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REPORT TO THE MARITIME SAFETY COMMITTEE

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1 ADOPTION OF THE AGENDA

1.1 The twelfth session of the Sub-Committee on Navigation, Communications and Search and Rescue (NCSR) was held from 13 to 22 May 2025 (Circular Letter No.4952), chaired by Mr. J. Brouwers (Kingdom of the Netherlands). The Vice-Chair, Mr. C. Cerda Espejo (Chile), 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 12/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.

Use of hybrid meeting capabilities

1.5 The Sub-Committee noted that the plenary sessions would be conducted in person, supplemented by hybrid meeting capabilities, taking into account the relevant decisions of C 132 and C 133 (C 132/D, paragraphs 17.2 and 17.3, and C 133/D, paragraph 3.5.2).

Adoption of the agenda and related matters

1.6 The Sub-Committee adopted the agenda (NCSR 12/1) and agreed to be guided in its work, in general, by the annotations contained in document NCSR 12/1/1 (Secretariat) and the arrangements and the provisional timetable in document NCSR 12/1/2 (Secretariat), as revised.

Establishment of Working Groups

1.7 In view of the work planned for this session, the Sub-Committee established Working Group 1, chaired by Mr. A. Jennings (Ireland), Working Group 2, chaired by Mr. H. Noguchi (Japan) and Working Group 3, chaired by Mr. F. Liu (China), 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.

Statements by delegations

Security situation in the Red Sea

1.8 The delegation of Oman made a statement, as set out in annex 24, referring to the security situation in the Red Sea, in particular the efforts and progress made leading to ensure the freedom of navigation and flow of international commercial shipping movement in the region.

Allegedly illegal activities

1.9 The delegation of Palau made a statement, as set out in annex 24, concerning a ship named **CONSCIENCE** (IMO No. 7211440) under the Palau registry and the actions taken by the Palau International Ship Registry.

Ship casualty

1.10 The Sub-Committee expressed its condolences to the delegation of Mexico and the families of the cadets who lost their lives in the recent casualty of the training tall ship **ARM CUAUHTÉMOC**.

2 DECISIONS OF OTHER IMO BODIES

General

2.1 The Sub-Committee noted the decisions and comments pertaining to its work made by C 132 and MSC 109, as reported in document NCSR 12/2, and took them into account in its deliberations when dealing with the relevant agenda items.

Outcome of MSC 109

2.2 The Sub-Committee noted the approval of 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.6).

Outcome of C 132 and C 133

2.3 The Sub-Committee noted that C 132 had agreed to permanently establish the utilization of hybrid capabilities to support in-person meetings and had invited other IMO organs to do the same (C 132/D, paragraph 17.2). Furthermore, C 133 had approved the draft revised Rules of Procedure of the Council, including matters related to hybrid meeting capabilities, and invited other organs of the Organization to consider amendments to their respective Rules of Procedure, with a view to harmonizing them with those of the Council to the extent possible (C 133/D, paragraph 3.8).

3 ROUTING MEASURES AND SHIP REPORTING SYSTEMS

Establishment of an area to be avoided off the coast of Réunion

3.1 The Sub-Committee considered document NCSR 12/3/1 (France), proposing the creation of an area to be avoided (ATBA) off the coast of Réunion in the Mascarene Basin aiming at reducing the risk of maritime accidents, improving the safety of navigation and protecting the marine environment, taking into account documents NCSR 12/INF.5 and NCSR 12/INF.6 (France), and the preliminary assessment provided by the Chair in document NCSR 12/WP.3, annex 1.

3.2 During consideration, the proposal was supported in principle, recommending detailed consideration by the Experts Group on Ships' Routing. Some delegations expressed concerns, in particular in relation to the partial overlapping of the proposed ATBA with a vital corridor for maritime trade, the compelling need of the measure and the need for consideration by MEPC in view of the primary objective of protecting the marine environment. In response, the proponent clarified that one of the main purposes of the proposed measure was to avoid groundings and, as such, consideration by MEPC was not required. The proponent also indicated that further clarifications in response to the observations raised in document NCSR 12/WP.3, annex 1 would be presented to the Experts Group.

3.3 In view of the support received, the Sub-Committee referred the above-mentioned documents to an Experts Group on Ships' Routeing for further consideration and advice, taking into account the observations pointed out in document NCSR 12/WP.3, annex 1, and the comments made during the discussion.

Amendments to the existing mandatory ship reporting system in the Adriatic Sea (ADRIREP)

3.4 The Sub-Committee considered document NCSR 12/3 (Albania et al.), proposing minor amendments to the existing mandatory ship reporting system in the Adriatic Sea (ADRIREP), aiming at expanding the system to improve maritime safety in the region and facilitating ship reporting requirements by using electronic means, taking into account the preliminary assessment contained in document NCSR 12/WP.3, annex 2.

3.5 Having noted further information provided by the proponents as well as general support for the proposal, the Sub-Committee referred the above-mentioned document to an Experts Group on Ships' Routeing for detailed consideration and advice, taking into account the observations contained in document NCSR 12/WP.3, annex 2.

Amendments to existing mandatory ship reporting systems in and around the coasts of European coastal States

3.6 The Sub-Committee considered document NCSR 12/3/3 (Austria et al.), proposing minor amendments to 10 existing mandatory ship reporting systems, in and around the coasts of European coastal States, aiming at enhancing the ability of coastal States to access critical information, including maritime insurance details, necessary for efficient and enhanced monitoring and management of maritime traffic, and the protection of the marine environment, taking into account the preliminary assessment contained in document NCSR 12/WP.3, annex 2.

3.7 The Sub-Committee noted, inter alia, that the proposal, if accepted, would require careful revision of each one of the 10 ship reporting systems in order to ensure that the proposed amendments were consistent with the existing reporting requirements and objectives, including consideration of amending the ship reporting systems and their corresponding MSC resolutions separately, which could require a considerable amount of work.

3.8 The Sub-Committee noted also additional information provided by one of the proponents in response to the preliminary assessment presented in document NCSR 12/WP.3, annex 2, as well as the support expressed by several delegations to refer the proposal to an Experts Group for detailed consideration.

3.9 The observer from ICS made a statement, as set out in annex 24, supported by some delegations, expressing concerns, in particular in relation to possible conflicts between the proposal and international and European law, the lack of alignment with SOLAS requirements and the methods of transmitting the information, and arguing that the proposal was not minor and would require detailed consideration.

3.10 Other delegations expressed concerns indicating that the procedure for the submission of proposals described in MSC.1/Circ.1608 had not been followed, as this was not considered to be a minor amendment and thus, the proposal should not be considered. Views were also expressed on the possibility of considering the proposal as a voluntary measure and allowing the reporting of such information in advance either by the shipowner or the ship agent.

3.11 In view of the support received by several delegations, the Sub-Committee referred the above-mentioned document to an Experts Group on Ships' Routeing for detailed consideration and advice, including the necessary amendments to each one of the mandatory ship reporting systems, taking into account the observations pointed out in document NCSR 12/WP.3 and the comments made during the discussion.

Change of chart datum and value of minimum depth in the South Åland Sea deep-water route

3.12 The Sub-Committee considered document NCSR 12/3/2 (Finland and Sweden), informing about the change of chart datum and value of minimum depth in the South Åland Sea deep-water route and proposing to issue an addendum to SN.1/Circ.272 updating the content of its information (minimum depth of water), which had been previously disseminated by SN.1/Circ.272/Add.2 in 2009.

3.13 Noting that the proposal was not seeking an amendment to the adopted deep-water route, but rather providing an update to the relevant information previously received, the Sub-Committee approved SN.1/Circ.272/Add.3 on *Routeing measures other than traffic separation schemes*, with contents set out in the annex to document NCSR 12/3/2, authorizing the Secretariat to effect any necessary editorial modifications, and invited the Committee to endorse this action.

Information documents

3.14 The Sub-Committee noted information provided in documents:

- .1 NCSR 12/INF.10 (China), concerning the review of the existing ships' routeing system and mandatory ship reporting system in the waters off the Chengshan Jiao Promontory; and
- .2 NCSR 12/INF.15 (Peru), on the intended establishment of three traffic separation schemes along the northern Pacific coast of Peru.

3.15 The Sub-Committee invited Member States and international organizations with an interest in the intended proposal presented in document NCSR 12/INF.15 to provide any comments directly to Peru. The Sub-Committee also invited Peru to consider submitting a proposal to a future session for consideration of the intended measures, should they require adoption by IMO.

Establishment of the Experts Group on Ships' Routeing

3.16 The Sub-Committee established the Experts Group on Ships' Routeing, chaired by Mr. N. Hafeez Bin Hashim (Malaysia), instructing it, taking into account decisions, comments and proposals made in plenary and the preliminary assessment in document NCSR 12/WP.3, as appropriate, to consider documents:

- .1 NCSR 12/3/1, proposing the establishment of an ATBA off the coast of Réunion, including the additional information provided in documents NCSR 12/INF.5 and NCSR 12/INF.6;

- .2 NCSR 12/3, proposing amendments to the existing mandatory ship reporting system in the Adriatic Sea (ADRIREP); and
- .3 NCSR 12/3/3 proposing amendments to existing mandatory ship reporting systems BELTREP, BONIFREP, CANREP, COPREP, FINREP, GDANREP, MANCHEREP, OUESSREP, SOUNDREP and TRANSREP, as contained in resolutions MSC.63(67), as amended by MSC.332(90); MSC.73(69); MSC.251(83); MSC.278(85); MSC.63(67), as amended by MSC.162(78); MSC.249(83); MSC.110(73), as amended by MSC.251(83); MSC.52(66), as amended by MSC.127(75) and MSC.251(83); MSC.314(88); and MSC.250(83), as amended by MSC.316(88), respectively,

and advise the Sub-Committee, as appropriate.

Report of the Experts Group

3.17 Having considered the Experts Group's report (NCSR 12/WP.4 and NCSR 12/WP.4/Add.1), the Sub-Committee took action as summarized in the following paragraphs.

3.18 The Sub-Committee agreed to the draft SN circular on routeing measures other than traffic separation schemes, as set out in annex 1, containing an ATBA *Off the coast of Réunion*, with a view to adoption of the above measure by MSC 111 in accordance with resolution A.858(20) and implementation six months after its adoption.

3.19 The Sub-Committee agreed to the draft MSC resolution on mandatory ship reporting system "In the Adriatic Sea" (ADRIREP), revising and superseding the existing mandatory ship reporting system contained in resolution MSC.139(76), annex 2, with a view to adoption by MSC 111 in accordance with resolution A.858(20) and implementation six months after its adoption.

3.20 The Sub-Committee considered the draft amendments to the existing mandatory ship reporting systems "In the Sound between Denmark and Sweden" (SOUNDREP) and "In the Storebælt (Great Belt) traffic area" (BELTREP) (resolutions MSC.314(88) and MSC.332(90), respectively), taking into account the deliberations of the Experts Group.

3.21 During the consideration, several delegations expressed the view that the deliberations of the Experts Group on this matter had not been correctly reflected in the report of the Experts Group (NCSR 12/WP.4); that the proposed amendments to the two above-mentioned systems had been thoroughly examined and agreed by the majority of delegations participating in the Experts Group; and that draft amendments to the existing mandatory ship reporting systems SOUNDREP and BELTREP should be submitted to the Committee for adoption. The delegation of Denmark made a statement in this regard, as set out annex 24, which was supported by the delegations aligned with the aforementioned views.

3.22 Other delegations were of the view that the report of the Experts Group (NCSR 12/WP.4) had correctly reflected the deliberations; that the Experts Group had not concluded on the matter; and that a number of substantial issues presented in the report of the Experts Group still required further consideration and, thus, the draft amendments to the existing mandatory ship reporting systems SOUNDREP and BELTREP should not be submitted to the Committee for adoption.

3.23 In view of the number of delegations who spoke and noting the substantial amount of support for the draft amendments in annexes 3 and 4 of document NCSR 12/WP.4 and for forwarding them to MSC for adoption, the Chair proposed that the Sub-Committee agree to the draft amendments to the existing mandatory ship reporting systems SOUNDREP and BELTREP, as presented in document NCSR 12/WP.4, annexes 3 and 4, and refer them to MSC 111 for adoption. The Chair also indicated that several of the concerns expressed by delegations when the Sub-Committee first considered the proposed amendments had been reflected in the report of the Sub-Committee.

3.24 In view of this proposal by the Chair, the delegation of the Russian Federation expressed concerns, in particular, for not having followed the agreed procedures for the consideration of amendments that were not minor, referring also to the issues identified in the report of the Experts Group (NCSR 12/WP.4, paragraph 5.3), and asked the Sub-Committee whether or not the proposed draft amendments outlined in annexes 3 and 4 to document NCSR 12/WP.4 were in contradiction with UNCLOS, SOLAS regulation V/11, resolution MSC.433(98) and MSC.1/Circ.1608, including the six-month submission deadline. The delegation of the Russian Federation, quoting rule 29 of the Rules of Procedure of the Maritime Safety Committee, requested a roll-call vote on the question. However, taking into account explanations provided by the Secretary-General with regard to the terms of reference of the NCSR Sub-Committee, in particular, the fact that giving a legal opinion on the implementation of UNCLOS was considered to be outside of the remit of the Sub-Committee, the delegation of the Russian Federation agreed not to include UNCLOS in the above question. The delegation of the Russian Federation then asked the Sub-Committee the following question: "whether the proposed amendments are in contradiction with SOLAS regulation V/11, resolution MSC.433(98) and MSC.1/Circ.1608, or not?".

3.25 The Secretariat read rule 29 of the Rules of Procedure of the Maritime Safety Committee. However, before proceeding with the conduct of the roll-call voting, the delegation of the United Kingdom rose to a point of order under rule 38 and asked to move to a procedural motion under rule 39.1.4 of the Rules of Procedure to close the debate on the question under discussion, as it was not considered to be within the remit of the Sub-Committee.

3.26 The Russian Federation appealed against the ruling of the Chair, based on rule 38 of the Rules of Procedure. The Sub-Committee proceeded with a vote according to rule 29 of the Rules by show of hands, using the "request to speak" function of IMO's hybrid system, resulting in 21 votes in favour of, and three against, which made the Chair's ruling stand.

3.27 As requested by the delegation of the United Kingdom, the Sub-Committee moved to a procedural motion under rule 39.1.4 of the Rules of Procedure for the closure of the debate on the question under discussion. The delegation of Canada supported the motion and the delegations of the Russian Federation and China were against the motion. The Sub-Committee voted, according to rule 29 of the Rules by show of hands using the "request to speak" function of IMO's hybrid system, which resulted in 24 votes in favour and three against the motion to close the debate on the question under discussion.

3.28 After the vote, the delegation of the Russian Federation, recalling the practice at the UN and IMO on the procedural motion to close the debate, pointed out that no further action could be taken under this agenda item as the result of the vote had been in favour of closing the debate.

3.29 Following a short break to allow consultations, the Sub-Committee, recalling the Chair's summary (see paragraph 3.23), agreed to the draft amendments to the existing mandatory ship reporting systems "In the Sound between Denmark and Sweden" (SOUNDREP) and "In the Storebælt (Great Belt) traffic area" (BELTREP), as set out in

annexes 3 and 4, respectively, for submission to MSC 111 with a view to adoption, and requested the Secretariat to prepare the draft MSC resolutions containing the revised mandatory ship reporting systems.

3.30 The delegation of the Russian Federation reserved its position on the decision taken, recalling all the concerns expressed against the proposed amendments during the considerations of the Sub-Committee, and requested the Secretariat to provide legal analysis to the Committee indicating whether the proposed amendments were in contradiction with UNCLOS, SOLAS regulation V/11, resolution MSC.433(98) or MSC.1/Circ.1608.

4 UPDATES TO THE LRIT SYSTEM

Developments on LRIT since NCSR 11

4.1 The Sub-Committee noted the information provided in document NCSR 12/4 (Secretariat) on relevant developments on LRIT since NCSR 11, including the functioning and operation of system components, testing activities and the upcoming renewal of Public Key Infrastructure (PKI) certificates, along with recommendations to reduce the administrative and operational burden.

4.2 Following consideration, the Sub-Committee requested the Secretariat to:

- .1 conduct, in consultation with the International LRIT Data Exchange (IDE) and the LRIT Coordinator, a revision of the *Protocols and arrangements for the prototype, developmental, integration and modification testing phases of the LRIT system* (MSC.1/Circ.1294/Rev.6, annex, annex 1), with a view to simplifying and streamlining the testing procedures and reducing the associated administrative and operational burden to LRIT components, for consideration at a future session of the Sub-Committee; and
- .2 implement the necessary changes in the LRIT Data Distribution Plan (DDP) module of the Global Integrated Shipping Information System (GISIS) to enable SOLAS Contracting Governments to directly update the information concerning their respective designated national points of contact for LRIT-related matters into the module.

Status of the International LRIT Data Exchange

4.3 The Sub-Committee noted the information provided in document NCSR 12/INF.16 (European Commission) on the operational status of the IDE in the production environment from 1 January to 31 December 2024.

Report from the LRIT Operational Governance Body

4.4 The Sub-Committee noted the information provided in document NCSR 12/4/2 (Secretariat) containing a report from the LRIT Operational Governance Body (OGB) on matters concerning the continuous operation of the LRIT system, including issues related to the LRIT system security, notifications from the LRIT Coordinator and the outcome of considerations on issues emanating from NCSR 11 (NCSR 11/19, paragraphs 4.2 and 4.11).

Use of date and time parameters in LRIT messages

4.5 Having considered the report of the OGB, the Sub-Committee endorsed the recommendations regarding the use of date and time parameters in LRIT messages and the handling of LRIT information with wrong global navigation satellite systems (GNSS) data (NCSR 12/4/2, paragraphs 13 and 14), noting in particular that:

- .1 DCs should continuously monitor the information received from ships associated with them and report any identified shipborne equipment malfunctions to the flag Administration for appropriate resolution; and
- .2 LRIT Data Users that identify wrong GNSS data from a particular ship should notify the relevant flag Administration (through the designated national LRIT points of contact) in order to investigate and rectify the issue with the LRIT shipborne terminal.

Performance review and audit of the LRIT system

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

- .1 NCSR 12/4/3 (IMSO), related to audits of DCs and the IDE, concluded between 1 April 2024 and 28 February 2025, along with the corresponding summary audit reports, which were made available through the DDP module GISIS, noting also additional information provided orally by the observer from IMSO indicating that all pending audit reports had been completed;
- .2 NCSR 12/4/1 (IMSO), on the overall performance of the LRIT system between 1 February 2024 and 31 January 2025, including recommendations to improve efficiency, effectiveness and security of the LRIT system, in particular, that the overall performance of the LRIT system was found generally compliant with the audit criteria during the above-mentioned reporting period; and
- .3 NCSR 12/INF.4 (IMSO), on the scale of charges to be levied by the LRIT Coordinator during 2025.

4.7 In this regard, the Sub-Committee urged SOLAS Contracting Governments participating in the LRIT system to:

- .1 keep the information updated in the DDP module of GISIS with respect to their designated national points of contact and geographical areas (i.e. internal waters, territorial sea, seaward area of 1,000 NM and custom coastal areas);
- .2 consider the effects of the GPS rollover phenomenon on the LRIT system and ensure that the LRIT terminals fitted on ships flying their flag were not affected; and
- .3 ensure that all DCs cooperate with the LRIT Coordinator and fulfil their financial obligations with respect to audits in a timely manner.

4.8 During the consideration, the Sub-Committee noted additional information and comments provided by some delegations concerning findings and observations emanating from the audits of DCs, the importance of LRIT information for search and rescue (SAR) as well as for security forces operating in waters of the Gulf of Aden and the western Indian Ocean, and training and capacity-building activities on LRIT.

4.9 With regard to training and capacity-building activities, the Sub-Committee recalled that Member States requiring such assistance could submit requests to IMO following existing procedures.

Other matters

4.10 In view of the comments provided by some delegations on documents concerning LRIT submitted under agenda item 19 on "Any other business", the Chair recalled that those issues should not be considered under this output based on its scope as agreed by MSC 109 (MSC 109/22, paragraph 19.8) and invited delegations to raise those comments when considering the respective documents under agenda item 19.

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

Report of the IMO NAVTEX Coordinating Panel

5.1 The Sub-Committee noted the information provided in document NCSR 12/5 (Chair of the IMO NAVTEX Coordinating Panel) presenting a summary of issues addressed by the IMO NAVTEX Coordinating Panel and its actions and activities since NCSR 11, including the list of inoperative NAVTEX stations provided in annex 1 to the above-mentioned document, and reminded Member States of the actions extended to them by NCSR 11 (NCSR 11/19, paragraph 5.2). In addition, the Sub-Committee encouraged Member States to take into account the provisions of the *NAVTEX Manual* (MSC.1/Circ.1403/Rev.2) before initiating any changes to stations' identity, function or location.

NAVDAT implementation

5.2 Having recalled the decisions of NCSR 11 (NCSR 11/19, paragraph 8.11), the Sub-Committee considered the actions emanating from the IMO NAVTEX Coordinating Panel (NCSR 12/5) and the Joint IMO/ITU Experts Group on Maritime Radiocommunication Matters (NCSR 12/6) concerning:

- .1 initial proposals related to the introduction and administration of a global NAVDAT system, renaming of the IMO NAVTEX Coordinating Panel and draft revision of its terms of reference (NCSR 12/5, annex 3); and
- .2 progress made with the review of the draft NAVDAT manual and consideration of issues identified in the draft revised road map regarding the introduction of NAVDAT (NCSR 12/6, annexes 8 and 9), taking into account comments and proposals presented in documents NCSR 12/5/5 (China, France and Ireland) and NCSR 12/5/7 (United Kingdom).

5.3 The Sub-Committee discussed, in particular, the proposed modifications to the NAVDAT Manual and the need for alignment with existing GMDSS services, recalling that IHO and WMO should be invited to review the manual before its finalization. In addition, the proposed expansion and renaming of the IMO NAVTEX Coordinating Panel to also address NAVDAT coordination issues was supported in general.

5.4 Following consideration, the Sub-Committee referred the above-mentioned documents to Working Group 3 for further consideration and advice, and instructed it as indicated in paragraph 5.13.

Report of the IMO Enhanced Group Call Coordinating Panel

5.5 The Sub-Committee considered the information provided in document NCSR 12/5/6 (Chair of the IMO Enhanced Group Call Coordinating Panel), presenting a summary of the considerations made at a meeting of the Panel held remotely on 14 November 2024, and took the following actions:

- .1 encouraged Member States to review and keep the information updated in the Enhanced Group Call (EGC) services section of the GMDSS Master Plan module of GISIS, and to contact the Secretariat (NCSR@imo.org) if any assistance was required or in case of any proposals for future modifications of this section;
- .2 requested the Secretariat to consider the possibility of undertaking online training courses on the above-mentioned section and report back to a future session of the Sub-Committee, and undertake consultations and submit any proposals for modifications of said section for consideration by the Sub-Committee, as necessary; and
- .3 urged Member States to ensure that METAREAs and NAVAREAs Coordinators that had completed the required training and testing declare the Iridium SafetyCast service operational as soon as possible; and those not presently conducting testing or trial activities to progress the implementation of such service.

Dissemination of MSI and SAR-related information

5.6 Having recalled the decisions of NCSR 11 (NCSR 11/19, paragraph 5.23.2), the Sub-Committee noted the considerations of the Joint IMO/ITU Experts Group on the development of draft amendments to the SOLAS Convention to state clearly the requirement for dissemination of maritime safety information (MSI) and SAR-related information through all operational recognized mobile satellite services (RMSSs); and on matters related to the draft revision of resolution A.707(17) and Recommendation ITU-T D.90 (NCSR 12/6, paragraphs 2.6 and 2.7).

5.7 The Sub-Committee considered the options to amend the SOLAS Convention and related instruments that might require consequential amendments prepared by the Joint IMO/ITU Experts Group (NCSR 12/6, annex, paragraphs 7.1 to 7.4, and annexes 5 to 7), taking into account documents NCSR 12/5/4 (Australia, Canada and New Zealand) and NCSR 12/5/8 (Austria et al.), which provided comments on the options presented by the Joint IMO/ITU Experts Group.

5.8 Following consideration, the Sub-Committee referred the above-mentioned documents to Working Group 3 for further review and finalization of the amendments to the SOLAS Convention, including any necessary related instruments.

Reports of RMSS providers

5.9 The Sub-Committee noted the information provided in documents NCSR 12/5/2 and NCSR 12/5/3 (IMSO) concerning the annual reports on RMSS providers' public service obligations, as overseen by IMSO, in particular that the availability of all GMDSS services provided by the RMSS providers during the reporting period was within the requirements of resolution A.1001(25).

Report on the Cospas-Sarsat system

5.10 The Sub-Committee noted the information provided in document NCSR 12/5/1 (Cospas-Sarsat) presenting a status report on the Cospas-Sarsat system, and reminded Member States of the actions and invitations that had been extended to them at NCSR 11 (NCSR 11/19, paragraphs 5.9 and 5.10). In addition, the Sub-Committee invited Member States to:

- .1 make rescue coordination centres (RCCs) aware that some maritime survivor locating devices (MSLDs) being advertised as being "personal locator beacons" (PLBs) might differ from Cospas-Sarsat personal locator beacons and might not have the capability to transmit a 406 MHz satellite signal; and
- .2 encourage RCCs to develop appropriate national procedures for prosecuting distress alerts from tracking emergency locator transmitters (ELT(DT)s), using the guidance material provided in the IAMSAR Manual (2025 edition) and in COMSAR.1/Circ.59/Rev.1, in particular to establish communication protocols between aeronautical and maritime RCCs and aviation authorities, as necessary.

5.11 A delegation expressed concerns about the continuous high rate of false alerts and the impact of homing signals from 406 MHz distress beacons on aviation, and invited Cospas-Sarsat to consider including statistics on false alerts in future reports. In response, the observer from Cospas-Sarsat indicated that the number of false alerts had not decreased during recent years and that it was important that States continue to educate users about the correct operation of beacons. In this regard, the Sub-Committee noted the information about a regional workshop conducted recently in Jeddah, Saudi Arabia.

World-Wide Navigational Warning Service

5.12 The Sub-Committee noted the information provided in document NCSR 12/INF.9 (IHO) concerning the outcomes of the sixteenth session and details of the seventeenth session of the IHO World-Wide Navigational Warning Service Sub-Committee.

Instructions for Working Group 3

5.13 The Sub-Committee instructed Working Group 3, already established under agenda item 1 (see paragraph 1.7), taking into account decisions, comments and proposals made in plenary, to:

- .1 consider NAVDAT implementation issues and advise the Sub-Committee, as appropriate, on the following:
 - .1 the road map on the issues to be considered regarding the introduction of the NAVDAT service (NCSR 12/6, annex 9);
 - .2 the draft NAVDAT manual (NCSR 12/6, annex 8, taking into account documents NCSR 12/5/5 and NCSR 12/5/7); and

- .3 the comments of the Chair of the IMO NAVTEX Coordinating Panel concerning the introduction and implementation of the NAVDAT service (NCSR 12/5, annex 2);
- .2 prepare a draft MSC circular with revised terms of reference of the IMO NAVTEX Coordinating Panel, along with any other necessary guidance or information (NCSR 11/5, annex 3), and advise the Sub-Committee on the name of such panel; and
- .3 consider the draft amendments to the SOLAS Convention, including any necessary consequential amendments to related instruments (NCSR 12/6, annexes 5 to 7), to clearly state the requirement for dissemination of MSI and SAR-related information through all operational RMSSs, taking into account the proposals in documents NCSR 12/5/4 and NCSR 12/5/8, and advise the Sub-Committee, as appropriate.

Report of the Working Group

5.14 Having considered the relevant part of the Working Group's report (NCSR 12/WP.7), the Sub-Committee took action as indicated in the following paragraphs.

NAVDAT implementation

5.15 The Sub-Committee instructed the Joint IMO/ITU Experts Group, at its next meeting, to consider the updated road map on the issues to be considered regarding the introduction of the NAVDAT service (NCSR 12/WP.7, annex 1) and advise the Sub-Committee, as appropriate.

5.16 The Sub-Committee noted the agreement of the Working Group concerning the mapping of message priorities between NAVTEX and NAVDAT, in particular the table for the mapping of message priorities between NAVTEX and NAVDAT systems and the proposed amendments to the draft NAVDAT manual (NCSR 12/WP.7, paragraph 7 and annexes 2 and 3, respectively).

5.17 The Sub-Committee invited:

- .1 IHO and WMO to further review the draft NAVDAT manual, as set out in document NCSR 12/6, annex 8, taking into account the Working Group's agreements in paragraph 5.16 above, and advise the Sub-Committee, as appropriate; and
- .2 the Chair of the IMO NAVTEX Coordinating Panel to provide further information on the introduction and implementation of NAVDAT, if any, to future sessions of the Sub-Committee.

5.18 The Sub-Committee agreed, in principle, to the draft MSC circular on IMO Terrestrial Broadcast Services Coordinating Panel, including its terms of reference (NCSR 12/WP.7, annex 4), with a view to approval by the Committee at a future session together with the revision of the NAVTEX Manual.

Dissemination of MSI and SAR-related information

5.19 The Sub-Committee agreed to the draft amendments to SOLAS regulations IV/5, V/4 and V/5 concerning the requirement for dissemination of MSI and SAR-related information through all operational RMSSs, together with the associated check/monitoring sheet and record format for the process of amending the SOLAS Convention and related mandatory instruments, and the checklist for the identification of capacity-building implications, as set out in annex 5, and endorsed the justification for submission of the above-mentioned draft amendments to MSC 110 for approval, as an urgent matter, with a view to adoption by MSC 111 and entry into force on 1 January 2028.

5.20 The Sub-Committee also agreed to the draft resolution MSC.509(105)/Rev.2 on provision of radio services for the Global Maritime Distress and Safety System (GMDSS), as set out in annex 6, with a view to approval, in principle, at MSC 110 and subsequent adoption at MSC 111 together with the adoption of the aforementioned amendments to SOLAS.

5.21 The Sub-Committee noted the Working Group's discussion on instruments that might require consequential amendments to clarify the dissemination of MSI and SAR-related information through all operational RMSSs and instructed the Joint IMO/ITU Experts Group, at its next meeting, to consider the need for amendments to MSC.1/Circ.1659 on *Guidance for the dissemination of search and rescue related information through the international enhanced group call 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 the twentieth meeting of the Joint IMO/ITU Experts Group on Maritime Radiocommunication Matters (Joint IMO/ITU Experts Group) (NCSR 12/6 (Secretariat)), which was held at IMO Headquarters from 7 to 11 October 2024, chaired by Mr. A. Jennings (Ireland), together with related documents, and took action on matters pertaining to this agenda item,¹ as summarized in the following paragraphs.

ITU World Radio Conferences

6.2 The Sub-Committee noted the Joint IMO/ITU Experts Group's considerations on the outcome of ITU World Radiocommunication Conference 2023 (WRC-23) and considered the preliminary draft IMO position on relevant WRC-27 agenda items concerning matters relating to Maritime Services (NCSR 12/6, annex, annex 1), taking into account document NCSR 12/6/5 (Japan), expressing support for the draft IMO position on WRC-27 agenda item 1.2 concerning radars operating in the frequency band 13.75-14 GHz, which was supported by some delegations. The Sub-Committee noted also the views of some delegations that the matter related to the introduction of digital technology for VHF voice communications should be added in the draft IMO position under WRC-27 agenda item 10 for inclusion in the agenda of WRC-31.

6.3 Noting that the draft IMO position should be finalized at this session for approval by MSC 111 and subsequent submission to the ITU's Conference Preparatory Meeting (CPM-2), planned to be held during the second quarter of 2027, the Sub-Committee referred it to Working Group 1 for review and finalization, taking into account document NCSR 12/6/5.

¹ Certain parts of document NCSR 12/6 were considered under agenda item 5.

WRC-27 agenda item 1.12

6.4 The Sub-Committee noted the Joint IMO/ITU Experts Group's preliminary consideration of a liaison statement from ITU-R Working Party 4C (WP 4C) (NCSR 12/6/2 (Secretariat)) concerning WRC-27 agenda item 1.12 and considered the draft reply liaison statement (NCSR 12/6, annex, annex 2), taking into account document NCSR 12/6/4 (France), providing modifications to the draft reply liaison statement prepared by the Group.

6.5 Following consideration, the Sub-Committee referred the draft reply liaison statement to Working Group 1 for review and finalization, taking into account document NCSR 12/6/4.

Revision of Recommendation ITU-R M.1371-5

6.6 Having recalled the decisions of NCSR 11 (NCSR 11/19, paragraph 6.22.1), the Sub-Committee noted the Joint IMO/ITU Experts Group's preliminary consideration of a liaison statement from ITU-R Working Party 5B (WP 5B) (NCSR 12/6/3 (Secretariat)) concerning the revision of Recommendation ITU-R M.1371-5 on *Technical characteristics for an automatic identification system using time division multiple access in the VHF maritime mobile frequency band* and considered the draft reply liaison statement prepared by the Group (NCSR 12/6, annex, annex 3), taking into account information provided orally by ITU on relevant outcomes emanating from the WP 5B meeting conducted from 29 April to 8 May 2025, as well as concerns expressed by some delegations on certain matters requiring further consideration.

6.7 Following consideration, the Sub-Committee referred the draft reply liaison statement to Working Group 1 for review and finalization, taking into account the outcomes of the latest meeting of WP 5B and comments expressed.

Blockage of the automatic identification system signal reception

6.8 Having recalled the decisions of NCSR 11 (NCSR 11/19, paragraph 6.22.2), the Sub-Committee noted the Joint IMO/ITU Experts Group's consideration on blockage of the automatic identification system (AIS) signal reception by the operation of VHF radiotelephony nearby and considered the draft liaison statement prepared by the Group (NCSR 12/6, annex, annex 4), taking into account document NCSR 12/6/6 (Japan), proposing further discussion on the impact of the AIS blockage issue on the safety of navigation, and the information provided orally by ITU on relevant outcomes emanating from the recent WP 5B meeting.

6.9 Following consideration, the Sub-Committee referred the draft reply liaison statement to Working Group 1 for review, taking into account document NCSR 12/6/6 and the outcomes of the latest WP 5B meeting, and to advise the Sub-Committee, as appropriate.

Draft modifications to MSC.1/Circ.1657

6.10 Having noted the Joint IMO/ITU Experts Group's discussions on discrepancies identified between the *Procedure for responding to DSC distress alerts by ships* (MSC.1/Circ.1657) and Recommendation ITU-R M.541-11 on *Operational procedures for the use of digital selective calling equipment in the maritime mobile service*, the Sub-Committee referred the draft modifications to MSC.1/Circ.1657 prepared by the Group (NCSR 12/6, annex, annex 10) to Working Group 1 for review and finalization, including the consideration of any consequential amendments to other instruments.

Other matters

6.11 The Sub-Committee noted a liaison statement from ITU-R WP 5B (NCSR 12/6/1 (Secretariat)), addressed to IMO for information only, concerning manufacturer IDs for devices using a free-form number identity.

Next meeting of the Joint IMO/ITU Experts Group

6.12 The Sub-Committee noted that MSC 109 (MSC 109/22, paragraphs 19.8 and 19.26, respectively):

- .1 had agreed that IMO-related matters considered by the Joint IMO/ITU Experts Group should remain within the scope of existing outputs, unless instructed otherwise by the NCSR Sub-Committee or the Committee; and
- .2 had authorized NCSR 12 to initiate intersessional work in 2025, through the Joint IMO/ITU Experts Group, on the output concerning "Development of a transition scheme for the introduction of digital technology for very high frequency (VHF) voice communications".

6.13 In this regard, the Sub-Committee agreed to the holding of the twenty-first meeting of the Experts Group during the week of 6 to 10 October 2025, at IMO Headquarters in London, and instructed Working Group 1 to prepare draft terms of reference for that meeting, taking into account the above-mentioned instructions of MSC 109, as well as the relevant provisions of the Committees' method of work (MSC-MEPC.1/Circ.5/Rev.6), and advise on the number of days required for the meeting.

Instructions for Working Group 1

6.14 The Sub-Committee instructed Working Group 1, already established under agenda item 1 (see paragraph 1.7), 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 Services (NCSR 12/6, annex, annex 1), taking into account document NCSR 12/6/5;
- .2 finalize the draft reply liaison statement to WP 4C on WRC-27 agenda item 1.12 (NCSR 12/6, annex, annex 2), taking into account document NCSR 12/6/4;
- .3 finalize the draft reply liaison statement to WP 5B on revision of Recommendation ITU-R M.1371-5 (NCSR 12/6, annex, annex 3), taking into account the relevant outcomes of the WP 5B meeting conducted from 29 April to 8 May 2025;
- .4 consider the draft liaison statement to WP 5B on blockage of the AIS signal reception by the operation of VHF radiotelephony nearby (NCSR 12/6, annex, annex 4), taking into account document NCSR 12/6/6 and the relevant outcomes of the WP 5B meeting conducted from 29 April to 8 May 2025, and advise the Sub-Committee, as appropriate;
- .5 prepare a revision of MSC.1/Circ.1657 on *Procedure for responding to DSC distress alerts by ships*, taking into account the proposed modifications identified by the Experts Group (NCSR 12/6, annex, annex 10) as a result of discrepancies with Recommendation ITU-R M.541-11, and advise the Sub-Committee on any consequential amendments to other instruments; and

- .6 prepare draft terms of reference for the twenty-first meeting of the Joint IMO/ITU Experts Group, provisionally scheduled to take place during the week of 6 to 10 October 2025, taking into account the instructions of 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.6), and advise the Sub-Committee on the number of days required for the meeting.

Report of the Working Group

6.15 Having considered the relevant part of the Working Group's report (NCSR 12/WP.5), the Sub-Committee took action as summarized in the following paragraphs.

Draft IMO position on relevant ITU WRC-27 agenda items

6.16 The Sub-Committee agreed to the draft IMO position on ITU WRC-27 agenda items concerning matters relating to Maritime Services, as set out in annex 7, and invited MSC 111 to approve it for subsequent submission to ITU's CPM 27-2. In doing so, the Sub-Committee noted that the final IMO position would be prepared by NCSR 13 and submitted to MSC 112 for approval and subsequent submission to ITU WRC-27.

Liaison statements to ITU

6.17 The Sub-Committee approved the liaison statements to ITU on WRC-27 agenda item 1.12, and Revision of Recommendation ITU-R M.1371-5 (NCSR 12/WP.5, annexes 2 and 3, respectively); requested the Secretariat to convey them to ITU, and invited the Committee to endorse the action taken.

Blockage of the AIS signal reception

6.18 The Sub-Committee noted the consideration of the Working Group concerning the blockage of the AIS signal reception by the operation of VHF radiotelephony nearby, in particular that the Group did not support communicating a liaison statement to ITU on this matter.

Revision of MSC.1/Circ.1657

6.19 The Sub-Committee agreed to the draft MSC.1/Circ.1657/Rev.1 on procedure for responding to DSC distress alerts by ships, as set out in annex 8, with a view to approval by MSC 111, and:

- .1 instructed the ICAO/IMO Joint Working Group, when preparing amendments to the next edition of the IAMSAR Manual, to update the relevant flow diagram concerning reception of DSC distress alerts (2022 edition, Volume III, section 6, page 3); and
- .2 requested the Secretariat, when preparing the next edition of the GMDSS Manual, to update the relevant flow diagram concerning reception of DSC distress alerts (2024 edition, page 38).

Next meeting of the Joint IMO/ITU Experts Group

6.20 The Sub-Committee approved the terms of reference for the twenty-first meeting of the Joint IMO/ITU Experts Group (NCSR 12/WP.5, annex 5), and agreed that five days were required for the meeting (see also paragraph 17.20.1).

7 DEVELOPMENT OF GLOBAL MARITIME SAR SERVICES, INCLUDING HARMONIZATION OF MARITIME AND AERONAUTICAL PROCEDURES AND AMENDMENTS TO THE IAMSAR MANUAL**Outcome of MSC 109**

7.1 The Sub-Committee noted the outcomes and instructions of MSC 109 on matters related to this agenda item, in particular in relation to:

- .1 the development of the Maritime Autonomous Surface Ships (MASS) Code, including chapter 23 (Search and rescue), noting that the invitation to relevant sub-committees to review the Code would take place after finalization and adoption of the non-mandatory MASS Code (MSC 109/22, paragraphs 5.6 and 5.47);
- .2 the referral of document MSC 109/13/7 (Colombia), containing proposed amendments to the IAMSAR Manual, to the NCSR Sub-Committee for consideration (MSC 109/22, paragraph 13.7);
- .3 the approval of SN.1/Circ.345 on *Difficulties and risks involved in the setting of radar displays to correctly visualize radar SAR transponder (SART) signals* (MSC 109/22, paragraphs 13.22 to 13.24);
- .4 the instruction to the NCSR Sub-Committee to give initial consideration of the appropriateness and effectiveness of the provisions of SOLAS regulation V/7.3 (Search and rescue services) (MSC 109/22, paragraph 15.11.5.1); and
- .5 the Committee's decision that IMO-related matters considered by the ICAO/IMO Joint Working Group should remain within the scope of existing outputs, unless instructed otherwise by the NCSR Sub-Committee or the Committee (MSC 109/22, paragraph 19.8.2).

Report of the ICAO/IMO Joint Working Group

7.2 The Sub-Committee considered the report of the thirty-first meeting of the ICAO/IMO Joint Working Group on Harmonization of Aeronautical and Maritime Search and Rescue (ICAO/IMO Joint Working Group) (NCSR 12/7 (Secretariat)), which was held in Dublin, Ireland, from 4 to 8 November 2024, chaired by Mr. D. Edwards (United States), and took action as summarized in the following paragraphs.

Preparation of amendments to the IAMSAR Manual

7.3 The Sub-Committee noted the work on the preparation of amendments to the IAMSAR Manual for its 2028 edition by the ICAO/IMO Joint Working Group, including radar SART matters, and considered whether work on the following issues could or should be progressed as an amendment to the IAMSAR Manual, based on the scope of output 1.34 agreed at MSC 109 (see document MSC 109/13/1, annex):

- .1 psychology of emergency, including the possibility of developing a draft circular on this subject;
- .2 optimizing homing operations for 406 MHz distress beacon and AIS signals; and
- .3 submarines and passenger submersible craft and related SAR issues.

7.4 Having noted additional information provided by some delegations on the scope of the work related to the above-mentioned issues being addressed by the ICAO/IMO Joint Working Group, the Sub-Committee referred the matters to Working Group 3 for further consideration and advice.

Remotely piloted aircraft (RPA) and other autonomous craft

7.5 The Sub-Committee confirmed the understanding of the ICAO/IMO Joint Working Group that SAR services were not required to conduct searches for craft with no persons on board, and that distress beacons should not be used for alerting on craft with no persons on board.

Assisting Member States in implementing SAR services

7.6 The Sub-Committee noted the considerations of the ICAO/IMO Joint Working Group on matters related to assisting States in implementing improvements in SAR service quality, capacity and capability, including the recent activities conducted by different Member States, ICAO and IMO.

Development of a strategic outlook for the global SAR operating environment

7.7 The Sub-Committee considered the discussions of the ICAO/IMO Joint Working Group on the development of a strategic outlook for the global SAR operating environment, including State and industry SAR system initiatives, identification of new and emerging issues, global SAR system implementation status and SAR system data and trends, in particular to what extent the work should or could be progressed under the scope of output 1.34 agreed at MSC 109.

7.8 Noting the additional information by a delegation concerning the intention of the work to be conducted by the ICAO/IMO Joint Working Group on this issue in line with IMO procedures, the Sub-Committee referred the matter to Working Group 3 for further consideration and advice.

Revocation of COMSAR/Circ.3

7.9 The Sub-Committee agreed to the revocation of COMSAR/Circ.3 on *Relations between NAVAREA Coordinators and Rescue Coordination Centres*, noting that the content was considered to be superseded by the *Guidance for the dissemination of search and rescue related information through the international enhanced group call service* (MSC.1/Circ.1659) and invited MSC 111 to endorse the action.

Next meeting of the ICAO/IMO Joint Working Group

7.10 Having noted the list of pending and new action items for the ICAO/IMO Joint Working Group (NCSR 12/7, annex, appendix 2) and the offer of Australia to host JWG 32 in Sydney provisionally planned from 3 to 7 November 2025, the Sub-Committee referred the draft provisional agenda for JWG 32 (NCSR 12/7, annex, appendix 5) to Working Group 3 for further

consideration and advice, including the preparation of any necessary instructions for the ICAO/IMO Joint Working Group concerning the scope of the work that should be conducted by JWG 32, taking into account the instructions of MSC 109 (see paragraph 7.1.5) and the relevant provisions of the *Committees' method of work* (MSC-MEPC.1/Circ.5/Rev.6).

Proposed draft amendments to the IAMSAR Manual

7.11 The Sub-Committee considered document MSC 109/13/7 (Colombia), proposing draft amendments to the IAMSAR Manual, and, noting support for the proposal, referred it to Working Group 3 for further consideration and advice.

Draft guidance for entering and updating information on search and rescue services into the Global SAR Plan

7.12 Recalling the decisions of NCSR 11 (NCSR 11/19, paragraph 7.26), the Sub-Committee considered document NCSR 12/7/1 (Secretariat), presenting consolidated draft guidance for entering and updating information on search and rescue services into the Global SAR Plan.

7.13 Having noted support in general for the proposal, the Sub-Committee referred the draft guidance to Working Group 3 for review and finalization.

Initial review of the appropriateness and effectiveness of SOLAS regulation V/7.3

7.14 The Sub-Committee recalled the decisions of MSC 109 (see paragraph 7.1.4) and considered the review of the appropriateness and effectiveness of the provisions of SOLAS regulation V/7.3 (Search and rescue services), taking into account the background information provided in document NCSR 12/7/2 (Secretariat).

7.15 Having noted general support to initiate such a review, the Sub-Committee referred the matter to Working Group 3 for further consideration and advice.

Proposal to initiate the review of resolutions A.225(VII) and A.616(15)

7.16 The Sub-Committee considered document NCSR 12/7/3 (Australia), proposing to initiate a review of resolutions A.225(VII) and A.616(15), which were referenced within SOLAS regulation V/7.1 (Search and rescue services), in order to update content that became obsolete due to changes and improvements in technology and SAR practices which had evolved since those resolutions were adopted.

7.17 Noting that the proposed action would require approval of a new output in accordance with the *Committees' method of work* (MSC-MEPC.1/Circ.5/Rev.6), the Sub-Committee invited interested Member States and international organizations to consider submitting a proposal to the Maritime Safety Committee.

Information documents

7.18 The Sub-Committee noted the information provided in documents NCSR 12/INF.11 and NCSR 12/INF.13 (United States) concerning activities of the Amver programme and on various national and regional activities for SAR in the polar regions, respectively.

Instructions for Working Group 3

7.19 The Sub-Committee instructed Working Group 3, already established under agenda item 1 (see paragraph 1.7), taking into account decisions, comments and proposals made in plenary, to:

- .1 consider the work carried out by the ICAO/IMO Joint Working Group on the following matters for inclusion into the IAMSAR Manual:
 - .1 psychology of emergency, including the possibility of developing a draft circular on the subject (NCSR 12/7, paragraph 2.4);
 - .2 optimizing homing operations for 406 MHz distress beacon and AIS signals (NCSR 12/7, paragraph 2.7); and
 - .3 guidance on submarines and passenger submersible craft and related SAR issues (NCSR 12/7, paragraph 2.9),and advise the Sub-Committee as appropriate;
- .2 consider the work carried out by the ICAO/IMO Joint Working Group on the development of a strategic outlook for the global SAR operating environment (NCSR 12/7, paragraph 2.6), and advise the Sub-Committee as appropriate;
- .3 consider the draft provisional agenda for the thirty-second meeting of the ICAO/IMO Joint Working Group (NCSR 12/7, paragraph 2.7) and provide any necessary advice and instructions concerning the scope of the work that should be conducted by JWG 32, taking into account the instructions of MSC 109 (MSC 109/22, paragraph 19.8) and the *Committees' method of work* (MSC-MEPC.1/Circ.5/Rev.6);
- .4 consider document MSC 109/13/7 (Colombia) proposing amendments to IAMSAR Manual Volume I and advise the Sub-Committee, as appropriate;
- .5 review and finalize the draft COMSAR circular on guidance for entering and updating information on search and rescue services into the Global SAR Plan and on how to get access to the information for operational use (NCSR 12/7/1); and
- .6 give initial consideration to the review of the appropriateness and effectiveness of SOLAS regulation V/7.3 (Search and rescue services), taking into account the background information provided in document NCSR 12/7/2, and advise the Sub-Committee, as appropriate.

Report of the Working Group

7.20 Having considered the relevant part of the Working Group's report (NCSR 12/WP.7), the Sub-Committee took action as summarized in the following paragraphs.

Work carried out by the ICAO/IMO Joint Working Group

7.21 The Sub-Committee noted the Working Group's discussion on the work carried out by the ICAO/IMO Joint Working Group in relation to amendments to the IAMSAR Manual and instructed the Joint Working Group to:

- .1 continue the work on psychology of emergency, optimizing homing operations for 406 MHz distress beacon and AIS signals, and guidance on submarines and passenger submersible craft and related SAR issues, and advise the Sub-Committee, as appropriate; and
- .2 consider the development of an IMO circular on psychology of emergency once the related amendments to the IAMSAR Manual had been finalized.

7.22 The Sub-Committee invited Member States to review the application of the homing capability of the SAR units for 406 MHz distress beacon and AIS signals in SAR operations and contribute to the work of the ICAO/IMO Joint Working Group accordingly.

7.23 The Sub-Committee noted the Working Group's consideration on a general overview of SAR issues and instructed the ICAO/IMO Joint Working Group to continue the work on the refinement of the general overview of SAR issues initiative within the scope of its work, and advise the Sub-Committee, as appropriate.

Proposed amendments to the IAMSAR Manual

7.24 The Sub-Committee instructed the ICAO/IMO Joint Working Group to further consider the proposal to amend IAMSAR Manual, Volume I to include a SAR communications and information management guide and a guide on periodic verification of contacts (document MSC 109/13/7), and advise the Sub-Committee, as appropriate.

Next meeting of the ICAO/IMO Joint Working Group

7.25 The Sub-Committee approved the updated provisional agenda for the thirty-second meeting of the ICAO/IMO Joint Working Group (NCSR 12/WP.7, annex 7) (see also paragraph 17.20.2).

Guidance for entering and updating information on SAR services into the Global SAR Plan

7.26 The Sub-Committee approved COMSAR.1/Circ.61 on *Guidance for entering and updating information on search and rescue services into the Global SAR Plan and on how to get access to the information for operational use* and invited the Committee to endorse the action. In this regard, the Sub-Committee requested the Secretariat to consider the development of a technical validation tool in the Global SAR Plan module of GISIS, and advise the Sub-Committee, as appropriate.

Initial review of the appropriateness and effectiveness of SOLAS regulation V/7.3

7.27 The Sub-Committee noted the Working Group's initial consideration on the appropriateness and effectiveness of SOLAS regulation V/7.3 (Search and rescue services) and invited the Committee to include 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.

8 DEVELOPMENT OF PROCEDURES AND REQUIREMENTS FOR THE RECOGNITION OF AUGMENTATION SYSTEMS IN THE WORLDWIDE RADIONAVIGATION SYSTEM

8.1 Having recalled the decisions of MSC 107 related to the inclusion of this output (MSC 107/20, paragraphs 17.56 to 17.58), the Sub-Committee considered the following documents:

- .1 NCSR 12/8 (Australia et al.), proposing draft procedures and requirements for the recognition of augmentation systems in the Worldwide Radionavigation system (WWRNS), including two options consisting of either developing a draft MSC resolution providing such procedures or amending resolution A.1046(27) on *Worldwide Radionavigation System*; and
- .2 NCSR 12/8/1 (Oman), commenting on document NCSR 12/8, recommending to adopt a phased implementation strategy with technical and financial support for developing countries and small island developing States (SIDS); developing global satellite-based augmentation systems (SBAS) interoperability standards aligned with existing international agreements; and implementing signal authentication, anti-jamming technologies and cybersecurity measures.

8.2 The Sub-Committee noted that radionavigation systems and global navigation satellite systems (GNSS) were assessed and recognized by the Organization following the procedures and criteria set out in resolutions A.915(22) and A.1046(27), as appropriate, and that, following assessment, systems were recognized as components of the WWRNS to assist in the navigation of ships.

8.3 The Sub-Committee recalled that the following systems had been recognized by IMO: Global Positioning System (GPS), Global Navigation Satellite System (GLONASS), Galileo, BeiDou Navigation Satellite System (BDS), Indian Regional Navigation Satellite System (IRNSS) and Japanese Quasi-Zenith Satellite System (QZSS). In this connection, the Sub-Committee noted that the accuracy and integrity of the data provided by some of these systems could be enhanced using augmentation techniques. However, procedures and/or criteria for the recognition of augmentation systems as part of the WWRNS had not been established by the Organization.

8.4 During the consideration, general support was expressed for the further consideration of the options presented in document NCSR 12/8, with a view to finalizing the procedures and requirements for recognition of augmentation systems at this session. While it was recognized that augmentation systems were essential for improving the accuracy, integrity and availability of core radionavigation services, particularly in harbour entrances, harbour approaches and coastal waters, views were expressed indicating that the need for recognition should be carefully considered. With regard to document NCSR 12/8/1, some delegations were of the view that the proposals therein should be considered when developing performance standards for augmentation systems; however, some elements could be taken into consideration during the development of the above-mentioned procedures.

8.5 Following consideration, the Sub-Committee referred the matter to Working Group 2 for further consideration and finalization of the draft procedures, including the consideration of the need for recognition of augmentation systems and the impact on existing and future systems.

Instructions for Working Group 2

8.6 The Sub-Committee instructed Working Group 2, already established under agenda item 1 (see paragraph 1.7), taking into account decisions, comments and proposals made in plenary, to review and finalize the procedures and requirements for the recognition of augmentation systems in the WWRNS, taking into account documents NCSR 12/8 and NCSR 12/8/1, and advise the Sub-Committee, as appropriate.

Report of the Working Group

8.7 Having considered the relevant part of the Working Group's report (NCSR 12/WP.6), the Sub-Committee took action as summarized in the following paragraphs.

8.8 The Sub-Committee agreed to the draft MSC resolution on amendments to the Worldwide Radionavigation System (resolution A.1046(27)), as set out in annex 9, revising the annex to resolution A.1046(27) to include relevant requirements for augmentation systems, including a modification to paragraph 1.6 of the annex to the draft resolution, with a view to adoption by MSC 111. In doing so, the Sub-Committee agreed that recognition of augmentation systems was not necessary as they were considered to be a method of improving GNSS attributes, such as accuracy, integrity, continuity and availability, not forming part of the WWRNS.

8.9 The Sub-Committee noted the recommendation of the Working Group to consider initiating work on output 204 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" at NCSR 13, as well as the view of the Group that the performance standards to be developed under such output should be goal-based, outlining the minimum functional requirements to assist future technological advancements.

9 DEVELOPMENT OF AMENDMENTS TO SOLAS CHAPTERS IV AND V AND PERFORMANCE STANDARDS AND GUIDELINES TO INTRODUCE VHF DATA EXCHANGE SYSTEM (VDES)

9.1 Having recalled the decisions of NCSR 11 (NCSR 11/19, paragraph 9.16) and MSC 103 in relation to the inclusion of this output (MSC 103/21, paragraph 18.13), the Sub-Committee considered document NCSR 12/9 (Japan), containing the report of the Correspondence Group on VHF Data Exchange System (VDES), presenting draft amendments to SOLAS chapter V and the appendix, draft performance standards for shipborne VDES and draft guidelines for the operational use of shipborne VDES, including also consequential amendments to mandatory and non-mandatory instruments, taking into account documents NCSR 12/9/1 (Secretariat), NCSR 12/9/2 (Liberia) and NCSR 12/9/3 (CIRM) proposing alternative approaches to facilitate the implementation of VDES within IMO's regulatory framework.

9.2 The Sub-Committee considered, in particular, options to introduce VDES within IMO's regulatory framework, taking into account the administrative burden associated with the work required to amend or revise existing instruments, and the impact on implementation for SOLAS Contracting Governments and the industry, including the type approval process.

9.3 Having confirmed the need to introduce amendments to SOLAS chapter V, and noting the general support to progress further considerations of the report of the Correspondence Group (NCSR 12/9) based on the proposals presented in documents NCSR 12/9/1 and NCSR 12/9/3, the Sub-Committee agreed to forward the above-mentioned documents to

Working Group 2 with instructions, as indicated in paragraph 9.4 below, with a view to finalizing this output. The Sub-Committee also agreed to forward document NCSR 12/9/2 to the Working Group in order to be taken into account from the point of view of reducing the administrative burden, but with the understanding that the proposal in paragraph 5.1 of the document (i.e. not to amend the SOLAS Convention) should not be considered.

Instructions for Working Group 2

9.4 The Sub-Committee instructed Working Group 2, already established under agenda item 1 (see paragraph 1.7), to consider the report of the Correspondence Group on VHF Data Exchange System (VDES) (NCSR 12/9), taking into account comments and proposals made in plenary and documents NCSR 12/9/1, NCSR 12/9/2 and NCSR 12/9/3, and:

- .1 finalize the draft MSC resolution on performance standards for shipborne VHF data exchange system (VDES) (NCSR 12/9, annex 2);
- .2 finalize the draft MSC circular on guidelines for the operational use of shipborne VHF data exchange system (VDES) (NCSR 12/9, annex 3);
- .3 prepare any necessary draft amendments to the 1974 SOLAS Convention and related mandatory instruments and advise the Sub-Committee on the appropriate date for entry into force of the draft amendments;
- .4 finalize any necessary draft amendments and/or revisions to existing non-mandatory instruments, including the development of a draft MSC resolution outlining the use of VDES to comply with AIS provisions;
- .5 finalize the check and monitoring sheet for the process of amending the SOLAS Convention and related mandatory instruments required by MSC.1/Circ.1500/Rev.3; and prepare the checklist for the identification of capacity-building implications, as required in the *Committee's method of work* (MSC-MEPC.1/Circ.5/Rev.6); and
- .6 prepare relevant advice in response to the instructions given by the Maritime Safety Committee (MSC 103/21, paragraph 18.13).

Report of the Working Group

9.5 Having considered the relevant part of the Working Group's report (NCSR 12/WP.6), the Sub-Committee took action as summarized in the following paragraphs.

9.6 The Sub-Committee agreed to the draft amendments to SOLAS chapter V and the appendix to introduce VDES, including the associated check/monitoring sheet for the process of amending the SOLAS Convention and related mandatory instruments, the record format and checklist for the identification of capacity-building implications, as set out in annex 10. The Sub-Committee agreed also to the consequential draft amendments to the 1994 and 2000 HSC codes, as set out in annexes 11 and 12, respectively.

9.7 Having considered the Working Group's assessment concerning the approval of the aforementioned draft amendments to SOLAS, the Sub-Committee agreed to invite MSC 110 to approve them, as an urgent matter, with a view to adoption by MSC 111 and entry into force on 1 January 2028.

9.8 The Sub-Committee agreed also to the:

- .1 draft MSC resolution on introduction of VHF data exchange system (VDES) into the IMO regulatory framework;
- .2 draft MSC resolution on performance standards for shipborne VHF data exchange system (VDES); and
- .3 draft MSC circular on guidelines for the operational use of shipborne VHF data exchange system (VDES),

as set out in annexes 13 to 15, respectively, with a view to approval, in principle, by MSC 110 in conjunction with the related draft amendments to SOLAS.

9.9 The Sub-Committee agreed further to advise the Committee, in regard to the instructions given by MSC 103 (MSC 103/21, paragraph 18.13), that:

- .1 amendments to SOLAS chapter IV concerning VDES should not be pursued at this stage and that interested Member States and international organizations should be invited to consider submitting proposals for a new output to introduce VDES as a communication equipment under SOLAS chapter IV, if required in the future (see document NCSR 11/19, paragraph 9.15); and
- .2 early implementation of the aforementioned draft amendments to SOLAS would not be required provided that the amendments enter into force on 1 January 2028.

10 DEVELOPMENT OF GUIDELINES FOR SOFTWARE MAINTENANCE OF SHIPBOARD NAVIGATION AND COMMUNICATION EQUIPMENT AND SYSTEMS

10.1 Having recalled the decisions of MSC 107 in relation to the inclusion of this output (MSC 107/20, paragraphs 17.29 to 17.33), the Sub-Committee considered document NCSR 12/10 (Liberia et al.), proposing a draft MSC circular on guidelines for software maintenance of shipboard navigation and communication equipment and systems, aiming to improve the efficiency, effectiveness, safety and security of shipboard software maintenance by introducing a standardized, controlled and transparent process.

10.2 Having noted general support for the proposed draft MSC circular, the Sub-Committee referred document NCSR 12/10 to Working Group 1 with instructions as set out in paragraph 10.3 below, with the understanding that the draft MSC circular could be finalized at this session.

Instructions for Working Group 1

10.3 The Sub-Committee instructed Working Group 1, already established under agenda item 1 (see paragraph 1.7), taking into account decisions, comments and proposals made in plenary, to consider the draft MSC circular on guidelines for software maintenance of shipboard navigation and communication equipment and systems set out in document NCSR 12/10, and advise the Sub-Committee, as appropriate.

Report of the Working Group

10.4 Having considered the relevant part of the Working Group's report (NCSR 12/WP.5), the Sub-Committee agreed to the draft MSC circular on guidelines for software maintenance of shipboard computer-based navigation and communication equipment and systems, as set out in annex 16, and invited the Committee to approve it.

11 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))

11.1 The Sub-Committee recalled the decision of MSC 107 concerning the inclusion of this output (MSC 107/20, paragraphs 17.34 and 17.35), and noting that no documents had been submitted under this agenda item, invited the Committee to confirm whether this output should be kept in the biennial agenda of the Sub-Committee for the 2026-2027 biennium and the provisional agenda for NCSR 13, in accordance with paragraph 5.12 of the *Committees' method of work* (MSC-MEPC.1/Circ.5/Rev.6).

11.2 In doing so, the Sub-Committee noted the information provided by one delegation about work being progressed by the European Commission and Cospas-Sarsat and the intention to submit inputs to the next session of the Sub-Committee.

12 DEVELOPMENT OF GUIDELINES FOR THE USE OF ELECTRONIC NAUTICAL PUBLICATIONS (ENP)

12.1 Having recalled the decision of NCSR 11 (NCSR 11/19, paragraph 12.6), the Sub-Committee considered document NCSR 12/12 (Republic of Korea), containing the report of the Correspondence Group, setting out draft guidelines for the carriage and use of electronic nautical publications (ENP) system, together with document NCSR 12/12/1 (China), proposing modifications to the text of the draft guidelines.

12.2 During the discussion, support was expressed for further consideration of the draft guidelines (NCSR 12/12, annex) with a view to finalization at this session. Some delegations also supported the modifications proposed in document NCSR 12/12/1. The Sub-Committee noted a number of issues that required to be addressed, such as the definition of ENP manufacturer, the minimum screen size of the ENP system, requirements for type approval and build-in battery, and whether the guidance should indicate how the record of equipment in relevant SOLAS Safety Certificates should be completed or if the unified interpretation contained in MSC.1/Circ.1496 should be amended instead.

12.3 After consideration, the Sub-Committee instructed Working Group 2 as indicated in paragraph 12.4 below, noting that the scope of the output agreed by the Committee did not include consideration of amendments to SOLAS, but recognizing that the inclusion of paragraph 5.1 (record of equipment of SOLAS Safety Certificates) in the draft guidelines should be further considered.

Instructions for Working Group 2

12.4 The Sub-Committee instructed Working Group 2, already established under agenda item 1 (see paragraph 1.7), taking into account decisions, comments and proposals made in plenary, to finalize the draft MSC circular on guidelines on carriage and use of electronic nautical publications system based on the annex to document NCSR 12/12, taking into account document NCSR 12/12/1.

Report of the Working Group

12.5 Having considered the relevant part of the Working Group's report (NCSR 12/WP.6), the Sub-Committee agreed to the draft MSC circular on guidelines on carriage and use of electronic nautical publications (ENP) system, as set out in annex 17, and invited the Committee to approve it.

13 REVISION OF THE PERFORMANCE STANDARDS FOR SHIPBORNE BEIDOU SATELLITE NAVIGATION SYSTEM (BDS) RECEIVER EQUIPMENT (RESOLUTION MSC.379(93))

13.1 Having recalled the decisions of MSC 107 concerning the approval of this output (MSC 107/20, paragraphs 17.54 and 17.55), the Sub-Committee considered document NCSR 12/13 (China), proposing a draft revision of the *Performance standards for shipborne BeiDou Satellite Navigation System (BDS) receiver equipment* (resolution MSC.379(93)) to align the performance standards with the current status of BDS services and performance.

13.2 Having addressed a concern expressed regarding the proposed change of the datum on which the output of position information should be based, the Sub-Committee referred document NCSR 12/13 to a drafting group for finalization and instructed it as indicated in the following paragraph.

Establishment of a Drafting Group

13.3 The Sub-Committee established a Drafting Group, to be chaired by Mr. C. Cerda Espejo (Chile), and instructed it to review and finalize the draft revision of resolution MSC.379(93) on *Performance standards for shipborne BeiDou Satellite Navigation System (BDS) receiver equipment*, based on document NCSR 12/13, taking into account decisions, comments and proposals made in plenary and the provisions of paragraph 4.2.6.3 of MSC.1/Circ.1500/Rev.3 concerning the use of the term "installed" in the application statements of an IMO instrument.

Report of the Drafting Group

13.4 Having considered the relevant part of the Drafting Group's report (NCSR 12/WP.8), the Sub-Committee agreed to the draft resolution MSC.379(93)/Rev.1 on performance standards for shipborne BeiDou Satellite Navigation System (BDS) receiver equipment, as set out in annex 18, and invited the Committee to adopt it.

14 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

14.1 Having noted the decisions of MSC 109 concerning the inclusion and scope of this output (MSC 109/22, paragraphs 19.27 to 19.34), the Sub-Committee considered the following documents:

- .1 NCSR 12/14 (Australia et al.), proposing draft guidance to establish a framework for data distribution and global IP-based connectivity for shore-based facilities and ships supporting ECDIS S-100 products, addressing the technical, operational and cybersecurity challenges of the S-100 ECDIS transition;
- .2 NCSR 12/14/1 (ISO), providing observations and recommendations regarding the development of guidance on the establishment of a framework for ECDIS S-100 products, taking into account other aspects of maritime digitalization than purely ECDIS and S-100 products;

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- .3 NCSR 12/14/2 (Australia), presenting information concerning the implementation requirements and cost implications for the Secure communication between ship and shore (SECOM) infrastructure specified in document NCSR 12/14 and highlighting the need for coordination of efforts among IMO, IHO and IALA to ensure successful implementation of a global IP-based connectivity framework;
 - .4 NCSR 12/14/3 (Japan), proposing a draft list of identified elements associated with the implementation of S-100 capable ECDIS, for resolution before the introduction of S-100 capable ECDIS as from 1 January 2026;
 - .5 NCSR 12/14/4 (Austria et al), highlighting the overlap between the contents of certain S-100 products and MSI disseminated through the GMDSS and presenting proposals related to the introduction, charging and communication of GMDSS-related S-100 products to S-100 capable ECDIS;
 - .6 NCSR 12/14/5 (United Kingdom), commenting on document NCSR 12/14, and proposing modifications to the draft guidance to clarify the relationship between the safety information delivered through S-100 products and the maritime safety information transmitted through the GMDSS;
 - .7 NCSR 12/14/6 (Japan), commenting on documents NCSR 12/14 and NCSR 12/14/1, and presenting proposals related to the status and meaning of GMDSS-related S-100 products, the use of core technologies in the S-100 framework and the role of the industry Maritime Connectivity Platform (MCP);
 - .8 NCSR 12/14/7 (CIRM), commenting on documents NCSR 12/14, NCSR 12/14/1 and NCSR 12/14/2, and presenting views to be taken into account during consideration and further development of the draft guidance;
 - .9 NCSR 12/14/8 (Türkiye), commenting on document NCSR 12/14, and providing recommendations of a technical nature, for consideration during further development of the draft guidance; and
 - .10 NCSR 12/INF.14 (Austria et al.), providing information on the results of a study concerning detailed analysis of the implications of the implementation of S-100 products.

14.2 During the consideration, general support was expressed for the further development of the draft guidance, as proposed in document NCSR 12/14. However, a number of concerns were raised, in particular, in relation to the overlap between certain S-100 products and MSI disseminated via the GMDSS, the proposed reliance on specific technologies such as SECOM and MCP, the use of industry-operated MCPs, the limited transmission and bandwidth capacity for delivering S-100 products to ships, as well as the potential capacity-building implications for the development and management of S-100 products. With regard to the implementation of GMDSS-related S-100 products (i.e. S-124 and S-412), some delegations supported the trial-based approach proposed in document NCSR 12/14/4, paragraph 9.2. Views were also expressed stating that the draft guidance should be goal-based, technology neutral and that the provision of data should be conducted by entities recognized by Member States.

14.3 In view of the highly technical nature of the matter and the need for further detailed consideration of the proposals, the Sub-Committee referred all documents to Working Group 1, instructing it as indicated in paragraph 14.4 below. In doing so, the Sub-Committee agreed that, as part of the work to be conducted under this output, the development of the draft guidance should be prioritized.

Instructions for Working Group 1

14.4 The Sub-Committee instructed Working Group 1, already established under agenda item 1 (see paragraph 1.7), taking into account decisions, comments and proposals made in plenary, to consider:

- .1 the draft guidance to establish a framework for data distribution and global IP-based connectivity for shore-based facilities and ships supporting ECDIS S-100 products (NCSR 12/14); and
- .2 the draft list of elements associated with the implementation of S-100 capable ECDIS (NCSR 12/14/3),

taking into account documents NCSR 12/14/1, NCSR 12/14/2, NCSR 12/14/4, NCSR 12/14/5, NCSR 12/14/6, NCSR 12/14/7, NCSR 12/14/8 and NCSR 12/INF.14 and advise the Sub-Committee, as appropriate, including on any actions to continue progressing this work intersessionally, if necessary.

Report of the Working Group

14.5 Having considered the relevant part of the Working Group's report (NCSR 12/WP.5), the Sub-Committee took action as summarized in the following paragraphs.

14.6 The Sub-Committee noted the considerations of the Working Group on the development of the draft MSC circular 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 the list of identified elements associated with the implementation of S-100 capable ECDIS and, taking into account the progress made, established a Correspondence Group on Establishment of an S-100 Framework (see also paragraph 17.18.1), under the coordination of Australia,² instructing it, taking into account comments and decisions made at this session and documents submitted under this agenda item, to:

- .1 review the draft MSC circular 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 (NCSR 12/WP.5, annex 7), with a view to addressing any inconsistencies or errors identified and making necessary amendments, while avoiding the reconsideration of matters already agreed;
- .2 further develop the list of identified elements associated with the implementation of S-100 capable ECDIS (NCSR 12/WP.5, annex 8);
- .3 submit an interim report on items .1 and .2 above to the upcoming meeting of the Joint IMO/ITU Experts Group on Maritime Radiocommunication Matters (6 to 10 October 2025) for its consideration; and
- .4 submit a report for consideration at NCSR 13.

²

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14.7 The Sub-Committee encouraged all stakeholders, in particular IHO, IALA and IEC, to continue progressing the S-100-related work within their own domains to enable the timely establishment and operation of an S-100 framework for distribution of S-100 data to ships and to keep the Organization informed of their progress, as appropriate.

15 VALIDATED MODEL TRAINING COURSES

Validation of Model Course 3.14

15.1 The Sub-Committee considered documents NCSR 12/15 and NCSR 12/15/Add.1 (Secretariat) providing a report of the Review Group on Model Course 3.14 on SAR Mission Coordinator (IAMSAR Manual, Volume II) and a draft revised model course, respectively.

15.2 Following consideration, the Sub-Committee, in accordance with the *Revised guidelines for the development, review and validation of model courses* (MSC-MEPC.2/Circ.15/Rev.2), validated Model Course 3.14 on SAR Mission Coordinator (IAMSAR Manual, Volume II), as set out in the annex to document NCSR 12/15/Add.1, and authorized the Secretariat to effect any necessary editorial corrections when finalizing the text of the revised model course.

15.3 The Sub-Committee, noting that the revised model course had been developed and reviewed over the last two years as a result of volunteering stakeholders' collaborative effort and with the assistance of the Secretariat, thanked the developer and review group members for their contributions in the review of the model course.

Revision of Model Course 3.15

15.4 The Sub-Committee considered document NCSR 12/15/1 (Secretariat), proposing to initiate the review of Model Course 3.15 on SAR On-scene Coordinator (IAMSAR Manual, Volume III) at this session and providing draft terms of reference for the review of the model course, for consideration.

15.5 After consideration, the Sub-Committee:

- .1 approved the terms of reference for the revision of Model Course 3.15 on SAR On-scene Coordinator (IAMSAR Manual, Volume III), including the corresponding time frames, as set out in annex 19; and
- .2 established a review group on Revision of Model Course 3.15 on SAR On-scene Coordinator (IAMSAR Manual, Volume III), with a view to validation at NCSR 14, having noted with appreciation the offers of Chile to act as the course developer and Ireland³ as coordinator of the review group.

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

16.1 The Sub-Committee noted that MSC 109 had approved amendments to the Committees' method of work (MSC-MEPC.1/Circ.5/Rev.6), which included a new section on issues related to the consideration and approval of unified interpretations, including safeguards that must be observed.

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17 BIENNIAL STATUS REPORT AND PROVISIONAL AGENDA FOR NCSR 13**Outcome of MSC 109**

17.1 The Sub-Committee noted the decisions of MSC 109 concerning the recommendations of NCSR 11 on the biennial status report of the Sub-Committee and the approval and inclusion of new outputs into its post-biennial agenda, the biennial agenda for 2024-2025 and the provisional agenda for NCSR 12, and the biennial agenda of the NCSR Sub-Committee for the 2026-2027 biennium and the provisional agenda for NCSR 13 (MSC 109/22, paragraphs 19.26, 19.34 and 19.44) and that, accordingly, the Committee had noted the Sub-Committee's biennial status report for the 2024-2025 biennium and approved the proposed provisional agenda for NCSR 12, as revised (MSC 109/22, paragraph 19.45).

17.2 The Sub-Committee also noted the decisions of MSC 109 concerning the work programme and the workload of the Committee and its subsidiary bodies (MSC 109/22, paragraphs 19.7 and 19.8), noting that further considerations on the workload of the Sub-Committee had been referred to NCSR 12 with a view to providing appropriate recommendations to MSC 110 when approving the 2026-2027 biennial agenda of the Sub-Committee, in particular to explore additional measures to return to five-day sessions and to advise the Committee, as appropriate.

Workload of the Sub-Committee

17.3 The Sub-Committee considered document NCSR 12/17 (Chair and Vice-Chair of the NCSR Sub-Committee) presenting options and proposals to facilitate the workload and enhance the efficiency of the sessions of the NCSR Sub-Committee, including intersessional groups, for the biennium 2026-2027, taking into account the instructions emanating from the Committee.

17.4 The Sub-Committee had a lengthy general discussion on possible measures to return to five-day sessions. Several delegations supported the continuation of the eight-day arrangement, emphasizing the current and future workload of the Sub-Committee as well as the importance of addressing critical issues concerning safety of navigation, emerging communication technologies and systems, including digitalization, and matters pertaining to saving lives at sea.

17.5 Other delegations were of the view that the Sub-Committee should focus on how to manage the workload and working arrangements more efficiently within five-day sessions, noting that the Committee had provided a clear instruction in that sense.

17.6 Some delegations did not support the establishment of additional intersessional meetings as a possible measure as these would add additional constraints and burden to Members of the Organization and the Secretariat. However, views were expressed indicating that existing arrangements to carry out work intersessionally should be fully utilized, including the possibilities for remote work and the use of collaborative platforms. In this connection, the Sub-Committee also generally considered options such as the establishment of groups immediately before the session of the Sub-Committee as part of the concept of early release of groups provided in the Committees' method of work (MSC-MEPC.1/Circ.5/Rev.6).

17.7 The Secretary-General encouraged delegations to work proactively, taking into account the work of the whole Organization, the impact on small delegations, including human resources and budgetary implications, and the need to improve efficiencies and find practical ways to deal with the workload. In addition, the Secretary-General emphasized that the

increasing regulatory workload impacted significantly both the membership of the Organization and the shipping sector globally, due to the high demand created by the continuous implementation of new requirements.

17.8 Following consideration of the recommendations and possible actions presented in document NCSR 12/17 concerning continuous outputs, the Sub-Committee agreed:

- .1 with the recommended actions related to continuous outputs 2.1 (Response to matters related to the ITU-R Study Groups and ITU World Radiocommunication Conference) and 1.34 (Development of global maritime SAR services, including harmonization of maritime and aeronautical procedures and amendments to the IAMSAR Manual), as set out in paragraphs 23 and 25 of document NCSR 12/17, respectively, retaining the output under dedicated agenda items for each session of the Sub-Committee, noting that any additional work that could be allocated to the ICAO/IMO Joint Working Group should be carefully considered bearing in mind that it was composed of a limited group of individual SAR experts not necessarily representing Member States;
- .2 to retain output 7.22 (Routeing measures and ship reporting systems) under a dedicated agenda item for each session of the Sub-Committee and requested the Secretariat to submit, in consultation with the Chair and Vice-Chair of the Sub-Committee, relevant proposals for consideration at the next session, focusing on clarifying procedures related to the submission and consideration of proposals under this output, particularly on a possible revision of the procedure described in MSC.1/Circ.1608 and any recommendations to deal with the workload emanating from this output;
- .3 to retain outputs 7.23 (Updates to the LRIT system) and 7.2 (Developments in GMDSS services, including guidelines on maritime safety information (MSI)) under dedicated agenda items for each session of the Sub-Committee, as well as the current arrangements for the conduct of work under these outputs, in view of the importance of addressing the continuous operation of such systems;
- .4 to continue with the current arrangements for output 6.2 (Validated model training courses), considering the output once every two sessions;
- .5 to retain outputs 7.1 (Unified interpretation of provisions of IMO safety, security, environment, facilitation, liability and compensation-related conventions) under dedicated agenda items for each session of the Sub-Committee; and
- .6 that outputs 4.1 (Identification and protection of Special Areas, Emission Control Areas and PSSAs and associated protective measures), 6.1 (Role of the human element) and 1.11 (Measures to harmonize port State control (PSC) activities and procedures worldwide) did not require at the moment a dedicated agenda item, noting that matters related to these outputs could be considered under the agenda item on "Any other business" or a related agenda item.

17.9 The Sub-Committee agreed to the draft revised terms of reference of the NCSR Sub-Committee, as set out in annex 20. In doing so, the Sub-Committee noted a view of the delegation of the United Arab Emirates that the simplification of paragraph 3 of the terms of reference could lead to inconsistency with the structure used in the terms of reference of other sub-committees set out in annex 40 of document MSC 92/26 and, thus, the original text should be retained. In the absence of any further proposals, the Sub-Committee agreed to leave the text with the modifications presented in the annex to document NCSR 12/17.

17.10 The Sub-Committee also considered the additional measures recommended in paragraph 42 of document NCSR 12/17 to enhance the efficiency and:

- .1 agreed that reports of working groups established during the session should be simplified, when possible, with focus on conclusions and final outcomes, reflecting only necessary views and comments that related to the conclusions, decisions taken or recommended actions;
- .2 encouraged delegations to avoid submitting lengthy documents and to present issues requiring consideration in a concise manner;
- .3 agreed to make full use of working arrangements during the sessions of the Sub-Committee, as well as of existing intersessional arrangements, including correspondence groups, to progress the work as much as possible; and
- .4 agreed to explore opportunities to better collaborate with other international organizations which currently contributed to the work of the Sub-Committee in order to alleviate the workload.

17.11 Taking into account that MSC 109 had instructed the Sub-Committee to explore additional measures to return to five-day sessions, the Sub-Committee invited the Committee to note the above deliberations and take them into account when approving the biennial agenda for the 2026-2027 biennium and the provisional agenda for NCSR 13.

Biennial status report for the 2024-2025 biennium

17.12 Taking into account the progress made at this session, the Sub-Committee updated the biennial status report for the 2024-2025 biennium, including outputs in the post-biennial agenda of the Committee assigned to the NCSR Sub-Committee, as set out in annex 21, for consideration by MSC 110.

17.13 In this context it was noted that, at this session, the work had been completed on the following outputs: 2.14 (Development of procedures and requirements for the recognition of augmentation systems in the Worldwide Radionavigation System); 2.17 (Development of guidelines for software maintenance of shipboard navigation and communication equipment and systems); 2.19 (Revision of the Performance Standards for Shipborne BeiDou Satellite Navigation System (BDS) Receiver Equipment (resolution MSC.379(93))); 2.28 (Development of amendments to SOLAS chapters IV and V and performance standards and guidelines to introduce VHF Data Exchange System (VDES)); and 7.49 (Development of guidelines for the use of electronic nautical publications (ENP)).

Proposed biennial agenda for the 2026-2027 biennium

17.14 Taking into account the progress made at this session, as well as the decisions taken regarding the workload of the Sub-Committee (see paragraphs 17.8 to 17.11), the Sub-Committee prepared its proposed biennial agenda for the 2026-2027 biennium, as set out in annex 22, for approval by MSC 110.

Proposed provisional agenda for NCSR 13

17.15 Accordingly, the Sub-Committee prepared the proposed provisional agenda for NCSR 13, as set out in annex 23, for approval by MSC 110, and invited the Committee to consider the duration of the session taking into account the Sub-Committee's deliberations (paragraphs 17.3 to 17.11).

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

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

- .1 routing measures and ship reporting systems;
- .2 ITU-related matters;
- .3 SAR matters, including amendments to the IAMSAR Manual;
- .4 MSI documentation;
- .5 EPIRB implementation of the two-way communication service;
- .6 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;
- .7 performance standards for DFMC SBAS and ARAIM in shipborne radionavigation receivers;
- .8 transition scheme for the introduction of digital technology for VHF voice communications; and
- .9 performance standards for gyro-compasses and guidance for navigation and communication equipment intended for use on ships operating in polar waters,

subject to the Committee's final decisions regarding the 2026-2027 biennial agenda of the Sub-Committee and the provisional agenda for NCSR 13, whereby the Chair, taking into account the submissions received on the respective subjects, would advise the Sub-Committee well in time before NCSR 13 on the final selection of such groups.

Correspondence groups established at this session

17.17 The Sub-Committee confirmed the establishment of a Correspondence Group on Establishment of an S-100 framework, as agreed under agenda item 14 (see paragraph 14.6).

17.18 In addition, in order to make full use of the intersessional arrangements available and subject to the Committee's final decisions regarding the 2026-2027 biennial agenda of the Sub-Committee and the provisional agenda for NCSR 13, the Sub-Committee:

- .1 instructed the Correspondence Group on Establishment of an S-100 framework to also consider the development of operational guidance for route exchange and advise NCSR 13, as appropriate;
- .2 established a Correspondence Group on Development of Performance Standards for DFMC SBAS and ARAIM in Shipborne Radionavigation Receivers, under the coordination of Australia,⁴ to progress the development of such performance standards and report to NCSR 13; and

⁴ **Coordinator:**
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- .3 established also a 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), under the Coordination of China,⁵ to progress the development of such performance standards and report to NCSR 13.

Review group for model courses

17.19 The Sub-Committee confirmed the establishment of a Review Group on Model Course 3.15 on SAR On-scene Coordinator (IAMSAR Manual, Volume III), due to report to NCSR 14 (see paragraph 15.5).

Intersessional meetings

17.20 The Sub-Committee confirmed the holding of the following intersessional meetings to take place in 2025 (see paragraphs 6.20 and 7.25):

- .1 the twenty-first meeting of the Joint IMO/ITU Experts Group on Maritime Radiocommunication Matters, which had been planned to be held from 6 to 10 October 2025, at the IMO Headquarters; and
- .2 the thirty-second meeting of the ICAO/IMO Joint Working Group on Harmonization of Aeronautical and Maritime Search and Rescue, which had been planned to be held from 3 to 7 November 2025, in Sydney (Australia),

and requested the Secretariat to take action, as appropriate.

Date of the next session

17.21 The Sub-Committee noted that its thirteenth session had been tentatively scheduled to take place from 22 to 26 June 2026.

18 ELECTION OF CHAIR AND VICE-CHAIR FOR 2026

18.1 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. C. Cerda Espejo (Chile) as Vice-Chair, both for 2026.

19 ANY OTHER BUSINESS

Progress on standards development by IEC

19.1 The Sub-Committee noted the information provided in document NCSR 12/19 (IEC) on the preparation of standards by IEC TC80 to support relevant performance standards and other instruments developed by the Organization.

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Update on the progress of S-100 implementation

19.2 The Sub-Committee considered the information provided in document NCSR 12/19/1 (IHO) on progress made with the development and implementation of the IHO Universal Hydrographic Data Model (S-100) intended for use in future S-100 ECDIS as baseline standard for the next generation of Electronic Navigational Charts (S-101 ENC's) and other products and services in accordance with resolution MSC.530(106)/Rev.1.

19.3 Following consideration, the Sub-Committee:

- .1 noted the commitment of IHO Member States to the implementation dates stated in resolution MSC.530(106)/Rev.1;
- .2 acknowledged the progress being made on IHO S-100 product specifications including the publication of the Operational Edition 2.0.0 of the Phase 1 Product Specifications; and
- .3 encouraged Member States to develop S-100 data set production and dissemination strategies.

Analysis of the limitations of the LRIT system

19.4 The Sub-Committee noted the information provided in document NCSR 12/19/2 (Islamic Republic of Iran), presenting an analysis of the current limitations of the LRIT system and proposing solutions to address them and to enhance search and rescue operations, in general. Following consideration, the Sub-Committee invited interested Member States and international organizations to consider submitting proposals for new outputs to the Committee, as appropriate, taking into account the comments made during the discussion.

Using new smartphone technology to track phones and vessels in distress in maritime search and rescue system

19.5 The Sub-Committee noted the information provided in document NCSR 12/19/3 (Islamic Republic of Iran), proposing to integrate satellite-enabled smartphones into the GMDSS framework to enhance distress communications, tracking of ships and search and rescue operations, in general. Following consideration, the Sub-Committee invited interested Member States and international organizations to consider submitting proposals for new outputs to the Committee, as appropriate, taking into account the comments made during the discussion.

Information documents

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

- .1 NCSR 12/INF.2 (IALA) on enhanced radar positioning system for resilient navigation;
- .2 NCSR 12/INF.3 (IMSO) on trial analysis of LRIT ship reporting data;
- .3 NCSR 12/INF.7 (IMPA) on improving the safety of pilot transfer arrangements;
- .4 NCSR 12/INF.8 (Republic of Korea) on information on the measures to improve the security and integrity aspects of AIS utilizing LRIT information; and
- .5 NCSR 12/INF.12 (United States) on information on Maritime Survivor Locating Devices (MSLD) for crew and maritime workers.

20 REPORT TO THE MARITIME SAFETY COMMITTEE

Consideration of the report of the Sub-Committee

20.1 The draft report of the session (NCSR 12/WP.1) was prepared by the Secretariat for consideration and adoption by the Sub-Committee.

20.2 During the meeting held on Thursday 22 May 2025, delegations were given an opportunity to provide comments on the draft report (NCSR 12/WP.1). Subsequently, a revised report (NCSR 12/WP.1/Rev.1) was published on Friday 23 May 2025, to allow delegations to provide further editorial corrections and improvements by correspondence, including finalizing individual statements, until 30 May 2025, in accordance with paragraphs 4.37 and 4.38 of the *Committees' method of work* (MSC-MEPC.1/Circ.5/Rev.6).

20.3 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

20.4 The Maritime Safety Committee, at its 110th session, is invited to:

- .1 approve the draft amendments to SOLAS regulations IV/5, V/4 and V/5 concerning the requirement for dissemination of MSI and SAR-related information through all operational RMSSs, taking into account the associated check/monitoring sheet and record format for the process of amending the SOLAS Convention and related mandatory instruments, and the checklist for the identification of capacity-building implications, with a view to subsequent adoption at MSC 111 and entry into force on 1 January 2028 (paragraph 5.19 and annex 5);
- .2 approve, in principle, the draft resolution MSC.509(105)/Rev.2 on provision of radio services for the Global Maritime Distress and Safety System (GMDSS) with a view to subsequent adoption at MSC 111 together with the related draft amendments to SOLAS (paragraph 5.20 and annex 6);
- .3 approve the draft amendments to SOLAS chapter V and the appendix to introduce the VHF Data Exchange System, taking into account the associated check/monitoring sheet for the process of amending the SOLAS Convention and related mandatory instruments, the record format and the checklist for the identification of capacity-building implications, with a view to subsequent adoption at MSC 111 and entry into force on 1 January 2028 (paragraph 9.6 and annex 10);
- .4 approve the consequential draft amendments to the 1994 and 2000 HSC codes related to the above-mentioned amendments to SOLAS concerning VDES, with a view to subsequent adoption at MSC 111 and entry into force on 1 January 2028 (paragraph 9.6 and annexes 11 and 12);
- .5 approve, in principle, the draft MSC resolution on introduction of VHF data exchange system (VDES) into the IMO regulatory framework, and the draft MSC resolution on performance standards for shipborne VHF data exchange system (VDES); and agree, in principle, to the draft MSC circular on guidelines for the operational use of shipborne VHF data exchange system (VDES), with a view to subsequent adoption or approval, as appropriate, at MSC 111 together with the adoption of the related draft amendments to SOLAS (paragraph 9.8 and annexes 13 to 15, respectively);

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- .6 endorse the agreement of the Sub-Committee that (paragraph 9.9):
- .1 amendments to SOLAS chapter IV concerning VDES should not be pursued at this stage and thus, invite interested Member States and international organizations to consider submitting proposals for a new output to introduce VDES as communication equipment under SOLAS chapter IV, if required in the future; and
 - .2 early implementation of the aforementioned draft amendments to SOLAS would not be required provided that the amendments enter into force on 1 January 2028;
- .7 confirm, in accordance with paragraph 5.12 of the Committees' method of work (MSC-MEPC.1/Circ.5/Rev.6), whether output 2.18 (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))) should be kept in the biennial agenda of the Sub-Committee for the 2026-2027 biennium and the provisional agenda for NCSR 13, noting that no related submissions had been received at NCSR 12 (paragraphs 11.1 and 11.2); and
- .8 note the consideration of the Sub-Committee on matters relating to workload in response to the instructions by the Committee (paragraphs 17.3 to 17.11) and, in particular:
- .1 approve the draft revised terms of reference of the NCSR Sub-Committee (paragraph 17.9 and annex 20);
 - .2 note the Sub-Committee's biennial status report for the 2024-2025 biennium (paragraph 17.12 and annex 21);
 - .3 approve the proposed biennial agenda of the Sub-Committee for the 2026-2027 biennium (paragraph 17.14 and annex 22); and
 - .4 approve the proposed provisional agenda for NCSR 13 and consider the duration of the session (paragraph 17.5 and annex 23).
- 20.5 The Maritime Safety Committee, at its 111th session, is invited to:
- .1 endorse the approval of SN.1/Circ.272/Add.3 on *Routeing measures other than traffic separation schemes* providing updated information about the change of chart datum and value of minimum depth in the deep-water route area within the borders of the "South Åland Sea" traffic separation scheme (paragraph 3.13);
 - .2 adopt, in accordance with resolution A.858(20):
 - .1 the area to be avoided "Off the coast of Réunion", to be implemented six months after its adoption, and approve the draft SN circular on Routeing measures other than traffic separation schemes (paragraph 3.18 and annex 1);

- .2 the draft MSC resolution on mandatory ship reporting system "In the Adriatic Sea" (ADRIREP), revising and superseding the existing mandatory ship reporting system contained in resolution MSC.139(76), annex 2, to be implemented six months after its adoption (paragraph 3.19 and annex 2);
- .3 the draft resolution MSC.314(88)/Rev.1 on mandatory ship reporting system "In the Sound between Denmark and Sweden" (SOUNDREP), revising and superseding the existing mandatory ship reporting system adopted by resolution MSC.314(88), to be implemented six months after its adoption (paragraph 3.29 and annex 3); and
- .4 the draft resolution MSC.332(90)/Rev.1 on mandatory ship reporting system "In the Storebælt (Great Belt) traffic area" (BELTREP), revising and superseding the existing mandatory ship reporting system adopted by resolution MSC.332(90), to be implemented six months after its adoption (paragraph 3.29 and annex 4);
- .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 (paragraph 6.16 and annex 7);
- .4 endorse the action taken by the Sub-Committee in approving liaison statements to ITU on WRC-27 agenda item 1.12, and Revision of Recommendation ITU-R M.1371-5, and requesting the Secretariat to convey them to ITU (paragraph 6.17);
- .5 approve the draft MSC.1/Circ.1657/Rev.1 on procedure for responding to DSC distress alerts by ships (paragraph 6.19 and annex 8);
- .6 endorse the action taken by the Sub-Committee in revoking COMSAR/Circ.3 on *Relations between NAVAREA Coordinators and Rescue Coordination Centres* (paragraph 7.9);
- .7 endorse the action taken by the Sub-Committee in approving COMSAR.1/Circ.61 on *Guidance for entering and updating information on search and rescue services into the Global SAR Plan and on how to get access to the information for operational use* (paragraph 7.26);
- .8 include 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 (paragraph 7.27);
- .9 adopt the draft MSC resolution on amendments to the Worldwide Radionavigation System (resolution A.1046(27)), revising the annex to resolution A.1046(27) to include relevant requirements for augmentation systems; invite the Assembly to endorse this action; and endorse the agreement of the Sub-Committee that recognition of augmentation systems by the Organization was considered not to be required (paragraph 8.8 and annex 9);

- .10 approve the draft MSC circular on guidelines for software maintenance of shipboard computer-based navigation and communication equipment and systems (paragraph 10.4 and annex 16);
- .11 approve the draft MSC circular on guidelines on carriage and use of electronic nautical publications (ENP) system (paragraph 12.5 and annex 17);
- .12 adopt the draft resolution MSC.379(93)/Rev.1 on performance standards for shipborne BeiDou Satellite Navigation System (BDS) receiver equipment (paragraph 13.4 and annex 18); and
- .13 approve the report in general.

(The annexes will be issued as addenda to this report)
