INTERNATIONAL MARITIME ORGANIZATION

E

SUB-COMMITTEE ON SHIP DESIGN AND CONSTRUCTION
11th session
Agenda item 17

SDC 11/WP.1/Rev.1
17 February 2025
Original: ENGLISH

DRAFT REPORT TO THE MARITIME SAFETY COMMITTEE[1]

Table of contents

[1] Delegations wishing to comment on this draft report should submit their comments to sdc@imo.org no later than 24 February 2025, 23.59 (UTC). Comments should state the specific paragraphs of the draft report to which they relate and, where possible, proposed alternative wording should be provided. If a Member has no comments on this draft report there is no need to provide a response. After review, the Chair will provide a summary of how comments received, if any, have been addressed.

1 GENERAL

1.1 The Sub-Committee on Ship Design and Construction (SDC), chaired by Mr. Erik Tvedt (Denmark), held its eleventh session from 13 to 17 January 2025.

1.2 The session was attended by delegations from Member States and Associate Members of IMO[, representatives from United Nations and specialized agencies,] and observers from intergovernmental organizations and non-governmental organizations in consultative status, as listed in document SDC 11/INF.1.

Opening address

1.3 The Secretary-General welcomed participants and delivered his opening address, the the full text of which is set out in annex […]. 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 (C 132/D, paragraphs 17.2 and 17.3).

Adoption of the agenda and related matters

1.6 The Sub-Committee adopted the agenda (SDC 11/1/Rev.1) and agreed to be guided in its work, in general, by the annotations contained in document SDC 11/1/1 (Secretariat) and the arrangements in document SDC 11/1/2 (Chair).

Statements by delegations with respect to attacks on ships in the Gulf of Aden and the Red Sea

1.7 Several delegations expressed concerns for the safety of ships and their crew following attacks by Houthi rebels on commercial ships in the Red Sea and the Gulf of Aden and, in this respect, commended the Secretary-General's effort in bringing this to the attention of the

United Nations Security Council and for continuing his efforts in outreach to different stakeholders in the region.

1.8 Delegations that took the floor condemned the acts against commercial ships and seafarers while expressing grave concern for the region and the disruption caused to international trade.

1.9 A number of delegations, having highlighted the devastating impact such attacks had on innocent seafarers, especially those on board the **MV GALAXY LEADER** who were still being held hostage, called for the immediate release of the ship and its crew.

1.10 Various statements on the attacks on ships in the Gulf of Aden and the Red Sea, were made by the delegations of Bahamas, Canada, Islamic Republic of Iran, Japan, Poland (on behalf of the Member States of the European Union and the European Commission), Ukraine, the United Kingdom and the United States, the full texts of which are set out in annex […]. Statements on the matter were also made by the delegations of Norway, Philippines, and the Republic of Korea.

2 DECISIONS OF OTHER IMO BODIES

2.1 The Sub-Committee noted the relevant outcome of MSC 108, C 132, III 10 and MEPC 82, as reported in document SDC 11/2 (Secretariat), and took the outcomes and decisions into consideration under the relevant agenda items. Additional matters relevant to this session are described hereunder.

Amendments to the Committees' Organization and method of work

Decisions of MSC 108

2.2 The Sub-Committee recalled that MSC 108 had agreed to draft amendments to the *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.5), with respect to an initial assessment of capacity-building implications, for application as from MSC 109 (MSC 108/20, paragraphs 17.6 to 17.8 and annex 22).

Decisions of MSC 109

2.3 The Sub-Committee also recalled that subsequently MSC 109 had further developed and had approved draft amendments to the Committees' Organization and method of work (MSCMEPC.1/Circ.5/Rev.5), addressing (MSC 109/22, paragraph 19.14 and annex 26):

.1 measures to address the workload of the Committees and their subsidiary bodies;

.2 procedures to facilitate the assessment of capacity-building implications of new or amended mandatory instruments;

.3 safeguards and the decision-making process to be followed during consideration and approval of unified interpretations; and

.4 general improvements,

to be disseminated as MSC-MEPC.1/Circ.5/Rev.6, subject to concurrent approval by MEPC 83 (April 2025).

2.4 In this regard, MSC 109 had decided to apply the changes introduced in the Committees' Organization and method of work on an interim basis, starting with submissions to MSC 110, until concurrent approval by MEPC 83, and had agreed to implement the new requirement for submission of a "road map" on a voluntary basis in the interim period (MSC 109/22, paragraph 19.15 and annex 26).

2.5 Subject to concurrent approval of the draft revision of the Committees' Organization and method of work by MEPC 83, the Committee (MSC 109/22, paragraph 19.16):

.1 invited the Council to consider aligning relevant provisions in the *Application of the Strategic Plan of the Organization* (resolution A.1174(33)) with the corresponding provisions in MSC-MEPC.1/Circ.5/Rev.6; and

.2 requested the Secretariat to update the *Guidance on drafting of amendments to the 1974 SOLAS Convention and related mandatory instruments* (MSC.1/Circ.1500/Rev.3) and *Procedural aspects related to the drafting of amendments to safety-related IMO Conventions, other than the 1974 SOLAS Convention, and related mandatory instruments* (MSC.1/Circ.1587) accordingly.

Rules on the use of hybrid capabilities

2.6 The Sub-Committee recalled that C132 had noted the Maritime Safety Committee's decision to include rules on the use of hybrid meeting capabilities in its Rules of Procedure (C 132/D, paragraph 12.3).

2.7 The Sub-Committee also recalled that C 133 had approved the draft revised Rules of Procedure of the Council, including the matter related to the hybrid meeting capabilities, and had invited the other organs of the Organization to consider the amendments to the Rules of Procedure, with a view to harmonizing their respective Rules of Procedure with the rules of the Council to the extent possible (C 133/D, paragraph 3.8).

3 DEVELOPMENT OF GUIDELINES FOR EMERGENCY TOWING ARRANGEMENTS FOR SHIPS OTHER THAN TANKERS

Background

3.1 The Sub-Committee recalled that MSC 108 had adopted resolution MSC.549(108), containing the amendments to SOLAS regulation II-1/3-4 in relation to new requirements for new ships other than tankers of not less than 20,000 gross tonnage (GT) to be fitted with emergency towing arrangements (ETAs), with the expected entry-into-force date of 1 January 2028.

3.2 The Sub-Committee also recalled that SDC 10 had agreed to develop draft guidelines for ETAs for ships other than tankers. However, the Sub-Committee, in the absence of more comprehensive data that would be required to develop a strength parameter suitable for ships other than tankers, had also agreed to consider further this matter at this session. In this context, SDC 10 had invited interested Member States and international organizations to submit more information, including data, which might contribute to the determination of the strength requirements.

3.3 The Sub-Committee further recalled that MSC 108 had agreed to the request of SDC 10 to expand output 2.20 by moving the output on the "Revision of appendices A and B of the *Revised guidance on shipboard towing and mooring equipment* (MSC.1/Circ.1175/Rev.1)" from the Committee's post-biennial agenda, and including it under existing output 2.20, i.e. to incorporate draft amendments to MSC.1/Circ.1175/Rev.1 deriving from the update of IACS Unified Requirement (UR) A2 and Recommendation No.10.

Draft guidelines for emergency towing arrangements for ships other than tankers

Strength of towing components

3.4 With respect to strength of towing components, the Sub-Committee considered the following documents:

.1 SDC 11/3 (Japan), providing a proposal for paragraph 2.3 of the draft Guidelines for emergency towing arrangements on ships other than tankers, on the strength of towing components; and

.2 SDC 11/3/1 (China) (relevant part), proposing modifications to the draft Guidelines with respect to the strength of towing components.

3.5 In the ensuing discussion, the Sub-Committee had a lengthy debate over the strength of towing components[2] and noted the following views:

.1 the definition of minimum strength requirements for ships other than tankers should be presented strictly as a function of Equipment Number (EN). To this end, a proposal for a linear relation, as proposed in document SDC 11/3, would be preferred, if compared to the "stepped" approach proposed in document SDC 11/3/1;

.2 requirements for minimum towing strength for ships other than tankers, should not be lower than those defined for tankers, as defined in the *Guidelines for emergency towing arrangements on tankers* (resolution MSC.35(63), as amended by resolution MSC.132(75). To this end, the minimum strength requirement between EN of 3,000 and 7,000 should be increased in both proposals in documents SDC 11/3 and SDC 11/3/1;

.3 while agreeing that it was important to have a well-defined relation between towing strength and EN, it was also important to have a balanced approach that combined safety with practicality and flexibility, taking into account different types of ships;

[2] The Sub-Committee discussed the matter by utilizing a comparison graph of Minimum Towing Strength Requirements proposed in documents SDC 11/3 and SDC 11/3/1, which can be downloaded on IMODOCS/SDC 11/Virtual Portal.

.4 from experience, for larger ships other than tankers, namely above EN of 10,000, there was no evidence that towing strength exceeded 2,000 kN. For this reason, the minimum required towing strength should not be required to be higher than this value which was not stricter than the requirement for tankers. Therefore, a linear approach that would lead strength requirements to be well above 2,000 kN for ships above EN of 10,000 was not supported;

.5 ships other than tankers had much less risk of having accidents resulting in severe environmental impacts. This should be taken into consideration when deciding the minimum towing strength requirements for ships other than tankers;

.6 it was important to ensure the highest possible minimum strength requirements for ships other than tankers, notably for ships above EN of 10,000. For ships of such high EN, e.g. large containerships and pure car and truck carriers, the EN determined a significant higher towing strength when compared to tankers. For this reason, a limit of 2,000 kN for larger ships was not acceptable;

.7 safety factor of 2 should be ensured; and

.8 given the need to:

.1 gain experience in the application of the guidelines on emergency towing arrangements for ships other than tankers; and

2 finalize the guidelines at this session, taking into account the expected entry into force of resolution MSC.549(108) on 1 January 2028,

the draft guidelines should be finalized as "interim guidelines" at that stage.

3.6 Taking into account the above views, the Sub-Committee agreed to instruct the Drafting Group on Development of guidelines for emergency towing arrangements for ships other than tankers/Further development of the IP Code and associated guidance to be established (see paragraphs 3.13 and 4…) to finalize the drafting of the guidelines on minimum

towing strength for ships other than tankers, based on the annex to document SDC 10/WP.6, taking into consideration the following agreements reached in plenary:

.1 to require 2,000 kN for ships having EN of 3,000 to 10,000;

.2 not to limit towing strength requirement of larger ships to 2,000 kN;

.3 to require the towing load (kN) of 0.2 tonnes multiplied by the equipment number for ships having equipment number of 10,000 and upwards;

.4 to set the safety factor at 2.0; and

.5 to keep the guidelines as "interim", with a view to allowing experience gained in their application to be incorporated into further revision.

Consequential amendment to MSC.1/Circ.1255

3.7 Regarding the revision of the *Guidelines for owners/operators on preparing emergency towing procedures* (MSC.1/Circ.1255), the Sub-Committee recalled that:

.1 SDC 10 had noted that the Guidelines (MSC.1/Circ.1255) might need to be reviewed in relation to the deployment and towing procedures, as a consequence of the new requirement for ETAs on ships other than tankers (SDC 10/17, paragraph 3.12.2), in particular for incorporation of the text related to "rapid deployment" of ETAs, as appropriate (SDC 10/WP.6, paragraph 8); and

.2 document SDC 11/3/1 had been partly considered on strength requirements, pending the remaining parts (see paragraph 3.4.2).

3.8 In this respect, the Sub-Committee considered paragraphs 12 to 14 of document SDC 11/3/1, proposing amendments to the Guidelines (MSC.1/Circ.1255), in order to require record of Equipment Number (EN) as minor corrections.

3.9 Having agreed with the above proposal, the Sub-Committee instructed the Drafting Group to draft consequential amendments to MSC.1/Circ.1255 on ship-specific data, based

on annex 3 of document SDC 11/3/1, including an associated MSC circular, with a view to circulation as MSC.1/Circ.1255/Rev.1, if time permits.

Proposal to revise MSC.1/Circ.1175/Rev.1

3.10 The Sub-Committee considered document SDC 11/3/2 (IACS), proposing to amend MSC.1/Circ.1175/Rev.1, with a view to updating the technical guidance provided by the circular.

3.11 Having agreed with the above proposal, the Sub-Committee instructed the Drafting Group to finalize revision of MSC.1/Circ.1175/Rev.1, based on document SDC 11/3/2, together with the associated draft MSC circular, if time permits, with a view to circulation as MSC.1/Circ.1175/Rev.2.

Establishment of the Drafting Group on Development of Guidelines for emergency towing arrangements for ships other than tankers

3.12 Subsequently, the Sub-Committee established the Drafting Group on Development of guidelines for emergency towing arrangements for ships other than tankers/Further development of the IP Code and associated guidance (see paragraph 4…) and instructed it, taking into account the comments made and decisions taken in plenary, to:

.1 finalize the draft Interim guidelines for emergency towing arrangements on ships other than tankers, together with the associated draft MSC circular, based on the annex to document SDC 10/WP.6 and taking into account documents SDC 11/3 and SDC 11/3/1;

.2 finalize the draft revision of MSC.1/Circ.1175/Rev.1, based on the annex to document SDC 11/3/2, together with the associated draft MSC circular, if time permits;

.3 prepare the draft text related to "rapid deployment" of emergency towing arrangements for ships subject to new SOLAS regulation II-1/3-4.2 for incorporation into the ETA guidelines as referred to in paragraph .1;

.4 prepare the draft consequential amendments to MSC.1/Circ.1255 on ship-specific data, based on annex 3 of document SDC 11/3/1, including an

associated MSC circular, with a view to circulation as MSC.1/Circ.1255/Rev.1, if time permits; and

.5 in case the establishment of a correspondence group to continue the work intersessionally on the tasks that have not been completed at this session is needed, prepare relevant draft terms of reference.

Report of the Drafting Group

3.13 Having considered the relevant part of the report of the Drafting Group on Development of guidelines for emergency towing arrangements for ships other than tankers/Further development of the IP Code and associated guidance (SDC 11/WP.8), the Sub-Committee approved it in general and took action as outlined hereunder (paragraphs ...).

Interim guidelines for emergency towing arrangements on ships other than tankers

3.14 The Sub-Committee agreed with the draft Interim guidelines for emergency towing arrangements on ships other than tankers, together with the associated MSC circular, as set out in annex […], for approval by MSC 110.

Revision of MSC.1/Circ.1175/Rev.1

3.15 Subsequently, the Sub-Committee agreed with the draft revision of MSC.1/Circ.1175/Rev.1, *Guidance on Shipboard Towing and Mooring Equipment*, for approval by MSC 110, and issuance as MSC.1/Circ.1175/Rev.2.

Amendment of MSC.1/Circ.1255

3.16 Finally, the Sub-Committee agreed with the draft amendments to MSC.1/Circ.1255, *Guidelines for Owners/Operators on Preparing Emergency Towing Procedures*, for approval by MSC 110, and issuance as MSC.1/Circ.1255/Rev.2.

4 FURTHER DEVELOPMENT OF THE IP CODE AND ASSOCIATED GUIDANCE

Background

4.1 The Sub-Committee recalled that MSC 105 had:

.1 approved the draft new SOLAS chapter XV and the draft International Code of Safety for Ships Carrying Industrial Personnel (IP Code); and

.2 agreed to a second phase of work to address outstanding matters, including clarifying the interaction between the IP and SPS Codes, incorporating provisions for passenger ships and, with respect to high-speed craft carrying industry personnel (IP), provisions for sleeping berths and for high-speed craft carrying more than 60 persons, under the new output "Further development of the IP Code and associated guidance".

4.2 The Sub-Committee also recalled that, in the absence of any submission to SDC 10 and no substantial proposal for amendments to the IP Code and related guidance to SDC 9, SDC 10 had invited submissions to this session on the matter, in order to complete the outstanding work.

Draft amendments to the IP Code

4.3 The Sub-Committee considered document SDC 11/4/2 (Germany and Ireland), commenting on the report of SDC 10 (SDC 10/17) and proposing amendments to regulation IV/1 of the IP Code (resolution MSC.527(106)).

4.4 In the ensuing discussion, the Sub-Committee noted the following views:

.1 no evidence was provided for an immediate technical need for the suggested change to specify the weight of IP as 90 kg also in part IV of the IP Code, given that the weight of IP (equipped and with personal protective equipment) was considered not to have any significant effect on the stability calculations for ships certified in accordance with SOLAS chapter I;

.2 the inconsistency had already been noted during ISWG-IP 1 where it was acknowledged that additional weight would not have the same effect on ships certified in accordance with SOLAS chapter I;

.3 IP weight should not be a function of ship type, and should be the same for ships certified in accordance with SOLAS chapter I (covered in the IP Code under part IV) or ships certified in accordance with SOLAS chapter X and the HSC Code (covered in the IP Code under part V);

.4 indication of IP weight of 90 kg for ships covered in part IV of the IP Code would result also in modifications to the standard weight used for stability

calculations and life-saving appliances. The consequences of making this change should be carefully considered;

.5 notwithstanding the view expressed above, irrespective of the impact on stability calculations in different ship types, which would be difficult to evaluate at this session, it would be important to ensure that a uniform weight for IP was used across different ship types, falling in different parts of the IP Code; and

.6 consistent weight standards should be provided within the IP Code for harmonizing provisions on IP weight in stability calculations.

4.5 Having noted the majority support provided for the proposal, the Sub-Committee agreed with the proposed amendments to regulation IV/1 of the IP Code and instructed the Drafting Group on Development of guidelines for emergency towing arrangements for ships other than tankers/Further development of the IP Code and associated guidance, established under item 3 (see paragraph 3.12), to finalize the draft amendments to part IV of the IP Code, based on document SDC 11/4/2; and to prepare associated draft part III of the check/monitoring sheet for the process of amending the 1974 SOLAS Convention and related mandatory instruments (see paragraph 4.12).

Development of related guidance to the IP Code

4.6 With respect to the development of related guidance to the IP Code, the Sub-Committee recalled that, in order to aid in developing an IMO guidance document/Explanatory Notes, as part of the second phase of the work on the IP Code, IMCA had submitted document SDC 9/INF.3.

4.7 In this respect, the Sub-Committee considered document SDC 11/4 (IMCA), commenting on the report of SDC 10 (SDC 10/17) and proposing a way forward for the development of related guidance to the IP Code, where it was further proposed that the text contained in the annex to document SDC 9/INF.3 be used as the basis for the development of guidance on the IP Code, taking into account the experience of flag Administrations, classification societies and the industry in implementing the IP Code.

4.8 In the ensuing discussion, the following views were expressed:

.1 it was premature to initiate the development of guidance on the IP Code at this stage. The Code had entered into force on 1 July 2024 and it would be preferable to wait for more experience to be gained before initiating the process for drafting the guidance; and

.2 especially due to the recent adoption of the IP Code, it would be important to develop guidance to assist in the implementation and adequate application of its provisions, following some experience, in order to assist all relevant stakeholders.

4.9 Taking into account the above views, the Sub-Committee agreed not to develop related guidance to accompany the implementation of the IP Code at this stage.

Second phase of work on the IP Code

4.10 The Sub-Committee considered document SDC 11/4/1 (IMCA), commenting on the report of SDC 10 (SDC 10/17) and proposing to maintain the agenda for incorporating additional text in the IP Code to clarify the interaction between the IP Code and the SPS Code.

4.11 In the ensuing discussion, despite acknowledging the need for further work and in the absence of concrete proposals, in accordance with the draft revision of the Committees' method of work (MSC 109/WP.10), the Sub-Committee agreed that the work under the output had been completed.

Further instructions to the Drafting Group

4.12 Subsequently, the Sub-Committee further instructed the Drafting Group on Development of guidelines for emergency towing arrangements for ships other than tankers/Further development of the IP Code and associated guidance, taking into account the comments made, and decisions taken in plenary, to finalize the draft amendments to part IV of the IP Code, based on document SDC 11/4/2; and to prepare associated draft part III of the check/monitoring sheet for the process of amending the 1974 SOLAS Convention and related mandatory instruments for the amendments;

Report of the Drafting Group

4.13 Having considered the relevant part of the report of the Drafting Group on Development of guidelines for emergency towing arrangements for ships other than tankers/Further development of the IP Code and associated guidance (SDC 11/WP.8), the Sub-Committee took action as outlined in the following paragraphs.

Amendments to the IP Code

4.14 The Sub-Committee agreed with the draft amendments to the IP Code, as set out in annex […], for approval at MSC 110, and subsequent adoption at MSC 111.

4.15 Subsequently, the Sub-Committee agreed with the analysis undertaken in filling part III of the check/monitoring sheet for the process of amending the 1974 SOLAS Convention and related mandatory instruments. The Sub-Committee also noted the observation of the Drafting Group on potential shortfalls of procedural aspect of the amendments.

5 REVISION OF THE INTERIM EXPLANATORY NOTES FOR THE ASSESSMENT OF PASSENGER SHIP SYSTEMS' CAPABILITIES AFTER A FIRE OR FLOODING CASUALTY (MSC.1/CIRC.1369) AND RELATED CIRCULARS

General

5.1 The Sub-Committee recalled that SDC 10 had considered the report of the Correspondence Group on Revision of the Interim Explanatory Notes for the Assessment of Passenger Ship Systems' Capabilities After a Fire or Flooding Casualty (MSC.1/Circ.1369) (SDC 10/13 (Germany)) and had re-established the Correspondence Group to continue the work on the revision of the Interim Explanatory Notes (MSC.1/Circ.1369).

5.2 The Sub-Committee also recalled that MSC 108 had agreed to the request of SDC 10 to extend the target completion year, by one year, to 2025.

Report of the Correspondence Group on the Revision of the Interim Explanatory Notes (MSC.1/Circ.1369)

5.3 The Sub-Committee considered the report of the Correspondence Group on the Revision of the Interim Explanatory Notes (MSC.1/Circ.1369), as contained in document SDC 11/5 (Norway).

5.4 Having approved the report of the Correspondence Group (SDC 11/5), in general, and having been informed about the progress made by the Group, the Sub-Committee noted the following general comments made:

.1 concerns were expressed regarding applicability of safe return to port (SRtP) requirements to existing ships;

.2 training and drill requirements should be addressed in conjunction with the ongoing revision of the STCW Convention; and

.3 further discussion on the "one hour" criterion, return to port voyage parameters was encouraged, recognizing the implications for both ship design and operational profiles and considering the diverse operational contexts of passenger vessels globally.

Additional provisions

5.5 With respect to additional provisions, the Sub-Committee, as part of the discussion of the Group's report considered, in particular:

.1 the discussion regarding proposals in the present work related to training, familiarization, drills, ISM, port State control (PSC) and passenger ship safety certificate (PSSC) surveys (paragraph 9); and

.2 whether provisions on these matters could be acceptable in the revision of the draft Explanatory Notes or if, alternatively, these should instead be addressed within the relevant instruments and regulations.

5.6 In the ensuing discussion, the Sub-Committee noted and supported the view that the revision of the Interim Explanatory Notes should provide high-level guidance covering training and other operational matters. Upon finalization of the work by the Sub-Committee, the training related provisions should be reviewed by the HTW Sub-Committee, with a view to being taken into account during the ongoing comprehensive review of the STCW Convention, as well as the development of relevant model courses.

5.7 Following discussion, the Sub-Committee agreed that:

.1 the revision of MSC.1/Circ.1369 could include the introduction of elements relevant to other instruments and regulations; and

.2 other relevant sub-committees, including the HTW Sub-Committee should be consulted after finalization of the revision of MSC.1/Circ.1369.

Draft revision of MSC.1/Circ.1369

5.8 The Sub-Committee considered the draft revision of MSC.1/Circ.1369, as set out in the annex to document SDC 11/5, together with the following documents:

.1 SDC 11/5/1 (IACS), proposing amendments to appendix 1 of the Interim Explanatory Notes (MSC.1/Circ.1369) and providing interpretations for each SRtP system to "remain operational"; and

.2 SDC 11/5/2 (IACS), presenting further proposals for the specific items within appendix 1 of the revised Explanatory Notes, set out in the annex to document SDC 11/5.

5.9 In the ensuing discussion, the Sub-Committee noted the following views expressed:

.1 careful consideration should be given to the provision concerning the "Safe Return to Port" voyage duration in paragraph 3.1.6 of the draft revised Interim Guidelines, and corresponding dimensioning, in order to maintain an adequate level of safety; and

.2 the proposed amendments to appendix 1 of the draft revised Interim Explanatory Notes (MSC.1/Circ.1369) would improve the understanding of SRtP regulations for achieving an enhanced safety potential for saving crew and passenger lives.

5.10 Following discussion, the Sub-Committee:

.1 agreed to establish the Working Group on the Revision of the Interim Explanatory Notes (MSC.1/Circ.1369) (see paragraph 5.10); and

.2 instructed the Group to further consider the draft revision of the Interim Explanatory Notes, based on document SDC 11/5, and taking into account documents SDC 11/5/1 and SDC 11/5/2.

Establishment of the Working Group on Revision of the Interim Explanatory Notes (MSC.1/Circ.1369)

5.11 Subsequently, the Sub-Committee established the Working Group on Revision of the Interim Explanatory Notes (MSC.1/Circ.1369), and instructed it, taking into account the comments made and decisions taken in plenary, to:

.1 consider further the draft revision of MSC.1/Circ.1369, with a view to finalization, based on the annex to document SDC 11/5, and taking into account documents SDC 11/5/1 and SDC 11/5/2;

.2 subject to the finalization of the draft revision of MSC.1/Circ.1369, consider consequential draft amendments to the related circulars, e.g. MSC.1/Circ.1400, MSC.1/Circ.1437, MSC.1/Circ.1532/Rev.1 and MSC.1/Circ.1539/Rev.1; and to identify other circulars for harmonization (e.g. MSC.1/Circ.1422 and MSC.1/Circ.1589), as appropriate; and

.3 consider whether a correspondence group should be established and, if so, prepare draft terms of reference.

Report of the Working Group on Revision of the Interim Explanatory Notes (MSC.1/Circ.1369)

5.12 Having considered the report of the Working Group on the Revision of the Interim Explanatory Notes (MSC.1/Circ.1369) (SDC 11/WP.4), the Sub-Committee took action as outlined below.

Revision of MSC.1/Circ.1369

5.13 The Sub-Committee noted the Working Group's further advancement in the revision of MSC.1/Circ.1369, notably the finalization of the main part of the draft revised Explanatory Notes, as set out in the annex to document SDC 11/WP.4. The Sub-Committee further noted the deliberations of the Group on the revision of MSC.1/Circ.1369, as detailed below.

Application

5.14 With regard to application of MSC.1/Circ.1369, the Sub-Committee noted that the application to ships constructed before and after the approval of the draft revised Explanatory Notes should be appropriately reflected in the cover page of the circular containing the revised Explanatory Notes.

SRtP range

5.15 With respect to Safe Return to Port (SRtP) range, the Sub-Committee noted that:

.1 no provisions on a single voyage exceeding the SRtP range were included in the draft revised Explanatory Notes, as these were deemed not to be a suitable vehicle for considering such exemptions; and

.2 following the Working Group's agreement on reduced added value of draft section 5.1.2 on "Actual SRtP range", this had been deleted from the draft revised Explanatory Notes, as detailed in paragraph 9 of document SDC 11/WP.4.

Training, familiarization and drills

5.16 In relation to provisions on Training, familiarization and drills, the Sub-Committee noted that the revision of the Interim Explanatory Notes should provide high-level guidance covering training and other operational matters; and the finalized Explanatory Notes, and any other relevant information or standards, should be referred to the HTW Sub-Committee for its consideration (see paragraph 5.5 above).

Consequential draft amendments to the related circulars

5.17 With respect to any consequential draft amendments to related circulars, the Sub-Committee noted the decision of the Working Group not to embark on consideration of such amendments prior to the conclusion of the draft revision of MSC.1/Circ.1369. The Sub-Committee further noted that some circulars may need to be revoked, depending on whether they are sufficiently covered in the finalized revised Explanatory Notes.

Re-establishment of the Correspondence Group

5.18 In view of the above, the Sub-Committee re-established the Correspondence Group on Revision of the Interim Explanatory Notes (MSC.1/Circ.1369), under the coordination of Norway,[3] and instructed it, taking into account comments made and decisions taken, to

.1 finalize the interpretations in appendix 1 of the draft revised Explanatory Notes, based on the annex to document SDC 11/WP.4, taking into account document SDC 11/5/2;

.2 finalize appendix 2 of the draft revised Explanatory Notes;

.3 review the main part of the draft revised Explanatory Notes to ensure consistency in terms of formatting, paragraph numbering, cross-references and terminology;

.4 prepare a draft cover page for the circular containing the revised Explanatory Notes;

.5 develop references and information for the HTW and III Sub-Committees, as appropriate;

.6 based on the draft revised Explanatory Notes, consider consequential draft amendments to the related circulars or the need for maintaining them, e.g. MSC.1/Circ.1400, MSC.1/Circ.1437, MSC.1/Circ.1532/Rev.1 and MSC.1/Circ.1539/Rev.1; and to identify other circulars for harmonization (e.g. MSC.1/Circ.1422 and MSC.1/Circ.1589), as appropriate; and

.7 submit a report to SDC 12.

[3] **Coordinator:**
Mr. Sifis Papageorgiou
Principal Surveyor
Norwegian Maritime Authority
Vessels and Seafarers
Tel: +47 456 52 575
Email: sipa@sdir.no

6 AMENDMENTS TO THE 2011 ESP CODE

General

6.1 The Sub-Committee recalled that SDC 10 had agreed, in principle, to use remote inspection techniques (RIT) for close-up inspections that would not be limited to bulk carriers and oil tankers under the ESP Code.

6.2 The Sub-Committee also recalled that SDC 10 had established the Correspondence Group on Amendments to the 2011 ESP Code to permit the use of RIT, and had instructed it to prepare and to finalize the draft amendments to the ESP Code, based on document SDC 10/6 (IACS). The Correspondence Group was also instructed to develop guidelines on RIT under the ESP Code, which might be used by the Organization as a template for more holistic guidelines in the future.

6.3 The Sub-Committee also recalled that resolution A.1186(33) on *Survey Guidelines under the Harmonized System of Survey and Certification (HSSC), 2023,* included relevant provisions for remote surveys which, despite not being specific to the application of RIT, should be taken into consideration to ensure a harmonized approach.

6.4 The Sub-Committee further recalled that III 10 had tasked a correspondence group to review the relevant section on technical requirements in the draft guidance on remote surveys, and to develop the necessary specific technical requirements for remote methods to achieve a level equivalent to in-person attendance, taking into account the Sub-Committee's ongoing work to develop guidance on the use of RIT if this becomes available.

Report of the Correspondence Group on Amendments to the 2011 ESP Code to permit the use of RIT

6.5 The Sub-Committee considered document SDC 11/6 (IACS), containing the report of the Correspondence Group on Amendments to the 2011 ESP Code to permit the use of RIT and, having approved it in general, took action as outlined below.

Use of RIT

6.6 With respect to the use of RIT, the Sub-Committee:

.1 noted the discussion of the Group and advances on the draft amendments to the ESP Code to permit the use of RIT, as well as the associated draft guidelines; and

.2 considered document SDC 11/6/2 (IACS), providing comments on the report of the Correspondence Group (SDC 11/6) with respect to RIT.

6.7 In the ensuing discussion, the Sub-Committee noted the following views expressed:

.1 the legal liability matter with respect to the use of RIT should be covered by the new RIT guidelines and consideration should be given to including relevant references in other instruments, e.g. the Code for Recognized Organizations (RO Code);

.2 while agreeing that RIT represented a significant, and much-needed, technological development for ship inspections, notably improving access in difficult areas, it was important to ensure that RIT should not replace close-up surveys entirely. Instead, RIT should be considered only as a supplementary tool;

.3 the amendments to the 2011 ESP Code for the inclusion of RIT should be kept in abeyance until the work on the RIT guidelines had been completed, with a view to ensuring that all relevant aspects were covered in the draft guidelines; and

.4 the use of RIT for thickness measurement would require detailed consideration, with a view to understanding to which level the existing technology can be relied upon for the performance of thickness measurement.

6.8 Following consideration, the Sub-Committee agreed to establish the Working Group on Amendments to the ESP Code (ESP Working Group) and instructed it to further consider document SDC 11/6/2 (see paragraph 6.24).

Definition of RIT

6.9 The Sub-Committee considered the different proposals for the definition of RIT included in documents SDC 11/6 and SDC 11/6/2, and noted the following views:

.1 a clear definition of RIT was needed, with a view to ensuring consistency and alignment with the use of RIT in other areas of the industry;

.2 RIT should be understood to be a subset of remote surveys, as a tool to be used in order to facilitate such surveys;

.3 the definition of RIT as a means of survey without direct physical access was supported and the definition should not create any limitation for other technologies;

.4 the simpler and more high-level definition of RIT, as proposed in paragraph 4 of annex 1 to document SDC 11/6, should be preferred;

.5 the definition of RIT should not limit the different possible technologies. The surveyor should be allowed to consider the most viable and adequate technical option in support of the surveys. In particular, the definition of RIT should not limit the technologies only to "remote controlled vehicles" or "robotic arms", as this could exclude other available technologies; and

.6 in order to ensure that the definition of RIT did not exclude cases where the surveyor was on-site, but not necessarily on board, the formulation should be sufficiently broad to avoid excluding any other cases where a surveyor might be located, e.g. at the quay or on a boat adjacent to the ship.

6.10 Consequently, having agreed with the shorter and simpler definition for RIT developed by the Correspondence Group (SDC 11/6, annex 1, paragraph 4.4), the Sub-Committee agreed to instruct the ESP Working Group to take that definition into account as a basis for further development when finalizing the draft amendments to the 2011 ESP Code.

Options on the requirements for the use of RIT

6.11 The Sub-Committee discussed the options provided by the Correspondence Group on the requirements for the use of RIT and agreed to instruct the ESP Working Group to further consider the options, with a view to developing a compromise proposal that would merge the two options presented in paragraphs 6 and 12 of annex 1 of document SDC 11/6, i.e. draft sections 1.6 and 7a of the draft amendments to the ESP Code.

The use of RIT for taking thickness measurements

6.12 The Sub-Committee considered the development of provisions for the use of RIT for taking thickness measurements and agreed that such provisions should not be developed for inclusion into the ESP Code amendments for the use of RIT at that stage; however, they might become part of the draft guidelines.

Legal liability on the use of RIT

6.13 The Sub-Committee considered the legal liability on the use of RIT and whether and where such a clause was required in the ESP Code and/or in the draft guidelines being developed. In this context, the Sub-Committee also considered whether the attention of the III Sub-Committee was required regarding potential implications for other IMO instruments, such as the RO Code.

6.14 In the ensuing discussion, the following views were expressed:

.1 as "legal liability" was considered to be a broad concept, it was important to define the issue properly. RIT were already used in different applications, notably in non-ESP Code ships. There was not any evidence of concerns regarding legal liability in the application of RIT in ship surveys;

.2 it was noted that legal liability between two contracting parties was not regulated in other IMO instruments. The companies providing survey services and other parties are linked by private agreements. MSC-MEPC.5/Circ.16 on *Model agreement for the authorization of recognized organizations acting on behalf of the Administration* provided legal liability provisions in relation to the services of ROs;

.3 as indicated in paragraph 5.14.3.6 of the *Survey Guidelines under the Harmonized System of Survey and Certification (HSSC), 2023* (resolution A.1186(33)), the current liability regime regulating the surveys between flags, RO and shipowners' obligations should not be changed; and

.4 it should be noted that, when considering the aspect of "legal liability", it was important to acknowledge the difference between "remote survey" and RIT, where the "remote survey" comprised an entirely different concept of surveys without the presence of the surveyor on board or on-site, whereas the RIT referred to a method that was supplementary to ship structure surveys, allowing the attending surveyor to conduct the survey in a safer and more efficient manner.

6.15 Following the discussion, the Sub-Committee concluded that specific provisions on "legal liability" should not be included as amendments to the 2011 ESP Code, nor in the draft guidelines.

Draft guidelines on the use of remote inspection techniques for ESP Code surveys

6.16 The Sub-Committee considered the draft guidelines on the use of RIT for ESP Code surveys and instructed the ESP Working Group to continue further the work, taking into account the discussions and decisions made at this session.

Procedures for certification of a firm engaged in a close-up survey of hull structures using RIT

6.17 The Sub-Committee considered the draft procedures for certification of a firm engaged in a close-up survey of hull structures using RIT and agreed with the proposed draft procedures to be included in the 2011 ESP Code. Subsequently, the Sub-Committee referred the draft procedures to the ESP Working Group accordingly, for further development.

Consequential revision of MSC.1/Circ.1502 to reflect changes in the 2011 ESP Code (resolution MSC.525(106))

6.18 The Sub-Committee considered document SDC 11/6/1 (IACS), proposing a revision of MSC.1/Circ.1502 on the *Guidance on pressure testing of boundaries of cargo oil tanks under direction of the master* to keep consistency with the latest 2011 ESP Code (amended by resolution MSC.525(106)).

6.19 Following consideration, the Sub-Committee, having agreed with the proposal, instructed the ESP Working Group to develop further consequential draft amendments to MSC.1/Circ.1502, following the 2011 ESP Code amendments adopted through resolution MSC.525(106) regarding pressure testing, based on the annex to document SDC 11/6/1.

Inconsistent implementation of resolution MSC.158(78) and the 2011 ESP Code

6.20 The Sub-Committee considered document SDC 11/16 (China), providing an observation of inconsistent implementation of resolution MSC.133(76) (as amended by MSC.158(78)) and the 2011 ESP Code (resolution A.1049(27), as amended) on the use of portable ladders as the means of access to cargo hold side shell frame of single-side skin bulk carriers, and proposing amendments to resolution MSC.158(78).

6.21 During consideration, the Sub-Committee noted the following diverse views expressed:

.1 the ESP Code related to statutory surveys, whereas resolution MSC.158(78) was intended to provide means of access to the ship structure and, therefore, the matter should be considered, taking into account the different scope of application and nature of the two instruments;

.2 the 5-metre limitation in the 2011 ESP Code provided for portable means of access that were possible to be used in statutory surveys up to the first bracket. In the case of the technical provisions such a limitation did not apply, with the objective of allowing crew or other parties to access the ship structure up to the upper bracket throughout the life of the ship. Such difference was justified by the different objectives of the 2011 ESP Code and resolution MSC.158(78);

.3 both the 2011 ESP Code and resolution MSC.158(78) contained mandatory provisions, with the latter being the primary enabler for close-up surveys. Therefore, both instruments should be consistent. Means of access to the inspection of the side shell frames of the cargo hold in resolution MSC.158(78) should, to this end, be subject to the constraints of paragraph 5.3, part A of annex A to the 2011 ESP Code;

.4 given the perceived inconsistency between the provisions of the 2011 ESP Code and resolution MSC.158(78) regarding the means of access to close-up surveys of the side shell frames, the provisions of the 2011 ESP Code should prevail; and

.5 according to SOLAS regulation II-1/3-6.2.1, each space shall be provided with means of access to enable, throughout the life of a ship, overall and close-up inspections and thickness measurements of the ship's structures to be carried out by the Administration; the company, as defined in SOLAS regulation IX/1; the ship's personnel; and others as necessary. To this end, the attending surveyor could be considered as one of these personnel during statutory inspections. For this reason, the provision on means of access in SOLAS regulation II-1/3-6, and *Technical provisions for means of access for inspections* (resolution MSC.133(76)), as amended by MSC.158(78), should be consistent with the means of access used by the surveyor to carry out close-up inspections according to the 2011 ESP Code.

6.22 In addition to the technical content of the proposal, the Sub-Committee further discussed the adequate procedural way forward and noted the following comments made:

.1 the proposed amendments contained in document SDC 11/6 could be considered as a minor correction and, therefore, be agreed by the Sub-Committee; and

.2 it was difficult to assess whether the amendments should be considered as a minor correction. Given the facts that the proposal suggested amendments to an MSC resolution, and it was considered outside the scope of the output on "Amendments to the 2011 ESP Code", the Committee should be invited to further consider document SDC 11/16.

6.23 In view of the above, the Sub-Committee:

.1 confirmed the inconsistency between the 2011 ESP Code and resolution MSC.158(78), as suggested in document SDC 11/16; and

.2 invited the Committee to further consider document SDC 11/16 in relation to the proposed amendments to resolution MSC.158(78).

Establishment of the Working Group on Amendments to the ESP Code

6.24 Subsequently, the Sub-Committee established the Working Group on Amendments to the ESP Code and instructed it, taking into account the comments made, and decisions taken, in plenary, to:

.1 further develop, with a view to finalizing at this session, draft amendments to the 2011 ESP Code to permit the use of remote inspection techniques (RIT), based on annex 1 of document SDC 11/6, and taking into consideration document SDC 11/6/2, including provisions for approval and certification of a firm engaged in the close-up survey of hull structures using an RIT;

.2 further develop draft guidelines for the use of RIT for surveys;

.3 finalize consequential draft amendments to MSC.1/Circ.1502, following the 2011 ESP Code amendments adopted through resolution MSC.525(106) regarding pressure testing, based on the annex to document SDC 11/6/1;

.4 prepare the associated draft part III of the check/monitoring sheet for the process of amending the 1974 SOLAS Convention and related mandatory instruments; and

.5 consider whether a correspondence group should be established and, if so, prepare draft terms of reference.

Report of the Working Group on Amendments to the ESP Code

6.25 Having considered the report of the Working Group on Amendments to the ESP Code (SDC 11/WP.5), the Sub-Committee approved it in general and took action as outlined hereunder.

Amendments to the ESP Code for the use of RIT

6.26 The Sub-Committee approved the draft amendments to the 2011 ESP Code, to incorporate RIT, together with the associated check/monitoring sheet for the process of

amending the 1974 SOLAS Convention and related mandatory instruments, as set out in annexes 1 and 2 of document SDC 11/WP.5, respectively, with a view to approval at MSC 110.

Definition of RIT

6.27 With respect to the definition of RIT, the Sub-Committee agreed, following its decision in paragraph 6.10, above, that the physical attendance of the surveyor on board the ship did not need to be mentioned expressly in the definition of RIT.

Thickness measurements and close-up surveys

6.28 In relation to thickness measurements and close-up surveys, the Sub-Committee agreed that only the Administration may authorize the use of RIT for periodic surveys after the third special survey.

Procedures for the use of RIT

6.29 The Sub-Committee agreed that, in relation to the procedures for the use of RIT, for the cases where the RIT would reveal damage or deterioration should be addressed, traditional close-up surveys shall be required.

6.30 The Sub-Committee also agreed with the introduction of the requirement for random confirmatory surveys/close-up surveys carried out at locations selected by the surveyor.

Renewal survey

6.31 Regarding renewal survey, the Sub-Committee agreed that RIT shall not be used to assist the surveyor during the close-up survey in areas which have a recorded significant history of structural failures (corrosion, cracks and buckling).

Preparations for survey

6.32 In relation to preparations for survey, using RIT, the Sub-Committee agreed with the following improvements to the text of the draft amendments, that:

.1 the RIT limitations, if any, shall be detailed in the survey programme;

.2 details of the areas not fully accessed by the permanent means of access and proposed to be covered with the RIT shall be detailed in the survey programme; and

.3 the RIT shall not be used to assist the surveyor during the close-up survey in areas which have a recorded significant history of structural failures, defects, damage or deterioration, as already indicated in paragraph 6.30.

Equipment for survey

6.33 The Sub-Committee agreed with the requirement for the surveyor to be satisfied with the data presentation and communication and, prior to the start of surveys, for the performance of the RIT to be confirmed.

Approval and certification of a firm engaged in close-up survey of hull structures using a RIT

6.34 The Sub-Committee agreed with the draft amendments on procedures for certification of firms engaged in close-up survey of hull structures using a RIT (SDC 11/WP.5, paragraph 16).

Editorial amendment to 2.6.1.3 of parts A and B of annex B of the 2011 ESP Code

6.35 The Sub-Committee agreed with the editorial amendment consisting of the rectification in existing sub-paragraph 2.6.1.3 of parts A and B of annex B of the 2011 ESP Code, where 'special survey' is mentioned, instead of 'renewal survey', and agreed to rectify this editorial matter, as set out in the new sub-paragraph 2.6.1.3.

Amendments to MSC.1/Circ.1502

6.36 The Sub-Committee agreed with the draft amendments to the *Guidance on pressure testing of boundaries of cargo oil tanks under direction of the master* (MSC.1/Circ.1502), to align the tank pressure testing provisions in its paragraph 3.4 with the 2011 ESP Code, as set out in annex 3 of document SDC 11/WP.5.

Guidelines on the use of RIT for 2011 ESP Code surveys

6.37 Having noted the progress made in the development of guidelines on the use of RIT for 2011 ESP Code surveys, the Sub-Committee instructed the ESP Correspondence Group

to further the work, based on annex 2 of document SDC 11/6, and taking into account the discussion reflected in paragraphs 20 to 23 of that document.

6.38 The Sub-Committee agreed that the guidelines on the use of RIT should be in place by the entry into force of the amendments to the 2011 ESP Code, to ensure a standardized and safe approach of the use of RIT for 2011 ESP Code surveys.

Re-establishment of the Correspondence Group

6.39 In view of the above, following the progress made at this session, the Sub-Committee re-established the Correspondence Group on the Development of guidelines on the use of RIT for 2011 ESP Code surveys, under the coordination of IACS[4], and instructed it, taking into account comments made and decisions taken at SDC 11, to:

.1 further develop guidelines on the use of RIT for 2011 ESP Code surveys, based on annex 2 of document SDC 11/6, and taking into account the discussion reflected in paragraphs 20 to 23 of that document;

.2 consider, as part of the development of the guidelines on the use of RIT, to:

.1 adopt a goal-based approach, including identifying functional requirements and expected performance;

.2 also include guidance for RIT thickness measurements capabilities;

.3 take into account the draft amendments to the 2011 ESP Code and also to identify the references to the guidelines on the use of RIT, as set out in annex 1 of document SDC 11/6;

.4 include guidance on the use of RIT for surveyors, ships' personnel, firms using RIT and for manufacturers of RIT;

[4] **Coordinator:**
Mr. Eduardo Antunes
LR Global Technology Centre, Hampshire House, Hampshire Corporate Park
Southampton, SO53 3RY, United Kingdom
Tel: +44 330 414 1000
Email: eduardo.mendes-antunes@lr.org

.5 include guidance for validation and verification of RIT equipment capability (ashore and onboard ship);

.6 include guidance for certification of RIT equipment;

.7 include guidance for training of personnel of firms and surveyors engaged in the use of RIT; and

.8 consider developments within the RIT manufacturing industry and firms using RIT;

.3 convene virtual meetings using a suitable platform in order to consider any of the terms of reference, as necessary; and

.4 submit a written report to SDC 12.

7 AMENDMENTS TO THE GUIDELINES FOR CONSTRUCTION, INSTALLATION, MAINTENANCE AND INSPECTION/SURVEY OF MEANS OF EMBARKATION AND DISEMBARKATION (MSC.1/CIRC.1331) CONCERNING THE RIGGING OF SAFETY NETTING ON ACCOMMODATION LADDERS AND GANGWAYS

Background

7.1 The Sub-Committee recalled that SDC 10 had considered the draft amendments to the *Guidelines for construction, installation, maintenance and inspection/survey of means of embarkation and disembarkation* (MSC.1/Circ.1331). However, due to time constraints, SDC 10 could not complete outstanding issues, in particular:

.1 clarification regarding the entry-into-effect date of the revised Means of embarkation Guidelines (MSC.1/Circ.1331), as to which version of the Guidelines should apply when replacing accommodation ladders and gangways installed on ships built before 1 January 2010; and

.2 discussion on the implementation of new and old ISO standards.

7.2 The Sub-Committee also recalled that MSC 108 had agreed to the request of SDC 10 to extend the target completion year by one year, i.e. 2025 (MSC 108/20, paragraph 18.24).

Draft amendments to the revised Means of embarkation Guidelines

7.3 With respect to the draft amendments to the revised Means of embarkation Guidelines, the Sub-Committee considered the following documents:

.1 SDC 11/7 (Republic of Korea), commenting on the draft revision of the Means of embarkation Guidelines (MSC.1/Circ.1331), as contained in annex 1 of document SDC 10/WP.7, with a view towards global and uniform implementation; and

.2 SDC 11/7/1 (China), discussing the remaining issues in paragraphs 2.1, 2.1*bis* and 2.3 of the draft amendments to MSC.1/Circ.1331, and proposing the applicable latest international standards regarding accommodation ladders, gangways and accommodation ladder winches fitted on ships constructed before 1 January 2010 and replaced on or after 1 July 2026.

7.4 Having noted that the submitters of documents SDC 11/7 and SDC 11/7/1 could suggest a compromise draft text for addressing the pending matters therein, for ease of discussion, the Sub-Committee also considered a Note by the Chair (SDC 11/WP.10), containing a draft revision of MSC.1/Circ.1331, incorporating a compromise draft text.

7.5 During discussion, the Sub-Committee noted the need for final verification of the international standards referred to in the draft revision of MSC.1/Circ.1331, paragraphs 2.2 and 2.3, having requested the Secretariat to perform this final check.

7.6 Subsequently, the Sub-Committee agreed with the draft revision of MSC.1/Circ.1331 and the associated draft MSC circular, as set out in annex […], for approval by MSC 110 and dissemination as MSC.1/Circ.1331/Rev.1.

8 REVISION OF SOLAS CHAPTERS II-1 (PART C) AND V, AND RELATED INSTRUMENTS REGARDING STEERING AND PROPULSION REQUIREMENTS, TO ADDRESS BOTH TRADITIONAL AND NON-TRADITIONAL PROPULSION AND STEERING SYSTEMS

Background

8.1 The Sub-Committee recalled that SDC 10 had agreed to defer decisions on the application provisions for the revised regulations in SOLAS chapters II-1 and V regarding steering and propulsion requirements.

8.2 The Sub-Committee also recalled that SDC 10 had agreed to defer decisions on:

.1 application provisions for, and the development of, non-mandatory instruments;

.2 possible revocation of resolutions A.415(XI) and A.416(XI), MSC.1/Circ.1398 and MSC.1/Circ.1416/Rev.1; and

.3 the potential need to amend or to review other instruments after the finalization of the draft amendments to SOLAS regulations II 1/1, 3 and 28 to 30; and V/25 and 26.

8.3 The Sub-Committee further recalled that SDC 10 had established the Correspondence Group on Revision of SOLAS chapters II-1 (part C) and V, and related instruments regarding steering and propulsion requirements, and had instructed it to develop further draft amendments, towards finalization.

Report of the Correspondence Group

8.4 The Sub-Committee considered documents SDC 11/8 and SDC 11/8/1 (Japan), containing the report of the Correspondence Group on Revision of SOLAS chapters II-1 (part C) and V, and related instruments regarding steering and propulsion requirements.

8.5 Having approved the report in general, the Sub-Committee noted, in particular:

.1 the conclusions of the Correspondence Group regarding the revision of MSC.1/Circ.1416/Rev.1; and

.2 the background of the consideration of the Correspondence Group regarding the agreement of SDC 10 on limiting the application of amendments (SDC 10/17, paragraph 8.13).

8.6 Following the presentation of documents SDC 11/8 and SDC 11/8/1, containing the report of the Correspondence Group, the following general comments were made:

.1 the use of modern propulsion systems integrating both steering and propulsion functions was not adequately covered by current SOLAS

regulations. For this reason, the need was reiterated to develop new rules that account for modern propulsion and steering systems with sufficient technical standards and redundancy;

.2 the need to set mandatory requirements on ship manoeuvrability performance, taking into account resolution MSC.137(76), and on the availability of information on board about ship's manoeuvring characteristics as per resolution A.601(15), should be addressed;

.3 the challenges should be recognized on the applicability of resolution MSC 137(76) as a mandatory manoeuvrability performance standard at that stage, notably with respect to variability in stopping performance test results and the absence of universally agreed conversion methodologies from "light" to "fully loaded" condition. Further studies were required in order for the requirements to reflect fully technological and operational developments for ships using traditional and non-traditional steering and propulsion systems;

.4 it was important to consider the implications of incorporating the specific performance standards from resolutions A.467(XII), A.601(15) and MSC.137(76) into SOLAS regulations II-1/28, 29, and 30. While these standards might be achievable under controlled trial conditions, their inclusion should not cause an undue burden on ship designers, shipyards and shipowners;

.5 regarding the discussion on "redundancy" in document SDC 11/8/1, preference was expressed to ensure ship-level redundancy;

.6 amendments to SOLAS regulation II-1/28 and regulation II-1/29 should take into account the unique arrangements and manoeuvrability characteristics of ships with podded propulsion. In particular, for cruise passenger ships having two or more podded propulsion systems, there was a high level of redundancy provided by the duplication of the steering gear power unit. Requiring ships to meet the manoeuvrability standards in resolution MSC.137(76) with one pod fully out of service was considered well beyond existing requirements for safe return to port; and

.7 while new rules for modern propulsion systems were under development, it was equally important to address the regulations related to existing systems. However, the subject needed to be further discussed and evaluated, based on concrete data, including accident reports, industry demands and reported operational experiences.

Further development of draft SOLAS regulations II-1/28-1 and 29-1, associated manoeuvrability performance requirements and consequential relevant amendments to associated instruments

8.7 With respect to the status of the new draft SOLAS regulations II-1/28-1 and 29-1, the Sub-Committee considered the Correspondence Group's discussion on the matter, together with the following documents:

.1 SDC 11/8/3 (Japan et al.), commenting on document SDC 11/8/1 with regard to the mandatory application of the manoeuvrability standards in SOLAS regulations;

.2 SDC 11/8/4 (Norway) (relevant part), providing comments on document SDC 11/8/1 as requested by the Correspondence Group; and

.3 SDC 11/8/5 (Austria et al.) (relevant part), also commenting on various parts of document SDC 11/8/1.

8.8 During consideration, the following views were expressed:

.1 different opinions still prevailed with respect to the inclusion of mandatory requirements for manoeuvrability performance criteria in new draft SOLAS regulations II-1/28-1, 29-1 and 30-1 for non-traditional steering and propulsion systems;

.2 the existing manoeuvrability performance standards in resolution MSC.137(76) would need to be significantly amended for application in conjunction with new draft SOLAS regulations II-1/28-1 to 30-1; and

.3 relevant substantial technical work would still need to be done in the context of a possible minimum review of the existing manoeuvring performance

standards. It would necessitate additional sessions of work, with a view to allowing such standards to be implementable on a mandatory basis, along with new SOLAS regulations, reflecting modern vessel trial results. Therefore, the target completion year should be extended accordingly.

8.9 In view of the above, the Sub-Committee agreed to:

.1 request MSC 110 to extend the target completion year of the output from 2025 to 2028, with a view to ensuring an entry into force of the new SOLAS regulations by 2032; and

.2 establish the Experts Group on Review of SOLAS chapters II-1 and V requirements to address both traditional and non-traditional propulsion and steering systems (see paragraph 8.18) and instructed it to:

.1 develop a road map identifying the tasks to be carried out; and

.2 further develop the new draft SOLAS regulations II-1/28-1 and 29-1, based on annexes 1 and 2 of document SDC 11/8/1, and taking into account documents SDC 11/8/3, SDC 11/8/4 and SDC 11/8/5.

Application of SOLAS regulations II-1/28, 29 and 30

8.10 Regarding the application of SOLAS regulations II-1/28, 29 and 30, the Sub-Committee considered the Correspondence Group's discussion on the matter, and agreed to instruct the Experts Group to further develop the application provisions of existing SOLAS regulations II-1/28, 29 and 30.

Draft amendments to SOLAS regulations II-1/3, 42 and 43; and V/25 and 26

8.11 Having noted the status of the work carried out by the Correspondence Group on Draft amendments to SOLAS regulations II-1/3, 42 and 43; and V/25 and 26, the Sub-Committee instructed the Experts Group to further develop draft amendments to SOLAS regulations II-1/3, and regulations V/25 and 26, based on annex 3 of document SDC 11/8/1.

Expected performances of new draft SOLAS regulations II-1/28-1 and 29-1

8.12 Regarding expected performances of new draft SOLAS regulations II-1/28-1 and 29-1, the Sub-Committee endorsed the view of the Correspondence Group that the expected performances of the draft new SOLAS regulations II-1/28-1 and 29-1 should be identified after these regulations are developed and agreed for inclusion in future amendments to the *Revised guidelines on alternative design and arrangements for SOLAS chapters II-1 and III* (MSC.1/Circ.1212/Rev.2).

Draft revisions to resolutions A.467(XII), A.601(15), MSC.64(67) and MSC.137(76); and MSC.1/Circ.1053 and MSC.1/Circ.1536

8.13 Having noted the views expressed by the Correspondence Group with regard to the development of draft revisions to resolutions A.467(XII), A.601(15) and MSC.137(76); and MSC.1/Circ.1053 and MSC.1/Circ.1536, the Sub-Committee agreed to address such revisions in accordance with the road map to be developed by the Experts Group (see paragraph 8.9.2.1).

8.14 The Sub-Committee also agreed to instruct the Experts Group to develop draft revisions to resolution MSC.64(67), taking into account document SDC 11/8/2.

Timing of adoption

8.15 The Sub-Committee recalled that documents SDC 11/8/4 and SDC 11/8/5 had been partly considered for the discussion on the new draft SOLAS regulations II-1/28-1 and 29-1 (see paragraph 8.6).

8.16 In this respect, the Sub-Committee considered the remaining parts of documents SDC 11/8/4 and SDC 11/8/5 with regard to the timing of the adoption of the new/revised SOLAS regulations and revised resolutions, and agreed to address the time of adoption in accordance with the road map to be developed by the Experts Group (see paragraph 8.9.2.1).

8.17 Subsequently, the Sub-Committee also agreed to instruct the Experts Group to develop draft revision of resolutions A.467(XII), A.601(15) and MSC.137(76), as well as MSC.1/Circ.1053 and MSC.1/Circ.1536, taking into account annex 2 to document MSC 105/18/1.

Establishment of the Experts Group on Review of SOLAS chapters II-1 and V requirements to address both traditional and non-traditional propulsion and steering systems

8.18 Subsequently, the Sub-Committee established the Experts Group on Review of SOLAS chapters II-1 and V requirements to address both traditional and non-traditional propulsion and steering systems and instructed it, taking into account the comments made and decisions taken in plenary, to:

.1 further develop draft amendments to SOLAS regulations II-1/3, and 28 to 30, and V/25 and 26, together with draft new SOLAS regulations II-1/28-1 and 29-1, including application provisions, based on annexes 1 to 3 to document SDC 11/8/1, and taking into account documents SDC 11/8/2; SDC 11/8/3, SDC 11/8/4, SDC 11/8/5 and SDC 11/INF.2;

.2 develop draft amendments to resolutions A.467(XII), A.601(15), MSC.64(67) and MSC.137(76); and MSC.1/Circ.1053 and MSC.1/Circ.1536, taking into account annex 2 to document MSC 105/18/1 and document SDC 11/8/2;

.3 develop a road map for establishing mandatory amendments, with a view to entry into force in 2032; and

.4 consider whether the Correspondence Group should be re-established and, if so, prepare draft terms of reference.

Report of the Experts Group on Review of SOLAS chapters II-1 and V requirements to address both traditional and non-traditional propulsion and steering systems

8.19 Having considered the report of the Experts Group on Review of SOLAS chapters II-1 and V requirements to address both traditional and non-traditional propulsion and steering systems (SDC 11/WP.7), the Sub-Committee approved it in general and took action as outlined below.

Draft new SOLAS regulations II-1/28-1 and 29-1

8.20 The Sub-Committee noted the discussion on draft new regulations II-1/28-1 and 29-1, attached as annexes 1 and 2 of document SDC 11/WP.7, notably with respect to the confirmation that future reference to relevant performance standards, under these regulations, would require new performance standards to be concluded first.

Application clauses

8.21 In relation to the application clauses for SOLAS regulations II-1/28, 29 and 30 and new SOLAS regulations II-1/28-1 and 29-1, the Sub-Committee agreed to use "three dates" for new regulations and to review further at later stage, as set out in annexes 1 to 3 of document SDC 11/WP.7.

Ship steering performance

8.22 Regarding ship steering performance, the Sub-Committee agreed, in principle, with the first draft of new regulation II-1/29-1.5, as set out in annex 1 of document SDC 11/WP.7.

Failure tolerance of steering system

8.23 With respect to steering system failure tolerance, the Sub-Committee noted the Experts Group's discussion on single failures not reducing the ships' steering capability, in particular whether scenarios of failure of a steering actuator should be limited to a certain type of ship or not. In this context, the Sub-Committee agreed that the consequences of such expansion of the application should be carefully considered.

Ships with multiple and single steering systems

8.24 With respect to ships with multiple steering systems, the Sub-Committee agreed with the clarification introduced in the draft in SOLAS regulation II-1/29-1.8.2 specifying that locking of failed steering system in a convenient position, would be "without time limitation".

8.25 As far as ships with single steering systems are concerned, while agreeing with a time requirement to maintain and regain steering capability following detection of a failure, the Sub-Committee noted that possible differentiated requirements per ship type would still require further consideration.

Alignment with requirements for passenger ships to safe return to port

8.26 The Sub-Committee, while noting the Experts Group's consideration regarding the relation between the requirements on Safe Return to Port Group and the draft provisions on failure of steering system, agreed that further consideration might be necessary to ensure alignment between the two work outputs under its purview.

Further development of new SOLAS regulations II-1/28-1 and 29-1

8.27 Subsequently, the Sub-Committee invited Member States and organizations to submit proposals and comments related to annexes 1 and 2 of document SDC 11/WP.7 containing draft text for new SOLAS regulations II-1/28-1 and 29-1.

Draft amendments to SOLAS regulations II-1/3, 28 29 and 30, and V/25 and 26

8.28 The Sub-Committee also noted the draft amendments to SOLAS regulations II-1/3, 28 29 and 30; and V/25 and 26, as contained in annex 3 of document SDC 11/WP.7, having invited Member States and organizations to submit proposals and comments to SDC 12.

Development of international standards for ship manoeuvrability

8.29 When considering the Experts Group discussion on a draft new instrument for ship manoeuvrability, the Sub-Committee agreed:

.1 to use annex 2 of document MSC 105/18/1 as the base document for further consideration of the associated instruments;

.2 to develop a new instrument for new SOLAS regulations II-1/28-1 and 29-1, while keeping resolution MSC.137 (76) to be used for existing ships, together with current SOLAS regulations II-1/28 and 29;

.3 to use technologically neutral terms for both traditional and non-traditional propulsion and steering systems; and

.4 in principle, not to state a steering angle limit, as this would otherwise be defined in new SOLAS regulations;

8.30 The Sub-Committee agreed to the draft new MSC resolution, as contained in annex 4 of document SDC 11/WP.7, having invited Member States and organizations to submit proposals and comments to SDC 12, including relevant trial data in line with the road map (as contained in annex 5 of document SDC 11/WP.7).

Related instruments

8.31 In relation to instruments other than resolution MSC.137(76), the Sub-Committee agreed that further consideration would be required in the future, as any need for further amendments would be dependent on the finalization of the new SOLAS regulations and would need to ensure the adequacy of the instrument to both new and existing regulations.

Road map and working arrangements

8.32 Having noted the Experts Group's discussion on the development of manoeuvrability standards and the process to make these mandatory under SOLAS regulations, and having acknowledged that more time was needed to develop such standards, based on relevant input of trial data, the Sub-Committee agreed to the road map, including the extension of the target completion year to 2028, as set out in annex 5 of document SDC 11/WP.7.

8.33 Subsequently, the Sub-Committee agreed that the re-establishment of a correspondence group would not be required at this session, having concurred, however, that this could become necessary following future sessions, notably for further consideration of trial data and information received of relevance for the development of manoeuvrability standards.

9 AMENDMENT TO REGULATION 25 OF THE OF THE 1988 LOAD LINE PROTOCOL REGARDING THE REQUIREMENT FOR SETTING OF GUARD RAILS ON THE DECK STRUCTURE

Background

9.1 The Sub-Committee recalled that SDC 10 had agreed, in principle, to the draft amendment to regulation 25 of the International Convention on Load Lines, 1966, as amended by the Protocol of 1988. However, due to time constraints, the Sub-Committee could not finalize requirements for "sag of chains" and had invited interested Member States and international organizations to submit further proposals on the requirements for "sag of chains" to this session.

Draft amendments to regulation 25 of the 1988 Load Line Protocol

9.2 With respect to draft amendments to regulation 25 of the 1988 Load Line Protocol, the Sub-Committee considered the following documents:

.1 SDC 11/9 (China), proposing amendments to regulation 25 of the 1988 Load Line Protocol regarding the sag standard of chains in case where chains are used in lieu of guard rails; and

.2 SDC 11/9/1 (Republic of Korea), providing comments on the draft amendments to regulation 25 of the 1988 Load Line Protocol set out in annex 4 of document SDC 10/WP.7, and proposing that the need to add the limit of chain sag be carefully considered.

9.3 In the ensuing discussion, the Sub-Committee noted the following views:

.1 it should be ensured that, where fitted, chains replacing guard rails could be tightened as much as reasonably practicable and should be easily detached;

.2 requirement for tightening of chains, when used in lieu of guard rails, should be applied in such a way that the operational function of the chains was not affected significantly. Chains were often installed where there was a need for passage of crew. Excessive tightening of the chains may render this functionality impractical;

.3 the requirement for limiting the sag of chains should be defined with clear terms and vague expressions should be avoided, which could, ultimately, lead to lack of uniform implementation; and

.4 it was considered inappropriate to set a restrictive criterion for the sagging of chains.

9.4 Having noted that the submitters of documents SDC 11/9 and SDC 11/9/1 could suggest a compromise draft text for addressing the pending matters therein, the Sub-Committee considered document SDC 11/WP.9, containing draft amendments to regulation 25 of the 1988 Load Line Protocol, incorporating the compromise draft text.

9.5 Subsequently, the Sub-Committee agreed with the draft amendments to regulation 25 of the 1988 Load Line Protocol and the associated draft MSC resolution, as set out in annex […], for approval at MSC 110 and subsequent adoption at MSC 111, with the expected entry into force on 1 January 2028.

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

Background

10.1 The Sub-Committee recalled that this was a continuous item on the Sub-Committee's biennial agenda and that the Assembly, at its twenty-eighth session, had expanded the output to include all proposed unified interpretations (UIs) to provisions of IMO safety, security and environment related Conventions, so that any newly developed or updated draft UI could be submitted for the consideration of the Sub-Committee, with a view to developing an appropriate IMO interpretation.

Approval process of UIs

10.2 The Sub-Committee considered document SDC 11/10 (Secretariat), containing the outcome of MSC 108 concerning the approval process of UIs.

10.3 Additionally, the Sub-Committee recalled that MSC 109 had (see paragraph 2.3):

.1 approved the draft revision of the Committees' method of work, containing amendments related to safeguards and the decision-making process to be followed during consideration and approval of UIs, to be disseminated as MSC-MEPC.1/Circ.5/Rev.6, subject to concurrent approval by MEPC 83; and

.2 agreed:

.1 that the safeguards agreed by MSC 108 needed to be implemented in order to gain sufficient experience before consideration was given to providing more specific guidance on their implementation; and

.2 to re-visit the matter in the future after sufficient experience on their implementation had been gained, in order to decide whether such guidance was needed; and

.3 invited Sub-Committees to provide relevant feedback to the Committee for making informed decisions in future.

Interpretation of SOLAS regulation II-1/25-1

10.4 The Sub-Committee considered document SDC 11/10/1 (IACS), proposing UIs of SOLAS regulation II-1/25-1 to clarify its applicability on multiple cargo hold ships with a single cargo hold below the freeboard deck, as well as the installation and location of water level detectors in a cargo hold consisting of multiple non-watertight decks, with a view towards universal and uniform implementation.

10.5 In this respect, the Sub-Committee considered, in particular, whether the safeguards were satisfied (see paragraph 10.3), and the technical content was agreeable, as well as the suggested effective date of 1 January 2026.

10.6 During consideration, the following views were expressed:

.1 the number of cargo holds should not be a determining factor for the requirements of the water level detectors. Reference to "watertight compartments" should, instead, be considered.

.2 the purpose of SOLAS regulations II-1/25 and 25-1 were different, i.e. on the one hand, representing a measure for ships not meeting damage stability requirements for one-cargo hold flooding case and on the other hand, providing for early detection of water ingress for ships meeting damage stability requirements, even after one-cargo hold flooding;

.3 location of the sensor(s) should be determined by each ship's design and configuration to address the most effective location;

.4 a possible revision of SOLAS regulations II-1/25 and 25-1 could address departing from exiting prescriptive requirements into a goal-based approach, supported by goals and functional requirements to cover all designs and configurations, e.g. vehicle carriers addressed in document SDC 11/10/1, and other configuration, such as single or two cargo hold configurations with double skin structure;

.5 the proposed UI in document SDC 11/10/1 was considered going beyond the requirements of SOLAS regulations II-1/25 and 25-1. Instead, a comprehensive revision of SOLAS regulations II-1/25 and 25-1 for

harmonization and alignment would be the best way forward to address the installation of water level detectors across different ship types, including also PCTCs; and

.6 the terms "prompt drainage" and "adequate drainage" were considered vague expressions, leading to difficulties for a harmonized implementation.

10.7 Subsequently, having concluded that the proposed UI failed to satisfy the safeguards, notably that it proposed amendments to mandatory requirements that would go beyond the interpretation of requirements, the Sub-Committee invited IACS and interested delegations to note the comments made and to take action, as appropriate, for a new output to be proposed to the Committee, for a possible revision of SOLAS regulation II-1/25-1, in accordance with the draft revision of the Organization and method of work of the Committee (MSC 109/22, paragraph 19.14 and annex 26).

Interpretation of SOLAS regulation II-1/12.6.2

10.8 The Sub-Committee considered document SDC 11/10/2 (IACS), proposing a UI of SOLAS regulation II-1/12.6.2 to clarify the term "remotely operated valve", with a view to building uniform and universal implementation.

10.9 In this respect, the Sub-Committee considered, in particular, whether the safeguards were satisfied (see paragraph 10.3), and the technical content was agreeable.

10.10 During consideration, the following views were expressed:

.1 the terms "manual fail-close" and "deck standing valve" were not used in SOLAS regulations. For that reason, the UI should not be considered strictly as an interpretation but as introducing new elements to SOLAS regulation II-1/12.6.2;

.2 the terminologies used in the UI could be considered useful in the clarification of SOLAS regulation II-1/12.6.2 without going beyond its requirements; and

.3 the proposed interpretation provided clarification on the term "remotely operated valve", providing a way for uniform and universal interpretation. The use of term "remote" was not understood as "mechanically operated"

and could still be manually operated from the deck if the valve was of "fail-close" type.

10.11 The Sub-Committee, having concluded that the proposal satisfied the safeguards and its technical content was supported, agreed to the draft MSC circular on UI of SOLAS regulation II-1/12.6.2, as set out in annex […], with a view to approval by MSC 110.

Revised interpretation of SOLAS regulations II-2/9 and 13

10.12 The Sub-Committee considered document SDC 11/10/3 (IACS), proposing to revise the UIs of SOLAS regulations II-2/9 and 13 (MSC.1/Circ.1511/Rev.1) in relation to regulations SOLAS II-2/13.4.1 and 13.4.2 to clarify the term "lower part" used in connection with the means of escape from spaces below the bulkhead deck.

10.13 In this respect, the Sub-Committee considered, in particular, whether the safeguards were satisfied (see paragraph 10.3), and the technical content was agreeable.

10.14 In the ensuing discussion, the Sub-Committee had a lengthy debate and noted the that the following views were expressed:

.1 the introduction of a prescriptive height requirement for the location of the escape trunk, i.e. up to 2.3 m above the lowest deck level would represent an additional requirement. Consequently, the amendment proposed to the existing UI was considered as going beyond current SOLAS regulations II-2/9 and 13;

.2 in practice, the escape trunks might be located in various heights in the lower part, not limited to the lowest level, in order to allow the most appropriate arrangement for safe evacuation;

.3 since SOLAS did not clearly define "lower part", it should continue to be the prerogative of the flag State to decide and instruct its ROs accordingly, depending on the assessment of specific ships and arrangements proposed. To this end, the decision of the flag State should not be bound to prescriptive requirements, which could end up being impracticable;

.4 a technical justification from the flag Administration or its RO should detail why the escape arrangement did not extend to the lowest platform, i.e. when there was not sufficient space due to any restrictions, e.g. ship's hull lines, structure, etc.; and such justification should be kept on board the vessel, available to be presented to port State control (PSC) or other parties when required;

.5 if further clarity was needed, it should be addressed through amendments to SOLAS, applicable to new ships only;

.6 depending on the specific arrangement of a ship machinery room, the proposed prescriptive requirement of 2.3 m could result in difficulties for evacuation of injured crew members from the lower level of the space. Evacuation through an open, unprotected vertical ladder would represent a serious safety concern, as demonstrated by recent drills; and

.7 the suggested amendment to the UI should be considered as a clarification of an existing requirement, introducing an interpretation that would be suitable to all different types of space arrangements from where an evacuation escape trunk should be provided.

10.15 As part of the discussion, IACS, as the submitter of the proposal, further clarified the intention of the draft modifications, pointing to several reported cases where ships had been detained following PSC inspections due to the fact that the arrangement for escape from machinery spaces had been judged differently from the flag State/RO at the time of approval.

10.16 In this respect, regarding PSC detention of ships, the following comments were made:

.1 where ships were presented with evidence of flag State approvals, PSC officials should not impose their own interpretations on ships visiting their ports;

.2 a clarification on the reported problem should be sought and this matter should be brought to the attention of the III Sub-Committee for consideration, as appropriate; and

.3 paragraph 6.1 of appendix 6 of the *Procedures for Port State Control, 2023* (resolution A.1185(33)) stated that "Queries on the method of structural protection should be addressed to the flag Administration and the PSCO should generally confine the inspection to the effectiveness of the arrangements provided".

10.17 In view of the above, while agreeing that the issue resided in different interpretations of the UIs of SOLAS regulations II-2/9 and 13 (MSC.1/Circ.1511/Rev.1) in relation to regulations SOLAS II-2/13.4.1 and 13.4.2, the Sub-Committee did not agree with the proposed amendment to the UI, considering that it did not meet the safeguards, notably for going beyond the interpretation of requirements.

10.18 Subsequently, while confirming that the lower part of the space should be regarded as either the lowest deck level or a platform or passageway, the Sub-Committee noted that the majority of delegations were of the view that the UI was not intended to be understood as "whichever is lowest" of the lowest deck level, platform or passageway.

10.19 Conversely, the Sub-Committee also noted some views advocating that such an understanding would not adequately address safety concerns in all ship designs, while the majority of the views highlighted that there were technical reasons for arrangements, catering for the lack of sufficient space, e.g. due to ship's hull lines, structure.

10.20 In this context, the Sub-Committee noted the statements of some delegations expressing that, following the rejection of the proposed amendment to the UI of SOLAS regulation II-2/13.4 in MSC.1/Circ.1511/Rev.1, interested delegations should re-submit a revised proposal, or a proposal for a new output with a view to addressing the regulation itself.

10.21 The Sub-Committee invited III 11 to consider the outcome of the discussion, which raised the question of rightful flag States' interpretations of mandatory provisions being potentially challenged by PSC officers, as appropriate, regarding the need for potential guidance in the context of the harmonization of PSC activities.

Interpretation of the method for calculating the minimum quantity of oil fuel required for emergency generators

10.22 The Sub-Committee considered document SDC 11/10/5 (China), proposing a UI of the method for calculating the minimum quantity of oil fuel required for emergency generators, to achieve common understanding by Administrations and recognized organizations, and to ensure harmonized implementation.

10.23 In this respect, the Sub-Committee considered, in particular, whether the safeguards were satisfied (see paragraph 10.3), and the technical content was agreeable.

10.24 Subsequently, having concluded that the proposed UI failed to satisfy the safeguards, notably for going beyond the interpretation to the requirement, the Sub-Committee invited China and interested delegations to note the comments made and to take action, as appropriate.

Deletion of IACS unified interpretations UI SC 4 and UI SC 5

10.25 The Sub-Committee considered document SDC 11/10/4 (IACS), presenting the information on the deletion of IACS UIs SC 4 and SC 5 pursuant to consideration of the discussion on document SDC 10/10 (IACS), and noted:

.1 the information provided; and

.2 that IACS was considering converting the text of the interpretations into an IACS Recommendation, recognizing that its provisions may be in use as guidance for various purposes by the industry.

Experience gained in the use of the safeguards for the review of draft UIs

10.26 The Sub-Committee established a robust review process for evaluating draft UI proposals submitted during this session. This process incorporated the use of the safeguards and responded to the Chair's request for delegations to provide detailed explanations supporting or opposing proposals based on these safeguards. The aim was to enable the Sub-Committee to make well-informed decisions.

11 GUIDELINES FOR USE OF FIBRE-REINFORCED PLASTICS (FRP) WITHIN SHIP STRUCTURES

Background

11.1 The Sub-Committee recalled that, following consideration of a proposal in document SDC 9/15/2 (CESA), SDC 9 had recommended, and MSC 107 had agreed, to put the post-biennial output on "Guidelines for use of fibre-reinforced plastics (FRP) within ship structures" on the provisional agenda of SDC 10, with a target completion year of 2025.

11.2 The Sub-Committee also recalled that, at SDC 10, a discussion on the scope of the present output had been held, with the Sub-Committee agreeing that the scope of the output should not be expanded, and that the revised FRP Interim Guidelines under development should not contradict the current SOLAS provisions, in line with the current instructions for this output.

11.3 The Sub-Committee also recalled that SDC 10 had agreed to establish the Correspondence Group on the Revision of the Interim Guidelines for Use of Fibre-Reinforced Plastic (FRP) (MSC.1/Circ.1574).

11.4 The Sub-Committee further recalled that SDC 10 had considered calls by some delegations to expand the scope of the output to cover larger parts of ships, resulting potentially in the need to address FRP elements other than those covered by the FRP Interim Guidelines (MSC.1/Circ.1574). It was, however, noted that although FRPs were high-strength materials compared to their weight and not subject to corrosion, the high risks related to fire safety and toxic fumes endangering the health of the persons on board, as well as the lack of recyclability, posed challenges for the use of FRP.

Report of the Correspondence Group

11.5 The Sub-Committee considered document SDC 11/11 (Sweden), containing the report of the Correspondence Group on the Revision of the Interim Guidelines for Use of Fibre-Reinforced Plastic (FRP) (MSC.1/Circ.1574).

11.6 Having approved the report in general, the Sub-Committee noted the progress made on the revision of the FRP Interim Guidelines (MSC.1/Circ.1574), together with the following general comments made:

.1 the concerns regarding the combustibility of FRP elements used in ship structures and environmental impact issues, as discussed and recognized at SDC 9 (SDC 9/16, paragraph 15.10), were still valid and should continue to be carefully considered in the revision of the FRP Interim Guidelines as a priority owing to their critical relevance for the use of FRP in shipbuilding; and

.2 the FRP Interim Guidelines were considered supplementary to the *Guidelines for the approval of alternatives and equivalents as provided for in various IMO instruments* (MSC.1/Circ.1455) and the *Guidelines on alternative design and arrangements for fire safety* (MSC.1/Circ.1002, as amended by MSC.1/Circ.1552) when approving FRP elements within ship structures irrespective of their functions onboard. Therefore, the revision of the FRP Interim Guidelines should provide harmonized guidance to flag States and industry.

Scope of the output

11.7 With respect to the inclusion of load-bearing divisions and elements as part of the scope of the output, the Sub-Committee considered the Correspondence Group's discussion on the matter, together with the following documents:

.1 SDC 11/11/2 (IACS) (relevant part), providing initial comments on the report of the Correspondence Group on the Revision of the Interim Guidelines for Use of Fibre-Reinforced Plastic (FRP) (MSC.1/Circ.1574), on fire performance and fire testing of FRP composite structures; and

.2 SDC 11/11/3 (United States), providing comments on the report of the Correspondence Group with respect to load-bearing divisions and elements contributing to global strength.

11.8 In this regard, the Sub-Committee considered, in particular:

.1 the inclusion of load-bearing divisions and elements contributing to global strength within the scope of the revision of the FRP Interim Guidelines; and

.2 the specific proposals on global strength and load-bearing elements in document SDC 11/11/2.

11.9 During the discussion, the following views were expressed:

.1 any proposals to address FRP load-bearing divisions or elements contributing to global strength, as part of the ongoing revision of the FRP Interim Guidelines, would represent an expansion of the scope and have to be subject to consideration and decision by the Committee;

.2 prior to an expansion of the scope of application of the FRP Interim Guidelines, in addition to overall structural safety, fire safety and recycling issues, it was also necessary to take into consideration the strength characteristics of FRP itself, both under normal operation and in the event of an accident, e.g. collision or contact with shore during berthing;

.3 the differences between the scope of the FRP Interim Guidelines and the scope of the output should be clarified. The scope of the present output was understood as addressing all elements, except those that could not be removed without compromising the safety of the ship and those contributing to global strength;

.4 recalling that SDC 9 had agreed to address fire safety and recycling concerns (SDC 9/16, paragraph 15.10) and that SDC 10 had agreed that the revised FRP Interim Guidelines should not contradict current SOLAS provisions (SDC 10/17, paragraph 12.5), there had been no agreed limitation on the scope with respect to which type of FRP structural elements could be considered in the revision work;

.5 when the FRP Interim Guidelines were initially developed, the exclusion of load-bearing elements was not in the initial scope of the output leading to the development of MSC.1/Circ.1574, as outlined in document MSC 87/24/9 (United Kingdom);

.6 the FRP Interim Guidelines were intended to be used as a supplementary instrument to support approvals to be carried out in accordance with SOLAS regulation II-2/17 (Alternative design and arrangements), whenever design or arrangements deviate from the prescriptive requirements of SOLAS chapter II-2. To this end, the inclusion of load-bearing divisions and elements

contributing to global strength in the revision work would assist in the approval of such alternative designs and arrangements of FRP structures; and

.7 the Committee should be invited to confirm whether or not load-bearing divisions and elements contributing to global strength were considered as part of the scope of the existing output, i.e. clarification on whether the scope of the output is limited to SOLAS chapter II-2 only, or wider.

11.10 Subsequently, the Sub-Committee agreed to:

.1 re-establish the Correspondence Group on FRP to continue the work intersessionally on the revision of the FRP Guidelines, with a view to reporting to SDC 12;

.2 instruct the Correspondence Group to be established to address also load bearing divisions and elements, in addition to other aspects, as part of its revision work, within the scope of SOLAS chapter II-2 from fire safety perspective; and

.3 invite MSC 110 to confirm whether or not load-bearing divisions and elements contributing to global strength are considered as part of the scope of the existing output, i.e. clarification on whether the scope of the output is limited to SOLAS chapter II-2 only, or wider, with a view to advising the Correspondence Group on FRP to be established, and to instructing SDC 12 accordingly. The Correspondence Group on FRP was instructed to take into account intersessionally, in its deliberations, the Committee's decision, as appropriate."

11.11 In this regard, the Sub-Committee:

.1 invited interested Member States and international organizations to submit relevant proposals to MSC 110, which could contribute to the discussion on the scope of the output (see paragraphs 11.9.7 and 11.10); and

.2 invited the Committee to extend the target completion year to 2026.

Amendments to other instruments

11.12 The Sub-Committee endorsed the Correspondence Group's discussion that:

.1 any relevant draft amendment proposals to the 2010 FTP Code should be made to the SSE Sub-Committee for consideration under the ongoing output on "Revision of the 2010 FTP Code to allow for new fire protection systems and materials", taking into account any input that might be provided by the SDC Sub-Committee; and

.2 any future draft amendments to other IMO instruments, such as SOLAS, should be considered under a new output, as appropriate.

Recycling aspects

11.13 Regarding the recycling matter, the Sub-Committee noted the Correspondence Group's view that the matter could be better addressed under other relevant IMO instruments and instructed the Correspondence Group to further consider the matter for advice to MEPC (see paragraph 11.18).

Recommendations for improvement in temperature measurement methods

11.14 The Sub-Committee considered document SDC 11/11/1 (China), commenting on the report of the Correspondence Group and proposing recommendations for improvement in temperature measurement methods during the test based on China's fire resistance test data of FRP composite and influencing factors and characteristics of failure of FRP core fire resistance divisions under thermal action.

11.15 Subsequently, the Sub-Committee agreed to refer document SDC 11/11/1 to the Correspondence Group for further consideration.

Specific proposals

11.16 The Sub-Committee considered:

.1 the remaining part of document SDC 11/11/2 (see paragraph 11.7), containing specific proposals for scope of output, alternative design for assessment of FRP structures, application of SOLAS chapter II-2, smoke

generation potential and toxicity, means of escape and fire testing of the FRP composite; and

.2 document SDC 11/11/4 (CESA and SYBAss), commenting on the report of the Correspondence Group, and proposing further amendments to the draft revised guidelines.

11.17 Subsequently, the Sub-Committee agreed to refer documents SDC 11/11/2 and SDC 11/11/4 to the Correspondence Group for further consideration.

Re-establishment of the Correspondence Group on the Revision of the Interim Guidelines for Use of Fibre-Reinforced Plastic (FRP) (MSC.1/Circ.1574)

11.18 The Sub-Committee re-established the Correspondence Group on FRP [5], and instructed it, taking into account the comments made and decisions taken, as well as documents SDC 11/11, SDC 11/11/1, SDC 11/11/2, SDC 11/11/3 and SDC 11/11/4, to:

.1 further review the *Interim guidelines for use of fibre reinforced plastic (FRP) elements within ship structures: fire safety issues* (MSC.1/Circ.1574), based on document SDC 11/11;

.2 in addition to other aspects as part of its revision work, address also load bearing divisions and elements, within the scope of SOLAS chapter II-2 from a fire safety perspective;

.3 subject to the input and confirmation received from MSC 110 regarding load bearing divisions and elements contributing to global strength being considered within the existing scope (see paragraph 11.X above), further consider inclusion of such provisions in the draft revision of MSC.1/Circ.1574, and take action, as appropriate;

[5] **Coordinator:**
Mr. Paul Altena
Accredited Representative of CESA to the IMO
Wetstraat 67 (4th floor)
B-1000 Brussels, Belgium
Mobile: +32493257937
Email: pa@seaeurope.eu

.4 consider the experience gained in the use of MSC.1/Circ.1574 in conjunction with alternative design and arrangements in accordance with SOLAS;

.5 consider recycling and fire safety matters, as a priority, and provide discussion points that would normally fall outside the remit of the Sub-Committee, with a view to advising other IMO bodies, e.g. MEPC and the SSE Sub-Committee, taking into account paragraph 15.10 of document SDC 9/16;

.6 consider and advise whether other IMO instruments (e.g. SOLAS and the 2010 FTP Code) should be amended in order to enable and support the use of FRP;

.7 consider clarification and definitions of:

.1 elements which are not load bearing and are not contributing to global strength;

.2 load bearing divisions and elements not contributing to global strength; and

.3 load bearing divisions and elements contributing to global strength, with a view to incorporation in the draft revision of MSC.1/Circ.1574, as appropriate;

.8 further consider documents SDC 11/11/1, SDC 11/11/2 and SDC 11/11/4;

.9 draft terms of reference for a working group, if established, to further progress the work; and

.10 submit a written report to SDC 12.

12 REVIEW OF THE 2009 CODE ON ALERTS AND INDICATORS

Background

12.1 The Sub-Committee recalled that MSC 108 had agreed to move the output on "Review of the 2009 Code on Alerts and Indicators" from the post-biennial agenda to the provisional agenda of SDC 11, with work to be undertaken based on the annex to document SSE 10/17 (IACS), containing the draft revision of the Code, after confirmation by SSE 10, which had been assigned as the coordinating organ.

Draft amendments to the 2009 Code on Alerts and Indicators

12.2 The Sub-Committee considered document SDC 11/12 (China), proposing further amendments to the 2009 Code on Alerts and Indicators, based on the annex to document SSE 10/17.

12.3 In the ensuing discussion, the Sub-Committee noted the following views:

.1 it was considered important to ensure that the amendments to the Code were consistent and harmonized with the latest versions of the conventions, codes and resolutions which establish requirements for visual and auditory alerts to guarantee the safety of operations on board;

.2 monitoring devices might be considered as indicators and, as such, there should be no exclusion to references to monitoring systems that did not provide alarm or indicator requirements, as required in the *2021 Guidelines for exhaust gas cleaning systems* (resolution MEPC.340(77)) and the Ballast Water Management Convention. The Code encompassed various visual and measuring indicators that display the condition of a system or equipment, including, therefore, monitoring devices;

.3 it would be appropriate to discuss the requirements for automatic intrusion detection devices in the context of the ISPS Code; and

.4 paragraphs 4.7 and 4.21 of the Code for Approval of Ballast Water Management Systems (BWMS Code) (resolution MEPC.300(72)) both referred to audible and visual alarms, which should be considered during the review of the Code.

12.4 Taking into account the above views, the Sub-Committee agreed to establish the Working Group on Review of the 2009 Code on Alerts and Indicators, and referred document SDC 11/12 to the Group for finalization of the draft amendments (see paragraph 12.7).

Potential expansion of the scope of the output

12.5 In addition to the discussion on the proposal contained in document SDC 11/12, the delegation of Norway recalled that the consideration of their proposal in document MSC 109/19/6 to expand the scope of the present output in order to include the consideration of engine control room alert management, had been deferred to MSC 110. In this respect, the Sub-Committee considered whether the finalization of this output should be postponed, pending the consideration of document MSC 109/19/6 by MSC 110.

12.6 Following consideration and taking into account the target completion year of 2025 for the current output, the Sub-Committee agreed that, subject to the finalization of the work at this session (see paragraph 12.7), the present output would be reported to MSC 110 as completed, with the understanding that any further work decided and instructed by the Committee, would be considered separately.

Establishment of the Working Group on Review of the 2009 Code on Alerts and Indicators

12.7 Subsequently, the Sub-Committee established the Working Group on Review of the 2009 Code on Alerts and Indicators and instructed it, taking into account the comments made, and decisions taken, in plenary, to further develop the draft amendments to the 2009 Code on Alerts and Indicators, based on the annex to document SSE 10/17 and taking into account document SDC 11/12, with a view to finalization, together with the associated draft Assembly resolution.

Report of the Working Group on Review of the 2009 Code on Alerts and Indicators

12.8 Having considered the report of the Working Group on Review of the 2009 Code on Alerts and Indicators (SDC 11/WP.6), the Sub-Committee approved it in general and agreed to:

.1 the draft Code on Alerts and Indicators, 2025, and the associated draft Assembly resolution, as set out in annex […] with a view to concurrent approval by MEPC 83 and MSC 110, and subsequent adoption by A 34; and

.2 the Working Group's recommendation to update the Code more regularly due to continuous update of the IMO instruments referenced therein.

13 BIENNIAL STATUS REPORT AND PROVISIONAL AGENDA FOR SDC 12

General

13.1 The Sub-Committee recalled that MSC 108 had approved the Sub-Committee's biennial agenda and the provisional agenda for SDC 11.

13.2 The Sub-Committee also recalled that MSC 108 had agreed to:

.1 extend to 2025 the target completion year of the outputs on:

.1 "Amendments to the *Guidelines for construction, installation, maintenance and inspection/survey of means of embarkation and disembarkation* (MSC.1/Circ.1331) concerning the rigging of safety netting on accommodation ladders and gangways";

.2 "Amendment to regulation 25 of the 1988 Load Line Protocol regarding the requirement for setting guard rails on the deck structure"; and

.3 "Revision of the *Interim explanatory notes for the assessment of passenger ship systems' capabilities after a fire or flooding casualty* (MSC.1/Circ.1369) and related circulars"; and

.2 move the output on "Review of the 2009 Code on Alerts and Indicators" from the post-biennial agenda to the provisional agenda of SDC 11, with work to be undertaken, based on the annex to document SSE 10/17 (IACS) containing the draft amendments to the Code, after confirmation by SSE 10, which had been assigned as the coordinating organ.

13.3 The Sub-Committee also recalled that MEPC 82 had agreed to revise the title of output 1.16 to "Experience-building phase for the reduction of underwater radiated noise from shipping" and extended its target completion year to 2026; and included in the provisional agendas of SDC 11 and SDC 12.

13.4 The Sub-Committee further recalled that MSC 109 had confirmed the biennial status report for the 2024-2025 biennium and the proposed provisional agenda for SDC 11, as had been approved at MSC 108 and revised at MEPC 82.

Workload of the Committee and analysis of the outputs

13.5 In relation to the workload of the Committee, the Sub-Committee recalled that, in considering the increased workload of the Committee and its subsidiary bodies, MSC 108 had, inter alia, invited all sub-committees to:

.1 undertake an analysis of the continuous and annual outputs under their purview and to make relevant suggestions to the Committee for their efficient consideration, minimizing additional workload; and

.2 review their terms of reference, as set out in document MSC 92/26, annex 40, to identify obsolete or missing elements therein and to provide suggestions, excluding in relation to the restructuring of the sub-committees, to the next available session of the Committee, for consideration and approval, as appropriate.

13.6 In this respect, the Sub-Committee considered document SDC 11/WP.3 (Chair), containing the outcome of an analysis of the continuous and annual outputs under the purview of the Sub-Committee, as well as a preliminary review of the terms of reference of the Sub-Committee, along with related recommendations, with a view to further consideration at MSC 110.

13.7 Following consideration, the Sub-Committee:

.1 noted the analysis of the continuous and annual outputs under the remit of the Sub-Committee; and

.2 agreed to the updated draft terms of reference of the Sub-Committee as a preliminary review outcome, as set out in annex […], without any changes related to roles and responsibilities among sub-committees, noting that this should be assessed and coordinated at the Committees' level, as necessary.

Biennial status report for the 2024-2025 biennium and post-biennial agenda

13.8 Taking into account the progress made at the session, the Sub-Committee prepared its biennial status report for the 2024-2025 biennium (SDC 11/WP.2, annex 1), as set out in annex […], for consideration by MSC 110.

Proposed biennial agenda for the 2026-2027 biennium

13.9 Taking into account the progress made at the session, the Sub-Committee prepared the proposed biennial agenda for the 2026-2027 biennium (SDC 11/WP.2, annex 2), as set out in annex […], for consideration by MSC 110.

Proposed provisional agenda for SDC 12

13.10 Taking into account the progress made at the session, the Sub-Committee prepared the proposed provisional agenda for SDC 12 (SDC 11/WP.2, annex 3), as set out in annex […], for consideration by MSC 110.

Correspondence groups established at the session

13.11 The Sub-Committee established correspondence groups on the following subjects, due to report to SDC 12:

.1 revision of the Interim Explanatory Notes for the Assessment of Passenger Ship Systems' Capabilities After a Fire or Flooding Casualty;

.2 amendments to the 2011 ESP Code;

.3 guidelines for use of Fibre-Reinforced Plastics (FRP) within ship structures; and

.4 experience-building phase for the reduction of underwater radiated noise (URN) from shipping

Arrangements for the next session

13.12 The Sub-Committee agreed to establish at its next session [experts,] working and drafting groups on the following subjects:

.1 revision of the Interim explanatory notes for the assessment of passenger ship systems' capabilities after a fire or flooding casualty (MSC.1/Circ.1369) and related circulars;

.2 revision of SOLAS chapters II-1 (part C) and V, and related instruments regarding steering and propulsion requirements, to address both traditional and non-traditional propulsion and steering systems;

.3 guidelines for the use of Fibre-Reinforced Plastics (FRP) within ship structures;

.4 experience-building phase for the reduction of underwater radiated noise (URN) from shipping; and

.5 amendments to the 2011 ESP Code and [Unified interpretation of provisions of IMO safety, security, environment, facilitation, liability and compensation-related conventions]

whereby the Chair, taking into account the submissions received on the respective subjects, would advise the Sub-Committee, before SDC 12, on the final selection of such groups.

Date of the next session

13.13 The Sub-Committee noted that the twelfth session of the Sub-Committee has been tentatively scheduled to take place from 19 to 23 January 2026.

14 ELECTION OF CHAIR AND VICE-CHAIR FOR 2026

14.1 Taking into account documents SDC 11/14 and SDC 11/14/1 (Secretariat), providing information on the election of the Chair and Vice-Chair, in accordance with the Rules of Procedure of the Maritime Safety Committee, the Sub-Committee unanimously re-elected Mr. Erik Tvedt (Denmark), as Chair, and elected Mr. Charles Rawson (United States), as Vice-Chair, both for 2026.

15 EXPERIENCE-BUILDING PHASE FOR THE REDUCTION OF UNDERWATER RADIATED NOISE FROM SHIPPING

Background

15.1 The Sub-Committee recalled that MEPC 82 had agreed to continue the work on reducing underwater radiated noise (URN) from ships, and, in that connection, that the Committee had:

.1 approved the *Action plan for the reduction of URN from commercial shipping* (URN Action Plan) (MEPC 82/17, annex 8), as a dynamic document to be reviewed and revised as necessary, depending on the progress made;

.2 agreed to continue with the three-year experience-building phase (EBP), having noted that it had been initiated with the approval by MEPC 80 of the Revised URN Guidelines, in which Member States and international organizations had been invited to submit to the Committee, information, observations, comments and recommendations, based on the practical experience gained with the application of them;

.3 approved the Guidance on the EBP for the Revised URN Guidelines (MEPC 82/17, annex 9);

.4 agreed that the EBP may need to be extended in the future; and

.5 encouraged wide participation in the EBP.

15.2 The Sub-Committee also recalled that MEPC 82 had agreed with the recommendation of SDC 10 for the re-titled output to be included as a dedicated item on its agenda from MEPC 83 through to MEPC 85. In view of its heavy workload in the foreseeable future and the limit in the number of working/drafting groups that could be established during a session, MEPC 82 had agreed to include output 1.16:

.1 in the provisional agendas of SDC 11 and SDC 12, for Member States, international organizations and the Secretariat to submit all technical documents concerning the EBP and other technical action items in the URN Action Plan to those two sessions of the Sub-Committee; and

.2 in the provisional agendas of MEPC 83, MEPC 84 and MEPC 85, to accommodate potential proposals from Member States, international organizations or the SDC Sub-Committee requiring high-level direction or policy decisions.

15.3 The Sub-Committee also recalled that MEPC 82 had forwarded documents MEPC 82/9/1 (Secretary-General), MEPC 82/9/2 (ICS et al.), MEPC 82/9/3 (IWC), MEPC 82/9/4 (ICC), MEPC 82/9/5 (United States), MEPC 82/9/6 (Canada), MEPC 82/9/7 (FOEI et al.), MEPC 82/INF.9 (Secretariat), MEPC 82/INF.23 (Italy), MEPC 82/INF.31 (India), MEPC 82/INF.34 (Chile) and MEPC 82/INF.37 (IMarEST) to this session for information.

15.4 The Sub-Committee further recalled that in-kind support was being provided to the IMO Secretariat, sponsored by Canada and the United States, in the form of consultancy expert support, covering all areas relevant to the monitoring, processing and organization of all relevant data received in the context of the URN EBP (MEPC 82/17, paragraph 9.15).

Discussions on URN and EBP

15.5 The Sub-Committee considered this agenda item at length, supplemented by presentations, in accordance with the timetable provided in annex 3 of SDC 11/J/3, as outlined in the subsequent paragraphs.

Presentations by the IMO Secretariat and URN "in-kind consultants"

15.6 The Sub-Committee observed with appreciation the presentations delivered by the:

.1 Secretariat, providing a brief overview of IMO's work on URN, as well as recent updates on the GEF-UNDP-IMO GloNoise Partnership project; and

.2 "in-kind consultants", describing the scope of URN in-kind support to the Secretariat, notably focusing on EBP monitoring and the implementation of the URN Action Plan,

which can be accessed on IMODOCS (SDC 11/Virtual Portal).

15.7 The Sub-Committee extended its appreciation to both Canada and United States for the in-kind support provided to the IMO Secretariat and the contributions made to the work of the Sub-Committee.

15.8 Following the presentations, the Sub-Committee had a comprehensive discussion with respect to the URN and EBP, and noted the following views expressed:

.1 the potential impact of energy efficiency measures in the reduction of URN was an important aspect to continue exploring, e.g. the NAVISON study conducted by the European Maritime Safety Agency (EMSA), where the energy efficiency measures and the reduction of URN were considered as complementary;

.2 it must be acknowledged that, whilst URN might represent a significant problem in areas with higher intensity of shipping traffic, in other areas this might not be the case. Therefore, it would be important to have a detailed analysis of these areas and understand how URN targets could be established; and

.3 The URN Action Plan outlined several approaches aimed at directly reducing URN at the vessel level, along with other strategies that consider the geographical relevance of URN reduction. These aspects should be carefully considered in discussions on developing biologically-based targets.

Documents submitted to MEPC 82

15.9 The Sub-Committee noted the following documents submitted to MEPC 82: MEPC 82/9/1, MEPC 82/9/2, MEPC 82/9/3, MEPC 82/9/4, MEPC 82/9/5, MEPC 82/9/6, MEPC 82/9/7, MEPC 82/INF.9, MEPC 82/INF.23, MEPC 82/INF.31, MEPC 82/INF.34 and MEPC 82/INF.37.

Documents submitted to this session

15.10 The Sub-Committee considered the following documents submitted to this session:

.1 SDC 11/15 (Belgium et al.), proposing the terms of reference for a working group or other ad hoc group to develop a suitable framework to assess the EBP for the reduction of URN from shipping and to advance other technical elements of the URN Action Plan within the purview of the Sub-Committee;

.2 SDC 11/15/1 (United States), commenting on document SDC 11/15, particularly on the proposal for a framework to provide a structure for reviewing the EBP results of the Revised URN Guidelines (MEPC.1/Circ.906/Rev.1), and providing results of a study undertaken in the United States supporting the EBP; and

.3 SDC 11/15/2 (FOEI et al.), providing comments in support of the proposed way forward for technical elements of the URN Action Plan, including the EPB, in document SDC 11/15.

15.11 In the ensuing discussion, the Sub-Committee noted the following views:

.1 it was important to develop a framework to assess the EBP for the reduction of URN and to advance other technical elements of the URN Action Plan, with a view to ensuring that adequate assessment and decision-making could be possible at MEPC 85 in order to identify the way forward in the further development of the international regulatory framework for URN;

.2 any future development in the regulatory framework for URN should be scientifically supported and, to this end, it should be ensured that any relevant knowledge gaps were assessed, and data and studies were submitted to fill in those gaps. To that end, an EBP monitoring framework would be essential;

.3 sharing of experiences and data was crucial as an enabler for the global uptake of the Revised URN Guidelines and their implementation through effective actions. In addition, the processes and methodologies used in the collection of URN data were important for the comparability of results and for relevant conclusions to be drawn;

.4 since the EBP was already in its second year, Member States and international organizations should continue to work to optimize the progress in the work, which would allow to maintain the objectives set out in various instruments, including the Kunming-Montreal Global Biodiversity Framework and article 14 of the Convention on Biological Diversity, as well as article 6 of the Agreement on the Conservation and Sustainable Use of Marine Biodiversity Beyond National Jurisdiction;

.5 intersessional work was needed to make progress through a correspondence group, which should not only focus on short-term actions but also on long-term actions to ensure that all aspects of the URN Action Plan were addressed;

.6 the need for inclusivity was emphasized, particularly regarding capacity-building, e.g. the GloNoise project, and equitable access to data and resources. Integrating the outcomes from energy efficiency measures and addressing knowledge gaps would be essential for a holistic approach to URN mitigation; and

.7 the ongoing GloNoise Partnership project was appreciated, with additional interest expressed from other Member States in supporting and participating in this project, for relevant future IMO initiatives aimed at reducing URN.

15.12 In addition, the Sub-Committee noted the intervention by the Secretariat:

.1 underlining that, as a priority, the short-term objective would be to identify synergies with existing studies or projects that could provide any relevant input in areas where knowledge gaps could still prevail;

.2 informing that the ongoing GloNoise project would already provide relevant input into several relevant areas of the EBP; and

.3 inviting interested Member States and international organizations, once the scope and terms of reference for a study to be commissioned by the Organization had been identified, to provide the necessary in-kind and financial support.

15.13 Following the discussion, having noted that the matter should further be discussed intersessionally, the Sub-Committee agreed to establish the Correspondence Group on Underwater Radiated Noise (see paragraph 15.21) and referred documents SDC 11/15, SDC 11/15/1 and SDC 11/15/2 to it for consideration during its deliberations.

IACS Recommendation No.181 on the measurement of URN from ships

15.14 The Sub-Committee noted the information contained in document SDC 11/INF.5 (IACS), informing about the publication of *IACS Recommendation No.181 on the Measurement of Underwater Radiated Noise from Ships.*

15.15 Subsequently, the Sub-Committee also agreed to refer document SDC 11/INF.5 to the Correspondence Group for taking into consideration during its deliberations.

EBP monitoring framework

15.16 The Sub-Committee considered the development of a monitoring framework for the URN EBP, based on SDC 11/J/6, and agreed to refer the document to the Correspondence Group for further consideration, as appropriate.

Scope and objective for further URN Studies

15.17 The Sub-Committee considered the scope and objective for further URN Studies, based on SDC 11/J/7.

15.18 In the ensuing discussion, the Sub-Committee noted the following views:

.1 there was already a significant number of studies and projects, ongoing or completed, that had modelled URN levels at regional and global levels.

The important step needed was to leverage the existing studies, with a view to identifying additional steps; and

.2 the prospective impact of measures to reduce GHG emissions from ships and energy efficiency should be taken into account in the expected reduction of URN levels.

15.19 In view of the above, the Sub-Committee agreed to refer SDC 11/J/7 to the Correspondence Group for further consideration, as appropriate.

15.20 Subsequently, the Sub-Committee invited interested Member States and international organizations to provide in-kind and financial support for such studies and projects.

Establishment of the Correspondence Group on Underwater Radiated Noise

15.21 Consequently, the Sub-Committee established the Correspondence Group on Underwater Radiated Noise, under the coordination of Belgium,[6] and instructed it, taking into account comments and decisions made in plenary, together with documents SDC 11/15, SDC 11/15/1, SDC 11/15/2 and SDC 11/INF.5, as well as SDC 11/J/6 and SDC 11/J/7, as appropriate, to:

.1 review the technical objectives of the URN Action Plan (MEPC 82/17/Add.1, annex 8) and develop next steps to progress these objectives, taking into consideration the high-level guidance provided at SDC 11;

.2 develop a framework to assess the progress made on the application and uptake of the Revised URN Guidelines (MEPC.1/Circ.906/Rev.1), with a view towards developing a shared database and other collated resources to represent the results of the EBP (action plan item A2 of the URN Action Plan);

[6] **Coordinator:**
Ms. Marie-Lucie Susini
Environmental Policy Adviser
Federal Public Service Mobility and Transport of Belgium
Tel:+32 277 35 32
Email: marielucie.susini@mobilit.fgov.be
Platform: IMO Space

.3 make a selection and evaluation of studies on URN emissions from the maritime sector, to discuss knowledge gaps and to integrate the relevant outcomes/results in the context of the EBP;

.4 in close cooperation with the Secretariat, draft terms of reference for a study, as appropriate, addressing the areas where knowledge gaps have been identified in the assessment of selected studies (action plan item D1 of the URN Action Plan);

.5 if necessary, consider whether a working group should be established at SDC 12 to further progress the work, and if so, prepare the draft terms of reference; and

.6 submit a written report to SDC 12.

16 ANY OTHER BUSINESS

Experience gained in the use of the second generation intact stability criteria

16.1 The Sub-Committee recalled that the *Interim guidelines on the second generation intact stability criteria* (MSC.1/Circ.1627) (Interim Guidelines) and the associated *Explanatory notes to the Interim guidelines on second generation intact stability criteria* (MSC.1/Circ.1652) (Explanatory Notes) had been issued on an interim basis in order to gain experience in their use.

Re-calculation of the Maersk Essen container loss incident with corrected roll period

16.2 The Sub-Committee recalled that SDC 10 had considered document SDC 10/16 (Denmark and WSC), reporting on the calculations made for the container ship **MV Maersk Essen,** following its cargo loss applying the second generation intact stability criteria, and proposing that the Sub-Committee consider whether a comprehensive review of the Interim Guidelines (MSC.1/Circ.1627) was needed in order to evaluate the correctness of the calculations for parametric roll analysis, particularly for Level 2 C2.

16.3 The Sub-Committee also recalled that, at SDC 10:

.1 an intervention had been made by the delegation of Japan, identifying an underestimation of the natural roll period of the accident containership, as the major reason of the false judgement; and

.2 the Sub-Committee had agreed to:

.1 the intervention made by Japan on the underestimation of the natural roll period of the containership;

.2 invite Member States to submit relevant information to future sessions of the Sub-Committee or Committee, as appropriate;

.3 take into account all reports and studies submitted to the Organization, for a future revision of the Interim Guidelines, including document SDC 10/16; and

.4 invite MSC 108 to note that the roll period formula in the weather criterion is not suitable for ships longer than 140 metres.

16.4 The Sub-Committee further recalled that MSC 108 had noted:

.1 that, in connection with the application of the Interim Guidelines (MSC.1/Circ.1627), the roll period formula in the weather criterion was not suitable for ships longer than 140 metres; and

.2 the information provided in document MSC 108/INF.7 (Japan), which had been submitted in response to the discussion at SDC 10 on the container loss accident of **MV Maersk Essen** due to parametric rolling (SDC 10/16 (Denmark and WSC)), and providing information on an alternative roll period formula used for second generation intact stability criteria.

16.5 In this connection, the Sub-Committee considered the following documents:

.1 SDC 11/16/1 (Denmark), sharing the results of a re-calculation of the **MV Maersk Essen** container loss incident according to MSC.1/Circ.1627, using an alternative roll period formula; and

.2 SDC 11/INF.3 (Denmark), providing supplementary information on assessing the loading condition of the event, applying the second generation intact stability criteria.

16.6 In the ensuing discussion, the Sub-Committee noted the following views:

.1 the content of documents SDC 11/16/1 and SDC 11/INF.3 should be referred to the CCC Sub-Committee for consideration under its agenda item "Development of measures to prevent the loss of containers at sea", without prejudging how the Interim Guidelines should be amended in future;

.2 new calculation results provided in document SDC 11/INF.3 had shown that the uncoupled roll model used in the second check of vulnerability Level 2 criterion could have predicted the parametric roll accident of **MV Maersk Essen** if a reliable method for the natural roll period had been used;

.3 results presented in document SDC 11/INF.3 demonstrated that possible areas of improvement in the Interim Guidelines could be to:

.1 improve the methods to predict the natural roll period applicable to ships above 140 metres (as discussed at SDC 10); and

.2 adjust the standard applied to calculation of "C" using the data from recent containership accidents;

.4 more calculated results of the second check of the Level 2 criterion with the reliable natural roll periods, should continue to be submitted. Based on this, the development of a new standard to be used in the prediction of parametric roll could be initiated, as part of the revision of the second generation intact stability criteria after the trial period;

.5 the most promising and effective method of gathering experience was the examination of historical stability accidents, using the second generation intact stability criteria methodology. The reported cases of container losses following parametric rolling accidents provided for key opportunity to validate the criteria in the Interim Guidelines or to further revise it;

.6 elements of the second check of Level 2 criterion other than the uncoupled model, such as the way to average the speed effect, could also be further

revised in future. However, such a revision would also require the revision of the standard with further updated accident data in its final stage;

.7 it was important to acknowledge the relevance of software prepared for performing the necessary calculations. To this end, the availability of codes, tested and preferably approved by recognized organizations, would be essential to gain experience; and

.8 no clear answer had been provided in document SDC 11.INF.3 on whether the **MV Maersk Essen** accident could have been avoided by applying the second generation intact stability criteria to the loading condition during the accident. Nevertheless, taking into account the information provided, the application of the criteria in terms of operational guidance could have been provided to the master, with the information that this particular ship speed (11 knots) should be avoided to prevent parametric rolling.

16.7 The delegation of Japan made a statement on the subject matter, containing a technical comment on Second Generation Intact Stability and possible areas for further improvement. The full text of the statement is set out in annex […].

16.8 Taking into account the above views, the Sub-Committee agreed to:

.1 invite interested Member States and international organizations to submit a relevant new output proposal to the Committee to initiate the revision work, in accordance with the Committee's Organization and method of work and the draft revision thereof (MSC 109/22, paragraph 19.14 and annex 26);

.2 invite CCC 11 to consider documents SDC 11/16/1 and SDC 11/INF.3 under its agenda item "Development of measures to prevent the loss of containers at sea" as a contribution to future discussions (see paragraph 17.[…]); and

.3 reiterate the request of SDC 10 to interested Member States and international organizations to submit reports and studies on the matter to future sessions, which would help in the revision work.

Numerical method for pure loss of stability in astern irregular waves

16.9 The Sub-Committee noted the information provided in document SDC 11/INF.4 (China), sharing the validation of a numerical method for pure loss of stability in astern irregular waves for the direct stability assessment.

16.10 Subsequently, the Sub-Committee extended its appreciation to the submitters of the documents considered with respect to the second generation intact stability and agreed to take into account all reports and studies submitted to the Organization, for a future revision of the Interim Guidelines, including documents SDC 11/16/1, SDC 11/INF.3 and SDC 11/INF.4 under a new output, as appropriate.

Industry practice with respect to the application of human-centered design (HDC) principles

16.11 The Sub-Committee noted the information provided in document SDC 11/INF.6 (ITF and NI), presenting the result of a survey of seafarers' views on industry practice with respect to the application of human-centred design (HDC) principles.

17 ACTION REQUESTED OF THE COMMITTEES

Action requested of the Committees

17.1 The Marine Environment Protection Committee, at its eighty-third session, is invited to:

[More to Come]

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

[More to Come]

Action requested of Sub-Committees

17.3 The Sub-Committee on Ship Systems and Equipment (SSE), at its eleventh session, is invited to note the Sub-Committee's (SDC 11) agreement that any relevant draft amendment proposals to the 2010 FTP Code emanating from agenda item 11 (Guidelines for use of Fibre-Reinforced Plastics (FRP) within ship structures) should be made to the SSE Sub-Committee for consideration under the ongoing output on "Revision of the 2010 FTP Code to allow for new fire protection systems and materials", taking into account any input that may be provided by the SDC Sub-Committee (paragraph 11.12.1).

17.4 The Sub-Committee on Implementation of IMO Instruments (III), at its eleventh session, is invited to consider the outcome of the discussion emanating from agenda item 10 (Unified interpretation of provisions of IMO safety, security, environment, facilitation, liability and compensation-related conventions), following consideration of the proposal for the Revised interpretation of SOLAS regulations II-2/9 and 13 (MSC.1/Circ.1511/Rev.1), on means of escape from spaces below the bulkhead deck, which raised the question of rightful flag States' interpretations of mandatory provisions being potentially challenged by PSC officers, as appropriate, regarding the need for potential guidance in the context of the harmonization of PSC activities (see paragraph 10.18.3).

17.5 The Sub-Committee on Carriage of Cargoes and Containers (CCC), at its eleventh session, is invited to consider documents SDC 11/16/1 and SDC 11/INF.3 under its agenda item "Development of measures to prevent the loss of containers at sea" as a contribution to future discussions (paragraph 16.7.2).

ANNEXES

[to be prepared by the Secretariat after the session]