IMO NCSR 11

Meeting summary

03 July 2024

The 11th meeting of the IMO's Sub-Committee on Navigation, Communication and Search and Rescue (NCSR 11) was held 4-13 June 2024 at the IMO Headquarters in London. The meeting was supplemented by hybrid (online) arrangements.

LISCR participated in the following groups, in addition to the plenary:

Working Group	Agenda items
Working Group (WG) 1	Communication
Working Group (WG) 2	Navigation
Working Group (WG) 3	Search and Rescue
Expert Group (EG)	Ship's routeing

Opening

Security situation in the Red Sea and Gulf of Aden

At the opening of the meeting, several delegations expressed concerns over the situation in the Red Sea and Gulf of Aden resulting from the attacks on commercial shipping.

GPS Jamming

NCSR 11 noted the concerns expressed by a Member State on recent cases of Global Positioning System (GPS) jamming which affected navigation systems, including AIS and LRIT, causing severe equipment malfunctions to ships.

Routeing measures

NCSR 11 agreed on the following measures for approval by the 109th Session of the Maritime Safety Committee (MSC 109):

- Revision of existing recommendation on navigation for containerships in traffic separation schemes Off Vlieland, Terschelling-German Bight, Off Friesland and German Bight western approach;
- Establishment of a no anchoring area off Hook of Holland in the Traffic Separation Scheme in the area; and
- Establishment of two areas to be avoided off the Brazilian southeast coast.

LRIT

Performance of the LRIT system and recommendations by the LRIT Coordinator

In relation to the IMSO audit report, views were expressed supporting wider use and application of the LRIT system, in particular, for search and rescue and other purposes.

Transmission monitoring of LRIT

Liberia and co-sponsoring Member States submitted a document to discourage the bad practice of shutting down LRIT equipment. The document also highlighted measures that could assist in eliminating those bad practices of ships aiming at circumventing sanctions or evading compliance with safety or environmental regulations through the manipulation of the onboard LRIT equipment.

Opinions expressed at NCSR 11 were:

- Agreed on urgency in eradicating the "dark fleet" or "shadow fleet" operations
- Concerns over cost implication on annual performance testing
- This is an issue for the flag States to resolve and they have means to exercise it
- Concerns over the protection of LRIT Data, which belongs to the flag State
- The matter should be considered in conjunction with the improvement of the AIS data usage and protection.

NCSR 11 concluded that to pursue the proposal further, a new output (work programme) would be needed. Meanwhile, NCSR 11 encourage Member States participating in the LRIT system to actively monitor the transmission of LRIT information received from their registered ships to enable immediate detection of missing LRIT position reports or any unusual trends.

Global Maritime Distress and Safety System (GMDSS), including dissemination of Maritime Safety Information (MSI)

Draft Assembly resolution on Charges for distress, urgency and safety communications messages through recognized mobile satellite services in the GMDSS

NCSR 11 prepared the revision to resolution A.707(17) and amended the title to *Charges for distress, urgency, and safety communications messages through recognized mobile satellite services in the GMDSS* to accommodate non-geostationary satellite services without any major changes to the charging scheme.

Search and Rescue (SAR)

Draft amendments to the IAMSAR Manual

NCSR 11 agreed to the draft amendments to the IAMSAR Manual Volumes I, II and III.

Use of the LRIT system by maritime rescue coordination centres

NCSR 11 noted the information provided by IMSO on the use of the LRIT system for SAR operations, including IMSO's recent initiatives to raise awareness of the use of LRIT for SAR.

NAVDAT

NAVDAT is a new generation interactive MF-HF radio broadcast system which may be used for Maritime Safety Information (MSI) dissemination and Search and Rescue (SAR) co-ordination.

NCSR 11 recalled that MSC 108:

.1 agreed that NAVDAT implementation should not entail replacement of shipborne NAVTEX receivers with NAVDAT receivers; and

.2 instructed the NCSR Sub-Committee to consider NAVDAT implementation issues and implications of its introduction, both from the shore and ship perspectives, including coordination with existing NAVTEX services and carriage requirements, under this output, and advise the Committee, as appropriate.

Draft Performance standards for NAVDAT

NCSR 11 developed the draft performance standard for approval by MSC 109. Key issues are:

- Highlighted that human-machine interface, including the presentation of alerts, should be in accordance with the Guidelines on Software Quality Assurance and Human-Centred Design of e-navigation (MSC.1/Circ.1512);
- The equipment should give an alert instead of a continuous audible alarm and that the requirement to include an interface for bridge alert management (BAM) could be simplified by referring to the Performance Standards for bridge alert management (resolution MSC.302(87)); and
- The performance standards also include compliance with the one for NAVTEX (MSC 508(105) so that NAVDAT receiver can receive both NAVDAT and NAVTEX signals.

Other work

NCSR 11 developed the draft revision to resolution MSC.509(105) on *the revised Recommendation on provision of radio services for the Global Maritime Distress and Safety System (GMDSS),* regarding the criteria for use when providing shore-based digital selective calling (DSC) facilities for use in the GMDSS, the criteria for establishing GMDSS sea areas and the criteria for use when providing a NAVTEX service, for adoption by MSC 109.

VHF Data Exchange System (VDES)

The VHF Data Exchange System (VDES) is a maritime communication system designed to enhance the existing Automatic Identification System (AIS). It operates in the Very High Frequency (VHF) band and provides a more robust and secure method for exchanging data between ships and shore stations. It includes satellite segments.

MSC had instructed NCSR to consider the introduction of VDES under SOLAS Chapters IV (Radiocommunications) and V (Safety of Navigation).

NCSR 11 considered the introduction of VDES under SOLAS chapter V but not chapter IV at this stage. However, how to introduce in Chapter V was not conclusive between the choice of mandatory or voluntary introduction. The matter was tasked to the correspondence group (CG).

The issue associated with AIS was addressed under agenda item 14.

Satellite service in GMDSS

NCSR 11 prepared draft revision of resolution A.1001(25) on *Criteria for the provision of mobile satellite communication systems in the Global Maritime Distress and Safety System (GMDSS)* or approval by MSC and subsequent adoption by the 34th Session of the IMO Assembly (A 34), which applies to both new and existing Recognized Mobile Satellite Services (RMSS).

Key changes are:

- To address satellite services other than Inmarsat; and
- Updating new application criteria

Electronic Nautical Publications (ENP)

NCSR 11 considered proposals for the development of guidelines for the use of electronic nautical publications (ENP).

While a Member State proposed to allow the use of portable devices (e.g. tablets), IHO suggested using the S-100 nautical chart. In addition, the following views were expressed at the Navigation Working Group (WG):

- Training for seafarers would be needed; and
- There should be standards for the display system.

The matter was tasked to the CG.

Pilot transfer arrangements

The mandatory requirements for safe pilot transfers are found in regulation 23 of Chapter V of SOLAS 1974. Detailed recommendations to Member Governments on the construction and rigging of pilot transfer arrangements are found in IMO Assembly resolution A.1045(27), as amended. In addition, a poster illustrating boarding arrangements for pilots was approved by IMO and issued MSC.1/Circ.1428.

NCSR 11 reviewed proposals on the revision of SOLAS regulation V/23 and associated instruments to improve the safety of pilot transfer arrangements and prepared the draft amendments to the SOLAS Convention and the draft mandatory performance standard for pilot transfer arrangements. In this regard, key issues are summarized below.

SOLAS

All technical provisions provided in the current SOLAS Regulation V/23 are moved into the newly developed mandatory performance standard. SOLAS primarily addresses the scope of the application and compliance deadline.

Application

After a lengthy discussion, it was agreed that the requirements apply to all ships on all voyages regardless of the date of construction and the size. However, NCSR 11 agreed not to touch the discretion of the flag Administration given in SOLAS regulation V/1.4, i.e., the Administration shall determine to what extent the provisions of regulations 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27 and 28 do not apply to the following categories of ships:

.1 ships below 150 gross tonnage engaged on any voyage;

.2 ships below 500 gross tonnage not engaged on international voyages; and

.3 fishing vessels.

Compliance deadlines

Ships must meet a new standard by:

- For new installation, on or after 1 January 2028;
- If the pilot transfer arrangements onboard installed before the above date, the deadline is the first survey after 1 January 2029. (there is one year period of grace)
- the expression installed *on or after 1 January 2028* means a contractual delivery date for the pilot transfer arrangement or, in the absence of a contractual delivery date, the actual delivery date of the arrangement to the ship on or after 1 January 2028.

Alternative design arrangements

While NCSR 11 did not include a provision on alternative design arrangements, there was an agreement that equivalent arrangements under SOLAS I/5 should be applicable subject to approval by the flag Administration.

Consequential amendments

Relevant certificate forms to include details of pilot transfer arrangements, i.e., forms P, E, and C, 1994 and 2000 HSC Codes, 2008 SPS Code were revised.

Mandatory performance standard

The mandatory performance standard consists of:

- Part A: design, manufacture and construction;
- Part B: Rigging;
- Part C: installation of pilot ladder winch reels;
- Part D: Operational readiness, onboard inspection and maintenance;
- Part E: Familiarization; and
- Part F: Approval.

Key discussions at NCSR 11 are presented below.

Expiry date of pilot ladder and manrope

After a lengthy discussion, NCSR agreed to 30 months from the commencement of onboard use and 36 months from the date of production, whichever comes first. At the expiration, the pilot ladder and manrope must be replaced.

Permanent marking on pilot ladders and manropes

NCSR 11 agreed to require making and verification mechanism to examine authenticity of the certificate of the products. However, the way to achieve this was left to each Administration during type approval process.

Winch reel drum diameter for stowing pilot ladders

Noting that the mandatory performance standard applies to both new and existing ships, NCSR 11 agreed on the minimum size of the winch drum as 0.16m in diameter.

Side door opening

To avoid conflict with the requirements of the Load Line Convention, in particular, to avoid major structural work for existing ships, “unless located below the freeboard deck” is inserted after “Ship's side doors used for the transfer of pilots or other personnel shall not open outwards”.

Mid-point securing

For pilot ladder and man-ropes, there shall be a means of securing a pilot ladder at intermediate lengths, which shall be capable of securing the pilot ladder to strong points.

Ship-specific maintenance plan

The maintenance plan must include the following items, while it does not require approval by the flag Administration:

.1 A checklist for use when carrying out the inspections;

.2 Maintenance, repair and stowage instructions, in accordance with manufacturer's instructions;

.3 Schedule of periodic inspection and maintenance;

.4 List of sources of spare parts or replacements;

.5 Log for records of inspections and maintenance; and

.6 Record of when the pilot ladder was brought into service and its anticipated date of withdrawal from service.

Training vs familiarization

NCSR 11 decided to use the term “familiarization” as per the ISM Code and the STCW Convention. This must be provided to all who are involved in the inspection, maintenance, rigging or operation of any equipment for pilot transfer arrangements.

Approval of the arrangements

Pilot transfer arrangements installed in accordance with regulation V/23.3 must be approved by the Administration This is not for existing installation unless that is modified to comply with the new standard.

Early implementation

NCSR 11 also prepared a draft MSC Circular on the early implementation of the standard.

Poster

NCSR 11 agreed to include both good examples and bad examples in the revised poster (*MSC.1/Circ.1428 on Pilot Transfer Arrangements - Required boarding arrangements for pilots)*, which addresses the arrangements as per the new Performance Standards. However, due to time constraints, the work was not completed.

Improving the security and integrity aspects of AIS

As instructed by MSC 107, NCSR 11 considered the identification of measures to improve the security and integrity aspects of AIS. NCSR 11 also recalled that the Assembly, at its thirty-third session, adopted resolution A.1192(33) on *Urging Member States and all relevant stakeholders to promote actions to prevent illegal operations in the maritime sector by the "dark fleet" or "shadow fleet"* referring, in particular, to the manipulation of AIS and LRIT transmissions.

NCSR 11 noted the report of the IMO/ITU Experts Group on Maritime Radiocommunication Matters, specifically the Experts' conclusion that, from a technical standpoint, there were no inherent safeguards to prevent manipulation of AIS due to the open nature of the AIS protocol.

NCSR 11 concluded as follows:

- From a technical standpoint, there were no inherent safeguards to prevent manipulation of AIS equipment due to the open nature of the AIS protocol;
- The IMO number should not be permanently entered into the AIS equipment but once entered, it should be further protected from unauthorized modification. In addition, there must be another form of identification number (e.g. official flag State number);
- There should be vendor IDs number for new AIS; and
- AIS would remain susceptible to manipulation by malicious actors due to its inherently open nature and that the equipment could be freely purchased on the market, as replacement equipment. Nonetheless, these measures could serve as a deterrent and make such actions more challenging than they were now.

Subsequently, NCSR 11 prepared the draft MSC resolution on *Performance standards for a universal shipborne automatic identification system (AIS)* with a view to adoption by MSC 109.

NCSR 11 prepared consequential modifications to *Guidelines for the installation of a shipborne automatic identification system (AIS)* (SN/Circ.227, as amended by SN/Circ.245, SN.1/Circ.227/Corr.1 and SN.1/Circ.227/Corr.2) and *Guidelines on annual testing of the automatic identification system (AIS)* (MSC.1/Circ.1252) for consideration at a future session.

In addition, NCSR 11:

- noted that, in general, the harmonized use and cross-referencing of AIS and LRIT data could significantly help to detect irregularities or suspicious AIS transmissions in the short term;
- noted a suggestion to create guidance for using LRIT data to identify and prevent AIS manipulation while noting that ships operating exclusively within sea area A1 were not required to comply with SOLAS regulation V/19-1 (Long-range identification and tracking of ships);

In terms of long-term solutions to AIS manipulation, NCSR 11 noted that VDES could provide an effective solution through data encryption and authentication. In this regard, a view was expressed that the operational and cost implications of this

solution should be further considered in due course. One Member State pointed out that the Organization should focus on better utilization of LRIT data.

Any other business

NCSR 11 reviewed various submissions under this agenda item.

VHF communication

While there was a shift in the VHF channel due to the change of the ITU regulation, owing to lack of available equipment, the IMO dispensed installation of compliant radio equipment until 1 January 2028. To ensure ship-shore communication can be established, NCSR 11 prepared draft amendments to *Guidance on the validity of radiocommunications equipment installed and used on ships.* The key points of the revision are to remind stakeholders that some shore authorities have already started using the new radio channels.

IALA Maritime Buoyage System

IALA proposed a draft revision of SN.1/Circ.297 on IALA Maritime Buoyage System to inform Member States of the revised system adopted at the 14th IALA General Assembly, held in 2023. NCSR 11 agreed on the proposal for approval by MSC 109.

Degree of risk evaluation following the continued development and enhancement of the IALA Risk Management Toolbox for aids to navigation and vessel traffic services

IALA proposed a draft revision of SN.1/Circ.297 on the IALA Maritime Buoyage System to inform Member States of the revised system adopted at the 14th IALA General Assembly in 2023. NCSR 11 agreed to submit the proposal for approval by MSC 109.

Further information

For further information please contact: imo@liscr.com

Annex

Provisional list of draft resolutions and circulars

- Draft revision to the resolution A.707(17) and amend title as *Charges for distress, urgency and safety communications messages through recognized mobile satellite services in the GMDSS;*
- Draft amendments to the IAMSAR Manual Volumes I, II and III;
- draft revision of resolution A.1001(25) on *Criteria for the provision of mobile satellite communication systems in the Global Maritime Distress and Safety System (GMDSS);*
- Draft Performance standards for NAVDAT;
- Draft revision of resolution MSC.509(105) on *the revised Recommendation on provision of radio services for the Global Maritime Distress and Safety System (GMDSS);*
- Draft amendments to the SOLAS Convention regulation V/23 and the draft mandatory performance standards for pilot transfer arrangements, and consequential changes to the 2008 SPS Code and the 1994 and 2000 HSC Code, as well as the draft MSC Circular for early implementation;
- Draft revision of the MSC circular on *Guidance on the validity of radiocommunications equipment installed and used on ships* (MSC.1/Circ.1460/Rev.4);
- Draft SN circular on *IALA Maritime Buoyage System; and*
- Draft SN circular on *IALA Risk Management Toolbox for aids to navigation and vessel traffic services*