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REPORT TO THE MARITIME SAFETY COMMITTEE

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1 ADOPTION OF THE AGENDA

1.1 The thirteenth session of the Sub-Committee on Navigation, Communications and Search and Rescue (NCSR) was held from 22 to 26 June 2026 (Circular Letter No.5061), chaired by Mr. J. Brouwers (Kingdom of the Netherlands). The Vice-Chair, Mr. M. L. Malschitzky (Brazil), who was elected at the opening of the session for the calendar year 2026 following his nomination (NCSR 13/16/2), was also present.

1.2 The session was attended by Members and Associate Members; representatives from the United Nations and specialized agencies; observers from intergovernmental organizations with agreements of cooperation; and observers from non-governmental organizations in consultative status, as listed in document NCSR 13/INF.1.

Opening address of the Secretary-General

1.3 The Secretary-General welcomed participants and delivered his opening address, the full text of which could be downloaded from the IMO website at the following link:
<https://www.imo.org/en/MediaCentre/SecretaryGeneral/Pages/Secretary-GeneralsSpeechesToMeetings.aspx>

Chair's remarks

1.4 In responding, the Chair thanked the Secretary-General for his words of guidance and encouragement and assured him that his advice and requests would be given every consideration in the deliberations of the Sub-Committee.

Adoption of the agenda and related matters

1.5 The Sub-Committee adopted the agenda (NCSR 13/1) and agreed to be guided in its work, in general, by the annotations contained in document NCSR 13/1/1 (Secretariat) and the arrangements and the provisional timetable in document NCSR 13/1/2 (Secretariat).

Establishment of working groups

1.6 In view of the work planned for this session, the Sub-Committee established Working Group 1, chaired by Mr. F. Liu (China), Working Group 2, chaired by Mr. H. Noguchi (Japan) and Working Group 3, chaired by Ms. M. C. Solana Araujo (Spain), and agreed to instruct them under the relevant agenda items. The Sub-Committee agreed that the establishment of other groups would be decided after considering other agenda items.

2 DECISIONS OF OTHER IMO BODIES

General

2.1 The Sub-Committee noted the decisions and comments pertaining to its work made by MSC 110, as reported in document NCSR 13/2, as well as by MSC 111, as reported orally by the Secretariat, and took them into account in its deliberations when dealing with the relevant agenda items.

Outcome of MSC 110 and MSC 111

2.2 The Sub-Committee noted the approval by MSC 110 of the revision of the Rules of Procedure of the Maritime Safety Committee (MSC.8/Circ.3) and the revised *Organization and method of work of the Maritime Safety Committee and the Marine Environment Protection Committee and their subsidiary bodies* (MSC-MEPC.1/Circ.5/Rev.7).

2.3 The Sub-Committee noted also that MSC 111 had reminded the sub-committees to ensure that resolution A.911(22) on *Uniform wording for referencing IMO instruments* was applied when drafting amendments and new instruments under their remit, and encouraged its use for non-mandatory instruments, as far as practicable (MSC 111/22, paragraph 3.63).

2.4 The Sub-Committee noted further that MSC 111 had adopted the International Code of Safety for Maritime Autonomous Surface Ships (MASS Code) (resolution MSC.595(111)), as a non-mandatory instrument, and agreed to extend the target completion year of the existing output (2.23) to 2030 in order to continue the work on the mandatory MASS Code; and the establishment of an experience-building phase (EBP) for MASS. In this regard, the Committee had agreed that expert input was required for the revision of the non-mandatory Code and for the development of the chapters and regulations of the mandatory Code, and assigned the CCC, HTW, III, NCSR, SDC and SSE Sub-Committees as associated organs for this output, and that detailed requests and priorities for the associated IMO bodies to review the adopted non-mandatory MASS Code would be formulated at MSC 112 (MSC 111/22, paragraphs 5.29, 5.36, 5.40, 5.41 and 5.46).

2.5 In this connection, the Sub-Committee considered document NCSR 13/2/1 (Russian Federation), providing comments concerning MASS in search and rescue operations and proposing initiating work on the corresponding chapter of the non-mandatory MASS Code.

2.6 During the ensuing discussion, several delegations supported the view that chapter 21 (Search and Rescue) of the MASS Code would require consideration by the NCSR Sub-Committee, at future sessions, to address, inter alia, matters concerning the technical capabilities of MASS to undertake SAR operations, the need to ensure that Governments would continue discharging their SAR responsibilities, liability issues, certification of remote control centre personnel and cybersecurity. However, in view of the decisions of MSC 111 (see paragraph 2.4), the Sub-Committee agreed that it would be premature for the NCSR Sub-Committee to start taking actions on MASS without clear instructions from the Committee.

General statements

Incidents in the Arabian Sea, the Sea of Oman and the Gulf region, particularly in and around the Strait of Hormuz

2.7 The delegation of Iraq made a statement, as set out in annex 15, sharing information on an incident involving the container ship **MSC SARISKA-V**, which was struck on 2 June 2026 by an external projectile in the Khor Abdullah waterway, causing hull damage and water ingress, and subsequent evacuation of 26 crew members.

2.8 The delegation of Oman provided information on maritime incidents in the Strait of Hormuz involving commercial vessels and tankers, including the rescue and evacuation of 218 seafarers and handling of 16 missing-person cases. Furthermore, the delegation made a statement, as set out in annex 15, in relation to the Strait of Hormuz and its importance to the global economy, and actions taken in order to restore maritime traffic through the Strait.

2.9 The delegation of the United Arab Emirates made a statement, as set out in annex 15, calling, inter alia, for the restoration of normal navigation through the Strait of Hormuz via the Traffic Separation Scheme adopted by the Organization.

2.10 The delegation of the Islamic Republic of Iran made a statement, as set out in annex 15, reaffirming its commitment to maintaining the Strait of Hormuz, connecting the Persian Gulf and the Sea of Oman, as a safe and open waterway for shipping, to protecting seafarers, and ensuring the safe passage of commercial vessels.

2.11 Other delegations welcomed the evacuation process in the Strait of Hormuz and thanked the IMO Secretary-General for the assistance and actions taken to facilitate the process.

Incidents in the Black Sea and Sea of Azov region

2.12 The delegation of Panama reported two drone attacks on Panama-flagged vessels in the Black Sea corridor: **LEGEND** and **VICTRESS** on 18 and 22 June 2026, respectively, both attributed to the Russian Federation. The incidents resulted in the deaths of two seafarers, injuries to others, a major fire on **VICTRESS**, and the evacuation of its remaining crew, adding to other cases already reported involving **ALJABRIYA**, **PROPUS** and **AQUA REGIA**.

2.13 The delegation of Türkiye made a statement, as set out in annex 15, expressing concerns over the increasing number of attacks on commercial vessels in the Black Sea and the Sea of Azov, referring to recent incidents involving the use of naval mines, drones and missiles against civilian vessels, including an incident in the Mediterranean Sea.

2.14 The delegation of Ukraine made a statement, as set out in annex 15, informing on attacks conducted by the Russian Federation against civilian shipping, port infrastructure and maritime safety services, including search and rescue units, which resulted in members of the search and rescue team being killed and others seriously injured. In particular, the delegation informed that, on 6 June 2026, during daylight hours, in the area of the Ukrainian special maritime corridor in the Black Sea, the Russian Federation attacked civilian merchant vessels proceeding to Ukrainian seaports, creating an immediate threat to the lives of seafarers on board. Ukrainian civilian search and rescue assets were deployed to provide assistance and rescue persons in distress at sea; however, while performing this humanitarian mission, clearly marked civilian SAR boats were also deliberately attacked. As a result, **SAR-02** and **SAR-07** were severely damaged, resulting in fatalities and injuries. Ukraine called on Member States to condemn attacks against SAR vessels and personnel, as well as against civilian merchant shipping, and to reaffirm that those who save lives at sea must be protected in all circumstances.

2.15 The delegation of the Russian Federation, in response to the statement made by the delegation of Ukraine, informed that the rescue vessels mentioned by the Ukrainian side, allegedly attacked on 6 June, were in fact Ukrainian Armed Forces boats used for military operations. The delegation also stated that the Armed Forces of Ukraine had unleashed an unprecedented campaign of armed attacks on civilian vessels in the Sea of Azov, Baltic, Mediterranean and Black Seas, as well as on the port civilian infrastructure of the Russian Federation. As specific examples of Ukraine's crimes, the delegation cited the destruction of the tanker **ARCTIC METAGAZ** under the flag of the Russian Federation in the Mediterranean Sea in March 2026 and the attack by Ukrainian drones on cargo ships in the Sea of Azov on 5 June 2026, which resulted in the loss of lives among Azerbaijani seafarers.

2.16 The delegations of Australia, Cyprus (on behalf of the European Union), the United Kingdom and the European Commission also made statements, as set out in annex 15, concerning the aggression of the Russian Federation against Ukraine, particularly in relation to SAR operations in the region. The delegations of Canada and Norway also made interventions commenting on the matter and condemning the aggression of the Russian Federation against Ukraine.

2.17 The delegation of Poland made a general statement, as set out in annex 15, underlining that the safety and security of seafarers, ships and maritime infrastructure had to remain a priority, and reaffirming the importance of freedom of navigation and transit passage.

2.18 The Secretary-General noted the Day of the Seafarer's theme for 2026, "Carrying world trade. Carrying the risks", highlighting the severe impact of conflict and geopolitical tensions on innocent seafarers. He expressed concern over the situation in the Sea of Azov, Black Sea, Gulf of Aden, off Yemen and Somalia, and the Strait of Hormuz, while stressing the need to implement the industry's best management practices to prevent piracy and improve safety. He welcomed the progress made on the evacuation framework in the Persian Gulf and thanked all Member States involved, as well as industry representatives, for their cooperation. He emphasized that evacuation efforts had to remain safe, coordinated, and consistent with international law, and called for continued collective action and dialogue among Member States.

3 ROUTEING MEASURES AND SHIP REPORTING SYSTEMS

Ships' routeing proposals

3.1 The Sub-Committee, taking into account the preliminary assessment provided in document NCSR 13/WP.3, annex 1, considered documents NCSR 13/3/4, NCSR 13/3/5, NCSR 13/3/6 and NCSR 13/3/7 (United States) proposing amendments to the existing traffic separation schemes (TSSs) *Off Delaware Bay*, *Off New York*, *In the approaches to the Cape Fear River*, and *In the approaches to Chesapeake Bay*, respectively, primarily consisting of the extension of existing traffic lanes and/or the establishment of precautionary areas (PAs), or modifying existing ones.

3.2 In doing so, the Sub-Committee noted the information provided in documents NCSR 13/INF.6, NCSR 13/INF.7, NCSR 13/INF.8 and NCSR 13/INF.9 (United States), containing related port access route studies in support of the proposed amendments.

3.3 During the consideration, concerns were raised mainly regarding the size and necessity of certain proposed PAs, as well as the need for additional information on traffic flow and patterns.

3.4 The Sub-Committee noted that, although presented separately, all the proposals were interrelated and would help provide predictable navigation corridors to accommodate shipping routes along with the evolving offshore energy infrastructure in the Exclusive Economic Zone.

3.5 Following the discussion, the Sub-Committee referred all the above-mentioned documents to the Experts Group on Ships' Routeing for detailed consideration and advice.

Ship reporting system proposals

3.6 The Sub-Committee, taking into account the preliminary assessment provided in document NCSR 13/WP.3, annex 2, as well as the comments provided in document NCSR 13/3/8 (Russian Federation), considered documents NCSR 13/3 (Iceland), NCSR 13/3/1 (France and Italy), NCSR 13/3/2 (Belgium et al.) and NCSR 13/3/3 (France and United Kingdom), proposing amendments to the existing mandatory ship reporting systems (SRs) *Off the south and southwest coast of Iceland (TRANSREP)*, *In the Strait of Bonifacio (BONIFREP)*, *In the Western European Particularly Sensitive Sea Area (WETREP)*, and *In the Dover Strait/Pas De Calais (CALDOVREP)*, respectively, consisting of, inter alia, the addition of new reporting contents, including evidence of insurance for maritime claims and certificates

of civil liability issued in accordance with relevant conventions, additional reporting methods to use the Internet, new conditions for reporting and/or new position reports.

3.7 During the consideration, some delegations shared the concerns raised in document NCSR 13/3/8, specifically concerning the mandatory nature of reporting certificates of insurance for maritime claims and civil liability, possible discrepancies with UNCLOS provisions, and the availability of Internet on board ships to fulfil the intended reporting requirements, including the associated expected additional administrative burden. In this connection, the delegation of the Russian Federation made a statement, as set out in annex 15, emphasizing the comments and observations provided in document NCSR 13/3/8; recalling the discussions at the United Nations General Assembly (UNGA) on Oceans and the Law of the Sea concerning liability certificates; recommending that the Sub-Committee request the Secretariat to prepare legal advice on the conformity of the proposed new requirements with international law, in particular UNCLOS and SOLAS regulation V/11, before submitting the amendments to MSC for adoption; and calling upon the Sub-Committee to reject the inclusion of mandatory requirements for the provision of insurance certificates and other financial documents in SRSs or include them as voluntary provisions.

3.8 Following consideration, the Sub-Committee, noting wide support for the proposed amendments and particularly that the proposals were not intended to impede the freedom of navigation, referred documents NCSR 13/3, NCSR 13/3/1, NCSR 13/3/2 and NCSR 13/3/3 to the Experts Group on Ships' Routeing for detailed consideration and advice, taking into account the preliminary assessment in document NCSR 13/WP.3, annex 2.

Information documents

3.9 The Sub-Committee noted the information provided in documents:

- .1 NCSR 13/INF.10 (Germany) on a national traffic regulation in German territorial sea in the Southwestern Baltic Sea west of Ruegen Island;
- .2 NCSR 13/INF.11 (Malaysia) on the review of the existing mandatory SRS STRAITREP in the Strait of Malacca; and
- .3 NCSR 13/INF.12 (Finland and Sweden) on experience gained from the establishment of TSSs and deep-water routes in the Åland Sea.

3.10 The delegations of Indonesia and Singapore made statements, as set out in annex 15, commenting on the information provided in document NCSR 13/INF.11. The delegation of Malaysia, in response, clarified that the document had been submitted solely to inform the Sub-Committee about the ongoing work on the review of the existing mandatory SRS STRAITREP and re-affirmed Malaysia's commitment to the Cooperative Mechanism established for the Straits of Malacca and Singapore (SOMS).

3.11 The delegation of Liberia commented on the information provided in document NCSR 13/INF.10, particularly concerning the measures applied by Germany, which could affect traffic patterns in an area adjacent to existing IMO adopted routeing measures, and invited Germany to consider submitting a formal proposal to IMO for consideration. The delegation also referred to paragraph 3.14 of the General Provisions on Ships' Routeing, which recommended submitting the proposal to the Organization for adoption, even if no part of the routeing measures lay beyond their territorial seas. In response, the delegation of Germany stated that the intended traffic regulation was entirely within German territorial waters and that traffic in international waters would not be affected.

Establishment of the Experts Group on Ships' Routeing

3.12 The Sub-Committee established the Experts Group on Ships' Routeing, chaired by Mr. Nazwan Hafeez Bin Hashim (Malaysia), and instructed it, taking into account decisions, comments and proposals made in plenary and the preliminary assessment in document NCSR 13/WP.3, to consider:

- .1 the proposed amendments to the existing ships' routeing measures in documents NCSR 13/3/4, NCSR 13/3/5, NCSR 13/3/6 and NCSR 13/3/7, taking into account documents NCSR 13/INF.6, NCSR 13/INF.7, NCSR 13/INF.8 and NCSR 13/INF.9, respectively; and
- .2 the proposed amendments to the existing mandatory SRSs in documents NCSR 13/3, NCSR 13/3/1, NCSR 13/3/2 and NCSR 13/3/3,

and advise the Sub-Committee, as appropriate.

Report of the Experts Group

3.13 Having considered the Experts Group's report (NCSR 13/WP.4), the Sub-Committee agreed to:

- .1 the draft COLREG.2 circular on traffic separation schemes and associated measures, containing amended traffic separation schemes and associated measures *Off Delaware Bay, Off New York, In the approaches to the Cape Fear River, and In the approaches to Chesapeake Bay*, revising and superseding the existing routeing measures set out in COLREG.2/Circ.20, paragraph 1.1.12, COLREG.2/Circ.42 and corrigenda, COLREG.2/Circ.55, paragraphs 1.1 and 1.4 and annexes 1 and 4;
- .2 the draft MSC resolution on the mandatory ship reporting system *In the Dover Strait/Pas De Calais (CALDOVREP)*, revising the existing mandatory ship reporting system and revoking resolution MSC.85(70), annex 2, as amended by resolution MSC.251(83);
- .3 the draft resolution MSC.190(79)/Rev.1 on the mandatory ship reporting system *In the Western European Particularly Sensitive Sea Area*, revising the existing mandatory ship reporting system and revoking resolutions MSC.190(79) and MSC.301(87); and
- .4 the draft MSC resolution on the mandatory ship reporting system *In the Strait of Bonifacio Particularly Sensitive Sea Area*, revising the existing mandatory ship reporting system and revoking annex 2 to resolution MSC.73(69),

as set out in annexes 1 to 4, respectively, with a view to adoption of the above measures by MSC 112 in accordance with resolution A.858(20) and implementation six months after their adoption.

3.14 In doing so, the Sub-Committee authorized the Secretariat to effect any minor editorial corrections that may be required when finalizing the report of the Sub-Committee.

3.15 The Sub-Committee noted the withdrawal by Iceland of the proposal on amendments to the existing mandatory SRS *Off the south and southwest coast of Iceland (TRANSREP)* (NCSR 13/3) and that the proposed amendments to TRANSREP were not finalized at this session.

4 UPDATES TO THE LRIT SYSTEM

Outcome of MSC 111

4.1 The Sub-Committee noted that MSC 111 had approved draft amendments to SOLAS regulation V/19-1 regarding the introduction of the free-of-charge policy for the provision of LRIT information to entitled coastal States, expected to enter into force on 1 January 2032, and a draft revision of the *Performance standards and functional requirements for the long-range identification and tracking of ships* (resolution MSC.263(84)/Rev.1), with an expected effective date of 1 January 2028, both with a view to adoption at MSC 112.

Developments on LRIT since NCSR 12

4.2 The Sub-Committee noted the information provided in document NCSR 13/4 (Secretariat) on relevant LRIT-related developments since NCSR 12, including the functioning and operation of system components, testing activities, renewal of public key infrastructure (PKI) certificates and regular meetings of the LRIT Operational Governance Body.

4.3 Having noted the expiry of the PKI certificate of the Yemen National LRIT Data Centre (NDC) on 3 December 2025, the Sub-Committee agreed to the removal of the NDC from the LRIT Data Distribution Plan (DDP) to avoid causing unnecessary processing load on the DDP server and the IDE. The Sub-Committee requested the Secretariat to update the DDP accordingly.

4.4 Regarding the ongoing testing of the International LRIT Data Exchange disaster recovery (IDE DR) site, the Sub-Committee urged all LRIT Data Centres (DCs), in particular those that had experienced connectivity issues with the IDE DR site in the past, to cooperate with the IDE and the IDE DR site operators at future tests of the IDE DR site.

4.5 The delegation of Cuba made a statement, as set out in annex 15, commenting on document NCSR 13/4, paragraph 6, clarifying that the issues affecting the establishment of the Cuba NDC were not related to unpursued interest but rather to unavailability of service providers and technical limitations beyond their control.

Status of the International LRIT Data Exchange

4.6 The Sub-Committee noted the information provided in document NCSR 13/INF.24 (European Commission) on the operational status of the IDE in the production environment from 1 January to 31 December 2025.

Performance review and audit of the LRIT system

4.7 The Sub-Committee noted the information provided in documents NCSR 13/4/1, NCSR 13/4/2 and NCSR 13/INF.4 (IMSO), concerning the performance of the LRIT system between 1 February and 31 December 2025; audits of DCs and the IDE concluded between 1 March 2025 and 28 February 2026; and the scale of charges to be levied by the LRIT Coordinator during the period 1 January to 31 December 2026, respectively.

4.8 In this regard, the Sub-Committee:

- .1 invited SOLAS Contracting Governments to review and update, where necessary, their geographical polygons in the DDP in compliance with the constraints set out in MSC.1/Circ.1259/Rev.9, annex 4; and

- .2 urged SOLAS Contracting Governments to keep their LRIT contact details in the DDP up to date.

4.9 Several delegations provided information concerning the declined use of LRIT for SAR; the availability of competing technologies in the maritime domain; the result of the audit and performance of certain DCs; and matters concerning the provision of LRIT services. The delegations of Ghana and the Democratic People's Republic of Korea made statements, as set out in annex 15.

4.10 The observer from IMSO advised that certain DCs mentioned in document NCSR 13/4/1 had already fulfilled their pending financial obligations with IMSO.

5 DEVELOPMENTS IN GMDSS SERVICES, INCLUDING GUIDELINES ON MARITIME SAFETY INFORMATION (MSI)

GMDSS Master Plan

5.1 Recalling the request of NCSR 12 to the Secretariat concerning the GMDSS Master Plan module of the Global Integrated Shipping Information System (GISIS) (NCSR 12/20, paragraph 5.5.2), the Sub-Committee noted the information provided in document NCSR 13/5/2 (Secretariat) presenting an analysis of the information contained in the GMDSS Master Plan as of February 2026, and advising on actions taken by the Secretariat particularly to assist Member States regarding the Enhanced Group Call (EGC) services section of the module.

5.2 In this connection, the Sub-Committee reminded SOLAS Contracting Governments to ensure that the information that was required to be communicated under the GMDSS Master Plan was complete, accurate and up to date at all times, and, where applicable, consistent with the information that might have been communicated to other organizations.

Reports of the IMO NAVTEX and EGC Coordinating Panels

5.3 The Sub-Committee noted the information provided in documents NCSR 13/5/4 (Chair of the IMO NAVTEX Coordinating Panel) and NCSR 13/5/8 (Chair of the IMO EGC Coordinating Panel), providing a summary of the current issues being addressed by the Panels, respectively, including actions and activities since NCSR 12.

5.4 With regard to NAVTEX issues, the Sub-Committee encouraged Member States to ensure that their NAVTEX operators:

- .1 provide status reports to the IMO NAVTEX Coordinating Panel of NAVTEX stations which had, or would, become non-operational (temporarily or permanently), together with anticipated return-to-service dates, if known, and keep the information updated in the GMDSS Master Plan, whenever changes occur; and
- .2 promulgate information in accordance with the guidelines provided in resolutions A.705(17), as amended, and A.706(17), as amended, the *NAVTEX Manual* (MSC.1/Circ.1403/Rev.2) and the *Joint IMO/IHO/WMO Manual on maritime safety information* (MSC.1/Circ.1310/Rev.2), and refrain from using NAVTEX as a tool to disseminate inappropriate non-maritime safety information (MSI) or SAR-related messages.

5.5 The delegation of Namibia provided updated information concerning the NAVTEX station Walvis Bay, including alternative arrangements established in cooperation with the Coordinator of NAVAREA VII.

5.6 The delegation of Ukraine made a statement, as set out in annex 15, referring to attacks conducted by the Russian Federation against Ukraine's NAVTEX services and infrastructure in the Black Sea region.

5.7 Concerning EGC services, the Sub-Committee encouraged Member States, METAREAs, NAVAREAs and SAR authorities, as appropriate, to:

- .1 utilize guidance, support and online training resources offered by recognized mobile satellite service providers regarding the effective use of EGC services;
- .2 review the information in the EGC services section of the GMDSS Master Plan, in particular regarding geographical boundaries of MSI coastal warning areas, if applicable;
- .3 ensure that actual MSI broadcast times align with the broadcast schedules allocated in the EGC services section of the GMDSS Master Plan; and
- .4 verify and ensure that the entries in the national authority section of the Global SAR Plan module of GISIS accurately reflect which rescue coordination centres (RCCs) disseminate information directly through the EGC service.

5.8 Furthermore, recalling the agreement by MSC 108 concerning the dissemination of MSI through all operational recognized mobile satellite services no later than 31 December 2026, the Sub-Committee:

- .1 encouraged METAREA VIII to declare full operational capability on the Iridium SafetyCast service; and
- .2 urged both NAVAREAs and METAREAs XIII, XX and XXI to progress the implementation of the Iridium SafetyCast service and notify the Secretariat should any further delays be encountered.

Reports of recognized mobile satellite service providers

5.9 The Sub-Committee noted the information provided in documents NCSR 13/5 and NCSR 13/5/1 (IMSO) concerning the annual reports on recognized GMDSS mobile satellite service providers' public service obligations, as overseen by IMSO, in particular, that the availability of all GMDSS services during the reporting period was within the requirements of resolutions A.1001(25) and A.1203(34), as applicable.

5.10 The Sub-Committee invited administrations to consider encouraging their MSI providers and SAR services to migrate to use Inmarsat SafetyNET II rather than SafetyNET given the cost and functionality benefits described in document NCSR 13/5.

5.11 The delegation of the Islamic Republic of Iran made a statement, as set out in annex 15, expressing concerns on the practical accessibility of satellite communication services by ships and maritime rescue authorities and restrictions or service limitations imposed for non-technical reasons.

5.12 The delegation of the Russian Federation supported the statement made by the delegation of Iran, recalling also the concerns expressed by the Russian Federation at recent Council and MSC meetings regarding restrictions imposed by a GMDSS-recognized mobile satellite service provider.

5.13 The observer from IMSO advised that it had maintained discussions with the two above-mentioned delegations and that a report on the availability of GMDSS services on barred terminals, concluding that even on barred terminals, in particular due to international banking restrictions, GMDSS services remained available in accordance with resolution A.1203(34), had been submitted to the upcoming session of the IMO Council for information and action, as appropriate (see document C 137/19/1).

Report on the Cospas-Sarsat system

5.14 The Sub-Committee noted the information provided in relevant parts of document NCSR 13/5/6 (Cospas-Sarsat), including additional information provided orally by the observer from Cospas-Sarsat, concerning the status report on the Cospas-Sarsat system, and:

- .1 invited Member States, especially those with a history of insufficient response to test communications, to continue to focus on improving the reliability of communications between Cospas-Sarsat mission control centres and their supported SAR points of contact (usually RCCs), both during tests and for transmission of real distress alerts; and
- .2 encouraged Member States to develop appropriate national procedures for mitigating non-distress alerts from tracking emergency locator transmitters (ELT(DT)s), encouraging cooperation between aircraft manufacturers, airline operators and aviation authorities, as necessary.

5.15 The delegation of Thailand provided an update on the commissioning of the MEOSAR system in Thailand, which had achieved full operational capability on 10 May 2026.

World-Wide Navigational Warning Service

5.16 The Sub-Committee noted the information provided in document NCSR 13/5/5 (IHO) concerning the outcomes of the seventeenth session of the IHO World-Wide Navigational Warning Service Sub-Committee, which was held from 8 to 12 September 2025 and invited interested Member States and international organizations to participate in the work of IHO concerning the review and update of MSI-related documentation.

WMO survey for observational requirements for maritime safety

5.17 The Sub-Committee noted the information provided in document NCSR 13/5/7 (WMO) concerning the WMO survey for observational requirements for maritime safety and encouraged interested stakeholders to participate and complete the online survey as indicated in the document.

Information document

5.18 The Sub-Committee noted the information provided in document NCSR 13/INF.25 (Peru) concerning the modernization of the GMDSS coast stations in Peru.

NAVDAT implementation issues

5.19 The Sub-Committee considered the relevant parts of document NCSR 13/6 (Secretariat), providing the report of the twenty-first meeting of the IMO/ITU Experts Group on Maritime Radiocommunication Matters (IMO/ITU EG), in particular matters concerning NAVDAT implementation issues, taking into account documents NCSR 13/6/1 (Secretariat), providing a liaison statement from ITU-R Working Party (WP) 5B regarding the ongoing revision of Recommendations ITU-R M.2010-2 and ITU-R M.2058-1 relevant to NAVDAT; and NCSR 13/5/3 (China, France and Ireland), commenting on the report of the IMO/ITU EG, and proposing updates and modifications to the road map on the issues to be considered regarding the introduction of the NAVDAT service.

5.20 Having noted the considerations of the IMO/ITU EG, including the preliminary consideration of the above-mentioned liaison statement from ITU-R WP 5B, the Sub-Committee endorsed the consequential draft modifications to paragraph 5.1 of appendix 3 of the NAVDAT manual agreed by the IMO/ITU EG (NCSR 13/6, paragraph 7.7) to ensure consistency and alignment with the ongoing revisions of the related ITU Recommendations.

5.21 Concerning document NCSR 13/5/3, the Sub-Committee referred it directly to Working Group 1 for consideration and update of the road map on the issues to be considered regarding the introduction of the NAVDAT service prepared by the IMO/ITU EG (NCSR 13/6, annex, annex 3), as appropriate.

Instructions for Working Group 1

5.22 The Sub-Committee instructed Working Group 1, already established under agenda item 1 (see paragraph 1.6), taking into account decisions, comments and proposals made in plenary, to consider the road map on the issues to be considered regarding the introduction of the NAVDAT service (NCSR 13/6, annex, annex 3) and the proposed modifications in document NCSR 13/5/3, and advise the Sub-Committee, as appropriate.

Report of the Working Group

5.23 Having considered the relevant part of the Working Group's report (NCSR 13/WP.5), the Sub-Committee agreed to the updated road map on the issues to be considered regarding the introduction of the NAVDAT service (NCSR 13/WP.5, annex 1), and to keep it updated based on future developments (see also paragraph 9.14 regarding capacity-building needs for the implementation of the NAVDAT service).

6 RESPONSE TO MATTERS RELATED TO THE ITU-R STUDY GROUPS AND ITU WORLD RADIOCOMMUNICATION CONFERENCE**Report of the Joint IMO/ITU Experts Group**

6.1 The Sub-Committee considered the report of IMO/ITU EG 21 (NCSR 13/6 (Secretariat)), which was held at IMO Headquarters from 6 to 10 October 2025, chaired by Mr. A. Jennings (Ireland), together with related and commenting documents, and took action on matters pertaining to this agenda item,¹ as summarized in the following paragraphs.

¹ Certain parts of document NCSR 13/6 were considered under agenda items 5, 9 and 11.

Draft IMO position on WRC-27 agenda items

6.2 The Sub-Committee noted that MSC 111, having considered the draft IMO position on ITU World Radio Conference 2027 (WRC-27) agenda items (NCSR 12/20, annex 7), including documents MSC 111/15/2 (IMSO), MSC 111/15/3 and MSC 111/15/4 (United States) commenting on agenda items 1.5 and 1.16 of the draft IMO position, had decided to refer the draft IMO position back to NCSR 13, together with the above-mentioned documents, for detailed review, consideration, and submission of a revised draft IMO position to MSC 112. The Sub-Committee also noted that MSC 111 had agreed that the final IMO position should be prepared by NCSR 14 and submitted, as an urgent matter, to MSC 113, for approval and subsequent submission to ITU WRC-27.

6.3 Therefore, the Sub-Committee considered the draft IMO position on ITU WRC-27 agenda items (NCSR 12/20, annex 7), including the draft modifications to agenda item 10 prepared by IMO/ITU EG 21 (NCSR 13/6, annex, annex 2), taking into account the above-mentioned documents referred by MSC 111, as well as documents NCSR 13/6/4, NCSR 13/6/5 (United States) and NCSR 13/6/7 (France), also commenting on agenda items 1.5 and 1.16 of the draft IMO position.

6.4 In addition, the Sub-Committee noted the liaison statement from ITU-R WP 5B contained in document NCSR 13/6/2 (Secretariat), concerning WRC-27 agenda item 1.12.

6.5 Following consideration and noting general support for the draft modifications prepared by the IMO/ITU EG, as well as the intention of the proposed modifications provided in the commenting documents to protect GMDSS services, the Sub-Committee referred the above-mentioned documents to Working Group 1 for review and finalization of the draft IMO position.

Draft revision to MSC.1/Circ.1659

6.6 Having recalled the instructions of NCSR 12 (NCSR 12/20, paragraph 5.21) to the IMO/ITU EG, the Sub-Committee agreed to the draft MSC.1/Circ.1659/Rev.1 on Guidance for the dissemination of search and rescue related information through the international enhanced group call service, as set out in annex 5, with a view to approval by MSC 112.

Next meeting of the IMO/ITU Experts Group

6.7 The Sub-Committee agreed to the holding of the twenty-second meeting of the IMO/ITU EG during the week of 28 September to 1 October 2026, at IMO Headquarters in London, and instructed Working Group 1 to prepare draft terms of reference for that meeting, taking into account the instructions emanating from MSC 109 concerning the scope of existing outputs and matters to be considered by the Group (MSC 109/22, paragraph 19.8) and the relevant provisions of the Committees' method of work (MSC-MEPC.1/Circ.5/Rev.7).

Revised ITU-R Recommendations

6.8 The Sub-Committee considered a liaison statement from ITU-R WP 5B, provided in document NCSR 13/6/3 (Secretariat), regarding the finalization of the revision of several ITU-R Recommendations related to maritime systems and, noting that consequential amendments to certain IMO instruments might be required, agreed to forward it directly to IMO/ITU EG 22 for consideration and advice, as appropriate.

Radar SART

6.9 The Sub-Committee considered document NCSR 13/6/6 (United States), providing information on search and rescue radar transponders (radar SART), requesting feedback to address the identified issues with the visualization of radar SART signals, and proposing liaison statements to IEC and ITU on this matter.

6.10 In this regard, the Sub-Committee recalled that MSC 109, having considered the difficulties identified in relation to radar SARTs (MSC 109/13/3 (United States)), had approved SN.1/Circ.345 on *Difficulties and risks involved in the setting of radar displays to correctly visualize radar SAR transponder (SART) signals* and had agreed that an output was needed in order to discuss a long-term solution. In this regard, the Sub-Committee noted that no proposals for a new output on this matter had yet been submitted to the Committee.

6.11 In view of the above, the Sub-Committee invited interested Member States and international organizations to provide feedback directly to the United States regarding the identified issues with the visualization of radar SART signals, noting that such States and organizations might also provide their views on this matter directly at relevant IEC and ITU meetings.

Instructions for Working Group 1

6.12 The Sub-Committee instructed Working Group 1, already established under agenda item 1 (see paragraph 1.6), taking into account decisions, comments and proposals made in plenary, to:

- .1 finalize the draft IMO position on relevant WRC-27 agenda items concerning matters relating to maritime service (NCSR 12/20, annex 7), taking into account the draft modifications to agenda item 10 prepared by IMO/ITU EG 21 (NCSR 13/6, annex, annex 2) and documents MSC 111/15/2, MSC 111/15/3, MSC 111/15/4, NCSR 13/6/4, NCSR 13/6/5 and NCSR 13/6/7; and
- .2 prepare draft terms of reference for IMO/ITU EG 22, provisionally scheduled to take place during the week of 28 September 2026, taking into account the instructions by MSC 109 (MSC 109/22, paragraphs 19.8 and 19.26) and the relevant provisions of the Committees' method of work (MSC-MEPC.1/Circ.5/Rev.7), and advise the Sub-Committee on the number of days required for the meeting.

Report of the Working Group

6.13 Having considered the relevant part of the Working Group's report (NCSR 13/WP.5), the Sub-Committee took action as summarized in the ensuing paragraphs.

6.14 The Sub-Committee agreed to the revised draft IMO position on relevant ITU WRC-27 agenda items concerning matters relating to Maritime Services, as set out in annex 6, with a view to approval by MSC 112 and subsequent submission to the second session of the ITU's Conference preparatory meeting (ITU's CPM 27-2), noting that the final IMO position would be prepared by NCSR 14 and submitted, as an urgent matter, to MSC 113 for approval and subsequent submission to ITU WRC-27.

6.15 The Sub-Committee noted the considerations of the Group concerning ITU WRC-27 agenda item 1.16 regarding protection of radio astronomy service and the possibility of developing an IMO position on such agenda item at NCSR 14, subject to the outcome of ITU's CPM 27-2.

6.16 The Sub-Committee approved the terms of reference for IMO/ITU EG 22 (NCSR 13/WP.5, annex 3), agreed that four days were required for the meeting (see also paragraph 15.18.1), and invited interested Member States and international organizations to consider submitting proposals to the IMO/ITU EG to further develop the IMO position on ITU WRC-27 agenda item 10.

7 DEVELOPMENT OF GLOBAL MARITIME SAR SERVICES, INCLUDING HARMONIZATION OF MARITIME AND AERONAUTICAL PROCEDURES AND AMENDMENTS TO THE IAMSAR MANUAL

Global SAR Plan module of GISIS

7.1 Having recalled the request of NCSR 12 to the Secretariat concerning the Global SAR Plan module of GISIS (NCSR 12/20, paragraph 7.26), the Sub-Committee noted the information provided in document NCSR 13/7/2 (Secretariat) presenting an analysis of the information contained in the Global SAR Plan, as of February 2026, and advising of actions taken by the Secretariat concerning the development of a technical validation tool for geographical polygons representing SAR regions. In this regard, the Sub-Committee reminded SOLAS Contracting Governments and Parties to the 1979 SAR Convention to ensure that the information that they were required to communicate under the Global SAR Plan was complete, accurate and up to date at all times.

7.2 The Sub-Committee emphasized the importance of maintaining up-to-date information within the Global SAR Plan, not only to ensure compliance with Member States' reporting obligations, but also in recognition of the fact that the information contained therein served operational purposes and contributed directly to saving lives at sea.

7.3 The Sub-Committee requested the Secretariat to continue reviewing the information contained in the Global SAR Plan and contacting individual Member States, as appropriate.

Report of the ICAO/IMO Joint Working Group

7.4 The Sub-Committee considered document NCSR 13/7 (Secretariat), presenting the report of the thirty-second meeting of the ICAO/IMO Joint Working Group (ICAO/IMO JWG), which was held in Sydney, Australia, from 3 to 7 November 2025, and chaired, on this occasion, by the Vice-Chair of the JWG, Mr. T. Kit (Singapore), together with commenting documents, and took action as indicated in the following paragraphs.

7.5 The Sub-Committee noted, in particular, the positive feedback in relation to a regional SAR capacity-building workshop which was organized by the IMO Secretariat in conjunction with ICAO/IMO JWG 32, facilitating the participation of SAR experts from Pacific small island developing States in the ICAO/IMO JWG meeting.

Amendments to the IAMSAR Manual

7.6 Recalling the instructions of NCSR 12 concerning draft amendments to the IAMSAR Manual (NCSR 12/20, paragraphs 7.21 and 7.24), the Sub-Committee considered the progress made regarding guidance on psychology of emergency, the ship security alert system (SSAS), ship reporting systems for SAR, and search planning and evaluation concepts (NCSR 13/7, annex, appendices 3, 4 and 5), taking into account document NCSR 13/7/5 (United States) commenting on the list of ship reporting systems for SAR set out in the IAMSAR Manual, volume II, appendix O.

7.7 The Sub-Committee also considered the progress made by the ICAO/IMO JWG 32 on the preparation of guidance on submarines and passenger submersible craft and related SAR issues, taking into account the comments provided in document NCSR 13/7/4 (United States).

7.8 Having noted the view of JWG 32 that the development of a separate IMO circular on psychology of emergency was considered to be not warranted with the production of the guidance in the IAMSAR Manual, the Sub-Committee referred the draft amendments to the IAMSAR Manual and documents NCSR 13/7/4 and NCSR 13/7/5 to Working Group 3 for further consideration and advice, including consideration of any necessary instructions to ICAO/IMO JWG 33 in relation to further progressing this work.

7.9 The Sub-Committee noted also the draft amendments to the IAMSAR Manual concerning autonomous distress tracking of aircraft in flight (NCSR 13/7, annex, appendix 4 (part)), addressing aeronautical matters.

7.10 The Sub-Committee noted further the consideration of the ICAO/IMO JWG 32, in response to the instruction of NCSR 12 (NCSR 12/20, paragraph 7.24), on the proposed amendments to the IAMSAR Manual, volume I to include a SAR communications and information management guide and a guide on periodic verification of contacts, and endorsed the ICAO/IMO JWG's agreement that the draft amendments proposed in document MSC 109/13/7 (Colombia) were not suitable for inclusion in the IAMSAR Manual.

General overview of SAR issues

7.11 The Sub-Committee noted the consideration by the ICAO/IMO JWG 32 of the general overview of SAR issues, which would be hosted on the ICAO/IMO JWG website on the ICAO secure portal and reviewed as necessary, ideally during the first year of the IAMSAR amendment cycle.

Other matters

7.12 The Sub-Committee noted the consideration of ways of assisting IMO Member States in completing the information in the Global SAR Plan and referred the matter to Working Group 3 for further consideration and advice.

7.13 The Sub-Committee noted also the list of pending and new action items for the ICAO/IMO JWG (NCSR 13/7, annex, appendix 2).

Next meeting of the ICAO/IMO Joint Working Group

7.14 Having noted that ICAO/IMO JWG 33 would be hosted in Malmö, Sweden, provisionally planned from 9 to 13 November 2026, the Sub-Committee approved the provisional agenda for ICAO/IMO JWG 33 (NCSR 13/7, annex, appendix 6) (see also paragraph 15.18.2).

List of documents and publications which should be held by a maritime or joint rescue coordination centre

7.15 The Sub-Committee considered document NCSR 13/7/1 (Secretariat) providing an updated *List of documents and publications which should be held by a maritime or joint rescue coordination centre* (SAR.7/Circ.16), and referred it to Working Group 3 for review and finalization of the revised circular.

Role of maritime survivor locating devices in maritime SAR

7.16 The Sub-Committee considered document NCSR 13/7/3 (United States) proposing the development of guidance on the carriage and use of maritime survivor locating devices (MSLD) in maritime SAR.

7.17 Having noted the information provided, the Sub-Committee invited interested Member States and international organizations to consider submitting a proposal for a new output to the Maritime Safety Committee.

Use of LRIT by SAR services

7.18 The Sub-Committee considered document NCSR 13/7/6 (IMRF) concerning the use of LRIT by SAR services and presenting recommendations to promote better use of the system for SAR purposes.

7.19 During the consideration, views were expressed in support of the recommendations contained in document NCSR 13/7/6, but also calling for caution, noting that LRIT was not the only system that could be used for SAR purposes and thus recommending that any further consideration should also include the use of other ship monitoring and tracking systems in conjunction with LRIT. It was emphasized that LRIT was just a complementary tool to other systems and each RCC should decide how and when to use it, taking into account possible limitations of the system and that not all ships were required to transmit LRIT information.

7.20 In this regard, the Sub-Committee recalled that MSC.1/Circ.1338/Rev.1 provided relevant guidance to SAR in relation to requesting and receiving LRIT information.

7.21 The observer from IMSO shared information about the availability of training materials and videos on the use of LRIT at IMSO's website (<https://imso.org/capacity-building/>).

7.22 Following consideration, the Sub-Committee:

- .1 encouraged SOLAS Contracting Governments to ensure that their SAR services make full and effective use of LRIT, including maintaining RCC access, training SAR operators, and integrating LRIT into SAR procedures and checklists;
- .2 instructed ICAO/IMO JWG 33 to evaluate if IMO and ICAO SAR guidance generally, and procedures contained in the IAMSAR Manual, were appropriate, and what other measures might be taken to improve the use of LRIT and any other ship tracking and monitoring systems for SAR purposes; and
- .3 invited interested Member States and international organizations to support IMRF in promoting the use of LRIT for SAR purposes.

IMRF online maritime search and rescue Academy project

7.23 Having considered document NCSR 13/7/7 (IMRF) concerning the IMRF online maritime SAR Academy project, the Sub-Committee encouraged interested Member States and stakeholders to participate and contribute to IMRF's efforts and consider making use of the resources offered by IMRF.

Global maritime SAR system review project

7.24 The Sub-Committee considered document NCSR 13/7/8 (IMRF) concerning the IMRF Global maritime SAR system review project aimed at enhancing SAR services and encouraged interested Member States to participate in the review project.

Information documents

7.25 The Sub-Committee noted the information provided in documents:

- .1 NCSR 13/INF.18 (United States) regarding the Report on the activities of the AMVER programme; and
- .2 NCSR 13/INF.23 (Argentina and Chile) on the Report of the 2025–2026 Combined Antarctic Naval Patrol conducted between the Argentine Republic and the Republic of Chile.

Instructions for Working Group 3

7.26 The Sub-Committee instructed Working Group 3, already established under agenda item 1 (see paragraph 1.6), taking into account decisions, comments and proposals made in plenary, to:

- .1 consider the report of the ICAO/IMO JWG 32 (NCSR 13/7), including documents NCSR 13/7/4 and NCSR 13/7/5, and advise the Sub-Committee, as appropriate, in particular on the following matters:
 - .1 draft amendments proposed for inclusion in the IAMSAR Manual;
 - .2 list of ship reporting systems for SAR contained in the IAMSAR Manual, Volume II, appendix O;
 - .3 guidance on submarines and passenger submersible craft and related SAR issues; and
 - .4 ways of assisting IMO Member States in completing the information in the Global SAR Plan;
- .2 prepare any necessary instructions for the ICAO/IMO JWG 33, taking into account the decisions of MSC 109 (MSC 109/22, paragraph 19.8) and the Committees' method of work (MSC-MEPC.1/Circ.5/Rev.7); and
- .3 review the updated list of documents and publications which should be held by a maritime or joint RCC (NCSR 13/7/1, annex) and finalize the revision of SAR.7/Circ.16 for approval by the Sub-Committee.

Report of the Working Group

7.27 Having considered the relevant part of the Working Group's report (NCSR 13/WP.7), the Sub-Committee took action as summarized in the following paragraphs.

7.28 The Sub-Committee noted the consideration on the draft amendments proposed for inclusion in the IAMSAR Manual, in particular that the Group had concurred with the amendments as proposed, and instructed the ICAO/IMO JWG 33 to consider any necessary additional amendments to the IAMSAR Manual, volume III concerning SSAS service providers.

7.29 The Sub-Committee noted also the consideration on the list of ship reporting systems for SAR contained in the IAMSAR Manual, volume II, appendix O, in particular that further information and inputs were needed to assess whether the information provided in appendix O was still useful for SAR services and if it should be removed from the Manual. Consequently, the Sub-Committee instructed the ICAO/IMO JWG 33 to consider the possible removal or update of the IAMSAR Manual, volume II, appendix O and to advise the Sub-Committee, as appropriate; and invited interested Member States and international organizations to consider submitting further information to the ICAO/IMO JWG 33 regarding the comprehensiveness and usefulness of the information contained in appendix O.

7.30 The Sub-Committee noted further the consideration on the guidance on submarines and passenger submersible craft and related SAR issues, including the agreement to update the IAMSAR Manual, volumes II and III to include such guidance, and instructed the ICAO/IMO JWG 33 to take the matters requiring further consideration into account when finalizing the related draft amendments to the IAMSAR Manual.

7.31 Having noted the consideration on possible ways of assisting IMO Member States in completing the information in the Global SAR Plan, the Sub-Committee requested the Secretariat to consider implementing modifications to the Global SAR Plan to automatically remind responsible authorities to periodically verify the information therein.

7.32 The Sub-Committee approved SAR.7/Circ.17 on *List of documents and publications which should be held by a maritime or joint rescue coordination centre*, and invited the Committee to endorse this action.

8 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))

8.1 The Sub-Committee recalled that no documents had been submitted under this agenda item at NCSR 12 and that MSC 110, having considered the status of the associated output, had agreed to retain the output in the biennial agenda of the Sub-Committee for the 2026-2027 biennium and the provisional agenda for NCSR 13 (MSC 110/21, paragraph 18.103).

8.2 The Sub-Committee considered document NCSR 13/8 (Austria et al.), presenting the two-way communication service offered by the Galileo Return Link and proposing draft amendments to resolution MSC.471(101) on *Performance standards for float-free Emergency Position-Indicating Radio Beacons (EPIRBs) operating on 406 MHz* to introduce the two-way communication service as an optional EPIRB feature; together with document NCSR 13/8/1 (China), proposing modifications to the draft amendments to resolution MSC.471(101).

8.3 The Sub-Committee took into account the information provided in document NCSR 13/5/6 (Cospas-Sarsat) concerning the two-way communication service and related activities.

8.4 During the ensuing discussion, the Sub-Committee considered, in particular, the need to develop guidelines including a functional description, technical characteristics, operational modes, performance, and use cases of EPIRBs that optionally implement the two-way communication service, as initially proposed in document MSC 107/17/11 (Austria et al.).

8.5 In this regard, the Sub-Committee noted that the Cospas-Sarsat documents referred to in the draft amendments to resolution MSC.471(101) presented in document NCSR 13/8 outlined the high-level requirements for the two-way communication service providers and the minimum requirements for EPIRB manufacturers, but they did not provide guidelines explaining how an EPIRB with the two-way communication capability should be operated.

8.6 The Sub-Committee also noted that, according to the Committees' method of work (MSC-MEPC.1/Circ.5/Rev.7), human element considerations, in particular those identified in the completed checklist appended to document MSC 107/17/11, should be addressed during the work on this output.

8.7 Noting support to proceed with the development of draft amendments to resolution MSC.471(101) introducing optional functionalities to implement the two-way communication service, as well as the need to address human element aspects for operational purposes and remain technologically neutral to accommodate future service providers, the Sub-Committee referred the matter to Working Group 3 for further consideration and advice to the Sub-Committee, as appropriate.

Instructions for Working Group 3

8.8 The Sub-Committee instructed Working Group 3, already established under agenda item 1 (see paragraph 1.6), taking into account decisions, comments and proposals made in plenary and documents NCSR 13/8, NCSR 13/8/1 and NCSR 13/5/6, to consider:

- .1 the draft amendments to resolution MSC.471(101) introducing the two-way communication service as an optional functionality (NCSR 13/8, annex);
- .2 the need for the development of guidelines for the operational use of EPIRBs that implement the two-way communication service; and
- .3 any other necessary actions, taking into account the identified human element issues (document MSC 107/17/11, annex 2),

and advise the Sub-Committee, as appropriate.

Report of the Working Group

8.9 Having considered the relevant part of the Working Group's report (NCSR 13/WP.7), the Sub-Committee:

- .1 agreed to the draft resolution MSC.471(101)/Rev.1 on performance standards for float-free Emergency Position-Indicating Radio Beacons (EPIRBs) operating on 406 MHz, as set out in annex 7, introducing the two-way communication service as an optional functionality, with a view to adoption by MSC 112;
- .2 invited MSC 112 to inform the Sub-Committee on Human Element, Training and Watchkeeping (HTW) of the draft revised resolution MSC.471(101), if adopted, and to take action as appropriate;
- .3 instructed the ICAO/IMO JWG 33 to consider the development of guidelines for the operational use of EPIRBs that implement the two-way communication service and advise the Sub-Committee, as appropriate; and
- .4 invited interested Member States and international organizations to submit information to the ICAO/IMO JWG 33 on this matter, for consideration.

8.10 In view of the above, the Sub-Committee agreed to invite the Committee to extend the target completion year of the output associated with this agenda item (see paragraph 15.13.1).

9 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 AND OPERATIONAL GUIDANCE FOR ROUTE EXCHANGE

Report of the Correspondence Group on Establishment of an S-100 Framework

9.1 The Sub-Committee recalled that NCSR 12 had established the Correspondence Group on Establishment of an S-100 Framework, under the coordination of Australia, and instructed it, inter alia, to submit an interim report to the IMO/ITU EG 21 and a final report to this session of the Sub-Committee, for consideration (NCSR 12/20, paragraph 14.6).

9.2 Having noted the considerations of the IMO/ITU EG 21 on the interim report of the Correspondence Group (NCSR 13/6, annex, paragraphs 6.1 to 6.16), the Sub-Committee considered document NCSR 13/9 (Australia), containing the report of the Correspondence Group, providing draft MSC circulars on guidance to establish a framework for data distribution and global IP-based connectivity for shore-based facilities and ships supporting ECDIS S-100 products, and on operational guidance for digital route exchange (see resolution MSC.530(106)/Rev.1), as well as a list of elements associated with the implementation of S-100 capable ECDIS, together with the following documents:

- .1 NCSR 13/9/1 (IALA), recommending the use of the secure communication between ship and shore (SECOM) infrastructure and the Maritime Connectivity Platform (MCP) as the reference technological solution for secure communication, identity, trust, and service discovery/registry functions within the global IP-based S-100 connectivity framework;
- .2 NCSR 13/9/2 (Japan), highlighting the need for comprehensive and sufficient testing before implementation of the IP-based connectivity and S-100 ECDIS, and outlining some further implementation issues requiring consideration; and
- .3 NCSR 13/9/3 (CIRM), providing observations on the report of the Correspondence Group intended to support safe and practical implementation of S-100 capable ECDIS, including proposed modifications to the recommended next steps set out in document NCSR 13/9, annex 2.

9.3 During the consideration, the finalization of the two draft MSC circulars at this session was supported in general, emphasizing the importance of progressing the implementation of the S-100 framework, which would represent a major milestone in maritime digitalization. In this context, views were expressed, inter alia, supporting the comprehensive testing and trial of the S-100 framework; progressing implementation in a practical and inclusive manner both ashore and on board ships, following a phased approach and taking into account the limitations of developing countries; addressing human element implications, including training and familiarization both for seafarers and shore-based stakeholders; further analysing the legal and financial implications of SECOM and MCP, including interoperability between different instances of MCPs; recommending that S-100 connectivity should remain technologically neutral, taking into account cybersecurity; and considering the need for possible coordination with other bodies of the Organization.

9.4 Regarding specifically the guidance on route exchange, views were expressed indicating that it should remain voluntary and should not conflict with the conduct of pilot activities.

9.5 The delegations of Australia and Sweden indicated their intention to work on a proposal for a new output to address remaining implementation issues with a view to submission to MSC 112 and invited interested Member States and international organizations to consider contributing to it.

9.6 The observer from IHO advised that the IHO Hydrographic Services and Standards Committee (HSSC) was already coordinating testing activities on S-100 and recommended using existing mechanisms to avoid duplication of efforts.

9.7 Following consideration, the Sub-Committee referred the above-mentioned documents to Working Group 1 for detailed consideration and finalization of the draft MSC circulars and the list of identified elements associated with the implementation of S-100 capable ECDIS, including consideration of any other necessary actions, as appropriate.

9.8 In addition, having noted the information provided in documents NCSR 13/17/1 (IEC) and NCSR 13/17/4 (IHO) concerning S-100-related developments, the Sub-Committee referred them to Working Group 1, to be taken into account during the deliberations.

Information documents

9.9 The Sub-Committee noted the information provided in the following documents:

- .1 NCSR 13/INF.2 (IALA), on the outcome of the IALA workshop on international mobile telecommunication (IMT) for marine aids to navigation;
- .2 NCSR 13/INF.5 (Australia et al.), sharing practical implementation experience with the SECOM Protocol in support of S-124 services;
- .3 NCSR 13/INF.15 (Japan), on technical considerations arising from communication tests conducted for S-100 data distribution using its own maritime connectivity platform; and
- .4 NCSR 13/INF.20 (IALA), providing an update on IALA's internal deliberations and ongoing feasibility study concerning the operation of an IALA MCP instance.

Instructions for Working Group 1

9.10 The Sub-Committee instructed Working Group 1, already established under agenda item 1 (see paragraph 1.6), taking into account decisions, comments and proposals made in plenary, to consider the report of the Correspondence Group on Establishment of an S-100 Framework (NCSR 13/9), taking into account documents NCSR 13/6, annex, paragraphs 6.1 to 6.16, NCSR 13/9/1, NCSR 13/9/2, NCSR 13/9/3, NCSR 13/17/1 and NCSR 13/17/4, and:

- .1 finalize the draft MSC circulars on:
 - .1 guidance to establish a framework for data distribution and global IP-based connectivity for shore-based facilities and ships supporting ECDIS S-100 products based on document NCSR 13/9, annex 1; and

-
- .2 operational guidance for digital route exchange based on document NCSR 13/9, annex 4;
 - .2 consider the revised list of identified elements associated with the implementation of S-100 capable ECDIS and the associated high-level summary of elements, including recommended next steps for the Organization, and advise the Sub-Committee, as appropriate (NCSR 13/9, annexes 3 and 2, respectively); and
 - .3 consider also any necessary consequential amendments to related instruments and advise the Sub-Committee, as appropriate.

Report of the Working Group

9.11 Having considered the relevant part of the Working Group's report (NCSR 13/WP.5), the Sub-Committee took action as summarized in the ensuing paragraphs.

9.12 The Sub-Committee agreed to the draft MSC circulars on:

- .1 guidance to establish a framework for data distribution and global IP-based connectivity for shore-based facilities and ships supporting ECDIS S-100 products; and
- .2 operational guidance for digital route exchange;

as set out in annexes 8 and 9, respectively, with a view to approval by MSC 112.

9.13 Having noted the high-level summary of elements associated with the implementation of S-100 capable ECDIS and recommended next steps for the Organization and the list of identified elements associated with the implementation of S-100 capable ECDIS (NCSR 13/WP.5, annexes 6 and 7, respectively), the Sub-Committee invited interested Member States and organizations to consider submitting a proposal for a new output to the Committee, as appropriate.

9.14 The Sub-Committee noted the consideration regarding capacity-building needs for the implementation of the NAVDAT service and ECDIS S-100 products and:

- .1 invited Member States requiring technical assistance on such matters to liaise with the Secretariat directly or visit the IMO Technical Cooperation Portal (<https://tcportal.imo.org>) to submit their requests, as appropriate; and
- .2 requested the Secretariat to consider organizing related capacity-building activities in collaboration with other international organizations or entities, as appropriate.

9.15 The Sub-Committee agreed to the completion of the work on outputs related to this agenda item (see also paragraph 15.11).

10 DEVELOPMENT OF PERFORMANCE STANDARDS FOR DUAL FREQUENCY MULTI-CONSTELLATION SATELLITE-BASED AUGMENTATION SYSTEMS (DFMC SBAS) AND ADVANCED RECEIVER AUTONOMOUS INTEGRITY MONITORING (ARAIM) IN SHIPBORNE RADIONAVIGATION RECEIVERS

10.1 The Sub-Committee recalled that MSC 107 had agreed to include in its post-biennial agenda an output on "Development of performance standards for dual frequency multi-constellation satellite-based augmentation systems (DFMC SBAS) and advanced receiver autonomous integrity monitoring (ARAIM) in shipborne radionavigation receivers", with two sessions needed to complete the output, assigning the NCSR Sub-Committee as the associated organ. In doing so, the Committee agreed that such performance standards should be developed only after the approval/adoption of the necessary procedures and requirements for the recognition of augmentation systems (MSC 107/20, paragraph 17.58). Following completion of the above-mentioned procedures and requirements at NCSR 12, this output was included in the 2026-2027 biennial agenda of the NCSR Sub-Committee and in the provisional agenda for NCSR 13 (MSC 110/21, paragraph 18.104).

10.2 In this regard, the Sub-Committee recalled also that MSC 111 had adopted resolution MSC.599(111) on *Amendments to the Worldwide Radionavigation System (resolution A.1046(27))*, containing relevant requirements for augmentation systems, and had endorsed the agreement of NCSR 12 that recognition of augmentation systems by the Organization was not required (MSC 111/22, paragraph 15.15).

Report of the Correspondence Group on Development of Performance Standards for DFMC SBAS and ARAIM in Shipborne Radionavigation Receivers

10.3 The Sub-Committee recalled that NCSR 12 had established the Correspondence Group on Development of Performance Standards for DFMC SBAS and ARAIM in Shipborne Radionavigation Receivers, under the coordination of Australia, to progress the development of such performance standards and report to NCSR 13 (NCSR 12/20, paragraph 17.18.2).

10.4 The Sub-Committee considered document NCSR 13/10 (Australia), containing the report of the Correspondence Group, including initial definitions and goal-based functional requirements to guide and progress the further development of the performance standards.

10.5 During the consideration, the approach recommended by the Correspondence Group was supported in general, including the general principles and functional requirements of the future performance standards. Views were expressed emphasizing, inter alia, the importance of remaining technology neutral, ensuring compatibility with all recognized satellite navigation systems that were part of the Worldwide Radionavigation System, taking into account the needs in the maritime environment and the limited capabilities of developing countries.

10.6 Noting the progress made by the Group and that substantial work still remained to finalize the performance standards, the Sub-Committee referred document NCSR 13/10 to Working Group 2 for consideration and advice, including the development of terms of reference for a correspondence group to continue the work intersessionally.

Instructions for Working Group 2

10.7 The Sub-Committee instructed Working Group 2, already established under agenda item 1 (see paragraph 1.6), taking into account decisions, comments and proposals made in plenary, to:

- .1 consider the report of the Correspondence Group on Development of Performance Standards for DFMC SBAS and ARAIM in Shipborne Radionavigation Receivers (NCSR 13/10) and advise the Sub-Committee, as appropriate; and
- .2 prepare terms of reference for a correspondence group to continue progressing the work intersessionally.

Report of the Working Group

10.8 Having considered the relevant part of the Working Group's report (NCSR 13/WP.6), the Sub-Committee noted the progress on the development of performance standards for DFMC SBAS and ARAIM in shipborne radionavigation receivers and re-established a Correspondence Group (see also paragraph 15.16), under the coordination of Australia,² instructing it to further develop and finalize the draft performance standards for DFMC SBAS and ARAIM in shipborne radionavigation receivers, ensuring that such standards remain goal-based and technology neutral; and submit a report for consideration at NCSR 14.

11 DEVELOPMENT OF A TRANSITION SCHEME FOR THE INTRODUCTION OF DIGITAL TECHNOLOGY FOR VERY HIGH FREQUENCY (VHF) VOICE COMMUNICATIONS

11.1 The Sub-Committee recalled that MSC 109 had agreed to include in the biennial agenda for 2026-2027 an output on "Development of a transition scheme for the introduction of digital technology for very high frequency (VHF) voice communications", with a target completion year of 2027, assigning the NCSR Sub-Committee as the associated organ, and that the Committee had also agreed to include this output in the provisional agenda for NCSR 13 (MSC 109/22, paragraph 19.26).

11.2 The Sub-Committee recalled also that NCSR 12 had instructed the IMO/ITU EG 21 to undertake initial considerations concerning the development of a transition scheme for the introduction of digital technology for VHF voice communications and advise NCSR 13, as appropriate (NCSR 12/20, paragraph 6.20).

11.3 In this regard, the Sub-Committee considered relevant parts of the report of the IMO/ITU EG 21 (NCSR 13/6, annex, paragraphs 4.1 to 4.6 and annex 1), containing initial considerations on this matter, including a preliminary draft MSC circular prepared by the Experts Group, together with the following documents:

- .1 NCSR 13/11 (China), proposing key principles and a phased transition scenario based on an "on-centre" spectrum approach; discussing candidate digital radio technologies; and presenting additional operational, regulatory and implementation considerations relevant to the transition scheme;

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- .2 NCSR 13/11/1 (Kingdom of the Netherlands), providing additional considerations concerning the development of a transition scheme and proposing to provide inputs to studies in ITU between WRC-23 and WRC-27 from IMO's perspective, in particular to safeguard the interests of shipping; and
- .3 NCSR 13/11/2 (Japan), providing comments on the preliminary draft MSC circular prepared by IMO/ITU EG 21 and proposing modifications.

11.4 In this context, the Sub-Committee noted the information provided in document NCSR 13/INF.16 (Japan) on the results of the VHF digital voice communication field trials conducted by Japan.

11.5 The Sub-Committee noted also that the primary responsibility to allocate radio spectrum for radiocommunication systems and develop technical standards to enable their interference-free operation rested with the ITU Radiocommunication Sector and that, in this regard, ITU-R WP 5B was conducting technical studies for the introduction of digital technology for VHF voice communications.

11.6 Following consideration, the Sub-Committee referred the above-mentioned documents to Working Group 1 for further consideration and advice to the Sub-Committee, as appropriate.

Instructions for Working Group 1

11.7 The Sub-Committee instructed Working Group 1, already established under agenda item 1 (see paragraph 1.6), taking into account decisions, comments and proposals made in plenary, to consider the development of a transition scheme for the introduction of digital technology for VHF voice communications, taking into account the initial considerations of the IMO/ITU EG 21 (NCSR 13/6, annex, paragraphs 4.1 to 4.6 and annex 1) and documents NCSR 13/11, NCSR 13/11/1 and NCSR 13/11/2, and advise the Sub-Committee, as appropriate.

Report of the Working Group

11.8 Having considered the relevant part of the Working Group's report (NCSR 13/WP.5), the Sub-Committee:

- .1 agreed to the draft MSC circular on transition scheme for the introduction of digital technology for VHF voice communications, as set out in annex 10, with a view to approval by MSC 112; and
- .2 approved a liaison statement to ITU on the transition scheme for the introduction of digital technology for VHF voice communications (NCSR 13/WP.5, annex 9); requested the Secretariat to convey it to ITU; and invited the Committee to endorse the action taken.

11.9 In view of the above, the Sub-Committee agreed to the completion of the work on the output associated with this agenda item (see also paragraph 15.11).

12 REVISION OF THE PERFORMANCE STANDARDS FOR GYRO-COMASSES (RESOLUTION A.424(XI)) AND GUIDANCE FOR NAVIGATION AND COMMUNICATION EQUIPMENT INTENDED FOR USE ON SHIPS OPERATING IN POLAR WATERS (MSC.1/CIRC.1612)

12.1 The Sub-Committee recalled that MSC 107 had agreed to include in its post-biennial agenda an output on "Revision of the Performance standards for gyro-compasses (resolution A.424(XI)) and Guidance for navigation and communication equipment intended for use on ships operating in polar waters (MSC.1/Circ.1612)", with two sessions needed to complete the item, assigning the NCSR Sub-Committee as the associated organ, and instructed the Sub-Committee to consider, as part of the output, whether amendments to resolution A.424(XI) were necessary (MSC 107/20, paragraph 17.47).

12.2 The Sub-Committee noted that MSC 110 had agreed to include this output in the biennial agenda of the Sub-Committee for 2026-2027 and in the provisional agenda of NCSR 13 (MSC 110/21, paragraph 18.104).

12.3 The Sub-Committee recalled that NCSR 12 had established a Correspondence Group, under the coordination of China, to progress the revision of such performance standards and report to NCSR 13 (NCSR 12/20, paragraph 17.18.3).

Report of the Correspondence Group

12.4 The Sub-Committee considered document NCSR 13/12 (China), containing the report of the Correspondence Group on Revision of the Performance Standards for Gyro-Compasses (resolution A.424(XI)) and Guidance for Navigation and Communication Equipment Intended for Use on Ships Operating in Polar Waters (MSC.1/Circ.1612), together with the following documents:

- .1 NCSR 13/INF.17 (China), presenting a record of considerations by the Correspondence Group, which had not been concluded by the Group;
- .2 NCSR 13/12/1 (Japan and CIRM), commenting on the above-mentioned documents, expressing the view that a revision of resolution A.424(XI) might not be necessary and proposing alternative options to address the issue; and
- .3 NCSR 13/12/2 (China), commenting on document NCSR 13/12/1, providing additional considerations regarding the necessity to revise resolution A.424(XI).

12.5 During the ensuing discussion, the Sub-Committee considered, in particular, if a revision of resolution A.424(XI) and MSC.1/Circ.1612 was necessary to incorporate the elements of fibre optic gyro-compasses, or if the identified gaps and issues could be addressed by other means, such as developing a new non-mandatory IMO instrument or amending other existing instruments. In this regard, views expressed were mainly divided, either in support of:

- .1 revising resolution A.424(XI) following a modular structure; or
- .2 developing separate non-mandatory performance standards suitable for gyro-compasses other than those provided in resolution A.424(XI).

12.6 Views were also expressed indicating the need to appropriately assess the identified gaps, in particular, concerning suitability in latitudes beyond 60 degrees, noting that several Member States emphasized that no issues had been identified with the operation of existing gyro-compasses in high latitudes; and that any possible developments should remain technologically neutral.

12.7 Based on the above, the Sub-Committee could not reach a conclusion on the preferred option and agreed to refer the above-mentioned documents to Working Group 2 for detailed consideration and advice, instructing the Group as indicated in the following paragraph.

Instructions for Working Group 2

12.8 The Sub-Committee instructed Working Group 2, already established under agenda item 1 (see paragraph 1.6), taking into account decisions, comments and proposals made in plenary, as well as documents NCSR 13/12, NCSR 13/12/1, NCSR 13/12/2 and NCSR 13/INF.17, to:

- .1 consider the options of amending resolution A.424(XI) following a modular structure (i.e. option 2 in document NCSR 13/12) and developing a new set of performance standards (i.e. option 3 in document NCSR 13/12), and advise the Sub-Committee as appropriate; and
- .2 based on the above, should the Group recommend:
 - .1 amending resolution A.424(XI) (i.e. option 2), prepare draft terms of reference for a correspondence group to continue the work intersessionally and report to NCSR 14, with a view to finalization; or
 - .2 developing a new set of performance standards (i.e. option 3), preparing justified advice for consideration by the Sub-Committee, with a view to reporting to the Committee, noting that a new output would be required.

Report of the Working Group

12.9 Having considered the relevant part of the Working Group's report (NCSR 13/WP.6), the Sub-Committee agreed that amendments to resolution A.424(XI) and MSC.1/Circ.1612 were not necessary to incorporate the elements of fibre optic gyro-compasses and that the development of a new set of performance standards (i.e. option 3) could be an appropriate way to address the gaps identified by the Correspondence Group. In this regard, the Sub-Committee invited interested Member States and international organizations to submit proposals for a new output to the Maritime Safety Committee.

12.10 The delegation of China expressed concerns about the way the Working Group had carried out its work, indicating that, in their view, the Group had reached a conclusion largely by conducting a counting of options 2 and 3 on the basis of a majority and without properly considering the gaps and technical issues identified by the Correspondence Group.

13 DEVELOPMENT OF PERFORMANCE STANDARDS FOR RANGING MODE (R-MODE) IN RADIONAVIGATION RECEIVERS

13.1 The Sub-Committee recalled that MSC 110 had agreed to include in the biennial agenda of the NCSR Sub-Committee for the 2026-2027 biennium and the provisional agenda for NCSR 13 an output on "Development of performance standards for ranging mode (R-mode) in radionavigation receivers", with a target completion year of 2027, assigning the NCSR Sub-Committee as the associated organ, which should also include consideration of any necessary amendments to resolution A.1046(27) concerning the use of R-mode as part of the Worldwide Radionavigation System (MSC 110/21, paragraph 18.35).

13.2 In this regard, the Sub-Committee considered the following documents:

- .1 NCSR 13/13 (Japan), proposing draft amendments to resolution A.1046(27) to incorporate operational requirements for R-mode when used as a backup of the radionavigation system and expressing the view that recognition of R-mode by the Organization would not be required as it was expected to be used as a terrestrial backup system;
- .2 NCSR 13/13/1 (Austria et al.), proposing draft performance standards for shipborne R-mode receiver equipment, intended for navigation purposes on ships, providing positioning, navigation and time data, either as an alternative or complementary system to GNSS; and
- .3 NCSR 13/13/2 (China), commenting on the above-mentioned documents, expressing the view that the proposed amendments to resolution A.1046(27) should be further evaluated given the limitations of positioning accuracy to be provided by R-mode, and proposing modifications to the draft performance standards concerning antenna design and service area.

13.3 The Sub-Committee noted the information provided in document NCSR 13/INF.21 (IALA), presenting the results of an IALA Workshop on Future Radionavigation and Radiocommunication Systems.

13.4 During the ensuing discussion, the Sub-Committee considered, in particular, whether R-mode should be considered as a backup system supplementary to GNSS, or as an independent system; and the need for recognition of R-mode by the Organization. In this connection, views were expressed indicating that R-mode should be considered as a voluntary and complementary system to enhance the resilience of GNSS; that the performance standards should remain technologically neutral, taking into account the capabilities of developing countries; and that any amendments to resolution A.1046(27) should be carefully considered, taking into account the technical capabilities of R-mode to meet the necessary minimum requirements, in particular, for navigation in harbour entrances, harbour approaches and coastal waters.

13.5 Following consideration, the Sub-Committee agreed that R-mode should be considered as a backup system supplementary to GNSS and that recognition of R-mode by the Organization would not be necessary.

Instructions for Working Group 2

13.6 The Sub-Committee instructed Working Group 2, already established under agenda item 1 (see paragraph 1.6), taking into account decisions, comments and proposals made in plenary, to:

- .1 prepare draft performance standards for shipborne ranging mode (R-mode) receiver equipment based on document NCSR 13/13/1, annex, taking into account document NCSR 13/13/2; and
- .2 consider the proposed amendments to resolution A.1046(27), as amended (NCSR 13/13, annex), taking into account document NCSR 13/13/2, and advise the Sub-Committee, as appropriate.

Report of the Working Group

13.7 Having considered the relevant part of the Working Group's report (NCSR 13/WP.6), the Sub-Committee agreed to the draft MSC resolution on performance standards for shipborne R-mode receiver equipment, as set out in annex 11, with a view to adoption by MSC 112.

13.8 The Sub-Committee agreed also that amendments to resolution A.1046(27), as amended, to accommodate the inclusion of R-mode would be premature at this stage and invited interested Member States and international organizations to submit proposals for a new output to the Maritime Safety Committee.

13.9 In view of the above, the Sub-Committee agreed that the work on the output associated with this agenda item was completed (see also paragraph 15.11).

14 UNIFIED INTERPRETATION OF PROVISIONS OF IMO SAFETY, SECURITY, ENVIRONMENT, FACILITATION, LIABILITY AND COMPENSATION-RELATED CONVENTIONS

General

14.1 The Sub-Committee recalled that MSC 108 had agreed on a policy for consideration and approval of unified interpretations to be followed by all its subsidiary bodies (MSC 108/20, paragraphs 19.6 to 19.8) and that relevant procedures for the consideration and approval of unified interpretations were contained in the Committees' method of work (MSC-MEPC.1/Circ.5/Rev.7), including safeguards that should be observed.

Interpretation of the SOLAS requirements for the carriage of compasses

14.2 The Sub-Committee considered document NCSR 13/14 (United Kingdom) highlighting a difference in the interpretation of the SOLAS requirements for the carriage of compasses and inviting the Sub-Committee to decide on the correct interpretation and issue a unified interpretation to ensure consistent application of the requirement.

14.3 During the ensuing discussion, the Sub-Committee considered, in particular, whether a gyro-compass could be carried on board a ship of 500 gross tonnage and upwards in compliance with regulation V/19.2.1.1 or 19.2.2.1, as other means, and if so, whether it could also be used to fulfil the requirements of regulation V/19.2.5.1. In this regard, the Sub-Committee recalled that MSC.1/Circ.1224 already provided a unified interpretation on SOLAS regulation V/19.2.5.1 concerning gyro-compasses.

14.4 Views expressed were mainly divided between those stating that the requirements in SOLAS were clear, and that a unified interpretation was not required, and those supporting further consideration of option 1, as presented in paragraph 8 of document NCSR 13/14.

14.5 Following the discussion, and having noted that a unified interpretation should not contravene SOLAS requirements, the Sub-Committee referred the matter to Working Group 2 for further consideration and advice, if time permitted. In this regard, a further view was expressed that the interpretation described in option 1 of document NCSR 13/14, paragraph 8, could contravene SOLAS requirements, in particular regulation V/19.2.1.1, which required a magnetic compass, or "other means", to be independent of any power supply; for this reason, a gyro-compass could not be used to fulfil the requirements of this regulation.

Instructions for Working Group 2

14.6 Having considered the above matters, the Sub-Committee instructed Working Group 2, already established under agenda item 1 (see paragraph 1.6), taking into account decisions, comments and proposals made in plenary, as well as the relevant decisions of MSC 108 (MSC 108/20, paragraphs 19.6 to 19.8) and the procedures for consideration and approval of unified interpretations set out in the Committees' method of work, if time permitted, to consider the need for a unified interpretation based on the options presented in paragraph 8 of document NCSR 13/14, and advise the Sub-Committee, as appropriate.

Report of the Working Group

14.7 Having considered the relevant part of the Working Group's report (NCSR 13/WP.6), the Sub-Committee agreed that neither a new unified interpretation nor any amendments to MSC.1/Circ.1224 were required to address the issue presented in document NCSR 13/14.

15 BIENNIAL STATUS REPORT AND PROVISIONAL AGENDA FOR NCSR 14

Outcome of MSC 110 and MSC 111

15.1 The Sub-Committee noted that MSC 110 had approved the revised terms of reference of the NCSR Sub-Committee, the proposed biennial agenda of the Sub-Committee for the 2026-2027 biennium and the provisional agenda for NCSR 13, which were subsequently confirmed by MSC 111 (MSC 110/21, paragraph 18.104, and MSC 111/22, paragraph 19.41).

15.2 The Sub-Committee also noted that MSC 110 had agreed to retain output 2.18 on "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))" in the biennial agenda of the Sub-Committee for the 2026-2027 biennium and the provisional agenda for NCSR 13 (MSC 110/21, paragraph 18.103).

15.3 The Sub-Committee noted further that MSC 111 (MSC 111/22, paragraphs 5.41 and 15.19) had:

- .1 assigned the CCC, HTW, III, NCSR, SDC and SSE Sub-Committees as associated organs for output 2.23 on "Development of a goal-based instrument for maritime autonomous surface ships (MASS)" and extended the target completion of the existing output to 2030. However, as advised already under agenda item 2, detailed requests and priorities for the associated IMO bodies to review the adopted non-mandatory MASS Code would be formulated at MSC 112; and

- .2 included a new output on "Development of amendments to SOLAS regulation V/7.3 and revision of MSC.1/Circ.1079/Rev.1 on Guidelines for preparing plans for cooperation between search and rescue services and passenger ships" in the post-biennial agenda of the Committee, assigning the NCSR Sub-Committee as the associated organ, with two sessions required to complete the output.

Workload of the Sub-Committee

15.4 The Sub-Committee recalled that NCSR 12 had requested the Secretariat to submit, in consultation with the Chair and Vice-Chair of the Sub-Committee, relevant proposals for consideration at this session, focusing on clarifying procedures related to the submission and consideration of proposals under output 7.22 on "Routeing measures and ship reporting systems" (NCSR 12/20, paragraph 17.8.2).

15.5 In this connection, the Sub-Committee considered document NCSR 13/15 (Secretariat), providing a revision of the *Guidance note on the preparation of proposals on ships' routeing systems and ship reporting systems for submission to the Sub-Committee on Safety of Navigation* (MSC.1/Circ.1060, as amended), including updated procedures for the preparation and submission of proposals on ships' routeing measures and ship reporting systems to the Organization.

15.6 During the consideration, the delegation of China made a statement, as set out in annex 15, commenting on the proposed revision of MSC.1/Circ.1060, as amended, and recommending further review and consideration of procedural matters, in particular, concerning the six-month deadline for submission of preliminary draft proposals to the Secretariat, which the delegation considered to be a mandatory requirement for non-minor amendments.

15.7 The delegation of the Russian Federation made a statement, as set out in annex 15, supporting the above statement by the delegation of China, recommended that the draft revision should incorporate references to relevant UNCLOS provisions in line with the requirement of SOLAS V/11.8, in particular in relation to the freedom of navigation, the right of innocent passage, and the right of transit passage through straits used for international navigation. The delegation also recommended retaining the six-month deadline for submission of preliminary draft proposals to the Secretariat and providing a clear definition of "minor amendment".

15.8 Other delegations supported the proposed draft MSC circular set out in the annex to document NCSR 13/15, with a view to submission to MSC 112 for approval, noting that the proposed draft would help clarify procedural aspects and avoid misinterpretations, while also contributing to improving the quality of the proposals by introducing a self-assessment. Views were also expressed that the six-month deadline for the submission of preliminary draft proposals to the Secretariat was not a mandatory requirement in the existing provisions and that, under the revised procedures, Member States would still have the option to submit preliminary draft proposals to the Secretariat for preliminary review.

15.9 The delegation of Singapore, referring to the Sub-regional Workshop on Ships' Routeing and Ship Reporting Systems conducted in Singapore (NCSR 13/15, paragraphs 18 and 19), highlighted the positive outcomes of the capacity-building activity, which would directly contribute to enhancing the knowledge and ability of Member States to plan and design suitable ships' routeing and ship reporting systems. The delegation of Côte d'Ivoire, while welcoming this initiative, called for similar activities in the African region.

15.10 Following consideration, the Sub-Committee agreed to the draft MSC circular on guidance on the preparation and submission of proposals on ships' routing and ship reporting systems to the Organization, as set out in annex 12, with a view to approval by MSC 112. In doing so, the Sub-Committee agreed to invite the Committee to revoke MSC.1/Circ.1060, as amended, and MSC.1/Circ.1608, and take into consideration the views expressed during the discussion.

Biennial status report for the 2026-2027 biennium

15.11 Taking into account the progress made at this session, the Sub-Committee updated the biennial status report for the 2026-2027 biennium, including outputs in the post-biennial agenda of the Committee assigned to the NCSR Sub-Committee, as set out in annex 13, for consideration by MSC 112. In this context, it was noted that, at this session, the work on the following outputs had been completed:

- .1 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 (2.12);
- .2 Operational guidance for route exchange (2.15);
- .3 Development of a transition scheme for the introduction of digital technology for Very High Frequency (VHF) voice communications (2.5);
- .4 Revision of the Performance standards for gyro-compasses (resolution A.424(XI)) and Guidance for navigation and communication equipment intended for use on ships operating in polar waters (MSC.1/Circ.1612) (2.14); and
- .5 Development of performance standards for Ranging mode (R-mode) in radionavigation receivers (2.17).

15.12 In view of the work completed at this session, the Sub-Committee invited MSC 112 to include the following outputs from the post-biennial agenda in the 2026-2027 biennial agenda of the Sub-Committee:

- .1 Consideration of descriptions of Maritime Services in the context of e-navigation (201), with one session required to complete the output, particularly to update the description of Maritime Services coordinated by IHO and IALA; and
- .2 Development of amendments to SOLAS regulation V/7.3 and revision of MSC.1/Circ.1079/Rev.1 on Guidelines for preparing plans for cooperation between search and rescue services and passenger ships (239), with two sessions required to complete the output.

15.13 The Sub-Committee invited also MSC 112 to:

- .1 extend the target completion year of the output on 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)) (2.18) to 2027; and

- .2 remove the output on Development of generic performance standards for shipborne satellite navigation system receiver equipment (202) from the post-biennial agenda due to unpursued interest from Member States.

Proposed provisional agenda for NCSR 14

15.14 Accordingly, the Sub-Committee prepared the proposed provisional agenda for NCSR 14, as set out in annex 14, for approval by MSC 112.

Arrangements for the next session for the working, experts and drafting groups

15.15 The Sub-Committee agreed to establish, at its next session, working, experts and drafting groups on subjects to be selected from the following:

- .1 routing measures and ship reporting systems;
- .2 GMDSS issues, including NAVDAT implementation and updates to MSI documentation;
- .3 IMO position on ITU WRC-27 agenda items concerning Maritime Services;
- .4 draft amendments to the IAMSAR Manual;
- .5 EPIRB implementation of the two-way communication service;
- .6 performance standards for DFMC SBAS and ARAIM in shipborne radionavigation receivers;
- .7 revision of the IMO Standard Marine Communication Phrases (resolution A.918(22));
- .8 amendments to SOLAS regulation V/7.3 and revision of MSC.1/Circ.1079/Rev.1 on Guidelines for preparing plans for cooperation between search and rescue services and passenger ships;
- .9 descriptions of Maritime Services in the context of e-navigation; and
- .10 validated model training courses,

subject to the Committee's final decisions regarding the 2026-2027 biennial agenda of the Sub-Committee and the provisional agenda for NCSR 14, whereby the Chair, taking into account the documents received on the respective subjects, would advise the Sub-Committee well in time before NCSR 14 on the final selection of such groups.

Correspondence groups established at this session

15.16 The Sub-Committee established a Correspondence Group on Development of Performance Standards for DFMC SBAS and ARAIM in Shipborne Radionavigation Receivers, due to report to NCSR 14 (see paragraph 10.8).

Review groups for model courses

15.17 The Sub-Committee recalled that a Review Group on Model Course 3.15 on SAR On-scene Coordinator (IAMSAR Manual, volume III), which was established at NCSR 12, was due to report to NCSR 14.

Intersessional meetings

15.18 The Sub-Committee confirmed the holding of the following intersessional meetings to take place in 2026 (see paragraphs 6.16 and 7.14):

- .1 the twenty-second meeting of the Joint IMO/ITU Experts Group on Maritime Radiocommunication Matters, had been planned to be held from 28 September to 1 October 2026, at the IMO Headquarters; and
- .2 the thirty-third meeting of the ICAO/IMO Joint Working Group on Harmonization of Aeronautical and Maritime Search and Rescue, had been planned to be held from 9 to 13 November 2026, in Malmö, Sweden,

and requested the Secretariat to take action, as appropriate.

Date of the next session

15.19 The Sub-Committee noted that its fourteenth session had been tentatively scheduled to take place from 26 to 30 April 2027.

16 ELECTION OF CHAIR AND VICE-CHAIR FOR 2027

16.1 In accordance with the Rules of Procedure of the Maritime Safety Committee, the Sub-Committee unanimously re-elected Mr. J. Brouwers (Kingdom of the Netherlands) as Chair and Mr. M. L. Malschitzky (Brazil) as Vice-Chair, both for 2027.

17 ANY OTHER BUSINESS

Update to SN.1/Circ.243/Rev.2

17.1 The Sub-Committee considered document NCSR 13/17 (Austria et al.), proposing amendments to SN.1/Circ.243/Rev.2 on *Guidelines for the presentation of navigation-related symbols, terms and abbreviations* in order to reflect the latest changes in IEC standard 62288.

17.2 The Sub-Committee considered, in particular, whether the proposed amendments should be considered as a minor correction/issue that could be addressed under the agenda item "Any other business", or if a new output would be required. In this regard, the Sub-Committee noted that SN.1/Circ.243/Rev.2 (as corrected by SN.1/Circ.243/Rev.2/Corr.1) contained several tables applicable to different equipment and that the proposal in document NCSR 13/17 did not specify which tables should be updated. In addition, further information was required in terms of implementation, impact on resolution MSC.191(79), as amended, and possible revisions to SN.1/Circ.243/Rev.1.

17.3 During the consideration, opinions were divided on whether the proposed updates to SN.1/Circ.243/Rev.2 should be considered a minor correction/issue. Views were expressed in support of incorporating new symbols into the circular as a consequence of the revision of related IEC standards, noting also the need for training and familiarization with the new symbols, as well as possible consequential updates to model courses and related material. Other views indicated that a further IEC standard had already been published with additional symbols and, since a further revision of relevant standards was ongoing, it was important to avoid re-certification of equipment.

17.4 Following consideration, the Sub-Committee concluded that the update of SN.1/Circ.243/Rev.2, if it were considered to be a minor correction/issue, could be conducted under the agenda item "Any other business" and referred the matter to Working Group 2 for detailed consideration and advice.

Progress on standards development by IEC

17.5 The Sub-Committee noted the information provided in document NCSR 13/17/1 (IEC) on the preparation of standards by IEC TC80 to support relevant performance standards and other instruments developed by the Organization and took it into account under relevant agenda items (see paragraph 9.8).

Bridge alert management

17.6 The Sub-Committee considered document NCSR 13/17/2 (IMPA), reporting on the experiences of maritime pilots and, by extension, bridge teams, with bridge alerts, and recommending revising the *Performance standards for bridge alert management* (resolution MSC.302(87)) to align the performance standards with the principles of SOLAS regulation V/15, and *ECDIS – Guidance for good practice* (MSC.1/Circ.1503/Rev.2) to highlight the need for company navigation policies to support effective context-specific alert management and effective human alert response.

17.7 During the consideration, several delegations supported the aim of the proposal. However, from the information presented in document NCSR 13/17/2, it was unclear whether the issue was related to bridge alert management, its effective implementation, or any other reasons. In this regard, views were expressed recommending waiting for the work on engine-room alert management to be finalized before embarking on these considerations.

17.8 Noting IMPA's intention to arrange for the submission of a proposal for a new output to MSC 112 on this matter, the Sub-Committee invited Member States and international organizations interested in supporting this proposal to contact IMPA directly.

Voyage data recorders

17.9 The Sub-Committee considered document NCSR 13/17/3 (United States), sharing information about the incident with the **MV Dali** and identifying several issues that should be considered in relation to voyage data recorders, including possible amendments to the *Performance standards for voyage data recorders (VDRs)* (resolution MSC.333(90)).

17.10 Following consideration and noting support for further assessment of the proposal, the Sub-Committee invited interested Member States and international organizations to consider submitting a proposal for a new output to the Maritime Safety Committee.

Update on the progress of S-100 implementation

17.11 Having recalled that document NCSR 13/17/4 (IHO), concerning the progress made with the development and implementation of the IHO Universal Hydrographic Data Model (S-100) intended for use in future S-100 ECDIS, had been considered under agenda item 9 (see paragraph 9.8), the Sub-Committee encouraged Member States to develop S-100 data set production and dissemination strategies in accordance with the implementation dates stated in resolution MSC.530(106)/Rev.1.

Information documents

17.12 The Sub-Committee noted the information provided in the following documents:

- .1 NCSR 13/INF.3 (Germany), sharing a study on the use of Virtual Aids to Navigation (AtoN);
- .2 NCSR 13/INF.13 (ICS), advising on free industry guidance for vessels and crews to assist when navigating in areas of unreliable satellite signals;
- .3 NCSR 13/INF.14 (IMPA), on pilot transfer arrangements;
- .4 NCSR 13/INF.19 (IAIN), reporting on the impacts of GNSS interference on maritime safety, including potential mitigation measures; and
- .5 NCSR 13/INF.22 (United Kingdom), on developments concerning the eLORAN service, an alternative terrestrial source of position, navigation and timing (PNT) for maritime navigation.

Instructions for Working Group 2

17.13 The Sub-Committee instructed Working Group 2, already established under agenda item 1 (see paragraph 1.6), taking into account decisions, comments and proposals made in plenary, if time permitted, to consider document NCSR 13/17 and advise on any necessary revisions to SN.1/Circ.243/Rev.1 and SN.1/Circ.243/Rev.2, as corrected, including addressing implementation issues, application to existing equipment and the impact on resolution MSC.191(79), as amended.

Report of the Working Group

17.14 Having considered the relevant part of the Working Group's report (NCSR 13/WP.6), the Sub-Committee agreed that the proposed amendments to SN.1/Circ.243/Rev.2 did not constitute a minor correction or update and invited interested Member States and international organizations to consider submitting a proposal for a new output to the Maritime Safety Committee.

18 REPORT TO THE MARITIME SAFETY COMMITTEE**Consideration of the report of the Sub-Committee**

18.1 The draft report of the session (NCSR 13/WP.1) was prepared by the Secretariat for consideration and adoption by the Sub-Committee.

18.2 During the meeting held on Friday, 26 June 2026, delegations were given an opportunity to provide comments on the draft report (NCSR 13/WP.1). Subsequently, a revised report (NCSR 13/WP.1/Rev.1) was published on 30 June 2026, to allow delegations to provide further editorial corrections and improvements by correspondence, including finalizing individual statements, until 7 July 2026, in accordance with paragraphs 4.37 and 4.38 of the Committees' method of work (MSC-MEPC.1/Circ.5/Rev.7).

18.3 By the above deadline, no comments on the draft report were received. The report of the Sub-Committee was then finalized by the Secretariat in consultation with the Chair.

Action requested of the Committee

18.4 The Maritime Safety Committee, at its 112th session, is invited to:

- .1 adopt, in accordance with resolution A.858(20), the following ships' routing measures and ship reporting systems to be implemented six months after their adoption:
 - .1 the amended traffic separation schemes and associated measures *Off Delaware Bay, Off New York, In the approaches to the Cape Fear River, and In the approaches to Chesapeake Bay*, and approve the draft COLREG.2 circular on Traffic separation schemes and associated measures (paragraph 3.13.1 and annex 1);
 - .2 the draft MSC resolution on mandatory ship reporting system *In the Dover Strait/Pas De Calais (CALDOVREP)* (paragraph 3.13.2 and annex 2);
 - .3 the draft resolution MSC.190(79)/Rev.1 on mandatory ship reporting system *In the Western European Particularly Sensitive Sea Area* (paragraph 3.13.3 and annex 3); and
 - .4 the draft MSC resolution on mandatory ship reporting system *In the Strait of Bonifacio Particularly Sensitive Sea Area* (paragraph 3.13.4 and annex 4);
- .2 approve the draft MSC.1/Circ.1659/Rev.1 on guidance for the dissemination of search and rescue related information through the international enhanced group call service (paragraph 6.6 and annex 5);
- .3 approve the draft IMO position on ITU WRC-27 agenda items concerning matters relating to Maritime Services for submission to ITU's CPM 27-2; and authorize NCSR 14 to submit, as an urgent matter, the final IMO position to MSC 113 for approval and subsequent submission to ITU WRC-27 (paragraph 6.14 and annex 6);
- .4 endorse the action taken by the Sub-Committee in approving SAR.7/Circ.17 on *List of documents and publications which should be held by a maritime or joint rescue coordination centre* (paragraph 7.32);
- .5 adopt the draft resolution MSC.471(101)/Rev.1 on performance standards for float-free Emergency Position-Indicating Radio Beacons (EPIRBs) operating on 406 MHz and instruct the HTW Sub-Committee to take action, as appropriate (paragraphs 8.9.1 and 8.9.2 and annex 7);
- .6 approve the draft MSC circulars on:
 - .1 guidance to establish a framework for data distribution and global IP-based connectivity for shore-based facilities and ships supporting ECDIS S-100 products (paragraph 9.12.1 and annex 8);
 - .2 operational guidance for digital route exchange (paragraph 9.12.2 and annex 9); and

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- .3 transition scheme for the introduction of digital technology for VHF voice communications (paragraph 11.8.1 and annex 10);
- .7 endorse the action taken by the Sub-Committee in approving a liaison statement to ITU on the transition scheme for the introduction of digital technology for VHF voice communications (paragraph 11.8.2);
- .8 endorse the agreement of the Sub-Committee that amendments to resolution A.424(XI) and MSC.1/Circ.1612 were not necessary to incorporate the elements of fibre optic gyro-compasses and that the development of a new set of performance standards could be an appropriate way to address the identified gaps, subject to the approval of a new output (paragraph 12.9);
- .9 adopt the draft MSC resolution on performance standards for shipborne R-mode receiver equipment and endorse the agreement of the Sub-Committee that amendments to resolution A.1046(27), as amended, to accommodate the inclusion of R-mode would be premature at this stage (paragraphs 13.7 and 13.8 and annex 11);
- .10 approve the draft MSC circular on guidance on the preparation and submission of proposals on ships' routing and ship reporting systems to the Organization and revoke MSC.1/Circ.1060, as amended, and MSC.1/Circ.1608, taking into consideration the views expressed during the discussion (paragraphs 15.4 to 15.10 and annex 12);
- .11 note the Sub-Committee's biennial status report for the 2026-2027 biennium (paragraphs 15.11 to 15.13 and annex 13) and:
- .1 endorse the completion of outputs 2.5, 2.12, 2.14, 2.15 and 2.17;
- .2 agree to the inclusion of outputs 201 and 239 from the post-biennial agenda in the 2026-2027 biennial agenda of the Sub-Committee;
- .3 extend the target completion year of output 2.18 to 2027; and
- .4 remove output 202 from the post-biennial agenda due to unpursued interest from Member States;
- .12 approve the provisional agenda for NCSR 14 (paragraph 15.14 and annex 14); and
- .13 approve the report in general.
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