



IMO NCSR 10 Meeting Summary

June 08, 2023

The 10th meeting of the IMO's Sub-Committee on Navigation, Communication and Search and Rescue (NCSR 10) was held 10-19 May 2023 at the IMO Headquarters in London. The meeting was supplemented by hybrid (online) arrangements.

Among others, Liberia participated in the following groups in addition to the plenary:

Group	Subject
WG 1	Communications
WG 2	Navigation
WG 3	Search and Rescue and other technical matters (Remote)

Routeing and Navigation

Safety of navigation in the Black Sea and the Sea of Azov

NCSR 10, having reviewed submission papers and discussions at the Maritime Safety Committee (MSC) and other committees, among others, took the following actions:

- Recognized the importance of taking prompt actions to restore aids to navigation and navigational systems affected by armed conflicts, seeking assistance from relevant international organizations, as appropriate; and
- Encouraged all Member States to ensure that the functioning of key navigational aids and systems was protected at all times and particularly during any conflict situation in order to guarantee the safety of international shipping and protect the lives of seafarers.

Ship's routeing

NCSR 10 recognized recommendatory ship reporting system in the Pentland Firth area (the United Kingdom) for the review by the 108th session of the Maritime Safety Committee (MSC 108) scheduled for 2024

With regard to the Designation of the North-Western Mediterranean Sea as a Particular Sensitive Sea Area (PSSA), NCSR 10 agreed on the associated protective measures (APM), including voluntary speed reduction to 10–13 knots and reporting of collision with cetaceans, for submission to MSC 107 and MEPC 80.

LRIT system

Performance of LRIT coordinators

IMSO provided information related to the overall performance of the LRIT system between 1 January 2022 and 31 January 2023.

Among others, NCSR 10 took the following actions:

- Urged on SOLAS Contracting Governments to ensure that ships flying their flags were recorded with the correct ship-type information in their respective DC databases;
- Invited SOLAS Contracting Governments to ensure that, upon change of a flag, ships were promptly de-registered from the existing Data Centre (DC) and registered to the DC associated with the new flag State; and
- Noted IMSO's conclusion that the overall performance of the LRIT system was found successful during the current reporting period (i.e. from 1 January 2022 to 31 January 2023).

Shipborne navigational equipment

Tampering AIS transponder

Following the discussion in the UN panel, MSC 106 instructed NCSR 10 to review hardware and software security standards to prevent tampering with AIS transponders.

NCSR 10 recalled the discussion at NCSR 9 on assigning MMSI even when a ship is not properly registered in a flag

State.

NCSR 10 considered various associated issues, and among others, took following actions:

- Noted that the ITU Maritime mobile Access and Retrieval System (MARS) allows users to consult ship and other information, including identification data for more than 900,000 vessels;
- Recalled that the AIS had been developed without provision for encryption or authentication of the transmitted data;
- Recalled protective measures given the Recommendation for the protection of the AIS VHF Data Link (resolution MSC.347(91));
- Recalled that it was the responsibility of the flag State to periodically survey the conformity of AIS;
- Noted further that the *Guidelines for the installation of a Shipborne Automatic Identification System (AIS)* (SN/Circ.227) address the restriction of access to the static information such as MMSI number and IMO number of AIS, controlled by, as an example, a password;
- Noted that circumstances might require changes to the MMSI number when a ship changes flag but the IMO number of the ship remains permanent, related to the vessel once assigned;
- Noted that the IMO number to be included in the AIS static data was already a requirement as per the AIS performance standards (resolution MSC.74(69), annex 3);
- Noted that VDES is more resilient to tempering the data; and
- Noted that consultation with ITU and IEC would be needed.

NCSR 10 agreed that it may not likely be possible to entirely stop the manipulation of AIS but there were certain measures that could be taken to make such acts more difficult.

NCSR 10 also agreed that sufficient feasibility and implications/impact studies should be thoroughly undertaken before amendments take place in order to avoid possible adverse effects.

Accordingly, NCSR 10 invited MSC 107 to create a new output (work programme) on this subject to further explore the ways which could provide the enhancement of information security of AIS signals, making them more resilient and reliable. NCSR 11, subject to the approval of the new output, will continue to work on this subject.

VHF data exchange system (VDES)

The discussion involves:

- Use of VDES for the replacement of AIS;

- Use AIS and VDES as part of GMDSS; and
- Use VDES for dissemination of MSI

NCSR 10 noted that VDES had been designed to include not only the current capabilities of 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. While it was understood that VDES could be incorporated into SOLAS chapter V as an alternative to AIS, the use of VDES for other applications would still require further consideration.

NCSR 10 set up the correspondence group (CG) for finalizing the package of the work at the next session, to cover both SOLAS chapters IV and V, but priority is given to chapter V.

NAVDAT

While the performance standard was addressed by the communication working group, the implementation aspects, including the NAVDAT manual, was addressed by the Search and Rescue and other technical matters.

An opinion was expressed that the IMO needs clear transition strategy from NAVTEX to NAVDAT. In this regard, Liberia expressed the opinion that the current SOLAS does not mandate the replacement of NAVTEX receiver with NAVDAT receiver onboard ship.

There are still many unknowns on this transition and both NCSR 10 could not come up with a tangible output, except for the roadmap, which captured all pending issues to be addressed.

The discussion will continue at NCSR 11 meeting scheduled for June 2023.

ECDIS performance standards

NCSR 10 was tasked to review the proposed amendments to the performance standard to accommodate the voyage plan exchange between shore-based organizations and ships.

During the session, views were expressed that additional guidance addressing operational aspects of the use of the proposed new functions should be developed to avoid unintended consequences, including:

- recognition of the overriding authority and responsibility of the master;
- the potential for over-reliance on a route plan originating from VTS by the navigating officers on the bridge; and
- the additional administrative burden that this exchange could cause to the bridge team.

A view was also expressed that the radio link for exchanging such information was yet to be determined and that careful

consideration should be given to avoid overloading the Automatic Identification System (AIS).

In this regard, Liberia expressed the view that recommending a safe navigation route by a shore authority through a digital exchange of ship's route plan might create a conflict against "innocent passage" as described by UNCLOS or routing measures adopted by the Organization. Recommending a route by the digital exchange of ship's route might be, in effect, establishing a "recommended route". Therefore, careful consideration would be required in the actual use of the technology.

Liberia also expressed that master's authority in using the exchanged route should also be given in the cover page (operative paragraph) of the resolution, in addition to the relevant standard. Accordingly, NCSR 10 agreed to insert the following on the front page:

"the master's discretion must always be respected, in accordance with SOLAS regulations V/34 and V/34-1"

NCSR 10 agreed to include the recognition of the need to develop such operational guidance in the operative paragraph, as well as a reminder on the master's discretion.

NCSR 10 finalized the draft text of revised Performance standards for electronic chart display and information systems (ECDIS) (MSC.530(106)) for adoption by MSC 108.

The revised standard will apply to the new installation from 1 January 2026 (voluntary) and 1 January 2029 (official change over from MSC.323(82) to the new standard).

Delays in developing products meeting new performance standards

A submission paper from the International standard organization and the industry body explained that delays are being experienced with the availability of new GMDSS radio equipment recommended for installation on or after 1 January 2024, in compliance with the revised performance standards set out in resolutions MSC.511(105) and MSC.512(105).

Having noted general support for the proposal to allow continued installation of radio installations complying with the existing standards (i.e. resolutions A.803(19), as amended, A.804(19), as amended, and A.806(19), as amended), NCSR 10 noted also the following views:

- IEC was expected to complete the development of the relevant testing standards by 1 January 2026, at the earliest;
- an additional two years would be required for mass production of the relevant equipment and to bring

them into the market;

- Performance standards for Inmarsat-C ship earth stations capable of transmitting and receiving direct-printing communications (resolution MSC.513(105)) should be incorporated; and
- shore-based infrastructure, which may have already been modernized based on the latest ITU channelling arrangements, may be incompatible with the existing radiocommunication equipment onboard vessels.

NCSR 10 prepared the draft MSC circular on *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)*, which invites Member States to consider permitting continued installation of the following equipment until 1 January 2028, for approval by MSC 107:

- shipborne VHF radio installations conforming to performance standards not inferior to those specified in the annex to resolution A.803(19), as amended; and
- shipborne MF and MF/HF radio installations conforming to performance standards not inferior to those specified in the annex to resolutions A.804(19), as amended and A.806(19), as amended.; and
- Inmarsat-C ship earth stations conforming to performance standards not inferior to those specified in the annex to resolution A.807(19), as amended.

NCSR 10 noted the information presented.

E-Navigation

E-navigation is not an electronically aided navigation system but is an advanced ship/shore electronic data exchange, which is illustrated in the YouTube video (<https://www.youtube.com/watch?v=WenDzWY-tXc>).

NCSR 10 noted that FAL 46 and FAL 47, having reviewed the description of Maritime Services from the FAL perspective, had approved revised descriptions of Maritime Services 4 (Port support service), 7 (Tug service), 8 (Vessel shore reporting) and 10 (Maritime assistance service) and had agreed that no changes to the initial description of Maritime Service 6 (Pilotage service) were required.

With that change, the list of Maritime Service will be

- MS 1 – Vessel traffic service (VTS)
- MS 2 – 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

NCSR 10 prepared the draft revision of *the descriptions of Maritime Services in the context of e-navigation* (MSC.1/Circ.1610) for approval by MSC 108, subject to consideration by the FAL Committee.

GMDSS

Guidelines on Maritime Safety Information (MSI)

MSI dissemination – cost options

Inclusion of Iridium as a Recognized Maritime Satellite System resulted in additional information distribution by NAVAREA (Navigational Warnings) and METAREA (Metrological warnings) coordinators through Iridium.

The CG established by NCSR 8 continued considering technical solutions for the dissemination and reception of MSI and SAR-related information over multiple services, including interoperability issues and broadcast monitoring.

While the interoperable application programming interface (API) seems to be a solution of the problem, it turned out that this does not cover two-way messages, i.e. SAR Coordination. Further, while it may resolve the additional operation of preparing messages for the second RMSS, and does not address the data uploading cost of the second RMSS.

While NCSR 10 recalled that MSC 105 instructed NAVAREAA/METAREA coordinators to disseminate MSI through all RMSS, NCSR 10 was of the view that the instruction was not clear whether such dissemination of the information is required:

- with immediate effect;
- after a specific date, while the question regarding possible solutions for dissemination of information, including interoperability, and cost related implications are addressed simultaneously; or
- only after the questions regarding possible solutions for disseminating information, including interoperability and cost-related implications, are duly addressed.

NCSR 10 invited MSC 108 (May 2024) to address the

above question.

COMSAR.1/Circ.32/Rev.1 on radio installation

Having reviewed various submissions, NCSR 10 revised the text, including the following elements, which will be endorsed by MSC 107:

- to delete the reference to SOLAS regulation IV/7.1.2 from section 1.6.3 relating to the duplication of the VHF DSC watch receiver, in line with previous GMDSS requirements;
- to clarify that ships may choose a duplicated MF/HF telephony to substitute an MF telephony in sea area A3; and
- re-organizing the section to clarify the process recommended for identifying the source of electromagnetic interference, such as LED lighting systems and by removing the reference to safety radio certificate to address "Interference from LED lighting and other unintentional emitters").

Pilot transfer

There were submissions to NCSR 10:

- draft amendments to SOLAS regulation V/23 and resolution A.1045(27) to address the issues identified;
- an assessment of Safety Campaign/Survey results, 2018 to 2022, and highlights the importance of taking complete account of the outcome of III 8 when acting on the instructions provided by MSC 106;
- amendments to SOLAS regulation V/23.3.3.2.1 and the supporting guidance, in order to specify the technical requirements for combination arrangements utilizing a trapdoor.
- clarification of the application of the updated footnote in the SOLAS consolidated edition 2020 publication and potential modifications to MSC.1/Circ.1428.

In addition to submission to NCSR 10, NCSR 10 also noted the observation of III 8, in particular, that:

- regulations and associated instruments appeared at times to be unclear or ambiguous, resulting in different parties interpreting the rules differently. The regulations were also spread over many different documents, which was likely to increase the difficulty of having a unified interpretation; and
- pilot transfer arrangements, especially pilot ladders, were used frequently, hence susceptible to damage. Since they were usually stowed away, such damage was not likely to be identified.

NCSR 10 also noted that MSC 106, in approving the new output, had agreed that the amendments developed on SOLAS regulation V/23 relating to maintenance and

inspection and to MSC.1/Circ.1428 should apply to all ships on all voyages; and the amendments to resolution A.1045(27) should apply, in principle, to new ships, and equipment and arrangements for pilot transfer on existing ships, on all voyages.

NCSR 10 agreed to develop amendments to the SOLAS regulation and a mandatory standard and set up the CG for further work.

Any other business

Human elements

The IMO Secretariat provided background information on the outcome of HTW 8 and MSC 105 regarding a holistic approach to human element matters in connection with all IMO bodies and invites the Sub-Committee to assess its involvement in these matters within its remit, with a view to contributing to the Committee's request.

NCSR 10 addressed this in relation to the recent work on MASS and expressed concerns over the manning and SAR operation.

Further information

For further information please contact: imo@liscr.com

PROVISIONAL LIST OF DRAFT RESOLUTIONS AND CIRCULARS

- Draft text of revised Performance standards for electronic chart display and information systems (ECDIS)
- Draft revision of the descriptions of Maritime Services in the context of e-navigation (MSC.1/Circ.1610)
- Draft MSC Circular on *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)*
- Revision to COMSAR.1/Circ.32/Rev.1 on radio installation