continue work intersessionally on draft SOLAS amendments and a new target completion year of 2024 has been agreed.

Next Steps: Work on this subject will be progressed intersessionally and discussed further at NCSR 11 (June 2024).

Development of Generic Performance Standards for Shipborne Satellite Navigation System Receiver Equipment

The Sub-Committee considered the report of an intersessional correspondence group tasked to develop a generic functional approach and modular structure for performance standards for shipborne satellite navigation system receiver equipment providing position, navigation and time data and associated information. Noting that all currently recognized satellite radionavigation systems have equipment performance standards that are very similar, work was undertaken to compare these standards and develop a generic performance standard to apply to current and future satellite radio-navigation systems. A draft of these generic performance standards has been developed, but due to time constraints, the Sub-Committee was not able to review the draft resolution and address all concerns at this session. A correspondence group has been established to continue this work intersessionally and a new target completion year of 2024 has been agreed.

It was also acknowledged that it was very important that the outcome of this work is confirmed and agreed by those Member States that had established systems already recognized by the Organization. This includes GPS (United Sates), GLONNAS (Russian Federation), Galileo (European Commission), BDS (China), IRNSS (India) and QZSS (Japan).

Next Steps: The consolidated performance standards, which will be progressed intersessionally, are expected to be discussed further at NCSR 11 (June 2024).

Revised Descriptions of Maritime Services in the Context of E-Navigation

The Sub-Committee agreed to a draft revision of the *Initial Descriptions of Maritime Services in the Context of E-Navigation* (MSC.1/Circ.1610), which provides information on various Maritime Services and their related or complimentary functions. The services covered in this informational document include:

- _ MS 1 Vessel traffic service (VTS)
- _ MS 2 VTS Navigational assistance service (NAS) Aids to navigation service (AtoN)
- _ MS 3 (blank)
- _ MS 4 Port support service (PSS)
- _ MS 5 Maritime safety information (MSI) service
- MS 6 Pilotage service
- _ MS 7 Tug service
- _ MS 8 Vessel shore reporting
- MS 9 Telemedical assistance service (TMAS)
- MS 10 Maritime assistance service (MAS)
- MS 11 Nautical chart service
- MS 12 Nautical publications service
- MS 13 Ice navigation service



- _ MS 14 Meteorological information service
- MS 15 Real-time hydrographic and environmental information services
- _ MS 16 Search and rescue (SAR) service

Next Steps: A draft circular MSC.1/Circ.1610/Rev.1 will be presented to MSC 108 (May 2024) for further consideration and approval.

COMMUNICATIONS

Delays Affecting the Availability of New GMDSS Equipment Compliant with the Revised Performance Standards Set Out in Resolutions MSC.511(105), MSC.512(105) and MSC.513(105)

The Sub-Committee discussed concerns of a reported lack of availability of radio equipment complying with the following revised performance standards which are scheduled to enter into force on 1 January 2024:

Resolution	Title		
MSC.511(105)	Performance Standards for Shipborne VHF Radio Installations Capable of Voic Communication and Digital Selective Calling, revising resolution A.803(19), as amended		
MSC.512(105)	Performance Standards for Shipborne MF and MF/HF Radio Installations Capable of Voice Communication, Digital Selective Calling and Reception of Maritime Safety Information and Search and Rescue Related Information, revising and consolidating resolutions A.804(19), as amended, and A.806(19), as amended		
MSC.513(105)	Performance Standards for Inmarsat-C Ship Earth Stations Capable of Transmitting and Receiving Direct-Printing Communications, revising resolution A.807(19), as amended		

Noting also that the IEC was expected to complete development of the relevant testing standards by 1 January 2026 at the earliest, the Sub-Committee agreed that it was unrealistic for new shipborne VHF radio installations, shipborne MF and MF/HF radio installations or Inmarsat-C ship earth stations to be available for installation from 1 January 2024. Therefore, a draft MSC circular was developed to acknowledge that member States may allow continued installation of radio equipment complying with the existing standards (i.e. resolutions A.803(19) as amended, A.804(19) as amended, A.806(19) as amended, and A.807 as amended) until 1 January 2028.

Next Steps: The draft MSC circular will be presented to MSC 107 (June 2023) for consideration and approval.

Guidance on the Validity of Radiocommunications Equipment Installed and Used on Ships

Related to the above consideration of performance standards for various GMDSS equipment, the Sub-Committee also considered the need for revision of MSC.1/Circ.1460/Rev.3 which contained guidance that VHF radiocommunication equipment should be updated so that following the first radio survey after 1 January 2024, at the earliest, it meets the arrangements which will be in force by then. The Sub-Committee agreed that this circular should be updated to extend the deadline for updating VHF radiocommunication equipment to 1 January 2028.

Next Steps: The revision of MSC.1/Circ.1460/Rev.3 will be addressed at MSC 107 (June 2023) in alignment with the extended deadline for application of the revised GMDSS equipment performance standards.



Revision to Criteria for Provision of Mobile Satellite Communication Services in the GMDSS

The Sub-Committee considered a draft text for the revision of the *Criteria for the Provision of Mobile Satellite Communication Systems in the Global Maritime Distress and Safety System (GMDSS)*, resolution A.1001(25). Revisions to this standard are under consideration due to an increase in the number of potential GMDSS service providers, and due to the use of non-geostationary satellite systems by GMDSS service providers which the current resolution does not take into account. Due to time constraints, this subject was not able to be discussed fully at this session of the Sub-Committee, and a correspondence group has been established to continue work intersessionally. A new target completion year of 2024 for this work has been agreed.

Next Steps: Work on the revision of Resolution A.1001(25) will be progressed intersessionally and discussed further at NCSR 11 (June 2024).

Modifications to COMSAR/Circ.32/Rev.1 – Harmonization of GMDSS Requirements for Radio Installations On Board SOLAS Ships

In order to align with other standard updates for the Modernization of the GMDSS, the Sub-Committee agreed to revisions to guidance for *Harmonization of GMDSS Requirements for Radio Installations On Board SOLAS Ships* (COMSAR/Circ.32/Rev.1). Numerous revisions were made to avoid non-uniform implementation of GMDSS requirements on or after 1 January 2024. The revisions made were primarily focused on clarifying requirements for completing Record of Equipment forms related to GMDSS equipment and clarifying questions on duplicate equipment.

Next Steps: The draft COMSAR circular will be presented to MSC 107 (June 2023) for consideration and approval, for distribution as COMSAR/Circ.32/Rev.2, with an effective implementation date of 1 January 2024.

Development Of Performance Standards for a Digital Navigational Data System (NAVDAT)

The Sub-Committee received a proposal for performance standards for the reception of maritime safety information and search and rescue related information by MF and HF digital navigational data system (NAVDAT), as well as draft amendments to resolution MSC.509(105) on *Provision of Radio Services for the Global Maritime Distress and Safety System (GMDSS)* to establish criteria for NAVDAT service providers.

NAVTEX coast stations can be changed to NAVDAT coast stations over time, as a NAVDAT transmitter can still broadcast NAVTEX messages. However, NAVDAT offers more comprehensive information delivered quicker to ships in a flexible way and a more user-friendly display. The international NAVDAT system allows the broadcast of messages in the form of texts, pictures or data. The digital technology allows NAVDAT to broadcast files in different modes: General Broadcast (to all ships); Selective Broadcast (to ships located in a specific area, or for groups of ships according to the ship's position, MMSI or group identification), and Dedicated Message (according to ship's MMSI). There are also possibilities for encrypting sensitive files in the three modes of broadcasting.

Noting that the frequencies indicated for the draft NAVDAT performance standards were to be discussed at a meeting of the ITU World Radiocommunication Conference later in 2023, the Sub-Committee agreed to continue discussions on this subject at the next session.

Next Steps: Work on this subject will continue at NCSR 11 (June 2024).



SEARCH AND RESCUE

Road Map for Introduction of NAVDAT Service into Vessel Operations and the GMDSS

In parallel to discussions on performance standards for a Digital Navigational Data System (NAVDAT) noted in the section above, the Sub-Committee also discussed the considerations needed for the NAVDAT to integrate into vessel operations and supplement the GMDSS. Vessel operations face an increasing need for exchange of information among all maritime entities and the enhanced data transmission capabilities of NAVDAT could meet the needs of increasingly connected vessels and data-dependent operations. The Sub-Committee agreed to a road map of elements to be considered for the introduction of the NAVDAT system in the future, which include the following:

- 1) Identify the areas where NAVDAT can complement NAVTEX/GMDSS in providing maritime safety information to ships at sea and what identified gaps it is filling.
- 2) Determine if the intent is for NAVDAT to eventually replace NAVTEX and if so, what are the time frame and regulatory amendments required.
- 3) Develop performance (IMO), technical (ITU), test and certification (IEC) standards for the integration of NAVDAT into GMDSS, and establish to coordinating panel to monitor the integration.
- 4) Conduct and evaluate pilot projects to test the integration of NAVDAT into GMDSS.
- 5) Develop training and certification standards for ship operators and shore-based personnel.

The Sub-Committee agreed to continue discussions on this subject at the next session, pending several points of clarification from the MSC regarding the need to develop a formal recognition framework to confirm the suitability of new GMDSS services such as NAVDAT.

Next Steps: Work on this subject will continue at NCSR 11 (June 2024).

OTHER DEVELOPMENTS

Manipulation of AIS Data Transmissions and Tampering of AIS Transponders

The Sub-Committee discussed the growing concern of ships with no registration obtaining Maritime Mobile Service Identity (MMSI) and manipulating AIS data transmissions. In the discussion, it was noted that some ships were deliberately using fraudulent MMSI's to handle cargoes from sanctioned countries and those ships change the MMSI entry in their AIS equipment very frequently, making it difficult to detect them. It was also noted that AIS had been originally developed without provision for encryption or authentication of the transmitted data, and the inherent functionality of the equipment required information transmitted by it to be non-secure and therefore might allow easy manipulation. It was agreed that the Sub-Committee should further explore ways that could provide the enhancement of information security of AIS signals, making them more resilient and reliable.

Next Steps: The Sub-Committee invited interested member States and organizations to submit proposals for a new output to address AIS manipulation.

Development of Model Training Courses

The IMO's catalog of Model Training Courses helps member States to implement various regulatory instruments and facilitate access to the knowledge required for the operation and management of modern vessels. The model courses each include a course framework and outline, a detailed teaching syllabus identifying learning objectives and competencies and guidance notes for instructors.



At this session, the Sub-Committee validated the following updated model training courses under its responsibility:

Course No.	Description
3.13	SAR Administration (IAMSAR Manual, Volume I)
3.15	SAR On-Scene Coordinator (IAMSAR Manual, Volume III)

The Sub-Committee also agreed to begin work on revising the following model training courses, for validation at HTW 10 (Feb.2024) and HTW 11 (Feb. 2025):

	Course No.	Description	Planned for Validation at
	3.14	SAR Mission Coordinator (IAMSAR Manual, Volume II)	NCSR 12

Furthermore, the Sub-Committee agreed to discontinue Model Course 3.08 on Survey of Navigational Aids and Equipment, noting that the *Survey Guidelines under the Harmonized System of Survey and Certification (HSSC), 2021* (Resolution A.1156(32)) might adequately cover some of the elements provided in this course.

Next Steps: Model Courses 3.13 and 3.15 which have been validated will be available for member States to develop detailed training programs, to effectively implement the provisions of the SAR Convention. Work will progress intersessionally on the validation of Model Course 3.14.





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CONTACT INFORMATION

NORTH AMERICA REGION

1701 City Plaza Dr. Spring, Texas 77389, USA Tel: +1-281-877-6000 Email: ABS-Amer@eagle.org

SOUTH AMERICA REGION

Rua Acre, nº 15 - 11º floor, Centro Rio de Janeiro 20081-000, Brazil Tel: +55 21 2276-3535 Email: ABSRio@eagle.org

EUROPE REGION

111 Old Broad Street London EC2N 1AP, UK Tel: +44-20-7247-3255 Email: ABS-Eur@eagle.org

AFRICA AND MIDDLE EAST REGION

Al Joud Center, 1st floor, Suite # 111 Sheikh Zayed Road P.O. Box 24860, Dubai, UAE Tel: +971 4 330 6000 Email: ABSDubai@eagle.org

GREATER CHINA REGION

World Trade Tower, 29F Room 2906, 500 Guangdong Road, Huangpu District, Shanghai, China 200000 Tel: +86 21 23270888 Email: ABSGreaterChina@eagle.org

NORTH PACIFIC REGION

11th Floor, Kyobo Life Insurance Bldg. 7, Chungjang-daero, Jung-Gu Busan 48939, Republic of Korea Tel: +82 51 460 4197 Email: ABSNorthPacific@eagle.org

SOUTH PACIFIC REGION

438 Alexandra Road #08-00 Alexandra Point, Singapore 119958 Tel: +65 6276 8700 Email: ABS-Pac@eagle.org

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