INTERNATIONAL MARITIME ORGANIZATION

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DRAFT REPORT TO THE MARITIME SAFETY COMMITTEE AND THE MARINE ENVIRONMENT PROTECTION COMMITTEE[1]

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[1] Delegations wishing to comment on this draft report should submit their comments to ccc@imo.org no later than 9 October 2024, 23:59 (UTC+1). 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 delegation 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.

LIST OF ANNEXES

1 GENERAL

Introduction

1.1 The Sub-Committee on Carriage of Cargoes and Containers (CCC), chaired by Ms. MaryAnne Adams (Marshall Islands), held its tenth session from 16 to 20 September 2024. The Vice-Chair, Mr. David Anderson (Australia), was also present.

1.2 The session was attended by delegations from Member States and Associate Members of IMO; and by observers from intergovernmental organizations and non-governmental organizations in consultative status, as listed in document CCC 10/INF.1.

Secretary-General's opening address

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

Chair's remarks

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

Adoption of the agenda and related matters

1.5 The Sub-Committee adopted its agenda (CCC 10/1/Rev.1) and agreed to be guided in its work, in general, by the annotations contained in document CCC 10/1/1 (Secretariat) and the working arrangements in document CCC 10/1/2 (Chair).

Use of hybrid meeting capabilities

1.6 The Sub-Committee noted that the plenary sessions would be conducted in hybrid mode, i.e. remote participation enabled, following the decisions of C 132 to permanently establish the utilization of hybrid capabilities to support in-person meetings and its invitation to other IMO organs to do the same (C 132/D, paragraph 17.2).

1.7 In this regard, the Sub-Committee noted that C 132 had:

.1 agreed that a review of the Rules of Procedure to include hybrid meeting capabilities was necessary, while recognizing that there was a need for further consideration of a number of elements, and in light of the comments made; and

.2 also agreed to continue with the application of the provisional measures established at C 127, until the revised Rules of Procedure, incorporating the relevant rules for the use of hybrid capabilities, were adopted.

Expressions of condolence

1.8 The Sub-Committee, having noted with great sadness the recent passing of Mr. Ralf Sören Marquardt, the Accredited Representative of CESA to IMO, whose work over the last 25 years had been instrumental as the voice of CESA, expressed its appreciation for Mr. Marquardt's great contribution to the work of the Organization and its sincere sympathy to the delegation of CESA and Mr. Marquardt's family and colleagues.

2 DECISIONS OF OTHER IMO BODIES

General

2.1 The Sub-Committee noted the outcome of III 9, ESPH 29, A 33, PPR 11, SSE 10, MEPC 81, FAL 48 and MSC 108, relevant to the work of the Sub-Committee, as reported in document CCC 10/2 (Secretariat), along with the relevant outcomes of III 10, and took them into account in its deliberations when dealing with relevant agenda items.

Proposed amendments to MSC-MEPC.1/Circ.5/Rev.5 and revision of MSC.1/Circ.1500/Rev.2

2.2 The Sub-Committee noted that MSC 108 had approved 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) (Organization and method of work) regarding the assessment of capacity-building implications in annexes 1 and 2 of the Committees' method of work; and had agreed to apply them as from MSC 109, and to advise MEPC 82 accordingly (MSC 108/20, paragraphs 17.1 to 17.10).

2.3 The Sub-Committee also noted that MSC 108, recognizing that the modifications concerning the assessment of capacity-building of a proposal to be included in the Committees' Organization and method of work also impacted the *Guidance on drafting of amendments to the 1974 SOLAS Convention and related mandatory instruments* (MSC.1/Circ.1500/Rev.2), had approved its consequent revision (MSC.1/Circ.1500/Rev.3) (MSC 108/20, paragraph 17.11).

Enhancement of multilingualism at IMO

2.4 The Sub-Committee noted the adoption of resolution A.1180(33) on *Enhancement of multilingualism at IMO* (A 33/D, paragraph 20).

Explosion on containership YM MOBILITY

2.5 The Sub-Committee was informed that at 13:46 p.m. on 9 August 2024, a container loaded on the bow deck of the Liberia-registered containership **YM MOBILITY** (IMO 9457737) burst into flames. The containership was berthing at No.2 berth of the Beilun (China) second container terminal in Ningbo-Zhoushan port. The explosion caused damage to 175 containers, as well as deck deformation at the place of bursting. There was no casualty or pollution of the marine environment. The **YM MOBILITY** is 305.6 metres in length and was loaded with 1,722 containers. The exploded container was a refrigerated container and the goods inside the container were class 5.2 dangerous goods with proper shipping name ORGANIC PEROXIDE TYPE C, LIQUID. However, the container was not connected to power on the ship.

2.6 After the accident, the Chinese Government carried out emergency rescue operations immediately in accordance with the emergency plan. An accident warning notification was issued in the first place to prevent the recurrence of similar accidents. The rescue operations were quite difficult due to the fact that the fire area on the ship was loaded with a variety of dangerous goods with different methods for fire extinction, and the containers were blocking the fire-fighting water and foam to extinguish the fire inside the containers. After about 51 hours of emergency rescue, the open fire on the ship was completely extinguished. During the whole emergency rescue process, there was no casualty. The marine traffic was safe and orderly, and no secondary disaster occurred. At present, all the containers on board the **YM MOBILITY** have been unloaded, and the ship is in the shipyard for repair. The casualty investigation is being carried out in an orderly manner.

Security situation in the Red Sea and Gulf of Aden

2.7 The delegation of the Bahamas thanked the Secretary-General for his continuous outreach and update on the situation in the Red Sea corridor and his active and ongoing engagements with the United Nations Security Council, its relevant agencies, States in the region and all other parties involved in an effort to try to eliminate attacks to ships and restore safety and security to this vital shipping region. The Bahamas also stressed the importance of addressing the issue, not only because of the high percentage of world goods and equipment that passed through this region, but also because of the urgent need for IMO to achieve its greenhouse gases reduction targets adopted in 2023. It referred to the resolution adopted by the Maritime Safety Committee on this issue (MSC.564(108)) and recalled that the Committee called for peaceful dialogue and diplomacy to resolve the crisis and ensure the safety of lives at sea. In keeping in line with UNSC resolution 2722, the delegation called for the immediate release of the Bahamas-flagged vehicle carrier **MV Galaxy Leader** (IMO 9237307) and its crew of 25.

2.8 Speaking on behalf of the Member States of the European Union and the European Commission, the delegation of Spain strongly condemned the Houthis' attacks on commercial ships, which are an unacceptable violation of international law and the IMO Convention, and present a threat to maritime security and peace in the region. The delegation specifically condemned the attack on the Greek-flagged tanker **MV Sounion** (IMO 9312145), which put the lives of innocent seafarers at risk and poses a serious environmental hazard. The delegation welcomed the adoption, on 27 June 2024, of the United Nations Security Council resolution 2739 (2024) which reiterates its demand that the Houthis immediately release the **MV Galaxy Leader** and its crew, and they also welcomed the adoption of resolution MSC.564(108) on *Security situation in the Red Sea and Gulf of Aden resulting from Houthi attacks on commercial ships and seafarers*. The full text of the statement of the delegation of Spain is set out in annex 9.

2.9 The delegations of Australia, the Bahamas, Canada, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Japan, Republic of Korea, Malta, Netherlands (Kingdom of the), Nigeria, Norway, Poland, Saudi Arabia, Singapore, Sri Lanka, Sweden, Ukraine, the United Kingdom, the United States and the European Commission took the floor to support the statements from the delegations of the Bahamas and Spain. The following views were also expressed:

.1 the safety and welfare of seafarers, and the freedom of navigation remain paramount, and the threats to the marine environment and stability of the global supply chain resulting from the attacks by the Houthis on commercial ships in the Red Sea and the Gulf of Aden pose serious concerns and must cease immediately; and

.2 the assistance provided by the European Union Naval Force Operation "ASPIDES" to protect the vessels transiting in the region and most recently the protection provided to the towing of the tanker **MV Sounion** to safety without any oil spill was recognized and welcomed.

2.10 The full text of the statements made by the delegations of Australia, the Bahamas, Canada, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Japan, Republic of Korea, Malta, Netherlands (Kingdom of the), Nigeria, Poland, Sri Lanka, Sweden, Ukraine, the United Kingdom, the United States and the , European Commission are set out in annex 9.

2.11 Following the statements, the Sub-Committee noted the aforementioned interventions.

Implementation of resolution A.1183(33) on *The impact of the Russian armed invasion of Ukraine on international shipping*

2.12 The Sub-Committee recalled that the Assembly had adopted, on 4 December 2023, resolution A.1183(33) on *The impact of the Russian armed invasion of Ukraine on international shipping*).

2.13 In this context, the Sub-Committee considered document CCC 10/2/1 (Ukraine), outlining the efforts of Ukraine to restore free, safe and secure navigation, and the functioning of global supply chains in the north-western part of the Black Sea. In introducing the document, the delegation of Ukraine raised concerns over Russian Federation-flagged naval ships continuing to act aggressively and provocatively in the waters of the Black Sea and the Sea of Azov, flagrantly breaching all norms of international maritime law, as well as threatening civilians in the Ukrainian territorial waters. Ukraine also stated that they managed to ensure the operation of the Black Sea special maritime corridor, after the Russian Federation withdrew from the grain deal in July 2023, which has proven to be successful and functioning in the round-the-clock mode. The delegation reiterated that they remain a key guarantor of global food security and committed

to safeguarding their ports and the Black Sea to ensure the continuity of food exports. The full text of the statement of the delegation of Ukraine is set out in annex 9.

2.14 The delegation of Türkiye introduced document CCC 10/WP.12, commenting on document CCC 10/2/1 (Ukraine). They stated that the information presented in document CCC 10/2/1 regarding Türkiye is based on uncertain and unreliable data that does not accurately reflect the factual situation. As such, it is unfounded and unacceptable. Türkiye declared that they identify vessels that switch off their AIS during their voyage as suspicious, and subject them to detailed inspections prior to port entry as part of their standard procedure. Türkiye reiterated that they respect Ukraine's territorial integrity and recalled the important role it has played in the grain deal. They reaffirmed their readiness to cooperate with Ukraine's authorities and invited Ukraine to provide timely information supported by concrete evidence. The full text of the statement of the delegation of Türkiye is set out in annex 9.

2.15 The delegations of Australia, Canada, Japan, Norway, Spain (speaking on behalf of the Member States of the European Union and the European Commission), the United Kingdom, the United States and Romania took the floor to express full solidarity with Ukraine and the Ukrainian people and to condemn in the strongest possible terms the illegal, unprovoked and unjustified aggression of the Russian Federation against Ukraine. The following views were also expressed:

.1 the Russian Federation's war of aggression against Ukraine continues to threaten peace and security in Europe and worldwide, and has had severe global consequences, including food insecurity and rising energy prices;

.2 the Russian Federation should take steps to respect international law, in particular the United Nations Convention on the Law of the Sea (UNCLOS), and to avoid destabilizing actions threatening freedom of navigation and overflight in the Black and Azov Seas, which endanger shipping and seafarers' safety;

3 resolution A.1183(33) strongly condemns the Russian Federation's violation of the territorial integrity and sovereignty of Ukraine, while highlighting that the actions of the Russian Federation are inconsistent with the principles and purposes of IMO; and

.4 the attack on the Saint Kitts and Nevis-flagged bulk carrier **MV AYA** (IMO 9117868) with cargo bound for Egypt represents a flagrant disregard of resolution A.1183(33) and expands the scope of the conflict by targeting the merchant ship of a State not involved in the conflict, exercising navigational freedom in the Exclusive Economic Zone of Romania, which is also not a part of the conflict.

2.16 The full text of the statements made by the delegations of Australia, Canada, Japan, Romania, Spain (speaking on behalf of the Member States of the European Union and the European Commission), the United Kingdom and the United States are set out in annex 9.

2.17 The delegation of the Russian Federation stated that document CCC 10/2/1 presents yet another set of falsehoods and manipulates facts with apparent disrespect to the participating Member States. This is clearly proven by document CCC 10/WP.12, which indicates some instances of falsely provided information in document CCC 10/2/1. The other example, amongst many, refers to the Crimean ports, which according to document CCC 10/2/1 are closed, while in reality they are open and are in active operation. The most vivid manipulation was the call contained in document CCC 10/2/1 essentially to limit international shipping and the supply of food produce. The Russian Federation stated that if the Sub-Committee agrees with this, then, it sacrifices IMO's work to abhorrent political practices, as this directly contradicts the aims and mission of IMO. Further, the Russian Federation reiterated that resolution A.1183(33) is the feeblest resolution adopted in the history of IMO and it does nothing else but undermine IMO's work, including being used to spend thousands of pounds without proper authorization from Member States.

2.18 On a procedural aspect, the Russian Federation called upon the Secretary-General to make sure that the Secretariat is effective in the way it processes the documents. Such ineffectiveness previously prevented Member States from submitting a commenting document within the deadline stipulated in the Organization and method of work. It was underscored that this was not the first time this had happened. Document CCC 10/2/1 was uploaded to IMODOCS nearly one week after the deadline for the submission of commenting documents, which is not an acceptable practice. The full text of the statement of the Russian Federation is set out in annex 9.

2.19 The delegation of Ukraine mentioned that the statement made by the Russian Federation contains manipulation, distortion, lies and blackmailing. According to Ukraine, the Russian Federation also keep emphasizing the lack of evidence, while sufficient evidence has been confirmed by decisions of several IMO bodies, including the Assembly and the Council, resulting in the adoption of resolutions A.1183(33), MSC 495(105) and MSC.519 (106). On the weakness of the resolution, as raised by the Russian Federation delegation, Ukraine highlighted that among all IMO Member States, only nine voted against the resolution. Finally, Ukraine reiterated its willingness to interact closely with all the countries with a view to achieving practical results based on principles and norms of international law. The full text of the statement of Ukraine is set out in annex 9.

2.20 Subsequently, the Sub-Committee took note of the actions in paragraph 22 of document CCC 10/2/1, as well as the statements in response to document CCC 10/2/1, and the information provided in document CCC 10/WP.12.

3 AMENDMENTS TO THE IGF CODE AND DEVELOPMENT OF GUIDELINES FOR ALTERNATIVE FUELS AND RELATED TECHNOLOGIES

BACKGROUND

3.1 The Sub-Committee recalled that CCC 9 had re-established the Correspondence Group on Development of Technical Provisions for the Safety of Ships using Low-flashpoint Fuels to continue the work on the draft safety provisions for ships using alternative fuels (CCC 9/14, paragraph 3.26).

3.2 The Sub-Committee also recalled that the Intersessional Working Group on Development of Technical Provisions for Safety of Ships using Alternative Fuels (ISWG-AF 1) had been held the previous week, from 9 to 13 September 2024.

OUTCOME OF ISWG-AF 1

3.3 The Sub-Committee considered the report of the Intersessional Working Group on Development of Technical Provisions for Safety of Ships using Alternative Fuels (CCC 10/WP.5); together with additional information provided orally by the Chair of the Working Group, Mr. Christian Allgeier (Germany). The Sub-Committee took action, as indicated in the following paragraphs.

Interim guidelines for ships using ammonia as fuel

3.4 The Sub-Committee noted the progress of the Working Group in the development of draft interim guidelines for ships using ammonia as fuel (CCC 10/WP.5, paragraphs 4 to 25 and annex 2). The Sub-Committee also noted that the following documents submitted to this session had already been considered by the Working Group:

.1 CCC 10/3/Rev.1 (Germany), providing the report of the Correspondence Group on Development of Technical Provisions for the Safety of Ships using Alternative Fuels regarding ammonia, hydrogen and low-flashpoint oil fuels, and specifically containing the draft interim guidelines for ships using ammonia as fuel;

.2 CCC 10/3/8 (RINA), presenting an analysis aimed at identifying gaps in the regulations and standards for ammonia-fuelled ship designs and assessing the impact of lack of prescriptive standard harmonization. Taking as basis the work previously conducted on the design of ammonia-fuelled vessels and risk assessments, and on a bow tie analysis conducted and presented in document CCC 10/INF.23, a list of priority gaps in the current regulatory texts was identified, together with a proposed set of recommendations;

.3 CCC 10/3/9 (Singapore), providing information regarding the use of plume dispersion modelling for emergency response planning on board ships using ammonia as fuel; intending to support the development of draft interim guidelines for the safety of ships using ammonia as fuel; and noting that similar considerations can also be applied to other alternative fuels, such as methanol and hydrogen;

.4 CCC 10/3/11 (Republic of Korea), explaining the inevitability of generation of ammonia effluent during the operation of ammonia-fuelled ships and proposing that the MEPC develop guidelines for managing such effluent;

.5 CCC 10/3/13 (China), providing comments on the report of the Correspondence Group (CCC 10/3) on interim guidelines for ships using ammonia as fuel;

.6 CCC 10/3/14 (Japan), providing comments on document CCC 10/3/Rev.1, with regard to key elements for the development of the draft interim guidelines for the safety of ships using ammonia as fuel, such as definition, pipe design and ammonia mitigation system;

.7 CCC 10/3/15 (Japan), providing comments on document CCC 10/3/Rev.1, the report of the Correspondence Group, with regard to key elements for the development of the draft interim guidelines for the safety of ships using ammonia as fuel, such as operation and personnel protection;

.8 CCC 10/3/18 (Republic of Korea), commenting on document CCC 10/3/Rev.1, proposing improvements to the draft interim guidelines for ships using ammonia as fuel;

.9 CCC 10/INF.21 (Japan), providing information on the hazards related to the normal release and accidental leakage of ammonia fuel identified through a hazard identification (HAZID) study in a trial-designed Panamax-type ammonia-fuelled bulk carrier; and presenting the results of identifying necessary safety measures and future considerations;

.10 CCC 10/INF.23 (RINA), presenting an analysis aimed at mapping barriers to qualify the application of ammonia on board by eliminating hazards associated with handling ammonia as a fuel on board;

.11 CCC 10/INF.24 (Republic of Korea), presenting information on the impact of direct discharge of ammonia water into the marine ecosystem, which may occur during the operation of ammonia-fuelled ships; and

.12 CCC 10/INF.26 (Republic of Korea), providing information on the various safety systems developed by the Republic of Korea through national research and development (R&D) projects to ensure the safe use of ammonia fuel on ships.

3.5 In the ensuing discussion, the Sub-Committee noted that there was an omission in annex 2 of document CCC 10/WP.5 concerning an understanding reached by the Working Group to reconsider insertion of a new paragraph 10.2.1 related to gas safe machinery space concept.

3.6 In this context, the Sub-Committee instructed the Working Group on Development of Technical Provisions for Safety of Ships using Alternative Fuels to finalize the draft interim guidelines for ships using ammonia as fuel, based on annex 2 of document CCC 10/WP.5, taking into account annexes 5 to 7 of document CCC 9/3/Add.1, as well as documents CCC 9/3, CCC 9/3/1, CCC 9/3/2, CCC 9/3/13, CCC 9/3/14, CCC 9/WP.3, CCC 10/3 and Rev.1, CCC 10/3/8, CCC 10/3/9, CCC 10/3/14, CCC 10/3/15, CCC 10/3/18, CCC 9/INF.7, CCC 9/INF.16 and CCC 9/INF.27, CCC 10/INF.21, CCC 10/INF.23, CCC 10/INF.24 and CCC 10/INF.26.

Ammonia effluent discharge

3.7 As invited by the Group (CCC 10/WP.5, paragraph 13), the Sub-Committee agreed to report to MEPC 83 the Working Group's discussions on ammonia effluent discharge. In this context, the Sub-Committee noted that this was a request for specific guidelines and agreed to the necessity of considering ammonia effluent discharge. Therefore, the Sub-Committee invited interested Member States and international organizations to submit a proposal for a new output to MEPC 83 concerning the need to develop guidelines for managing ammonia effluent. In this regard, the Sub-Committee noted a view expressing that it should be taken into account that the MEPC is an associated organ of the output on "Development of a safety regulatory framework to support the reduction of GHG emissions from ships using new technologies and alternative fuels".

3.8 The Sub-Committee noted that generalized outputs, such as "Development of a safety regulatory framework to support the reduction of GHG emissions from ships using new technologies and alternative fuels", are causing confusion as to the procedures as outlined in the Organization and method of work. Therefore, the Sub-Committee would request clarification on how to proceed with items that clearly require a new output proposal but could also fall under an overarching output.

Interim guidelines for ships using hydrogen as fuel

3.9 The Sub-Committee noted the progress of the Working Group in the development of draft interim guidelines for the safety of ships using hydrogen as fuel (CCC 10/WP.5, paragraphs 26 to 35 and annex 1). The Sub-Committee also noted that the following documents submitted to this session had already been considered by the Working Group:

.1 CCC 10/3/Rev.1 (Germany), providing the report of the Correspondence Group on Development of Technical Provisions for the Safety of Ships using Alternative Fuels regarding ammonia, hydrogen and low-flashpoint oil fuels, and specifically containing the draft interim guidelines for ships using hydrogen as fuel;

.2 CCC 10/3/16 (Japan), providing comments on document CCC 10/3/Rev.1, on requirements for fuel supply to consumers in chapter 9 of the draft of interim guidelines for ships using hydrogen as fuel;

.3 CCC 10/3/17 (Japan), providing comments on document CCC 10/3/Rev.1, requirements for fuel supply to consumers in the draft interim guidelines for the safety of ships using hydrogen as fuel;

.4 CCC 10/INF.16 (Japan et al.), providing information and safety considerations for liquified hydrogen bunkering systems and procedures; and intending to support the development of draft interim guidelines for the safety of ships using hydrogen as fuel; and

.5 CCC 10/INF.27 (Republic of Korea), providing information on the importance of managing potential risk factors that may arise during ship operations due to the permeation occurring in type 4 high-pressure hydrogen gas storage tanks.

3.10 In the ensuing discussion, the Sub-Committee noted a view expressing that a new section on training and personnel protection should be included in the interim guidelines.

3.11 In this context, the Sub-Committee instructed the Working Group on Development of Technical Provisions for Safety of Ships using Alternative Fuels to further develop, towards finalization, the draft interim guidelines for ships using hydrogen as fuel, based on annex 1 of document CCC 10/WP.5, taking into account documents CCC 9/3, CCC 9/3/11, CCC 9/3/12,

CCC 9/3/15, CCC 9/WP.3, CCC 10/3 and Rev.1, CCC 10/3/16, CCC 10/3/17, CCC 9/INF.17, CCC 9/INF.18, CCC 10/INF.16 and CCC 10/INF.27.

Interim guidelines for ships using low-flashpoint oil fuels

3.12 The Sub-Committee noted that, due to time constraints, the Working Group had agreed not to consider the draft interim guidelines for ships using low-flashpoint oil fuels (CCC 10/WP.5, paragraph 36).

3.13 In this context, the Sub-Committee instructed the Working Group on Development of Technical Provisions for Safety of Ships using Alternative Fuels, if time permitted, to further develop the draft interim guidelines for ships using low-flashpoint oil fuels, based on annex 3 of document CCC 10/3/Rev.1, taking into account annex 3 of document CCC 9/3/Add.1 and document CCC 9/3/10.

Work plan for the development of the IGF Code and safety provisions for alternative fuels

3.14 The Sub-Committee recalled that MEPC 81 (MEPC 81/16, paragraph 10.10) and MSC 108 (MSC 108/20, paragraph 14.2) had endorsed the updated work plan for the development of new alternative fuels prepared by CCC 9 (CCC 9/14, annex 1).

3.15 The Sub-Committee considered the following documents:

.1 CCC 10/3/1 (Austria et al.), proposing to develop mandatory requirements for the safety of ships using methyl/ethyl alcohol as fuel based on the *Interim guidelines for the safety of ships using methyl/ethyl alcohol as fuel* (MSC.1/Circ.1621);

.2 CCC 10/3/2 (IACS), proposing an amendment to paragraph 9.6 of the IGF Code to provide technical requirements for gas fuel vent pipes with single-walled construction in machinery spaces;

.3 CCC 10/3/3 (Denmark), highlighting learnings and experience gained using MSC.1/Circ.1621 as the basis of a flag State approval of new ships capable of using methanol as fuel;

.4 CCC 10/3/4 (IACS), proposing amendments to paragraphs 11.5.1, 11.5.2 and 11.5.3 of part A-1 of the IGF Code concerning a water spray system for fuel storage tank(s);

.5 CCC 10/3/5 (China), analysing the necessity of the overboard discharge of wastewater containing methyl alcohol fuel on board methyl alcohol-fuelled ships; putting forward the logic for controlling the hazards caused by overboard discharge, based on analysis of the MARPOL Convention regulations on operational discharge of residues of noxious liquid substances; and proposing to develop overboard discharge provisions for wastewater containing methyl alcohol fuel, with related aspects to be considered during the development of the provisions;

.6 CCC 10/3/6 (China), analysing the feasibility of using ballast space as the protective cofferdam for integral methyl alcohol fuel tanks; and based on a detailed analysis of the applicability of relevant technical requirements in MSC.1/Circ.1621, proposing respective revisions accordingly;

.7 CCC 10/3/7 (United Kingdom), proposing to seek clarification and to agree to an interpretation on the functional requirements of a cofferdam for the use of methanol as fuel, as per MSC.1/Circ.1621, in order to allow for alternative design and arrangement to be assessed and agreed on, in a fair and unanimous way, ensuring that equal and appropriate safety provisions are implemented when agreeing on an equivalence of a cofferdam, specifically for methanol, whilst meeting the necessary functional requirements of the IGF Code;

.8 CCC 10/3/12 (Republic of Korea), highlighting that, in order to develop regulations applicable to the installation of LNG fuel tanks on the open deck above cargo areas of oil tankers and chemical tankers, the Republic of Korea conducted a heat transfer analysis; and proposing new regulations based on this analysis, including fire protection requirements; and

.9 CCC 10/INF.29 (Republic of Korea), providing information on heat transfer analysis which is conducted to develop regulations applicable for installing LNG fuel tanks on the open deck of cargo areas of crude oil tankers and chemical tankers.

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

.1 it would be premature to include document CCC 10/3/12 within consideration of the work plan, as more information and studies are required;

.2 more information concerning document CCC 10/3/12 can be provided to CCC 11; and

.3 document CCC 10/3/5 should not be part of consideration of the work plan. Instead, interested Member States and international organizations should be invited to submit a proposal for a new output.

3.17 In this context, the Sub-Committee instructed the Working Group on Development of Technical Provisions for Safety of Ships using Alternative Fuels to update the work plan for the development of the IGF Code and safety provisions on alternative fuels, based on annex 1 of document CCC 9/14, and taking into account documents CCC 10/3/1, CCC 10/3/2, CCC 10/3/3, CCC 10/3/4, CCC 10/3/6 and CCC 10/3/7. With regard to document CCC 10/3/5, the Sub-Committee agreed to invite interested Member States and international organizations to submit a proposal for a new output to MEPC 83 concerning development of provisions on overboard discharge of wastewater containing methyl alcohol fuel on board methyl alcohol-fuelled ships.

Consideration of MSC.1/Circ.1622 and MSC.1/Circ.1648 for casting

3.18 The Sub-Committee considered the following documents submitted by the Republic of Korea to this session:

.1 CCC 10/3/10, providing the results of considering the procedure for approving casting materials using MSC.1/Circ.1622 and MSC.1/Circ.1648, which include verification procedures for new materials; and

.2 CCC 10/INF.28, providing technical information on high manganese casting for cryogenic service in relation to the acceptability of the material.

3.19 In the ensuing discussion, the Sub-Committee noted the following comments expressed:

.1 developing relevant provisions can be supported;

.2 document CCC 10/3/10 proposes to apply Charpy impact test to the ferrous casting material with a certain acceptance criterion, 41 Joule, coming from the IGC Code. However, it should be noted that the IGC Code does not require the Charpy impact test, nor the same criteria for all materials. For example, austenitic steel is listed in table 6.4 of the IGC Code and is required to have a minimum average Charpy impact value of 41 Joule. On the other hand, aluminium alloys are also listed in table 6.4 of the IGC Code, but the Charpy impact test is not required. These examples show that the necessity of the Charpy impact test and the criteria should be considered depending on properties of the materials and their design temperature. Besides, in table 3 of document CCC 10/INF.28, the required values and the test results seem to be mixed up without proper specification. Therefore, clarification is necessary if these values are considered for incorporation. For those reasons, it would still be premature to mandate the Charpy impact test with the same acceptance criterion of 41 Joule to all ferrous casting materials;

.3 as the criteria are already included in the IGC Code, the work on incorporation of new provisions should not take too long and would not require a proposal for a new output; the work could be done at the Working Group, if time permits; and

.4 documents CCC 10/3/10 and CCC 10/INF.28 could be part of consideration of the work plan.

3.20 After consideration, the Sub-Committee agreed to instruct the Working Group on Development of Technical Provisions for Safety of Ships using Alternative Fuels to take into account documents CCC 10/3/10 and CCC 10/INF.28 when updating the work plan for the development of the IGF Code and safety provisions on alternative fuels.

ESTABLISHMENT OF THE WORKING GROUP ON DEVELOPMENT OF TECHNICAL PROVISIONS FOR SAFETY OF SHIPS USING ALTERNATIVE FUELS

3.21 The Sub-Committee agreed to establish the Working Group on Development of Technical Provisions for Safety of Ships using Alternative Fuels and instructed it, taking into account the comments made and decisions taken in plenary, to:

.1 further develop, towards finalization, the draft interim guidelines for ships using hydrogen as fuel, based on annex 1 of document CCC 10/WP.5, taking into account documents CCC 9/3, CCC 9/3/11, CCC 9/3/12, CCC 9/3/15, CCC 9/WP.3, CCC 10/3 and Rev.1, CCC 10/3/16, CCC 10/3/17, CCC 9/INF.17, CCC 9/INF.18, CCC 10/INF.16 and CCC 10/INF.27;

.2 finalize the draft interim guidelines for ships using ammonia as fuel, based on annex 2 of document CCC 10/WP.5, taking into account annexes 5 to 7 of document CCC 9/3/Add.1, as well as documents CCC 9/3, CCC 9/3/1, CCC 9/3/2, CCC 9/3/13, CCC 9/3/14, CCC 9/WP.3, CCC 10/3 and Rev.1, CCC 10/3/8, CCC 10/3/9, CCC 10/3/14, CCC 10/3/15, CCC 10/3/18, CCC 9/INF.7, CCC 9/INF.16, CCC 9/INF.27, CCC 10/INF.21, CCC 10/INF.23, CCC 10/INF.24 and CCC 10/INF.26;

.3 if time permits, further develop the draft interim guidelines for ships using low-flashpoint oil fuels, based on annex 3 of document CCC 10/3/Rev.1, taking into account annex 3 of document CCC 9/3/Add.1 and document CCC 9/3/10;

.4 update the work plan for the development of the IGF Code and safety provisions on alternative fuels, based on annex 1 of document CCC 9/14, and taking into account documents CCC 10/3/1, CCC 10/3/2, CCC 10/3/3, CCC 10/3/4, CCC 10/3/6, CCC 10/3/7, CCC 10/3/10 and CCC 10/INF.28; and

.5 consider whether it is necessary for the Correspondence Group to be re-established and, if so, prepare terms of reference for consideration by the plenary.

REPORT OF THE WORKING GROUP ON DEVELOPMENT OF TECHNICAL PROVISIONS FOR SAFETY OF SHIPS USING ALTERNATIVE FUELS

3.22 Having considered the report of the Working Group on Development of Technical Provisions for Safety of Ships using Alternative Fuels (CCC 10/WP.6), the Sub-Committee approved it in general and took action as described in the following paragraphs.

Draft interim guidelines for the safety of ships using ammonia as fuel

3.23 The Sub-Committee noted the discussion of the Working Group in the development and finalization of the draft interim guidelines for ships using ammonia as fuel (CCC 10/WP.6, paragraphs 4 to 45).

3.24 The Sub-Committee also noted the provisional nature of the guidelines, as well as the approach to provide high-level goal-based guidance for the use of ammonia as fuel, not addressing all provisions in detail, as well as the need for future revision once relevant experience is available (CCC 10/WP.6, paragraphs 30 to 44).

3.25 The Sub-Committee agreed to the draft interim guidelines for the safety of ships using ammonia as fuel, as set out in annex 1, with a view to approval by MSC 109 (CCC 10/WP.6, paragraph 46 and annex 1).

Draft interim guidelines for the safety of ships using hydrogen as fuel

3.26 The Sub-Committee noted the progress of the Working Group in the development of draft interim guidelines for the safety of ships using hydrogen as fuel (CCC 10/WP.6, paragraphs 47 and 48, and annex 2).

Draft interim guidelines for ships using low-flashpoint oil fuels

3.27 The Sub-Committee noted that, due to time constraints, the Working Group agreed not to consider the draft interim guidelines for ships using low-flashpoint oil fuels (CCC 10/WP.6, paragraph 49).

Updated work plan

3.28 The Sub-Committee agreed to the updated work plan for developing new alternative fuels under the IGF Code, as set out in annex 2 (CCC 10/WP.6, paragraph 53 and annex 3).

Re-establishment of the Intersessional Working Group

3.29 The Sub-Committee invited the Maritime Safety Committee to approve the re-establishment of the Intersessional Working Group on Development of Technical Provisions for Safety of Ships using Alternative Fuels (ISWG-AF 2), in 2025, with the associated draft terms of reference as set out in annex 3 (CCC 10/WP.6, paragraph 54).

Re-establishment of the Correspondence Group

3.30 The Sub-Committee agreed to re-establish the Correspondence Group on Development of Technical Provisions for Safety of Ships Using Alternative Fuels, under the coordination of Norway[2], and instructed it to:

.1 further develop the draft interim guidelines for ships using hydrogen as fuel, towards finalization at CCC 11, based on annex 1 of document CCC 10/WP.5 and annex 2 of document CCC 10/WP.6;

.2 if time permits, further develop the draft interim guidelines for ships using low-flashpoint oil fuels, based on annex 2 of document CCC 9/3/Add.1, taking into account annex 3 of document CCC 9/3/Add.1, and document CCC 9/3/10;

.3 consider document CCC 10/4/Add.1 and advise the Sub-Committee on how best to proceed;

.4 collect information on the use of ammonia and methyl/ethyl alcohol as fuel;

.5 convene remote meetings using a suitable platform in order to consider any of the terms of reference, as necessary, for further development of the aforementioned draft guidelines; and

.6 submit a written report to CCC 11.

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4 REVIEW OF THE IGC CODE

Background

4.1 The Sub-Committee recalled that MSC 103 had agreed to include in its post-biennial agenda the output on "Review of the IGC Code", with two sessions needed to complete the item, assigning the CCC Sub-Committee as the associated organ. Having agreed that the scope of the review should not be limited to specific paragraphs of the Code, the Committee had also agreed, in accordance with MSC.1/Circ.1481 and MSC.1/Circ.1500/Rev.2, that:

.1 the amendments to be developed should apply to all new ships to which the IGC Code applied on or after the date of entry into force;

.2 the instrument to be amended was the IGC Code; and

.3 the amendments to be developed should enter into force on 1 January 2028, provided that they were adopted before 1 July 2026.

4.2 The Sub-Committee also recalled that CCC 9 had agreed to extend the target completion year of the output on "Review of the IGC Code" to 2024, which had been subsequently approved by MSC 108.

4.3 The Sub-Committee further recalled that CCC 9 had re-established the Correspondence Group on the Review of the IGC Code and Amendments to the IGF Code.

Report of the Correspondence Group

4.4 The Sub-Committee considered documents CCC 10/4 and Add.1 (Marshall Islands), providing the report of the Correspondence Group on Amendments to the IGF Code and Review of the IGC Code. The Sub-Committee approved the report in general and took action, as described in the following paragraphs.

Draft amendments to the IGC Code

4.5 The Sub-Committee noted the progress made by the Correspondence Group on finalizing draft amendments to the IGC Code (CCC 10/4, paragraphs 8 to 31).

4.6 In this context, the Sub-Committee considered the following documents related to this matter:

.1 CCC 10/4/2 (SIGTTO), providing comments on document CCC 10/4 and proposing amendments to paragraph 8.2.18 and chapter 15 of the IGC Code, considering the discussion in the Correspondence Group;

.2 CCC 10/4/3 (IACS), proposing amendments to paragraph 11.3.2 of the IGC Code concerning a water spray system for fuel storage tank(s);

.3 CCC 10/4/4 (Japan), providing comments on document CCC 10/4, with regard to the requirements for filling limits;

.4 CCC 10/4/5 (IACS), providing comments on document CCC 10/4;

.5 CCC 10/4/6 (Germany), providing a comparison of ethane to LPG and LNG with regard to safety; and concluding that, related to safety, new regulations are not needed because LNG and LPG regulations in the IGC Code cover the necessary requirements for the use of ethane cargo as fuel; and

.6 CCC 10/INF.11 (SIGTTO), providing information concerning the technical background of chapter 15 of the IGC Code on filling limits.

4.7 Following the discussion, the Sub-Committee agreed that the Working Group could use document CCC 10/4/2 as a basis for further consideration, taking into account document CCC 10/4/4.

4.8 After consideration, the Sub-Committee agreed to refer documents CCC 10/4/2, CCC 10/4/3, CCC 10/4/4, CCC 10/4/5, CCC 10/4/6 and CCC 10/INF.11 to the Working Group, with a view to taking them into account when finalizing the draft amendments to the IGC Code.

Draft amendments to the IGF Code

4.9 The Sub-Committee considered document CCC 10/4/Add.1 (Marshall Islands), containing the part of the report of the Correspondence Group on Amendments to the IGF Code and Review of the IGC Code concerning draft amendments to the IGF Code.

4.10 As invited in paragraph 37.2 of document CCC 10/4, the Sub-Committee noted the progress made by the Correspondence Group on finalizing draft amendments to the IGF Code.

4.11 After consideration, the Sub-Committee agreed to refer document CCC 10/4/Add.1 to the Working Group on Development of Technical Provisions for Safety of Ships using Alternative Fuels, for consideration in conjunction with updating the work plan for the development of the IGF Code and safety provisions on alternative fuels (see paragraphs 3.21 and 3.28, and annex 2).

Amendment to section 16.9 of the IGC Code

4.12 The Sub-Committee noted that MSC 108 had approved the draft amendments to section 16.9 of the IGC Code for adoption at MSC 109 and entry into force on 1 July 2026 (CCC 10/4, paragraphs 9 and 21).

Development of multiple generations of the IGC Code

4.13 The Sub-Committee endorsed the view that there was no compelling need to develop multiple generations of the IGC Code (CCC 10/4, paragraph 10).

Toxic designation to CO2 throughout the SOLAS Convention

4.14 The Sub-Committee noted that applying a toxic designation to CO_2 throughout the SOLAS Convention may have unintended consequences (CCC 10/4, paragraph 13).

Addition of an ESD-protected machinery space safety concept to the IGC Code

4.15 The Sub-Committee noted that that there were no additional proposals on the addition of an ESD-protected machinery space safety concept to the IGC Code (CCC 10/4, paragraph 16).

Application of the IGC Code

4.16 The Sub-Committee endorsed the principle that IGC Code ships using liquefied gases as fuel, including liquefied gases not carried as cargo, are subject to the requirements of the IGC Code in lieu of the IGF Code (CCC 10/4, paragraph 19), while noting that MSC 109 would be invited to further consider the issues raised in document CCC 10/10/4 (see paragraph 10.15).

Consideration of other hydrocarbon LPGs in addition to propane and butane

4.17 The Sub-Committee noted the relevant information provided in paragraph 20 of document CCC 10/4.

Guidelines on the use of ammonia cargo as fuel

4.18 The Sub-Committee noted that guidelines on the use of ammonia as fuel were under development and would serve as the basis for guidelines referenced in the IGC Code (CCC 10/4, paragraph 21).

4.19 In this context, the Sub-Committee considered the following documents:

.1 CCC 10/4/1 (Australia et al.), containing draft interim guidelines for use of ammonia cargo as fuel and proposing to finalize these interim guidelines within the scope of the work plan for review of the IGC Code; and

.2 CCC 10/4/7 (IACS), providing comments on document CCC 10/4/1 proposing to develop interim guidelines for the use of anhydrous ammonia cargo as fuel.

4.20 Following the discussion, the Sub-Committee noted the following views expressed on this matter:

.1 document CCC 10/4/1 should be the base document for further work, which could start at the Working Group, continue at the Correspondence Group and be finalized at CCC 11;

.2 it would be more realistic to extend the target completion year of the output by two years, taking into account that the work at the Correspondence Group could formally start only after MSC 109; and

.3 in addition, the scope of the output should be modified to read "Development of guidelines for the use of ammonia cargo as fuel".

4.21 After consideration, the Sub-Committee:

.1 agreed to invite MSC 109 to extend the target completion year of the existing output 1.17 on "Review of IGC Code" to 2026 and to modify the scope of the output to read "Development of guidelines for the use of ammonia cargo as fuel"; and

.2 instructed the Working Group to prepare terms of reference for the Correspondence Group, for consideration by the plenary, taking into account the draft guidelines for the use of ammonia as fuel on ships subject to the IGF Code, currently under development, as well as documents CCC 10/4/1 and CCC 10/4/7; and that the work of the Correspondence Group would be subject to the decision of MSC 109 concerning the extension of the target completion year of the existing output 1.17 on "Review of IGC Code" to 2026 and the modification of the scope of the output to read "Development of guidelines for the use of ammonia cargo as fuel".

Draft cover page of the MSC resolution and draft new consolidated version of the IGC Code

4.22 The Sub-Committee noted the progress made by the Working Group on finalizing the draft cover page of the MSC resolution for amendments to the IGC Code (CCC 10/4, paragraph 34).

4.23 In this context, the Sub-Committee considered document CCC 10/WP.4 (Secretariat), containing information with a view to preparing the draft amendments in the form of a new consolidated version of the IGC Code.

4.24 After consideration, the Sub-Committee agreed that the draft amendments should be adopted in the form of a new consolidated version of the Code, taking into account the intended application of the individual provisions to new and/or existing ships; and instructed the Working Group to prepare the draft amendments to the IGC Code, including the cover page of the draft MSC resolution, accordingly, taking into account document CCC 10/WP.4.

4.25 As a consequence, the Sub-Committee also agreed to invite MSC 109, when approving the draft amendments to the IGC Code, to request the Secretariat to prepare the text of the draft new consolidated version of the IGC Code, incorporating all amendments to the 2014 IGC Code, with a view to circulation and subsequent adoption at MSC 110.

The Sub-Committee also authorized the Secretariat, when preparing the final text of the draft amendments to the IGC Code, to effect corrections that may be required and renumber paragraphs, as appropriate.

Draft check/monitoring sheet for amendments to the IGC Code

4.26 The Sub-Committee noted the status of the draft check/monitoring sheet for amendments to the IGC Code (CCC 10/4, paragraph 35).

Establishment of the Working Group

4.27 Having considered the above matters, the Sub-Committee established the Working Group on Review of the IGC Code, and instructed it, taking into account the comments made and decisions taken in plenary, to:

.1 finalize the draft amendments to the IGC Code which should be adopted in the form of a new consolidated version of the IGC Code, based on documents CCC 8/WP.4, CCC 9/WP.4 and CCC 10/4, and taking into account documents CCC 10/4/2, CCC 10/4/3, CCC 10/4/4, CCC 10/4/5, CCC 10/4/6, CCC 10/WP.4 and CCC 10/INF.11;

.2 finalize the draft MSC resolution for amendments to the IGC Code, including the cover page of the draft resolution, taking into account document CCC 10/WP.4, with a view to approval at MSC 109 and subsequent adoption at MSC 110, with the expected entry into force on 1 January 2028;

.3 finalize the check/monitoring sheet and record format for the consolidated draft amendments to the IGC Code; and

.4 prepare terms of reference for the Correspondence Group, for consideration by the plenary, taking into account the draft guidelines for the use of ammonia as fuel on ships subject to the IGF Code, currently under development, as well as documents CCC 10/4/1 and CCC 10/4/7; and that the work of the Correspondence Group would be subject to the decision by MSC 109 concerning the extension of the target completion year of the existing output 1.17 on "Review of IGC Code" to 2026 and the modification of the scope of the output to read "Development of guidelines for the use of ammonia cargo as fuel".

Report of the Working Group

4.28 Having considered the report of the Working Group on Review of the IGC Code (CCC 10/WP.7), the Sub-Committee approved it in general and took action as described in paragraphs.

Draft amendments to the IGC Code

4.29 The Sub-Committee noted the discussions of the Gorking group on the finalization of the draft amendments to the IGC Code (CCC 10/WP.7, paragraphs 4 to 29).

4.30 The Sub-Committee agreed to the draft amendments to the IGC Code, as set out in annex 4, with a view to submitting them for approval by MSC 109 and subsequent adoption at MSC 110, with the expected entry into force on 1 January 2028 (CCC 10/WP.7, paragraph 30 and annex 1).

4.31 The Sub-Committee also agreed to the draft associated cover page of the MSC resolution for the draft amendments to the IGC Code, as set out in annex 4, with a view to submitting it following the procedure outlined in paragraph 4.30 above (CCC 10/WP.7, paragraph 32 and annex 2).

Check/monitoring sheet for the amendments to the IGC Code

4.32 The Sub-Committee endorsed the draft associated check/monitoring sheet and record format for the draft amendments to the IGC Code, as set out in annex 4 (CCC 10/WP.7, paragraph 33 and annex 3).

Need for an improved base document

4.33 The Sub-Committee noted the need for an improved base document taking into account the output in documents CCC 10/4/1, CCC 10/4/7 and CCC 10/WP.6 (CCC 10/WP.7, paragraph 35).

Establishment of the Correspondence Group

4.34 Subject to the decision by MSC 109 concerning the extension of the target completion year of the existing output 1.17 on "Review of IGC Code" to 2026 and the modification of the scope of the output to read "Development of guidelines for the use of ammonia cargo as fuel", the Sub-Committee agreed to establish the Correspondence Group on Development of

Guidelines for the Use of Ammonia Cargo as Fuel, under the coordination of the Marshall Islands[3], and instructed it to:

.1 consider the framework and structure of the draft interim guidelines, taking into account document CCC 10/4/1;

.2 review in detail the provisions of the draft interim guidelines, taking into account documents CCC 10/4/1 and CCC 10/4/7;

.3 consider the requirements in document CCC 10/WP.6 on interim guidelines for ships using ammonia as fuel, with a view towards harmonizing the provisions, as appropriate;

.4 consider the issue of the vehicle to be recommended to MSC for adoption and circulation of the draft interim guidelines, and to develop the draft text of such a vehicle;

.5 develop draft terms of reference for a working or drafting group, if established at CCC 11, to finalize the draft interim guidelines; and

.6 submit a written report to CCC 11.

5 AMENDMENTS TO THE IMSBC CODE AND SUPPLEMENTS

GENERAL

5.1 The Sub-Committee recalled that MSC 107 had adopted amendments (07-23) to the IMSBC Code by resolution MSC.539(107), in the form of a consolidated edition, which was expected to enter into force on 1 January 2025.

5.2 The Sub-Committee also recalled that E&T 40 had commenced the preparation of draft amendment 08-25 to the IMSBC Code.

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5.3 The Sub-Committee noted that after consideration of the submissions under this agenda item, E&T 41 would be instructed to finalize draft amendment 08-25 to the IMSBC Code, for circulation and subsequent adoption by MSC 110 in 2025.

REPORT OF E&T 40

5.4 The Sub-Committee considered document CCC 10/5 (Secretariat), the report of E&T 40, together with the related documents submitted to the session, and took action as indicated in the following paragraphs.

Proposals for amendments to the IMSBC Code in connection with the carriage requirement of spare charges for SCBAs (self-contained breathing apparatuses)

5.5 The Sub-Committee noted the deliberations of E&T 40 on proposals for amendments to the IMSBC Code in connection with the carriage requirement of spare charges for self-contained breathing apparatuses (SCBAs) (CCC 10/5, paragraphs 3.1 to 3.6 and annex 1).

5.6 After consideration, the Sub-Committee agreed, in principle, to delete the words "or, alternatively, entry is required for this purpose, at least two sets of self-contained breathing apparatus, additional to those required by SOLAS regulation II-2/10.10 shall be provided" in the individual schedule for FERROUS METAL BORINGS, SHAVINGS, TURNINGS or CUTTINGS UN 2793 in a form liable to self-heating, in the section for "Carriage", in the second sentence. Consequently, the Sub-Committee decided to refer this issue to E&T 41 for consideration and incorporation, as appropriate, into draft amendment 08-25 to the IMSBC Code.

Proposal for amending the Recommendations on the safe use of pesticides in ships applicable to the fumigation of cargo holds (MSC.1/Circ.1264)

5.7 The Sub-Committee noted the draft revision of MSC.1/Circ.1264, as contained in annex 2 of document CCC 10/5; and also noted that E&T 40 had invited interested Member States and international organizations to submit proposals to CCC 10 with regard to the need to amend other relevant IMO instruments accordingly (CCC 10/5, paragraphs 3.10 to 3.13 and annex 2).

5.8 In this context, the Sub-Committee considered the following documents:

.1 CCC 10/5/9 (China), commenting on the report of E&T 40 (CCC 10/5, paragraphs 3.10 to 3.13), regarding the issues on the disposal of fumigation residues in MSC.1/Circ.1264, as well as other relevant instruments that may need to be amended accordingly;

.2 CCC 10/5/11 (Netherlands (Kingdom of the)), containing amendments to IMO instruments with regard to the fumigation recommendations;

.3 CCC 10/5/13 (Japan), identifying the IMO instruments requiring consequential amendment emanating from the revision of MSC.1/Circ.1264; and

.4 CCC 10/INF.19 (Republic of Korea), providing the guidelines for the treatment of residual aluminium phosphide (hydrogen phosphide) fumigants developed by the Republic of Korea to prevent fires from residual fumigants.

5.9 The Sub-Committee also noted the invitation by III 10 to consider document III 10/4/4 (China), containing information in relation to safety issues identified from five accidents associated with fumigation on board, together with the views of its Working Group on Analysis of Marine Safety Investigation Reports, in relation to the work currently in progress on the safe use of pesticides in ships applicable to the fumigation of cargo holds (III 10/18[4], paragraphs 4.41 to 4.43 and 18.5.1).

5.10 After consideration, the Sub-Committee agreed to refer the draft revision of MSC.1/Circ.1264, as contained in annex 2 of document CCC 10/5, to E&T 41 for finalization, with a view to approval at MSC 110.

5.11 The Sub-Committee also agreed to inform the E&T Group that, in connection with the revision of MSC.1/Circ.1361/Rev.1 (CCC 10/5/11, paragraph 13), two consequential amendments are required in paragraphs 1.3.1.7.10 and in 5.5.2.

[4] To be issued in due course.

5.12 Regarding documents CCC 10/5/9 and CCC 10/5/11, the Sub-Committee noted some support for the proposals contained therein. Some delegations expressed their interest in improving the clarity of the proposed text through a revision of the wording. Also, in this context, the Sub-Committee noted the related information contained in document CCC 10/INF.19 in connection with the outcome of III 10 (III 10/18, paragraph 18.5.1). Nevertheless, the proposals in documents CCC 10/5/9 and CCC 10/5/11 not being considered to be within the scope of this agenda item, the Sub-Committee invited interested Member States and international organizations to submit a proposal to MSC for a new output.

5.13 The Sub-Committee further agreed to instruct E&T 41 to prepare draft amendments to IMO instruments consequential to the amendment to MSC.1/Circ.1264, taking into account document CCC 10/5/13, with a view to approval at MSC 110.

Proposal for annual listing and real-time updating of solid bulk cargoes not listed in the IMSBC Code but shipped based on provisional assessments (tripartite agreements)

5.14 The Sub-Committee noted the deliberations of E&T 40 on the proposal for annual listing and real-time updating of solid bulk cargoes not listed in the IMSBC Code but shipped based on provisional assessments (tripartite agreements) (CCC 10/5, paragraphs 3.14 to 3.17); and recommended the consideration of the development of a new module to GISIS for the competent authority of the port of loading to submit information on an application made to IMO under 1.3.2 of the IMSBC Code, as appropriate.

5.15 In this context, the Sub-Committee was informed that a major review of the GISIS system is taking place currently and that the process has just begun. Therefore, the request to develop of a new GISIS module for the competent authority of the port of loading to submit information on an application made to IMO under 1.3.2 of the IMSBC Code will be kept on hold until the finalization of the GISIS review.

Fish meal

5.16 The Sub-Committee noted the deliberations of E&T 40 on fish meal (CCC 10/5, paragraphs 3.26 to 3.32 and annex 1); and the draft new individual schedule for FISH MEAL (FISH SCRAP), STABILIZED (group C) and the draft amendments to the individual schedule for FISH MEAL (FISH SCRAP), STABILIZED (group B). The Sub-Committee also noted the invitation to consider further the issue of the interval between testing and shipment.

5.17 In this context, the Sub-Committee considered the following documents:

.1 CCC 10/5/6 (Norway), commenting on the report of E&T 40 in document CCC 10/5 and providing an updated proposal for a new individual schedule for FISH MEAL (FISH SCRAP), STABILIZED (group C);

.2 CCC 10/5/7 (Germany), providing arguments to apply the proposed new schedule for FISH MEAL, group C, only to consignments stabilized with tocopherol and not to consignments stabilized with ethoxyquin and BHT; and inviting the Sub-Committee to consider the reclassification of FISH MEAL, group B, from MHB (SH) to class 9; and

.3 CCC 10/INF.12 (Norway), containing information to support the updated proposal in document CCC 10/5/6 on a new individual schedule for FISH MEAL (FISH SCRAP), STABILIZED (group C).

5.18 Following the discussion, the Sub-Committee noted the following views expressed on this matter and made the decisions.

FISH MEAL (FISH SCRAP), STABILIZED (group B)

5.19 In considering the draft individual schedule for FISH MEAL (FISH SCRAP), STABILIZED (group B), as contained in annex 1 of document CCC 10/5, the Sub-Committee noted the following views:

.1 when fish meal in bulk is stabilized with appropriate antioxidants, it does not fall under class 4.2 nor MHB (see CCC 9/5/1 and E&T 40/3);

.2 the decision of the E&T Group to classify this schedule as class 9 is based on scientific evidence;

.3 the proposal presented in document CCC 10/5/7 lacks scientific evidence and support as per UN standards; and

.4 the reason behind the proposal in document CCC 10/5/7 is that the classification scheme in 9.2.3.3 of the IMSBC Code and the related flow charts show three possibilities: class 4.2 or MHB or group C, depending on the cell feeding properties of the substance. If the properties are such that

neither class 4.2 nor MHB applies, it would be group C. However, the fact that there might be new testing is acknowledged.

5.20 Following the discussion, the Sub-Committee agreed, in principle, to the draft amendments to the individual schedule for FISH MEAL (FISH SCRAP), STABILIZED (group B), as prepared by E&T 40, and agreed to refer them to E&T 41 for incorporation into draft amendment 08-25 to the IMSBC Code.

FISH MEAL (FISH SCRAP), STABILIZED (group C)

5.21 In considering the draft individual schedule for FISH MEAL (FISH SCRAP), STABILIZED (group C), as contained in annex 1 of document CCC 10/5, and documents CCC 10/5/6, CCC 10/5/7 and CCC 10/INF.12, the Sub-Committee noted the following views:

.1 the proposal in document CCC 10/5/7 to amend the group C schedule for fish meal to only apply to fish mill stabilized with 800 ppm does not take into account additional information (CCC 10/5/6 and CCC 10/INF.12), which indicates that North Atlantic fish meal is not self-heating when containing as little as 25 ppm tocopherol, and that requiring stabilization of group C fish meal with 800 ppm tocopherol is not necessary;

.2 some support was shown for the proposal in document CCC 10/5/7 for the group C FISH MEAL schedule. However, it was noted that the study referenced involved fish stabilized with other antioxidants; and

.3 regarding the interval between testing and shipment, as contained in document CCC 10/5, paragraph 6.1.4, the draft new individual schedule for group C fish meal, in the section for "Precautions", sub-paragraph .4 reads "anti-oxidant concentrations and the date of testing", and taking into account the various information and the comments made, the deletion of this provision should be considered.

5.22 Following the discussion, the Sub-Committee agreed to refer the new draft individual schedule for FISH MEAL (FISH SCRAP), STABILIZED (group C), as contained in document CCC 10/5/6, for incorporation into draft amendment 08-25 to the IMSBC Code, further instructing the E&T Group to consider the deletion of sub-paragraph .4 in the section for "Precautions".

Proposal for amendment to the individual schedule for DIRECT REDUCED IRON (A) Briquettes, hot-moulded

5.23 The Sub-Committee noted the deliberations during E&T 40 on DIRECT REDUCED IRON (A) Briquettes, hot-moulded; and noted that E&T 40 had invited interested Member States and international organizations to submit further proposals to CCC 10, particularly concerning "apparent density" (CCC 10/5, paragraphs 3.37 to 3.41).

5.24 In this context, the Sub-Committee considered the following documents:

.1 CCC 10/5/12 (Japan et al.), containing a proposal for an amendment to the individual schedules for DIRECT REDUCED IRON (A) and DIRECT REDUCED IRON (B); and

.2 CCC 10/INF.31 (IIMA), containing background information aimed at facilitating consideration of the proposed amendments to the DRI (A) and (B) schedules, following discussions on this subject at CCC 9 and E&T 40.

5.25 The Sub-Committee noted the following views expressed on this matter:

.1 it was recognized that DIRECT REDUCED IRON (A) and DIRECT REDUCED IRON (B) are key strategic components for decarbonization in connection to the iron and steel industry, and that the volume of carriage is anticipated to increase. Therefore, looking at the existing ways to amend them to guarantee continuous safety improvement is important;

.2 a research project called HBI C-Flex is under way. Therefore, no changes should be made to the schedule with respect to mandatory apparent density until the mentioned project is completed. The project is examining the relationship between iron ore feedstock, material properties and reactivity, with a view to providing a scientific basis for possible future proposals for amending the IMSBC Code;

.3 concerns were expressed due to the lack of clear guidelines and research to support competent authorities assessing the safety of DRI cargoes, particularly when considering shipments under section 1.3 of the IMSBC Code. This absence of standardized criteria leaves room for

variability with regard to how different authorities assess and certify these shipments, which could introduce potential safety risks;

.4 whilst it is understandable to suggest that amendments could wait until the outcome of the HBI C-Flex project, the proposed amendments to the DRI schedules are aimed at improving safety of shipment now, having been motivated by a real life situation; and

.5 related measurements should be done according to ISO 15968:2016, and such a reference should be reflected in the footnote to the relevant schedules.

5.26 After consideration, the Sub-Committee agreed to refer the proposals, as contained in documents CCC 10/5/12 and CCC 10/INF.31, to E&T 41 for consideration and incorporation, as appropriate, into draft amendment 08-25 to the IMSBC Code.

Phosphate rock fines (uncalcined)

5.27 The Sub-Committee noted the deliberations of E&T 40 on the proposed new individual schedule for phosphate rock fines (uncalcined) (CCC 10/5, paragraphs 3.42 to 3.44); and agreed, in principle, to the proposed new individual schedule for PHOSPHATE ROCK FINES (uncalcined), as set out in the annex to document CCC 9/5/2 (Australia), and decided to refer the draft new individual schedule to E&T 41 for consideration and incorporation, as appropriate, into draft amendment 08-25 to the IMSBC Code.

Untreated incinerator bottom ash (U-IBA)

5.28 The Sub-Committee noted the deliberations of E&T 40 on the proposed new individual schedule for untreated incinerator bottom ash (U-IBA) (CCC 10/5, paragraphs 3.45 to 3.47).

Asphalt granulates (non-hazardous)

5.29 The Sub-Committee noted the deliberations of E&T 40 on the proposed new individual schedule for asphalt granulates (non-hazardous) and the intention of the Netherlands (Kingdom of the) to submit further information to CCC 10 (CCC 10/5, paragraphs 3.48 to 3.51).

5.30 In this context, the Sub-Committee considered the following documents submitted by the Netherlands (Kingdom of the):

.1 CCC 10/5/10, containing a revised proposal for a new individual schedule for asphalt granulates to be included in appendix 1 of the IMSBC Code; and

.2 CCC 10/INF.15, containing the supporting information for a revised proposal for a new individual schedule for asphalt granulates to be included in appendix 1 of the IMSBC Code.

5.31 After consideration, the Sub-Committee agreed to refer the proposal, as contained in documents CCC 10/5/10 and CCC 10/INF.15, to E&T 41 for further consideration, and incorporation, as appropriate, into draft amendment 08-25 to the IMSBC Code. The E&T Group was also instructed to consider the mandatory provision on asphalt content.

Pea protein concentrate pellets (non-hazardous)

5.32 The Sub-Committee noted the deliberations of E&T 40 on the proposed new individual schedule for pea protein concentrate pellets (non-hazardous) and the intention of the Netherlands (Kingdom of the) to submit further information to CCC 10 (CCC 10/5, paragraphs 3.52 to 3.55).

5.33 In this context, the Sub-Committee considered document CCC 10/5/15 (Netherlands (Kingdom of the)), containing a revised proposal for the inclusion of a new individual schedule for pea protein concentrate pellets in the International Maritime Solid Bulk Cargoes (IMSBC) Code.

5.34 After consideration, the Sub-Committee agreed to refer the proposal, as contained in document CCC 10/5/15, to E&T 41 for further consideration and incorporation, as appropriate, into draft amendment 08-25 to the IMSBC Code.

Petroleum coke (calcined or uncalcined)

5.35 The Sub-Committee noted the deliberations of E&T 40 on the proposed new individual schedule for petroleum coke (calcined or uncalcined); and that E&T 40 had invited China to submit a new proposal to CCC 10 (CCC 10/5, paragraphs 3.56 to 3.60).

Wheat gluten pellets

5.36 The Sub-Committee noted the deliberations of E&T 40 on the proposed new individual schedule for wheat gluten pellets; and that E&T 40 had invited interested Member States and international organizations to submit further proposals to a future session (CCC 10/5, paragraphs 3.61 to 3.65), as appropriate.

Crushed granodiorite, coarse

5.37 The Sub-Committee noted the deliberations of E&T 40 on the proposed new individual schedule for crushed granodiorite; and that E&T 40 had invited Norway to submit further information to CCC 10 (CCC 10/5, paragraphs 3.66 to 3.68).

5.38 In this context, the Sub-Committee considered document CCC 10/5/5 (Norway), responding to comments made at E&T 40 and providing an updated proposal to include a new individual schedule for CRUSHED GRANODIORITE, COARSE, group C, in the IMSBC Code.

5.39 After consideration, the Sub-Committee agreed to refer the proposal, as contained in document CCC 10/5/5, to E&T 41 for consideration and incorporation, as appropriate, into draft amendment 08-25 to the IMSBC Code.

Draft amendments (08-25) to the IMSBC Code

5.40 The Sub-Committee agreed, in principle, to the draft amendments (08-25) to the IMSBC Code, as prepared by E&T 40 (CCC 10/5, paragraph 3.69 and annex 1), with a view to finalization by E&T 41.

Editorial modifications to the segregation table in 9.3.3 of the IMSBC Code

5.41 The Sub-Committee noted the deliberations of E&T 40 on the proposed editorial modifications to the segregation table in 9.3.3 of the IMSBC Code; and considered the draft amendments to the IMSBC Code set out in annex 3 of document CCC 10/5, and the proposed amendments to the segregation table in 7.6.3.5.2 of the IMDG Code set out in paragraph 4.4 (CCC 10/5, paragraphs 4.1 to 4.5 and annex 3).

5.42 After consideration, the Sub-Committee:

.1 agreed, in principle, to refer the draft amendments to the IMSBC Code, as set out in annex 3 of document CCC 10/5, to E&T 41 for consideration

and incorporation, as appropriate, into draft amendment 08-25 to the IMSBC Code; and

.2 with regard to the proposed amendments to the segregation table in 7.6.3.5.2 of the IMDG Code, as set out in paragraph 4.4 of document CCC 10/5, agreed, in principle, to refer the proposals to E&T 42 for consideration and incorporation, as appropriate, into draft amendment 43-26 to the IMDG Code.

PROPOSALS FOR AMENDMENTS TO THE EXISTING INDIVIDUAL SCHEDULES AND PROVISIONS IN THE IMSBC CODE AND RELATED INSTRUMENTS

Proposal to introduce bulk cargo identification numbers in the IMSBC Code

5.43 The Sub-Committee recalled that CCC 9 had noted the deliberations of E&T 37 on substance identification numbers for solid bulk cargoes and had agreed to invite interested Member States and international organizations to submit further proposals to a future session (CCC 9/14, paragraph 5.12).

5.44 The Sub-Committee considered the following documents:

.1 CCC 10/5/8 (Germany), containing a new proposal for bulk cargo identification numbers (BC numbers) in the IMSBC Code; and

.2 CCC 10/5/16 (Spain), containing comments and proposals on document CCC 10/5/8 concerning a new proposal for the identification of bulk cargoes with numbers (BC numbers) in the IMSBC Code.

5.45 The Sub-Committee agreed to refer this matter, along with documents CCC 10/5/8 and CCC 10/5/16, to E&T 41 for further consideration, with a view to providing further advice to CCC 11.

PROPOSALS FOR NEW INDIVIDUAL SCHEDULES

Apatite concentrate

5.46 The Sub-Committee considered documents CCC 10/5/1 and CCC 10/INF.4, submitted by the Russian Federation, proposing to include a new individual schedule for apatite concentrate in the IMSBC Code and containing cargo information to support the proposed new schedule.

5.47 The Sub-Committee agreed to refer the proposal, as contained in documents CCC 10/5/1 and CCC 10/INF.4, to E&T 41 for consideration and incorporation, as appropriate, into draft amendment 08-25 to the IMSBC Code.

Tuff (coarse)

5.48 The Sub-Committee considered documents CCC 10/5/2 and CCC 10/INF.5, submitted by Italy, proposing a new individual schedule for tuff (coarse) for inclusion in the IMSBC Code and containing the cargo information to support the proposed new individual schedule.

5.49 After consideration, the Sub-Committee agreed to refer the proposal, as contained in documents CCC 10/5/2 and CCC 10/INF.5, to E&T 41 for consideration and incorporation, as appropriate, into draft amendment 08-25 to the IMSBC Code.

Aluminium sulphate granular

5.50 The Sub-Committee considered documents CCC 10/5/3 and CCC 10/INF.7 submitted by Sweden and Finland, proposing a new individual schedule for aluminium sulphate granular for inclusion in the IMSBC Code and containing the cargo information to support the proposed new individual schedule.

5.51 The Sub-Committee agreed to refer the proposal, as contained in documents CCC 10/5/3 and CCC 10/INF.7, to E&T 41 for consideration and incorporation, as appropriate, into draft amendment 08-25 to the IMSBC Code.

Ferric sulphate granular

5.52 The Sub-Committee had for its consideration documents CCC 10/5/4 and CCC 10/INF.8, submitted by Finland, proposing a new individual schedule for ferric sulphate granular for inclusion in the IMSBC Code and containing the cargo information to support the proposed new individual schedule.

5.53 The Sub-Committee agreed to refer the proposal, as contained in documents CCC 10/5/4 and CCC 10/INF.8, to E&T 41 for consideration and incorporation, as appropriate, into draft amendment 08-25 to the IMSBC Code.

SAFETY ISSUES IDENTIFIED DURING THE MARINE SAFETY INVESTIGATION FOR FATALITY OF STEVEDORES

5.54 The Sub-Committee recalled that III 9 had instructed its Working Group on Analysis of Marine Safety Investigation Reports to consider document III 9/4/6 (Republic of Korea), containing safety issues identified during the marine safety investigation for fatality of stevedores involving a bulk carrier, and, in particular the proposal contained in paragraph 10 (III 9/19, paragraphs 4.14 to 4.15).

5.55 The Sub-Committee also recalled that III 9, having noted the working group's deliberations on document III 9/4/6, highlighting analysis of the causes of a very serious marine casualty involving mineral concentrates and the need to consider amending the IMSBC Code to explicitly and directly indicate in the Code the hazards and precautions of mineral concentrates by the Bulk Cargo Shipping Name (BCSN) written on the cargo declaration, had endorsed the view of the working group and had invited CCC 10 to consider the information provided in the document, while progressing the work on the existing output 7.13 on "Amendments to IMSBC Code and supplements", as appropriate (III 9/19, paragraphs 4.37 and 19.8).

5.56 In this context, the Sub-Committee considered document CCC 10/5/14 (Republic of Korea), pointing out the likelihood of oxygen depletion by mineral concentrates; proposing to amend their individual schedule and paragraph 3.2.3 of the IMSBC Code; and, in addition, proposing to add caution texts for entering cargo spaces in the section for "Precautions" of individual schedules for five cargoes, stating their property of oxygen depletion in the section for "Hazard".

5.57 After consideration, the Sub-Committee agreed to refer documents III 9/4/6 and CCC 10/5/14 to E&T 41 for further consideration, with a view to providing advice to CCC 11.

REVISION 5 OF IACS UNIFIED INTERPRETATION (UI) SC 89 ON SOLAS REGULATION II-2/19.3.4 AND THE IMSBC CODE CARGO SPACE VENTILATION REQUIREMENTS

5.58 The Sub-Committee noted the information contained in document CCC 10/INF.3 (IACS), providing information on revision 5 of IACS UI SC 89 on SOLAS regulation II-2/19.3.4 and the IMSBC Code cargo space ventilation requirements with the inclusion of a new cargo type in accordance with the amendments to the IMSBC Code (resolution MSC.539(107)).

5.59 The Sub-Committee noted the following comments:

.1 CCC 10 is the first Sub-Committee to deal with UIs following the agreement of MSC 108. Any proposed UIs are considered by the Sub-Committee against the three safeguards, and the Sub-Committee will report back to the Committee accordingly. Information documents do not contain requests for action and, as such, they are simply to be noted by the sub-committees and the Committees;

.2 information documents are possible candidates to be considered in a fast-track manner and if this happens, the Sub-Committee could be running the risk of overlooking potentially important UIs; and

.3 consequently, various delegations agree to request the submitters of those UIs at this session to resubmit any UIs to the future session as documents of substance.

5.60 Regarding document CCC 10/INF.3 (IACS), the observer delegation of IACS informed that different documents were submitted by IACS under agenda item 10: two documents containing draft interpretations, requesting action; and one document as an information document, not seeking action. The information document contains the revision adopted by IACS of its existing interpretation on the basis of past decisions of the Sub-Committee. Those documents were submitted before MSC 108 had made its decision on the safeguards. Noting the limited nature of the update of IACS UI SC 89 as consequential to the decision of IMO on the DRI (D) schedule and acknowledging that information documents can be reviewed by the Sub-Committee, should a Member State make such a request, IACS chose to submit it as an information document in order to help manage the processing workload of the Secretariat and the Sub-Committee. IACS considered that the decision to accept an interpretation as an IMO interpretation, for release as its circular, is the decision of the Sub-Committee, regardless of the symbol of the submission document.

5.61 The Sub-Committee agreed to refer document CCC 10/INF.3 to E&T 41 to provide advice to CCC 11.

DRAFT AMENDMENT 08-25 TO THE IMSBC CODE AND INSTRUCTIONS TO THE E&T GROUP

5.62 Having considered the above matters, the Sub-Committee instructed E&T 41 to finalize the draft amendments (08-25) to the IMSBC Code, based on the documents and related documents submitted to CCC 10 and E&T 41, respectively, taking into account comments made and decisions taken by the Sub-Committee, for submission of the draft amendments (08-25) to MSC 110 for consideration and adoption.

5.63 Subsequently, the Sub-Committee requested the Secretary-General to circulate draft amendments (08-25) to the IMSBC Code, to be finalized by E&T 41, in accordance with SOLAS article VIII, for consideration and subsequent adoption by MSC 110.

5.64 The Sub-Committee noted that the provisional agenda for E&T 41 was available in document E&T 41/1.

6 AMENDMENTS TO THE IMDG CODE AND SUPPLEMENTS

GENERAL

6.1 The Sub-Committee recalled that MSC 108 had adopted amendments to the IMDG Code (42-24) to enter into force on 1 January 2026 and to be applied from 1 January 2025 on a voluntary basis (resolution MSC.556(108)).

6.2 The Sub-Committee also recalled that CCC 9 had re-established the Correspondence Group on the Review of Transport Provisions for Vehicles and had instructed it to report to this session.

6.3 The Sub-Committee noted that, after consideration of the submissions under this agenda item, it should provide clear advice, instruction and authorization to E&T 42, tentatively scheduled to take place in the spring of 2025, in order to prepare the draft text of amendment 43-26 to the IMDG Code, with a view to adoption at MSC 111.

REPORT OF E&T 39

6.4 The Sub-Committee considered the report of E&T 39 (CCC 10/6), together with the related documents submitted to this session and, having approved it in general, took action as indicated in the following paragraphs.

Editorial corrections to the English version of amendment 41-22 to the IMDG Code

6.5 The Sub-Committee noted that E&T 39 had finalized the editorial corrections applicable to the English version of amendment 41-22 to the IMDG Code (resolution MSC.501(105)) and had agreed to request the Secretariat to issue a corrigendum before 1 January 2024, the date when amendment 41-22 entered into force (CCC 10/6, paragraphs 2.1 and 2.4 to 2.6, and annex 1). The Secretariat had prepared and issued the corrigendum, as set out in document MSC 105/20/Add.2/Corr.1.

Editorial corrections to the French and Spanish versions of amendment 41-22 to the IMDG Code

6.6 The Sub-Committee noted that E&T 39 had finalized the editorial corrections applicable to the French and Spanish versions of amendment 41-22 to the IMDG Code (resolution MSC.501(105)) and had agreed to request the Secretariat to issue separate corrigenda before 1 January 2024, the date when amendment 41-22 entered into force (CCC 10/6, paragraphs 2.2 to 2.4 and annexes 2 and 3). The Secretariat had prepared and issued the corrigenda, as set out in document MSC 105/20/Add.2/Corr.1, for the French and Spanish versions.

UN 3553

6.7 The Sub-Committee noted the deliberations of E&T 39 on UN 3553; agreed, in principle, to amend the notation for UN 2203 in column 16a of the Dangerous Goods List of the IMDG Code from category E to category D, with a view to incorporation, as appropriate, into draft amendment 43-26 to the IMDG Code; and noted the invitation to interested Member States and international organizations to submit further information to this session on the reactivity of UN 3553 with class 5.1, oxidizing substances (CCC 10/6, paragraphs 3.15 to 3.21 and annex 4).

Thorough review of column 17

6.8 The Sub-Committee noted the deliberations of E&T 39 on a thorough review of column 17, and the invitation to interested Member States and international organizations to submit further proposals to this session; and considered referring this issue to the working group (CCC 10/6, paragraphs 3.42 to 3.44).

6.9 In this context, the Sub-Committee considered document CCC 10/6/3 (China), providing proposals for amending column 17 in the Dangerous Goods List of the IMDG Code, establishing guiding principles for inclusion of information in column 17, and a review of the existing shipping provisions in column 17.

6.10 Following the discussion, the Sub-Committee noted the following views expressed on this matter:

.1 the proposals in document CCC 10/6/3 could be supported and referred to the working group;

.2 deletion of information in column 17 that has been present for many years, even if it uses mandatory language, would not enhance the ease of use of the IMDG Code. Users with the mandatory training required in accordance with chapter 1.3 of the Code are confused by the existing information in column 17. Column 17 provides informative facts rather than repeats mandatory provisions. There may be better ways to keep the information in column 17, making it clearer than if the mandatory text is elsewhere in the Code. For example, where SP900 applies, the text in column 17 could read "this substance is prohibited from transport – see SP900". Or there could be a clearer explanation that the text in column 17 is not part of the mandatory provisions; and

.3 the guiding principles should be reviewed first. The current IMDG Code provides some direction on what information should be present in column 17 through the guiding principles. These principles are found in paragraph 3.2.1. Although column 17 contains information for most dangerous goods, the fact is that the properties and observations presented lack consistency, which leads to a significant decrease in the value of this column. Therefore, document CCC 10/6/3 should be referred to the working group to address the overarching guidance for information to be included for each class of dangerous goods in column 17. The information identified by the guiding principles should be the minimum information to be included in column 17 and would only be populated if the property or observation data exists. Furthermore, the working group should recommend how to implement the guidance. Specifically, it should be considered whether only new entries to the Dangerous Goods List shall follow the guiding principles; the E&T Group takes on certain classes of materials in small pieces and evaluates each entry for incorporation of the guiding principles for existing entries; or all entries shall be updated to meet the guiding principles.

6.11 After consideration, the Sub-Committee instructed the working group to consider further the thorough review of column 17 of the Dangerous Goods List of the IMDG Code, taking into account document CCC 10/6/3. In this regard, the Sub-Committee also invited the working group to consider how the work on the thorough review of column 17 should continue after CCC 10.

Stowage and segregation of lithium battery energy storage cabinets

6.12 The Sub-Committee noted the deliberations of E&T 39 on stowage and segregation of lithium battery energy storage cabinets and the draft amendments to the IMDG Code; and the invitation to China to submit further proposals to CCC 10 (CCC 10/6, paragraphs 3.56 to 3.61 and annex 4).

Clarification of assigning portable tank special provision for the degree of filling

6.13 The Sub-Committee noted the deliberations of E&T 39 on clarification of assigning portable tank special provision for the degree of filling; agreed, in principle, to the proposals in document CCC 9/6/2 (Republic of Korea), except for the proposal concerning UN 2735; referred the document to E&T 42, with a view to incorporation, as appropriate, into draft amendment 43-26 to the IMDG Code; and noted the invitation to the Secretariat to submit a proposal to the UN Sub-Committee of Experts on the Transport of Dangerous Goods (TDG Sub-Committee) concerning UN 2735 (CCC 10/6, paragraphs 3.62 to 3.64).

6.14 The Sub-Committee noted that the Secretariat had submitted a proposal to the TDG Sub-Committee concerning an amendment of the tank special provision from TP1 to TP2 for UN 2735, packing group (PG) II, in the Dangerous Goods List of the UN Model Regulations. UNTDG 64 had adopted the proposed amendment to the UN Model Regulations. As a consequence, the Sub-Committee agreed, in principle, to the proposal in document CCC 9/6/2 concerning UN 2735 as well; and referred it to E&T 42, with a view to incorporation, as appropriate, into draft amendment 43-26 to the IMDG Code.

6.15 In this context, the Sub-Committee considered document CCC 10/6/6 (Republic of Korea), proposing to amend 4.2.1.9.2 of the IMDG Code in order to clarify the provision on the maximum degree of filling in portable tanks for liquid marine pollutants under generic or NOS (not otherwise specified) entries.

6.16 Following the discussion, the Sub-Committee noted the following views expressed on document CCC 10/6/6:

.1 document CCC 10/6/6 could be referred to E&T 42 for further consideration. TP1 is assigned for generic entries which have to be declared by the shipper as a marine pollutant. The proposal in document CCC 10/6/6 would create a practical problem, considering that, for the additionally addressed substances, column 14 still assigns TP1, which then in the case of a marine pollutant would be changed to TP2, by the proposed amendment to the text in paragraph 4.2.1.9.2. This could cause confusion;

.2 the proposal in document CCC 10/6/6 can be supported, as it aims to clarify the maximum degree of filling in portable tanks for liquid marine pollutants. Most shippers or fillers will refer to TP1 or TP2 in the Dangerous Goods List to find the correct degree of filling. In most cases, there is no need for them to consider the text in paragraphs 4.2.1.9.2 and 4.2.1.9.3 of the IMDG Code because the degree of filling is decided based on class and packing group. Furthermore, TP1 is specifically assigned to specific UN numbers in the Dangerous Goods List and only refers to paragraph 4.2.1.9.2. The proposal in document CCC 10/6/6 is to amend paragraph 4.2.1.9.2 so as to clarify the need to look at exceptions for the degree of filling, taking into account the variables of the specific products. In the proposal, one variable is mentioned. However, in paragraph 4.2.1.9.3, there are two variables mentioned that could change the demands for the degree of filling. Besides marine pollutants, liquids with an absolute vapour pressure of more than 175 kPa (1.75 bar) at 65°C are also mentioned. Both these variables should be included in this specific proposal;

.3 the proposal in document CCC 10/6/6 would help the industry concerning the correct filling of tanks. TP2 should apply to marine pollutants;

.4 taking into account the multimodal aspects, it would be helpful to submit a proposal to the TDG Sub-Committee; and

.5 confusion concerning the multimodal aspects should be avoided. In this regard, it should be noted that only applying stricter requirements to marine pollutants would be feasible.

6.17 After consideration, the Sub-Committee agreed to refer document CCC 10/6/6 to E&T 42, with a view to providing advice to CCC 11, taking into account the views expressed as indicated in paragraph 6.16 above.

Amendment to 5.4.3.1 of the IMDG Code

6.18 The Sub-Committee noted the deliberations of E&T 39 on amendment to 5.4.3.1 of the IMDG Code and the amendments prepared by the Group; and noted the invitation to interested Member States and international organizations to submit further proposals to this session (CCC 10/6, paragraphs 3.65 to 3.69 and annex 4).

6.19 In this context, the Sub-Committee considered document CCC 10/6/5 (Netherlands (Kingdom of the)), proposing to amend 5.4.3.1 and, consequentially, 5.4.3.2 of the IMDG Code.

6.20 Following the discussion, the Sub-Committee noted the following views expressed on document CCC 10/6/5:

.1 as drafted, 5.4.3.1 allows a stowage plan as one of three options at the beginning of the provision, which reads "Each ship carrying dangerous goods and marine pollutants shall have a special list, manifest or stowage plan setting out, …". This is where the intention that whichever option is used, it will include the same information, lies. A further improvement to the drafted text would be to add the stowage plan as a third option throughout the provision and make it clearer that a "detailed" stowage plan is not intended to be a fourth option. The sentence referring only to the special list or manifest could be amended to add the stowage plan as follows: "This special list, manifest or stowage plan shall be based on the documentation and certification required in this Code. It shall contain, in addition to the information in 5.4.1.4; 5.4.1.5; and, for UN 3359, in 5.5.2.4.1.1, the stowage location and the total quantity of dangerous goods and marine pollutants." Having added subsidiary hazards to the sentence relating to the detailed stowage plan, the provision may not have been made clearer. Is a detailed

stowage plan only different to a stowage plan because it must include the primary and secondary hazards? The stowage plan must already include the location of the dangerous goods and marine pollutants – particularly if the amendment just mentioned is agreed. Also, was it ever intended that the hazards must be on a special list or manifest if one of those is used as the option? Must only the stowage plan include the hazards, or should amendments be considered to simply add the hazards to each of the three options?; and

.2 the stowage plan is an option. However, the stowage plan has fewer requirements in terms of information to be provided, compared to the dangerous goods manifest. It is essential to require that all information is delivered to the ship.

6.21 After consideration, the Sub-Committee invited interested Member States and international organizations to submit a proposal for a new output on this issue to the MSC.

Amendments to the shipping conditions of seed cakes in the IMDG Code

6.22 The Sub-Committee noted the deliberations of E&T 39 on amendments to the shipping conditions of seed cakes in the IMDG Code; and the invitation to China to submit further proposals to this session (CCC 10/6, paragraphs 3.70 to 3.73).

Amendment 42-24 to the IMDG Code

6.23 The Sub-Committee noted that E&T 39 had finalized the draft amendments (42-24) to the IMDG Code and had agreed to request the Secretariat to circulate them in accordance with SOLAS article VIII, for consideration and subsequent adoption by MSC 108 (CCC 10/6, paragraph 3.75 and annex 4). MSC 108 had adopted the amendments by resolution MSC.556(108).

6.24 In this context, the Sub-Committee considered document CCC 10/6/1 (France), proposing editorial corrections to the amendment 42-24 to the IMDG Code.

6.25 After consideration, the Sub-Committee agreed to refer document CCC 10/6/1 to E&T 42 for further consideration in conjunction with the preparation of editorial corrections to the amendment 42-24 to the IMDG Code.

Amendments to the EmS Guide

6.26 The Sub-Committee noted that E&T 39 had finalized the consequential amendments to the EmS Guide and had agreed to request the Secretariat to submit them to MSC 108 for approval (CCC 10/6, paragraphs 4.1 and 4.2 and annex 5). MSC 108 had approved MSC.1/Circ.1588/Rev.3 on the *Revised emergency response procedures for ships carrying dangerous goods* (EmS Guide), containing a revised consolidated version of the Guide.

Structural serviceability of cargo transport units

6.27 The Sub-Committee noted the deliberations of E&T 39 on structural serviceability of cargo transport units, and the invitation to interested Member States and international organizations to submit further proposals to CCC 10 (CCC 10/6, paragraphs 5.1 to 5.3).

Response to the questions from E&T 35 on open-type freight containers

6.28 The Sub-Committee noted the deliberations and advice of E&T 39 on the response of the International Atomic Energy Agency (IAEA) on to the questions from E&T 35 on open-type freight containers, and the invitation to the Secretariat to inform IAEA and to seek further advice accordingly (CCC 10/6, paragraphs 5.4 to 5.8).

Issues to be considered by the UN TDG Sub-Committee

6.29 The Sub-Committee noted that the Secretariat had informed and submitted proposals to the UN TDG Sub-Committee to consider several technical findings identified by E&T 39, which might have implications for the relevant provisions for multimodal transport (CCC 10/6, paragraphs 2.2, 2.6, 2.7, 2.8, 3.46 and 3.64). UNTDG 63 had noted no objection to adopting two amendments proposed, concerning SP277 and 6.2.15.2 of the UN Model Regulations.

REPORT OF THE CORRESPONDENCE GROUP ON THE REVIEW OF TRANSPORT PROVISIONS FOR VEHICLES

6.30 The Sub-Committee recalled that CCC 9 had re-established the Correspondence Group on the Review of Transport Provisions for Vehicles, with agreed terms of reference (CCC 9/14, paragraph 6.57).

6.31 In this context, the Sub-Committee considered document CCC 10/6/2 (United States), containing the report of the Correspondence Group on the Review of Transport Provisions for Vehicles, as well as the following documents:

.1 CCC 10/6/8 (Germany et al.), commenting on the report of the Correspondence Group on the Review of Transport Provisions for Vehicles; and providing a proposal for a new special provision (SP) 9xx for the identification of unsafe vehicles and for their exclusion from transport, as well as consequential amendments to SP961 and SP962; and

.2 CCC 10/INF.9 (ICHCA et al.), containing guidelines prepared by industry organizations and companies engaged in the shipment of vehicles. This document, including the supporting checklist, was intended to ensure that the risks associated with the shipment of vehicles, including electric and hybrid vehicles, are managed, and to promote the safety of terminal and vessel personnel and the protection of property, including the vessel. This document recommended that guidelines be considered for inclusion in various instruments, codes and circulars published by IMO, as appropriate.

6.32 The Sub-Committee noted the progress made by the Correspondence Group and the following views expressed on this matter:

.1 the outstanding issues arising from the work of the Correspondence Group should be referred to the working group, taking into account document CCC 10/6/8. Further work could be done at a correspondence group, if necessary;

.2 option 1 in document CCC 10/6/8 can be supported for further consideration by the working group;

.3 in general, the proposal to add SP9xx in addition to SP961 and SP962, can be supported. Option 1 in document CCC 10/6/8 can be supported. In the last paragraph of SP962, the placarding requirement is added in square brackets. In this regard, retaining this part (i.e. removing the square brackets) is supported, while also adding the provisions to display the UN number and marine pollutants on CTUs when the vehicles are packed in CTUs. Concerning the proposed SP961 in document CCC 10/6/2, sub-paragraph .1 of the draft SP961 provides an exemption for vehicles when stowed on roll-on/roll-off and vehicle spaces. In this provision, the requirement for the state of charge (SOC) of the battery, namely 30% if verified by the manufacturer or 25% otherwise, is added in square

brackets. This part should be removed, at least for "in-use vehicles" and "hybrid vehicles". For those vehicles loaded on roll-on/roll-off passenger ships, it is practically impossible to adjust the state of charge of the battery to less than 25% before loading. Additionally, the battery of hybrid vehicles is normally controlled automatically to have a state of charge from 50% to 60% in use, and it is technically difficult to reduce the state of charge to less than 30%. Therefore, even if the proposed SP961 is to be finalized and agreed in general, still, the said SOC requirement should be removed, at least for "in-use vehicles" and "hybrid vehicles". In the last paragraph of the draft SP962 in document CCC 10/6/2, the requirements of marking, labelling, placarding and marine pollutants are applied to the vehicles packed in CTUs. This can be supported. However, in addition to CTUs, the vehicles fully enclosed by packages or overpacks that prevent ready identification should also be subject to the same requirements of marking, labelling, placarding and marine pollutants;

.4 document CCC 10/6/8 proposes a new SP9xx under the IMDG Code applicable to all types of vehicles. These new SPs reflect the criteria for a vehicle to be unsafe and its exclusion from transport so that it can neither benefit from the exemption in SP961, nor be transported under SP962. It is obvious that these new special provisions clearly determine when a vehicle is safe or unsafe for transportation, without taking into consideration specifically if it is new, in use or used, since this categorization does not offer reliable information on the condition of the concerned vehicle. Taking this into account, document CCC 10/6/8 proposes options 1 and 2, where option 1 follows a more general rule where the vehicle is not categorized by the type of fuel it holds. Provided information on a fuel basis may be confusing in terms of flashpoint or tank pressure. Furthermore, option 1 replaces the role of SP961 and SP962. The preservation and applicability of SPs are supported. Therefore, although it is up to the Sub-Committee to consider the proposals in paragraph 10 of document CCC 10/6/8, option 2 is supported, followed by the required amendments to the existing SP961 and SP962 where the consignor has the obligation to ensure the transport safety of a vehicle;

.5 it would be beneficial to re-establish the correspondence group;

.6 as paragraph 28 of document CCC 10/6/2 states, it was not possible to agree on consolidated draft amendments to the special provisions for vehicles due to time constraints. Thus, the Coordinator provided a text as one possible option for future work. It is important to define unsafe vehicles that shall be excluded from transport and to require the shipper to ensure that a consigned vehicle is safe. Furthermore, criteria need to be determined concerning how the shipper shall assess that the vehicle is safe. The inspections required of the shipper for this assessment will vary, depending on whether the vehicle is new, in use or used. For this distinction, the criteria developed by the correspondence group can be taken. Based upon this goal-based approach, consequential amendments to the existing special provisions should be developed. A concrete proposal in this regard is provided in document CCC 10/6/8, which could be referred to the working group;

.7 the shipper should guarantee the safety of the vehicle. Option 2 in document CCC 10/6/8 allows for future developments;

.8 option 1 in document CCC 10/6/8 is preferred. Recognition of different types of vehicles carried and different types of ships carrying them is appreciated;

.9 documents CCC 10/6/2 and CCC 10/6/8 should both be referred to the working group. Document CCC 10/6/8 provides a clear understanding of what is unsafe with a goal-based approach. Option 1 is preferred; and

.10 one of the cases where a vehicle is deemed to be damaged is related to check engine lights, which may have nothing to do with the safety of the vehicle. Therefore, check engine lights should be removed from the corresponding definition, or the wording of the definition should be modified accordingly.

6.33 After consideration, the Sub-Committee instructed the working group to consider further amendments to transport provisions for vehicles, taking into account the discussions at CCC 8 on documents CCC 8/6/1, CCC 8/6/6 and CCC 8/6/10, discussions at CCC 9 on document CCC 9/6/1, and the relevant work at the SSE Sub-Committee, as well as documents CCC 10/6/2, CCC 10/6/8 and CCC 10/INF.9.

PROPOSALS RELATED TO AMENDMENT 43-26

WSC-BAM charcoal sampling project

6.34 The Sub-Committee noted document CCC 10/INF.6 (WSC), informing that WSC and the Bundesanstalt für Materialforschung und -prüfung (BAM) have launched the "charcoal sampling project" through which member carriers of WSC have been sourcing and shipping samples of charcoal (UN 1361) to BAM for laboratory testing. The intention of this project was to inform both carriers and regulators of any increased or decreased risks in the transport of charcoal against the standards that are set in the IMDG Code. The annex to document CCC 10/INF.6 provides an interim "progress report on testing the self-ignition behaviour of different charcoal samples" which has been issued by BAM.

Proposed amendments to 4.1.1.20 of the IMDG Code

6.35 The Sub-Committee considered document CCC 10/6/4 (China), reviewing the provisions in the IMDG Code on cargo transport units and the transport of packaged dangerous goods by general cargo ships and bulk carriers, analysing the application of 4.1.1.20 of the IMDG Code, and putting forward amendments accordingly.

6.36 Following the discussion, the Sub-Committee noted the following views expressed on this matter:

.1 it should be noted that paragraphs 4.1.1.20 and 4.1.1.21 only exist in the IMDG Code. Paragraph 4.1.1.20 only considers packages in cargo transport units, and it does not consider packages stowed directly in the cargo space of a general cargo ship. However, chapter 4.1 of the IMDG Code is not the right place for addressing cargo securing. Chapter 7.3 of the IMDG Code contains requirements for cargo securing concerning cargo transport units. Chapter 7.6 of the Code contains corresponding requirements concerning the cargo space of a general cargo ship. Paragraph 4.1.1.20 of the IMDG Code is superfluous and could be deleted, since all the pertinent issues are already covered by chapter 7.6 and SOLAS regulation VII/5;

.2 SOLAS requirements concerning cargo securing, and the Cargo Securing Manual are enough, and the IMDG Code does not need to cover these issues;

.3 amendment to paragraph 4.1.1.20 of the IMDG Code is needed. In this regard, option 2 in paragraph 6 of document CCC 10/6/4 is supported; and

.4 paragraph 4.1.1.20 of the IMDG Code should be more precise, and the content of that paragraph should be in line with other IMO instruments, as well as chapter 7.6 of the Code. Paragraph 7.6.2.1.8 requires that packages shall be adequately braced and secured for the voyage. It is not clear whether these packages shall be fastened to a cargo transport unit. Therefore, paragraph 4.1.1.20 of the Code can be deleted.

6.37 After consideration, the Sub-Committee agreed to invite interested Member States and international organizations to submit a proposal for a new output on this issue to the MSC.

Amendments to additional provision 3 of packing instruction P406 and provisions for exclusion from class 1

6.38 The Sub-Committee considered document CCC 10/6/7 (Republic of Korea), proposing to amend additional provision 3 of packing instruction P406, as well as 2.1.1.1 and 2.1.3.4 of the IMDG Code, in order to clarify provisions regarding exclusion from class 1 and classification as desensitized explosives.

6.39 Following the discussion, the Sub-Committee noted the following views expressed on this matter:

.1 option 3 in document CCC 10/6/7 can be supported, and the document could be referred to E&T 42 for further consideration;

.2 option 1 can be supported. A proposal for a new output would be needed;

.3 option 3 can be supported, but a proposal for a new output would be required; and

.4 option 3 would be the most appropriate way forward. A proposal for a new output would not be needed because the aim is to harmonize the IMDG Code with the UN Model Regulations. This issue could be referred to E&T 42 for further consideration.

6.40 After consideration, the Sub-Committee agreed to refer document CCC 10/6/7 to E&T 42, with a view to providing advice to CCC 11.

Amendments to table 7.1.4.5.18 of the IMDG Code

6.41 The Sub-Committee considered document CCC 10/6/9 (Netherlands (Kingdom of the)), proposing to amend table 7.1.4.5.18 of the IMDG Code to clarify the requirements for segregation distances between radioactive material and passengers and crew.

6.42 Following the discussion, the Sub-Committee noted the following views expressed on this matter:

.1 the table could be improved in terms of readability and consistency with the rest of the Code. It is suggested that the wording "minimal" should be changed to be consistent with how other minimum distances are stated in the Code. The wording "at least" or "minimum" may be more consistent, and possibly the most appropriate word at the top of each column would leave the table less cluttered and easier to read;

.2 the proposal in document CCC 10/6/9 reveals that the table could be misunderstood and requires, therefore, clarification. However, this proposal would result in an unintended consequence, because it would reduce the required distance between class 7 containers and the accommodation. The purpose of the table is to assist the crew in implementing the requirements for dose-assessment in 1.5.2.4 of the Code. The table provides distances in metres for maximum TI values in each line (10, 20, 50 100, 200 and 400 TI), which all result in a dose rate of 0.003 mSv/h. The crucial value of 1 mSv/a (according to paragraph 1.5.2.4) is reached after an exposure of 14 days. Therefore, it is not justified to reduce the distance from an accumulated TI of, e.g. 20, from 8 m to 6 m on a containership. The effect of ionizing radiation is the same on a containership, and on a ro-ro or general cargo ship. The values in the table for containerships have been provided under the assumption that the container bay nearest to the accommodation has a distance of 2 m from the accommodation. Adding the 6 m length of a 20-foot container results in the required 8 m. As there may exist containerships where the containers are closer than 2 m to the accommodation, the table could be misleading. Therefore, it is proposed to apply the calculated distance in metres to all cargo ships and to delete the distances expressed in TEU;

.3 the proposal in document CCC 10/6/9 can be supported and referred to E&T 42 for further consideration; and

.4 the proposed amendments have merit, but further information would be required in order to ensure practicality for all cases.

6.43 After consideration, the Sub-Committee agreed to refer document CCC 10/6/9 to E&T 42 for further consideration, with a view to providing advice to CCC 11.

LIST OF RISK-PREVENTION-RELATED AREAS IN CONNECTION WITH CONTAINERSHIP FIRE SAFETY

6.44 The Sub-Committee recalled that MSC 103 had agreed to include in the biennial agenda of the SSE Sub-Committee a new output on the "Development of amendments to SOLAS chapter II-2 and the FSS Code concerning detection and control of fires in cargo holds and on the cargo deck of containerships", in association with the CCC Sub-Committee as and when requested by the SSE Sub-Committee.

6.45 The Sub-Committee also recalled that SSE 10, regarding other items in connection with containership fire safety, had agreed to invite CCC 10 to note and to consider the following non-exhaustive list of risk-prevention-related areas, with a view to taking action, as deemed appropriate (SSE 10/20, paragraph 10.39):

.1 improved training of shore-side personnel throughout the supply chain, (e.g. consideration of identification/certification regimes for shippers/handlers);

.2 measures to encourage, ensure and improve the quality and reliability of the shipper's declaration (e.g. conducting Member State implementation of inspection programmes for all cargo transport units, including those carrying dangerous goods and reporting to IMO; encouraging Member State law enforcement for cooperation regarding the shipper's misdeclaration and non-declaration of dangerous goods; shippers supplying the carrier with photographic and/or other reliable documentary evidence of cargo stowage and segregation compliance with the IMDG Code);

.3 container scanning process in port;

.4 stowage provisions for cargoes, which the CCC Sub-Committee considers relevant for container fire safety. For example: Should class 5.1 (oxidizers) or other cargo classes be continued to be allowed under deck? Or should only stowage on deck be regulated?; and

.5 risk control measures (RCMs) in paragraph 4.3.1 of the CARGOSAFE study report, noting that the list might not be completed at this stage.

6.46 The Sub-Committee further recalled that, in this respect, SSE 10 had (SSE 10/20, paragraph 10.40):

.1 encouraged interested Member States and international organizations to submit further proposals for addition to the list of risk-prevention-related areas to SSE 11, taking into account paragraph 4.3.1 (Risk Control Measures) of the CARGOSAFE study report; and

.2 invited interested Member States and international organizations to make relevant submissions to CCC 10, under the agenda item on "Any other business", referring to the outcome of SSE 10.

6.47 In this context, the Sub-Committee considered the following documents:

.1 CCC 10/15/1 (IACS), proposing risk-prevention-related areas which should be considered by the Sub-Committee in order to mitigate the risks and consequences of cargo fires on containerships; and

.2 CCC 10/15/2 (Liberia et al.), reiterating the importance of considering risk-prevention-related areas, including those that have been forwarded to CCC 10 by SSE 10; and recommending to task a working group to consider these issues, while at the same time recognizing the potential necessity to continue work intersessionally.

6.48 Following the discussion, the Sub-Committee noted the following views expressed on this matter:

.1 documents CCC 10/15/1 and CCC 10/15/2 can be referred to the working group for further consideration, as well as to a correspondence group, as appropriate;

.2 as highlighted in document CCC 10/15/2, taking into account the importance of fire prevention in addition to mitigation, the involvement of the CCC Sub-Committee is needed;

.3 with regard to document CCC 10/15/1, based on the CARGOSAFE study, it is recommended to reduce the risk and consequences of cargo fire on containerships through the provisions of the IMDG Code, e.g. by improving provisions on cargo declaration and stowage, and the test methods for self-heating cargoes;

.4 a holistic risk-based approach is needed, and, in this regard, taking into account the interlinkage between the work at the CCC and SSE Sub-Committees is crucial;

.5 several of the topics passed on from the CARGOSAFE report have been extensively discussed by the Sub-Committee over the years – particularly the misdeclaration of dangerous goods. Many proposals to amend chapters 5.4 and 7 over the years have been introduced with the intention of improving the information a shipper must provide the carrier and master, and to further mitigate the risks of various hazards of dangerous goods. The Sub-Committee also considered several proposals around training, and it is important to bear in mind the related previous decisions. The CARGOSAFE report initiated substantive work at the SSE Sub-Committee. In this regard, the CCC Sub-Committee should wait for developments arising from the discussions in the SSE Sub-Committee, before considering amendments concerning packaging and stowage;

.6 with regard to document CCC 10/15/2, there are safety gaps that the CCC Sub-Committee, as an expert organ, should look into. The relevant outcome of SSE 10, as well as documents CCC 10/15/1 and CCC 10/5/2, should be referred to the working group, noting that further work may also be necessary; and

.7 it should be noted that a proposal submitted to DSC 18 concerning the certification of shore-side personnel was not supported.

6.49 After consideration, the Sub-Committee agreed to refer this issue to the working group for further consideration, based on paragraph 10.39 of document SSE 10/20 and taking into account documents CCC 10/15/1 and CCC 10/15/2, with a view to providing advice to the Sub-Committee.

ESTABLISHMENT OF THE WORKING GROUP

6.50 Having considered the above matters, the Sub-Committee established the Working Group on Amendments to the IMDG Code and instructed it, taking into account the comments made and decisions taken in plenary, to:

w*ith regard to a thorough review of column 17 of the Dangerous Goods List of the IMDG Code:*

.1 further consider the thorough review of column 17, taking into account document CCC 10/6/3;

with regard to the list of risk-prevention-related areas in connection with containership fire safety

.2 further consider this issue, based on paragraph 10.39 of document SSE 10/20 and taking into account documents CCC 10/15/1 and CCC 10/15/2, with a view to providing advice to the Sub-Committee; and

with regard to transport provisions for vehicles:

.3 further consider amendments to transport provisions for vehicles, taking into account the discussions at CCC 8 on documents CCC 8/6/1, CCC 8/6/6 and CCC 8/6/10; discussions at CCC 9 on document CCC 9/6/1; and the relevant work of the SSE Sub-Committee; as well as documents CCC 10/6/2, CCC 10/6/8 and CCC 10/INF.9.

Report of the Working Group

6.51 Having considered the report of the Working Group on Amendments to the IMDG Code (CCC 10/WP.8), the Sub-Committee approved it in general and took action, as described in the following paragraphs.

List of topics to be considered in future submissions on transport provisions for vehicles

6.52 The Sub-Committee noted the deliberations of the Working Group on the minimum list of topics that should be considered in any future submissions to CCC 11 on transport provisions for vehicles (CCC 10/WP.8, paragraphs 4 to 4.16 and annex 1).

Further considerations related to special provisions for the transport of vehicles

6.53 The Sub-Committee noted the deliberations of the Working Group on further considerations related to special provisions for the transport of vehicles, and the draft amendments to option 1 from document CCC 10/6/8 (Germany et al.) to be considered in future submissions; and invited interested Member States and international organizations to submit relevant proposals[5] for further consideration at a future session of the Sub-Committee (CCC 10/WP.8, paragraphs 4.18 to 4.20 and annex 2).

Thorough review of column 17

6.54 The Sub-Committee noted the deliberations of the Working Group on the thorough review of column 17 of the Dangerous Goods List of the IMDG Code and the proposed new draft guiding principles for column 17; agreed, in principle, to the draft amendments to the

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IMDG Code; and referred them to E&T 42 for further consideration, with a view to incorporation, as appropriate, into draft amendment 43-26 to the IMDG Code (CCC 10/WP.8, paragraphs 5 and 5.1, and annex 3).

Risk prevention-related areas in connection with containership fire safety

6.55 The Sub-Committee noted the deliberations of the Working Group on risk prevention-related areas in connection with containership fire safety; and invited interested Member States and international organizations to submit relevant proposals to future sessions (CCC 10/WP.8, paragraphs 6 to 6.6).

DRAFT AMENDMENT 43-26 TO THE IMDG CODE AND INSTRUCTIONS TO THE E&T GROUP

6.56 The Sub-Committee authorized E&T 42, tentatively scheduled to take place in the spring of 2025, to prepare draft amendment 43-26 to the IMDG Code, based on documents submitted to CCC 10 and taking into account comments made and decisions taken in plenary. E&T 42 should take into consideration the outcome of the UN/ECOSOC Sub-Committee of Experts on the Transport of Dangerous Goods with regard to the amendments to the twenty-third revised edition of the UN Recommendations on the Transport of Dangerous Goods, Model Regulations. The Working Group should also identify and correct any editorial mistakes in amendment 42-24 of the IMDG Code and submit a written report to CCC 11.

7 REVISION OF THE REVISED GUIDELINES FOR THE PREPARATION OF THE CARGO SECURING MANUAL (MSC.1/CIRC.1353/REV.2) TO INCLUDE A HARMONIZED PERFORMANCE STANDARD FOR LASHING SOFTWARE TO PERMIT LASHING SOFTWARE AS A SUPPLEMENT TO THE CARGO SECURING MANUAL

Background

7.1 The Sub-Committee recalled that MSC 108 had agreed to include in the biennial agenda of the CCC Sub-Committee for 2024-2025 and the provisional agenda of CCC 10 the output on "Revision of the Revised guidelines for the preparation of the Cargo Securing Manual (MSC.1/Circ.1353/Rev.2) to include a harmonized performance standard for lashing software to permit lashing software as a supplement to the Cargo Securing Manual", assigning the CCC Sub-Committee as the coordinating organ, with a target completion year of 2025.

Consideration of documents submitted to this session

7.2 The Sub-Committee considered document CCC 10/7 (Germany and IACS), proposing a revision of MSC.1/Circ.1353/Rev.2 to accept lashing software as a supplement to

the container stowage and securing the arrangement plan included in the approved Cargo Securing Manual in order to evaluate actual loading conditions, and draft performance standards and guidelines with which the lashing software should comply to allow consistent approval of lashing software.

7.3 The Sub-Committee also considered the relevant parts of document CCC 10/11/5 (Australia et al.), proposing issues for consideration and inclusion in the performance standards to be developed; and proposing that the drafting group should consider the interlinkage between the issues considered under agenda items 7 and 11.

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

.1 it needs to be clarified whether the lashing software, which is being proposed as a supplement to the Cargo Securing Manual, is being proposed as a mandatory requirement or not. While development of lashing software can be supported, it needs to be seen how much value it would actually add to the existing system, as it would also depend on accuracy of a number of variables, such as weights and centres of gravities. Inaccuracies in these variables have been found to be contributory causes in a number of container-related incidents on ships. Hence, all aspects need to be analysed in detail in the proposed drafting group, prior to proposing any mandatory requirements in this regard;

.2 document CCC 10/7 can be referred to the drafting group, including aspects concerning standardization/harmonization of the input data and compatibility of the software;

.3 the proposed amendment to MSC.1/Circ.1353/Rev.2, as well as the draft performance standards and guidelines to be inserted as a new annex to the CSS Code, can be supported. Lashing software is an efficient way to aid ship cargo officers in appropriate decision-making on actual application of the ship's stowage and securing plan. Therefore, it is paramount that the master of the ship or cargo officer should verify and ensure that the physical lashing arrangement is not being reduced from the accepted lashing configuration used for lashing strength calculation by approved onboard lashing software prior to the sailing. Otherwise, the lashing software will not

serve its intended purpose. This possible safety gap can be addressed either under the company's Safety Management System in view of its operational nature, or the Sub-Committee could consider a relevant text to be added in MSC.1/Circ.1353/Rev.2;

.4 there are several technical issues that should be considered in the drafting group before a final decision on the proposals contained in document CCC 10/7 can be made. There is a contradiction in paragraph 5 between sub-paragraphs .1 and .3 that needs to be addressed. Further, application of the Revised Guidelines to containerships contracted for construction on or after 1 July 2025 is an extremely early implementation – even when considering that these are non-mandatory guidelines. In this regard, it could also be noted that the target completion year of the output is 2025. Regarding the approval of the software, it would be preferable that a harmonized calculation method be first developed – possibly by IMO. It is difficult to see the value of imposing a performance standard when there seems to be a huge tolerance discrepancy between class societies (see CCC 10/INF.13). Also, application of the performance standard should be made less subject to interpretation by the class societies if any real value is to be gained. Otherwise, significant approval costs could be incurred in vain by the industry. In addition, it is not clear what would or should happen if the ship changes flag/class. Shall the lashing software then be replaced? This is of concern, not least considering the text of paragraph 6.1 of document CCC 10/7 where, for the accuracy of the computational results from the lashing software, reference is made to "computation results deemed appropriate by the Administration or by the recognized organization acting on its behalf";

.5 the shipping industry continues to evolve with more complex technology, and actual loading conditions can vary considerably from voyage to voyage. The proposal in document CCC 10/7 highlights the challenges that the crew face in using traditional manual methods to evaluate stowage and securing plans accurately, especially given the increasing complexity of modern containerships. By allowing lashing software as a supplementary tool, the industry would benefit from an automated means to quickly assess real-time conditions and ensure that container loads are properly secured in

compliance with international safety standards. Furthermore, the emphasis on performance standards and guidelines outlined in document CCC 10/7 is particularly welcome, as it will ensure that any software used meets safety criteria and provides consistent results. These standards will help guarantee that lashing software is not only a tool for convenience but also a reliable solution that improves safety outcomes across the board. The proposal to consider lashing software as a supplement to the Cargo Securing Manual and development of draft performance standards and guidelines for application to containerships contracted for construction on or after 1 July 2025 can be supported. The inclusion of such software represents a significant step forward in enhancing the safety and efficiency of container stowage and securing operations;

.6 document CCC 10/7 can be referred to the drafting group or to a correspondence group for further consideration. However, it should be noted that amending the CSS Code is out of the scope of the current output. Notwithstanding that, performance standards should be in line with the CSS Code. Furthermore, the aim is not to mandate using lashing software, but rather enable using it as a supplement. Therefore, the wording "should be used as a supplement" in paragraph 4.3.3 of MSC.1/Circ.1353/Rev.2 should be replaced with the wording "may be accepted as a supplement";

.7 this work is needed so that lashing software can be used as a supplement to the Cargo Securing Manual. The draft performance standards and guidelines contained in the annex to document CCC 10/7 can also be supported. The benefits of digitalization should be recognized, especially concerning the use of technologies that help to increase safety levels for the crew, as well as for the ship and the environment. Document CCC 10/7 could be referred to the drafting group so that some aspects regarding the characteristics, standardization and compatibility of this software can be further considered;

.8 expansion of the output would be needed in order to consider amending the CSS Code. The wording "lashing software should be used as a supplement" in paragraph 4.3.3 of MSC.1/Circ.1353/Rev.2 could be replaced with the wording "lashing software, when used as a supplement"; and

.9 work to harmonize the calculation method would also need to take into account the scope of the output.

7.5 After consideration, the Sub-Committee agreed that:

.1 amending the CSS Code would be out of the scope of the current output;

.2 the wording "should be used as a supplement" in paragraph 4.3.3 of MSC.1/Circ.1353/Rev.2 should be replaced with the wording "may be accepted as a supplement"; and

.3 technical discussions on performance standards should take into account concerns related to the calculation method.

Establishment of the Drafting Group

7.6 Having considered the above matters, the Sub-Committee established the Drafting Group on Prevention of the Loss of Containers at Sea, Revision of MSC.1/Circ.1353/Rev.2 and Development of Performance Standards and Guidelines for Lashing Software and instructed it, taking into account the comments made and decisions taken in plenary, as well as document CCC 10/7 and the relevant parts of document CCC 10/11/5, to prepare draft terms of reference for a correspondence group, for consideration by the plenary.

Report of the Drafting Group

7.7 Having considered the part of the report of the Drafting Group on Prevention of the Loss of Containers at Sea, Revision of MSC.1/Circ.1353/Rev.2 and Development of Performance Standards and Guidelines for Lashing Software (CCC 10/WP.11) related to this agenda item, the Sub-Committee approved it in general and took action, as described in paragraphs 11.7 to 11.9.

8 REVISION OF THE REVISED RECOMMENDATIONS FOR ENTERING ENCLOSED SPACES ABOARD SHIPS (RESOLUTION A.1050(27))

Background

8.1 The Sub-Committee recalled that MSC 106 had agreed to include in the biennial agenda of the Sub-Committee for 2022-2023 and the provisional agenda of CCC 9 the output on "Revision of resolution A.1050(27) to ensure the safety of personnel entering enclosed

spaces on board ships", with a target completion year of 2024, in association with the III, HTW, PPR, SDC and SSE Sub-Committees, as and when requested by the Sub-Committee; and that MSC 106 had also agreed that the new output would absorb the ongoing work in the Sub-Committee on the matter (MSC 106/19, paragraphs 16.29 to 16.31).

8.2 The Sub-Committee also recalled that, after consideration, CCC 9 had established the Correspondence Group on Revision of Resolution A.1050(27), with the terms of reference set out in paragraph 8.16 of document CCC 9/14 (Secretariat), to further develop the draft recommendations.

Report of the Correspondence Group

8.3 The Sub-Committee considered document CCC 10/8 (Japan), providing the report of the Correspondence Group on Revision of Resolution A.1050(27). The Sub-Committee approved the report in general and took action, as described in the following paragraphs.

Progress of the work made by the Correspondence Group

8.4 The Sub-Committee noted the progress of the work made by the Correspondence Group. In this context, the Sub-Committee considered the following documents:

.1 CCC 10/8/1 (IMarEST et al.), proposing to inform and raise awareness of the increase in carbon dioxide emissions in cargo holds arising from air ingress when hatch covers are not gastight, and "breathing" has occurred through variations of atmospheric conditions. It is proposed that the findings of this research be included in the guidance for the entry into enclosed spaces;

.2 CCC 10/8/2 (IACS), containing comments on the report of the Correspondence Group; and

.3 CCC 10/INF.32 (IBTA), providing an updated summary of research carried out into all reported enclosed space-related fatalities across all ship types for the period 2000 to 2023; and aiming to support the ongoing work to amend resolution A.1050(27).

8.5 The Sub-Committee also noted the invitation by III 10 to take into consideration the views of its Working Group on Lessons Learned and Safety Issues Identified from the Analysis of Marine Safety Investigation Reports, and the information provided in documents III 10/4/3 (paragraphs 3 to 5) and III 10/INF.18 (InterManager), while progressing the current work under the existing output 6.15 on "Revision of the Revised recommendations for entering enclosed spaces aboard ships (resolution A.1050(27))" (paragraphs 4.45.5 and 4.46.2) (III 10/18[6], paragraph 18.5.2).

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

.1 establishment of the Drafting Group to finalize the work on revision of resolution A.1050(27) is important in order to improve safety;

.2 the draft recommendations are too prescriptive and laden with theoretical information and training specifications, which would be better placed within the STCW Convention. The draft recommendations contain ambiguities and, in some instances, are contrary to industry practice. It should also be noted that the arguments that merited the revision of resolution A.1050(27) still remain valid. The drafting group should aim to achieve recommendations that are goal-based, uncomplicated and in language that will be easily understood by the ultimate users of these recommendations, i.e. the seafarers, shore-side workers and maritime education and training institutes;

.3 the draft paragraph 3.2 has the wording "company should ensure…", which is not correct. The word "company" is not defined in the draft recommendations. According to SOLAS regulation VI/2, the master should be provided with all the relevant information. The draft paragraph 7.4.4 should be made more specific concerning toxic vapours and gases;

.4 the Enclosed Space Register is important. However, there are concerns related to the large amount of information and the need for updates. In this regard, digitalization should be encouraged;

.5 the draft paragraph 2.1.4 should be completely deleted;

[6] To be issued in due course.

.6 the first sentence of the draft paragraph 2.1.4 should be retained;

.7 the establishment of adequate procedures (in accordance with legislation/guidelines/recommendations) and their continuous observance is the responsibility of the management company in accordance with the ISM Code. The adequacy control of a process for the ship's operations is carried out, among other things, in the context of the review of the company's safe management system, where that system takes into account the results of the company's internal audits, as well as those of the flag and port State authorities. The external audit, in the context of the certification of a ship under the ISM Code, may verify that the relevant codes, guidelines and standards recommended by IMO, authorities, classifiers and organizations of the shipping industry have been taken into account, in accordance with paragraph 1.2.3 of the ISM Code. Taking the aforementioned into consideration, it is supported to amend paragraph 3.9, where the company should verify that the established procedures are followed and are consistent with the safety strategy referred to in the recommendations;

.8 in the draft paragraph 3.3, the word "maintained" should be replaced with the word "implemented", taking into account the relevant provisions of the ISM Code;

.9 document CCC 10/INF.32 highlights the importance of revision of resolution A.1050(27). While taking into account ease of use and simplicity, there is also a need for some additions to the recommendations;

.10 the company has a key role in fostering a safety culture;

.11 document CCC 10/8/1 contains important information on the risk of rising carbon dioxide levels, and should be included as an annex to the recommendations;

.12 the content of document CCC 10/8/1 is a scientific study that is not suitable for inclusion in the recommendations;

.13 document CCC 10/8/2 should be referred to the drafting group; and

.14 the draft example of an Enclosed Space Register should be deleted.

8.7 The Sub-Committee, while considering specifically the related proposal in document CCC 10/8/2, agreed to delete the draft example of an Enclosed Space Register (appendix 3).

8.8 Following discussion, the Sub-Committee instructed the drafting group to take into account document CCC 10/8/2 when finalizing the draft revised recommendations. With regard to document CCC 10/8/1, the Sub-Committee noted that the document contains valuable information.

List of oxygen-depleting solid bulk cargoes

8.9 The Sub-Committee noted that the Correspondence Group had agreed to include the list of oxygen-depleting solid bulk cargoes, and to clarify that the list was non-exhaustive (CCC 10/8, paragraphs 15 and 16).

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

.1 it should be noted that the recommendations are recommendatory in nature, while oxygen depletion caused by a solid bulk cargo is something the E&T Group considers within every existing and new individual schedule and within mandatory sections of the IMSBC Code. The E&T Group has considered how oxygen depletion should be reflected in the Code over many sessions. Some of the cargoes listed are carried under an inert gas blanket, which intentionally causes oxygen depletion. The individual schedules for such cargoes include the details relating to the hazard of oxygen depletion caused by the cargo and/or the inert gas blanket. However, the IMSBC Code does not seem to include a list of oxygen-depleting solid bulk cargoes;

.2 it should be noted that the list would be non-exhaustive and updated in a similar manner as *Lists of solid bulk cargoes for which a fixed gas fire-extinguishing system may be exempted or for which a fixed gas fire-extinguishing system is ineffective* (MSC.1/Circ.1395);

.3 a responsible operator will examine the relevant individual schedule as a priority, not a list;

.4 updating the list would be a challenge; and

.5 it should be noted that the list only covers oxygen depletion but not other phenomena. As the list would be non-exhaustive, the crew could bypass it. Therefore, the list should be deleted.

8.11 After consideration, the Sub-Committee agreed to delete the list of oxygen-depleting solid bulk cargoes (appendix 6) from the draft revised recommendations.

Alternative means to determine that a tank atmosphere is safe for entry

8.12 The Sub-Committee recalled that CCC 9 had considered document CCC 9/8/7 (INTERTANKO), proposing an alternative means to determine that a tank atmosphere was safe for entry, that would apply only on chemical tankers following the discharge of certain toxic products where no means of testing for toxicity existed.

8.13 The Sub-Committee also recalled that CCC 9 had agreed to keep document CCC 9/8/7 in abeyance for the time being and to further consider this document together with the relevant outcomes of ESPH 29 and the PPR Sub-Committee (CCC 9/14, paragraph 8.6.2).

8.14 The Sub-Committee noted that ESPH 29, in considering the implications that the lack of toxic vapour detection equipment will have on the daily operation of chemical tankers, had agreed to progress the work with three concurrent workstreams (PPR 11/3, paragraph 8.7):

.1 collect available information on the identified products, such as vapour pressure or additional toxicological data, to identify products for ratings of inhalation toxicity through reassessment by the GESAMP/EHS Working Group and/or revised carriage requirements through the application of the ratio of the saturated vapour concentration and LC_{50} method set out in accordance with section 21.7.12 of the IBC Code;

.2 continue researching and collecting information on available toxic vapour detection equipment to identify products that could be removed from the list; and

.3 consider additional approaches for addressing the remaining products on the list.

8.15 The Sub-Committee also noted that, since several delegations had expressed their willingness to continue the work intersessionally, ESPH 29 had been informed that interested Member States and international organizations would work intersessionally in an informal group. In this regard, the delegation of Germany and the observer delegation of INTERTANKO had volunteered to co-coordinate the work of the informal group, and interested delegations were encouraged to contact Germany and INTERTANKO.

8.16 The Sub-Committee further noted that PPR 11 had invited the Sub-Committee to note the outcome of ESPH 29 with regard to products that have a newly assigned toxic rating in the latest revision of chapter 17 of the IBC Code (PPR 11/18, paragraph 3.9).

8.17 In this context, the Sub-Committee agreed to discontinue the discussion on this issue and to entrust the PPR Sub-Committee and the ESPH Technical Group to resolve it.

Establishment of the Drafting Group

8.18 Having considered the above matters, the Sub-Committee established the Drafting Group on Revision of Resolution A.1050(27) and instructed it, taking into account the comments made and decisions taken in plenary, to:

.1 consider the issues not agreed upon by the Correspondence Group and other editorial issues, including the deletion of the draft example of an Enclosed Space Register (appendix 3) and the list of solid bulk cargoes, which may cause oxygen depletion according to the IMSBC Code (appendix 6), taking into account document CCC 10/8/2; and

.2 finalize the draft revised recommendations, based on annexes 1 and 2 to document CCC 10/8.

Report of the Drafting Group

8.19 Having considered the report of the Drafting Group on Revision of Resolution A.1050(27) (CCC 10/WP.10), the Sub-Committee approved it in general and took action, as described in the following paragraphs.

Draft Revised Recommendations for entering enclosed spaces aboard ships

8.20 The Sub-Committee agreed to the draft Revised Recommendations for entering enclosed spaces aboard ships, as set out in annex 5, for submission to MSC 110 for adoption (CCC 10/WP.10, paragraphs 4 to 6 and annex 1).

8.21 In this context, the Sub-Committee noted a statement by the delegation of Denmark, as set out in annex 9, concerning paragraph 3.2 of the draft Revised Recommendations. The statement was supported by Germany, ICS, WSC and IFSMA. In addition, the Sub-Committee noted the statement by BIMCO, as set out in annex 9, concerning paragraph 3.2.

Footnotes of relevant IMO instruments

8.22 The Sub-Committee agreed that the Secretariat should be requested by MSC to make the necessary consequential amendments to the footnotes of relevant IMO instruments (CCC 10/WP.10, paragraph 7 and annex 2).

Completion of the work on the output

8.23 The Sub-Committee noted that the work under this output had been completed (CCC 10/WP.10, paragraph 8).

9 CONSIDERATION OF REPORTS OF INCIDENTS INVOLVING DANGEROUS GOODS OR MARINE POLLUTANTS IN PACKAGED FORM ON BOARD SHIPS OR IN PORT AREAS

General

9.1 The Sub-Committee recalled that MSC 105 had approved MSC.1/Circ.1649 on *Guidelines for the implementation of the inspection programmes for cargo transport units* and had encouraged Member States and international organizations to implement them.

Inspection programmes for cargo transport units carrying dangerous goods

9.2 The Sub-Committee noted document CCC 10/INF.2 (Secretariat), containing the consolidated results from 2023 of container inspection programmes, submitted, through GISIS, by Canada; Chile; Finland; Germany; Hong Kong, China; the Republic of Korea; Sweden; and the United States. The Sub-Committee was informed that, out of the 74,870 CTUs inspected, 8,236 CTUs were found to have deficiencies, meaning that 11% of the CTUs inspected had deficiencies. With regard to the type of deficiencies, placarding and marking, stowage/securing inside the unit, marking and labelling, as well as documentation, were the main deficiencies found.

9.3 The Sub-Committee expressed its appreciation to those Member States that had submitted the results of container inspection programmes and urged Member States who have not yet carried out such programmes to submit relevant information in accordance with MSC.1/Circ.1649. In this context, the Sub-Committee also noted a statement by the observer delegation of WSC, expressing concerns about the low reporting numbers on container inspection results and emphasizing the importance of joint efforts by the maritime authorities and the industry to enhance the safety of containers. The observer delegation had further concerns about the proposal in document CCC 10/WP.3 (Chair) to consider whether the current output 7.28 on "Consideration of reports of incidents involving dangerous goods or marine pollutants in packaged form on board ships or in port areas" is necessary (see also paragraphs 12.1 to 12.5).

Updates from the Secretariat

9.4 The Sub-Committee noted the following verbal updates provided by the Secretariat:

.1 the technical development on the update to the GISIS module on Reports of CTU inspections in accordance with MSC.1/Circ.1649 is ongoing, taking into account the ongoing major review of GISIS; and

.2 the Secretariat has been following the instructions from MSC on the implementation of MSC.1/Circ.1649 in collaboration with FAO/International Plant Protection Convention (IPPC). The Secretariat submitted a report to the eighteenth session of the Commission on Phytosanitary Measures (CPM-18), which was held in April 2024. The report provided a summary of IMO activities in relation to the movement of containers by sea, which may be relevant to the work within the framework of IPPC.

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

General

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

Outcome of MSC 108 on the approval process of unified interpretations

10.2 The Sub-Committee considered document CCC 10/10/2 (Secretariat), informing the Sub-Committee on the outcome of MSC 108 concerning the approval process of unified interpretations.

10.3 The Sub-Committee will implement the above-mentioned decision of MSC 108 when considering proposals for unified interpretations.

Draft unified interpretation of paragraph 5.7.1 of the IGF Code

10.4 The Sub-Committee considered document CCC 10/10 (IACS and SGMF), proposing a unified interpretation of paragraph 5.7.1 of the IGF Code to facilitate the universal and uniform implementation of the IGF Code.

10.5 With regard to the three safeguards, as contained in paragraph 19.6.3 of document MSC 108/20, the Sub-Committee noted the views expressed concerning document CCC 10/10 that the proposal would involve an amendment to paragraph 5.7.1 of the IGF Code.

10.6 After consideration, the Sub-Committee agreed to report the above outcome of the consideration of document CCC 10/10 to MSC 110.

Draft unified interpretation of SOLAS regulation II-1/2.29 concerning low-flashpoint fuel

10.7 The Sub-Committee recalled that MSC 108 had noted the deliberations of the GHG Safety Working Group on the title of the IGF Code, which states that the Code should apply to fuels that are gases or have a low flashpoint, while in SOLAS chapter II-1, part G, it is stated that the IGF Code applies to ships using low-flashpoint fuels regardless of whether they are in liquid or in gaseous form (MSC 108/20, paragraph 5.30).

10.8 The Sub-Committee also recalled that MSC 108 had noted that the definition of a low-flashpoint fuel in SOLAS regulation II-1/2 reads as follows: "Low-flashpoint fuel means gaseous or liquid fuel having a flashpoint lower than otherwise permitted under regulation II-2/4.2.1.1"; and, consequently, MSC 108 had noted the need to clarify whether the IGF Code applies to ships using gas as fuel irrespective of flashpoint, or not (MSC 108/20, paragraphs 5.31 and 5.32).

10.9 The Sub-Committee further recalled that, in this regard, MSC 108 had agreed to the proposal by the Chair of the CCC Sub-Committee, to refer this issue as an urgent matter to CCC 10, for consideration and advice to MSC 109, accordingly (MSC 108/20, paragraph 5.33).

10.10 In this context, the Sub-Committee considered document CCC 10/10/3 (IACS), proposing a draft unified interpretation of SOLAS regulation II-1/2.29 to clarify the applicability of SOLAS regulations II-1/56 and 57 to facilitate the universal and uniform implementation of the IGF Code to ships using gas as fuel.

10.11 With regard to the three safeguards, as contained in paragraph 19.6.3 of document MSC 108/20, the Sub-Committee noted the following views expressed concerning document CCC 10/10/3:

.1 the proposal in document CCC 10/10/3 cannot be agreed as UI; instead, this issue could be supported for further consideration on a way forward concerning whether and how all gaseous fuels could be considered to be included in the scope of the IGF Code. For example, it could be considered how to ensure that the risk profile of all gases is sufficiently covered by the application of the IGF Code;

.2 this issue would require consideration on amending SOLAS chapter II-1, and as a first step, a new output proposal to MSC 110;

.3 paragraph 17 of document CCC 10/10/3 can be supported with regard to the intention behind SOLAS regulations II-1/56 and 57, which was to make the IGF Code applicable to ships using gases as fuel. Also, as stated in paragraph 19 of document CCC 10/10/3, it was never the intention of part G in SOLAS chapter II-1 and the IGF Code to exclude the application of the use of materials such as hydrogen or ammonia. Even if the suggested proposal on the way forward can be supported on a technical basis, this cannot be addressed by UI. This would rather require an amendment to SOLAS regulations; and

.4 it should be noted that, despite the fact that the proposal in document CCC 10/10/3 cannot be agreed as UI, the issue raised by MSC 108 requires clarification as an urgent matter.

10.12 Subsequently, the Sub-Committee agreed to report the above outcome of the consideration of document CCC 10/10/3 to MSC 109 as an urgent matter, and in this regard, recommend that SOLAS chapter II-1 would require an amendment in line with paragraph 20 of document CCC 10/10/3.

Development of unified interpretation regarding the application of the IGF Code under SOLAS regulation II-1/56.4

10.13 The Sub-Committee considered document CCC 10/10/4 (Republic of Korea), aiming to develop a unified interpretation of SOLAS regulation II-1/56.4, which is considered when using low-flashpoint fuel instead of cargo on gas carriers; and seeking to apply the IGF Code or other developed IMO guidelines for using alternative fuels to the design and arrangement of fuel storage and supply systems for gas carriers that do not use cargo as fuel if fuel tanks and fuel systems are independent of cargo systems.

10.14 With regard to the three safeguards, as contained in paragraph 19.6.3 of document MSC 108/20, the Sub-Committee noted the following views expressed concerning document CCC 10/10/4:

.1 the wording "provided that" in SOLAS regulation II-1/56.4.2 guarantees that the three safeguards are observed;

.2 MSC 95 made a policy decision that the IGF Code should not apply to ships subject to the IGC Code, even when the IGC Code ships are using low-flashpoint fuels that are not cargo. MSC 95 further instructed the working group to make the necessary amendments to SOLAS chapter II-1 to reflect this policy decision, as outlined in paragraph 3.17 of document MSC 95/22. As a result, the current SOLAS regulation has been developed. Based on this, the proposed UI does not meet the three safeguards;

.3 the policy decision at MSC 95 was based on a principle that one Code should apply to a specific ship; therefore, the proposal in document CCC 10/10/4 cannot be agreed as UI; however, further consideration may be appropriate for liquids such as methanol;

.4 instead of UI, a SOLAS amendment would be required;

.5 considerable amount of time has passed and developments in terms of alternative fuels and related technologies have taken place since MSC 95; therefore, it should be possible to change the policy decision;

.6 SOLAS regulation II-1/56.4.2 literally stipulates that the IGF Code shall not apply to gas carriers using other low-flashpoint gaseous fuels provided that the fuel storage and distribution systems' design and arrangements for such gaseous fuels comply with the requirements of the IGC Code for gas as a cargo. Due to the phrase "provided that" used in the provision, this could be rephrased to read "If the design and arrangement of the fuel storage and distribution system do not comply with the relevant requirements of the IGC Code, the IGF Code should apply to gas carriers";

.7 the proposal in document CCC 10/10/4 should be referred to the working group, with a view to preparing UI;

.8 considering the different stages of developments of amendments to the IGC Code and of the draft interim guidelines for the use of ammonia (and other gases) as fuel, clarity is needed on the applicability of the IGC and IGF Codes and the guidelines being developed. It may happen that, for a ship subject to the IGC Code, the IGF Code and/or the guidelines being developed would also apply, and this may cause confusion, especially considering that "cargo systems" are not presently defined in the IGC Code, and likewise, "fuel supply systems" are not defined in the IGF Code; and

.9 similar to document CCC 10/10/3, the issues raised in document CCC 10/10/4 should be referred to MSC 109 for further consideration.

10.15 After consideration, the Sub-Committee agreed to report consideration of document CCC 10/10/4 to MSC 109 as an urgent matter, and, in this regard, recommended that the issues raised in document CCC 10/10/4 could be further considered under the output on "Development of a safety regulatory framework to support the reduction of GHG emissions from ships using new technologies and alternative fuels".

Revision 5 of IACS unified interpretation (UI) SC 89 on SOLAS regulation II-2/19.3.4 and the IMSBC Code cargo space ventilation requirements

10.16 The Sub-Committee recalled that document CCC 10/INF.3 (IACS) had been considered under agenda item 5 (see paragraphs 5.58 to 5.61).

11 DEVELOPMENT OF MEASURES TO PREVENT THE LOSS OF CONTAINERS AT SEA

Background

11.1 The Sub-Committee recalled that MSC 107 had agreed to include in the biennial agenda of the Sub-Committee for the 2024-2025 biennium and the provisional agenda of CCC 10 the output on "Development of measures to prevent the loss of containers at sea", with a target completion year of 2025, assigning the Sub-Committee as the coordinating organ, in association with the HTW, III, NCSR and SDC Sub-Committees, as and when requested by the Sub-Committee (MSC 107/20, paragraph 17.37).

Consideration of documents submitted to this session and the related documents

11.2 The Sub-Committee recalled that CCC 9 had noted with appreciation the information contained in document CCC 9/INF.25 (Australia et al.), providing updates on the progress of the TopTier JIP on container losses. CCC 9 had also considered document CCC 9/13 (WSC), providing a 2023 update on an estimate of the number of containers lost at sea. CCC 9 had decided to forward these documents to this session of the Sub-Committee, as they provided useful information for consideration under the new output on "Development of measures to prevent the loss of containers at sea" (CCC 9/14, paragraph 13.1).

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

.1 CCC 10/11 (Denmark et al.), providing a review of the work initiated or under way within IMO, aiming at preventing loss of containers at sea, as well as measures to mitigate the impacts of such incidents; and proposing CCC 10 to commence its work to coordinate current and new outputs under the new output on "Development of measures to prevent the loss of containers at sea";

.2 CCC 10/11/1 (WSC), containing the 2024 update which adds information from the year 2023 where a total of 221 containers were lost at sea, out of 250 million containers being transported. Of the containers lost, about 33% were recovered. This represented the lowest losses since the start of the survey in 2011, and a significant improvement on the previous lowest-ever loss of 661 containers in 2022;

.3 CCC 10/11/2 (Denmark), highlighting possible amendments and updates to the IMO framework concerning measures to prevent the loss of containers at sea, to address the key issues as further identified and described in document CCC 10/INF.13;

.4 CCC 10/11/3 (BIC), updating the Sub-Committee on BIC's progress in developing the BoxTech database and highlights how BoxTech could be better utilized to help prevent loss of containers at sea;

.5 CCC 10/11/4 (BIC), containing an updated report on the activity of the global ACEP database since the last update to CCC 9; and making the case for ensuring CSC requirements related to ACEP (including auditing and publication requirements) are followed, noting that sufficiently frequent and proper container inspections have a direct bearing on the issue of containers lost at sea;

.6 CCC 10/11/5 (Australia et al.), proposing improvements to be considered for the safe transport, stowage and securing of containers based on preliminary results of the TopTier project;

.7 CCC 10/INF.13 (Denmark), summarizing the submitter's experience with issues on container securing and highlighting the key causes for container loss;

.8 CCC 10/INF.17 (Australia and the Netherlands (Kingdom of)), presenting a study concerning the review of incidents resulting in loss of containers under the umbrella of the TopTier project;

.9 CCC 10/INF.18 (Australia and the Netherlands (Kingdom of)), presenting a summary and gap analysis concerning the review of incidents resulting in loss of containers under the umbrella of the TopTier project;

.10 CCC 10/INF.25 (Republic of Korea), introducing technologies developed by the Republic of Korea to prevent the loss of containers at sea; and

.11 CCC 10/INF.30 (Secretariat), providing the report of an analysis carried out by the World Maritime University (WMU) containing in-depth data statistics and trend analysis of 445 marine casualties involving containerships, based on the data for the period 2011-2022, extracted from the GISIS module on Marine Casualties and Incidents (MCI), supplemented mainly by data from the European Marine Casualty Information Platform (EMCIP). In addition to the statistics on loss of containers at sea, the report contains the casualty events, consequences, accident events, human erroneous action, contributory factors and safety recommendations.

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

.1 IMO has made diverse efforts to prevent the loss of containers at sea. As a result, a recent WSC report shows that 221 containers were lost at sea in 2023, which is the lowest number of losses since the survey began in 2011. Despite this positive trend, a container loss incident ,involving a large containership, occurred near South Africa in July, during a severe weather event. This serves as a stark reminder of the risks of container loss at sea and presents an opportunity to facilitate the development of preventive measures. In this context, referring document CCC 10/11 to the Drafting Group can be supported;

.2 the growing size of containerships, as well as changing sea conditions, have contributed to increased risks of container losses. As noted in document CCC 10/11, although the overall number of containers lost annually has decreased, the impact of such incidents remains severe. Containers lost at sea create navigation hazards and pose environmental threats, as they often carry hazardous materials that can damage marine ecosystems. The development of a comprehensive framework to address this issue, as outlined in paragraphs 29 and 30 of document CCC 10/11, can therefore be supported. These are well-structured steps that will ensure an effective response to this problem. This approach will also ensure that related initiatives, such as lashing software and stability criteria, are integrated into the broader effort. With these developments, IMO can significantly reduce the frequency and impact of container losses at sea, thereby enhancing maritime safety and environmental protection;

.3 the content of the proposals in document CCC 10/11/3 cannot be supported because regulation 2 of the CSC Convention already includes provisions on examination of containers and the Safety Approval Plate; in addition, there are other operational matters to be considered, such as related to loading software programs using 192 tons of stack strength, unsafe conditions associated with weaker containers on top tiers, mix-up and mis-stowage by terminals, and selection of correct containers at the stuffing stage; notwithstanding this, document CCC 10/11/3 can be referred to the Drafting Group for further consideration;

.4 all the related documents can be referred to the Drafting Group, and document CCC 10/11 could be regarded as a basis for consideration of the work ahead;

.5 the proposal in paragraph 2.3 of document CCC 10/11/2 cannot be supported. Containerships have not only grown in size in the last decade but have become more complex from the lashing design aspect to meet the demand of the industry with regard to loadability. Such complex designs require sophisticated calculation methodologies to consider the non-linear behaviour of the stacks. This has led to the emergence of various methodologies with a focus on the various non-linear effects crucial for safe prediction of the stack behaviour. The contribution of these methods for reducing container loss incidents to such a great extent is indicated in document CCC 10/11/1. Harmonizing the calculation models at this stage of development would hamper further advances in these technologies and should be discouraged at present. Instead, it is proposed to define the minimum physical effects that a calculation model should be able to predict. Further, considering the harmonization of the stack design loads mentioned in paragraph 2.1 of document CCC 10/11/2, an improved alignment is expected regarding the agreement of the results calculated by different methods;

.6 despite the lowest number of container losses in 2023, there is no room for complacency; all the related documents should be referred to the Drafting Group for further consideration;

.7 the impact of container losses is wide-ranging, including safety, environmental and trade aspects. The proposed amendments to relevant instruments, such as the CSC Convention, the CSS Code and the SOLAS Convention, are timely and necessary. A holistic approach, including training and capacity-building aspects, is important. In addition, using advanced technologies should be supported;

.8 with regard to document CCC 10/11/1, the data presented is a crucial first step to understanding the performance of existing measures to prevent loss of containers at sea, allowing for benchmarking of progress and identifying what the future ambitions should be for IMO. The transparency of these data sets underlines the importance of regular reporting and liaison between industry stakeholders, and highlights the growing role of recovery efforts. With regard to the content of document CCC 10/11/2, it can be regarded as a prudent way forward that acknowledges the growth in containership sizes, as well as changes in container stacking, which could necessitate changes to the CSS Code. Updating the ISO standards and the CSC Convention would help to ensure that containers are designed with improved strength, fatigue life and load-bearing capacity. Improvement of seafarer training and skills should be at the heart of the strategy to prevent the loss of containers at sea, as well as a regulatory approach that is proactive rather than reactive;

.9 there may be misconceptions concerning the content of document CCC 10/11/3; and

.10 introducing new SOLAS requirements on reporting of lost containers has been a welcome development; in addition, taking advantage of emerging technologies is important.

11.5 In this context, the Sub-Committee instructed the Drafting Group on Prevention of the Loss of Containers at Sea, Revision of MSC.1/Circ.1353/Rev.2 and Development of Performance Standards and Guidelines for Lashing Software, taking into account documents CCC 10/11, CCC 10/11/1, CCC 10/11/2, CCC 10/11/3, CCC 10/11/4, CCC 10/11/5, CCC 10/INF.13, CCC 10/INF.17, CCC 10/INF.18, CCC 10/INF.25, CCC 10/INF.30, CCC 9/13 and CCC 9/INF.25, to:

.1 initiate preparation of an inventory on finalized, current and foreseeable work;

.2 initiate preparation of a work plan; and

.3 prepare terms of reference for a correspondence group, for consideration by the plenary.

Report of the Drafting Group

11.6 Having considered the part of the report of the Drafting Group on Prevention of the Loss of Containers at Sea, Revision of MSC.1/Circ.1353/Rev.2 and Development of Performance Standards and Guidelines for Lashing Software (CCC 10/WP.11) related to this agenda item, the Sub-Committee approved it in general and took action as described in the following paragraphs.

Preliminary inventory on finalized, current and foreseeable work

11.7 The Sub-Committee endorsed the preliminary inventory on finalized, current and foreseeable work related to the prevention of the loss of containers at sea (CCC 10/WP.11, paragraphs 4 to 7, annex 1).

Preliminary work plan

11.8 The Sub-Committee endorsed the preliminary work plan for the consideration and potential development of the topics identified in the inventory (CCC 10/WP.11, paragraphs 8 to 10, annex 2).

Establishment of the correspondence group

11.9 The Sub-Committee established the Correspondence Group on Prevention of the Loss of Containers at Sea, Revision of MSC.1/Circ.1353/Rev.2 and Development of Performance Standards and Guidelines for Lashing Software, under the coordination of Denmark and the Kingdom of the Netherlands,[7] and instructed it to:

[7] **Coordinators:**

Ms. Anne Marie Norderud-Poulsen
Senior Adviser
Danish Maritime Authority
amn@dma.dk

Ms. Eleni Poupaki
Senior policy adviser
Directorate for Maritime Affairs / Shipping Policy Division
Kingdom of the Netherlands

with regard to prevention of the loss of containers at sea:

taking into account documents CCC 10/11, CCC 10/11/1, CCC 10/11/2, CCC 10/11/3, CCC 10/11/4, CCC 10/11/5, CCC 10/INF.13, CCC 10/INF.17, CCC 10/INF.18, CCC 10/INF.25, CCC 10/INF.30, CCC 9/13 and CCC 9/INF.25, to:

.1 review and finalize the inventory on finalized, current and foreseeable work in annex 1 of document CCC 10/WP.11, identifying potential interlinkage;

.2 assess the feasibility, merit (e.g. regulatory, technological) and priority of the work items for further consideration; and

.3 identify potential amendments to relevant instruments and assess which other committees or bodies should be involved;

with regard to revision of MSC.1/Circ.1353/Rev.2 and development of performance standards and guidelines for lashing software:

taking into account documents CCC 10/7 and CCC 10/11/5 (paragraphs 12 and 13) and the comments and decisions taken by plenary (CCC 10/WP.1), to:

.4 review and amend the *Revised Guidelines for the preparation of the Cargo Securing Manual* (MSC.1/Circ.1353/Rev.2) and identify issues which need to be included in the performance standards;

.5 identify impacts on other instruments;

.6 assess how best to proceed with this output and revise the work plan accordingly;

.7 finalize the work plan based on annex 2 of document CCC 10/WP.11; and

.8 submit a written report to CCC 11.

12 BIENNIAL STATUS REPORT AND PROVISIONAL AGENDA FOR CCC 11

Workload of the Sub-Committee

12.1 The Sub-Committee was advised that MSC 108, in considering the report of the Working Group on Workload of the Committee (MSC 108/WP.9), had noted its considerations regarding the measures recommended in document MSC 108/18 (Chair) to address the increased workload of the Committee and its subsidiary bodies.

12.2 The Sub-Committee was also advised that, in this context, MSC 108 had, inter alia (MSC 108/20, paragraphs 18.12 and 18.15 to 18.17):

.1 invited all sub-committees to 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;

.2 invited all sub-committees to review their terms of reference, as set out in document MSC 92/26, annex 40, identify obsolete or missing elements therein, and 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;

.3 invited interested Member States and international organizations to submit relevant proposals on measures to address the increased workload of the Committee and its subsidiary bodies, including draft amendments to MSC-MEPC.1/Circ.5/Rev.5, taking into account the progress made at that session, for consideration at MSC 109; and

.4 invited MEPC to take note of the work undertaken thus far on the revision of the Organization and method of work.

12.3 In this context, the Sub-Committee had for its consideration document CCC 10/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, conducted by the Chair, in consultation with the Secretariat, along with related recommendations, for consideration by the Sub-Committee, with a view to further consideration at MSC 109.

12.4 Following the discussion, the Sub-Committee noted the following views expressed on this matter:

.1 it should be considered whether it is still appropriate to retain the GC Code as part of the terms of reference of the Sub-Committee;

.2 with regard to the analysis on the current annual output 7.28 on "Consideration of reports of incidents involving dangerous goods or marine pollutants in packaged form on board ships or in port areas", it may be worth considering whether the current output is necessary (CCC 10/WP.3, paragraph 7). In this context, it should be noted that the same relevant information is also publicly available on GISIS. Therefore, preparing the information document may not be necessary;

.3 not all relevant stakeholders may necessarily use GISIS on a regular basis. Therefore, the usual information document prepared by the Secretariat may still be needed; and

.4 it should be clarified whether stakeholders are allowed to use the information on GISIS for producing a similar consolidated report as the usual information document, and make it publicly available.

12.5 The Sub-Committee, having noted the analysis of the continuous and annual outputs under the remit of the Sub-Committee, as well as the review of the terms of reference of the Sub-Committee (CCC 10/WP.3, paragraphs 4 to 9 and annexes 1 and 2), agreed:

.1 that the current annual output 7.28 on "Consideration of reports of incidents involving dangerous goods or marine pollutants in packaged form on board ships or in port areas" should be retained, but the Secretariat should discontinue the preparation of a consolidated report (information document); and

.2 to the updated draft terms of reference of the Sub-Committee, as a preliminary review outcome, as set out in annex 6, without any changes related to roles and responsibilities among sub-committees, that should be assessed and coordinated at the Committees' level, as necessary.

Biennial status report

12.6 The Sub-Committee noted that MEPC 81 and MSC 108 had approved the Sub-Committee's biennial agenda and the provisional agenda for CCC 10.

12.7 The Sub-Committee also noted that MSC 108 had agreed to include the output on "Revision of the Interim recommendations for carriage of liquefied hydrogen in bulk" in the provisional agenda for CCC 10 and to extend the target completion year to 2026.

12.8 The Sub-Committee recalled that it had requested the MSC to extend the target completion year of the existing output 1.17 on "Review of the IGC Code" to 2026 and to revise the scope to be "Development of guidelines for the use of ammonia cargo as fuel".

12.9 The Sub-Committee also recalled that the work on output 6.15 on "Revision of the Revised recommendations for entering enclosed spaces aboard ships (resolution A.1050(27))" had been completed at this session (see paragraph 8.23).

12.10 Concerning outputs 7.20 on "Develop measures to prevent the loss of containers at sea" and 7.40 on "Revision of the Revised Guidelines for the preparation of the Cargo Securing Manual (MSC.1/Circ.1353/Rev.2) to include a harmonized performance standard for lashing software to permit lashing software as a supplement to the Cargo Securing Manual", the Sub-Committee noted that the target completion year for MSC of both outputs had been set as 2025. In this regard, the Sub-Committee noted that MSC 110 would be the only session of the Committee in 2025, taking place before CCC 11. In this context, the Sub-Committee invited MSC 110 to consider the possible need to extend the target completion years of outputs 7.20 and 7.40.

12.11 Taking into account the progress made at the session, the Sub-Committee prepared the updated biennial status report for the 2024-2025 biennium (CCC 10/WP.2, annex 1), as set out in annex 7, for submission to MEPC 83 and MSC 110, with a view to approval.

Proposed provisional agenda for CCC 11

12.12 Taking into account the progress made at this session, the Sub-Committee prepared the proposed provisional agenda for CCC 11, as set out in annex 8 (CCC 10/WP.2, annex 2), for approval by MEPC 83 and MSC 110.

Correspondence groups established at the session

12.13 The Sub-Committee established correspondence groups on the following subjects, due to report to CCC 11:

.1 development of technical provisions for safety of ships using alternative fuels and related technologies (see paragraph 3.30);

.2 development of guidelines for the use of ammonia cargo as fuel (see paragraph 4.34); and

.3 prevention of the loss of containers at sea, revision of MSC.1/Circ.1353/Rev.2 and development of performance standards and guidelines for lashing software (see paragraph 11.9).

Arrangements for the next session

12.14 The Sub-Committee agreed to establish at its next session working and drafting groups on the following subjects:

.1 development of technical provisions for safety of ships using alternative fuels (agenda items 3);

.2 development of guidelines for the use of ammonia cargo as fuel (agenda item 4);

.3 amendments to the IMDG Code (agenda item 6);

.4 development of measures to prevent the loss of containers at sea and revision of the Revised guidelines for the preparation of the Cargo Securing Manual (MSC.1/Circ.1353/Rev.2) to include a harmonized performance standard for lashing software to permit lashing software as a supplement to the Cargo Securing Manual (agenda items 7 and 10); and

.5 revision of the Interim Recommendations for carriage of liquefied hydrogen in bulk (agenda item 11).

whereby the Chair, taking into account the submissions received on the respective subjects, would advise the Sub-Committee before CCC 11 on the final selection of such groups.

Intersessional meetings

12.15 Having noted that MSC 107 had approved the forty-first meeting of the E&T Group (IMSBC Code) to take place immediately after CCC 10, the Sub-Committee invited MSC 109 to approve the holding of two intersessional meetings of the E&T Group for the IMDG Code, one in the spring of 2025 and another one immediately after CCC 11.

12.16 The Sub-Committee also invited MSC 109 to approve re-establishment of the Intersessional Working Group on Development of Technical Provisions for Safety of Ships using Alternative Fuels (ISWG-AF 2), in 2025, with the associated draft terms of reference as set out in annex 3 (see also paragraph 3.29).

Date of the next session

12.17 The Sub-Committee also noted that the eleventh session of the Sub-Committee has been tentatively scheduled to take place from [8 to 12][22 to 26] September 2025.

Urgent matters to be considered at MSC 109

12.18 Having noted the close proximity of CCC 10 to MSC 109, the Sub-Committee invited MSC 109 to take action on urgent matters emanating from CCC 10, as set out in paragraph 16.3, with the remaining issues being considered at MEPC 83 and MSC 110.

13 ELECTION OF THE CHAIR AND VICE-CHAIR FOR 2025

13.1 In accordance with the Rules of Procedure of the Maritime Safety Committee, the Sub-Committee unanimously elected Mr. David Anderson (Australia) as Chair and Mr. Christian Allgeier (Germany) as Vice-Chair, both for 2025.

Expression of appreciation

13.2 The Sub-Committee expressed its appreciation to Ms. MaryAnne Adams (Marshall Islands) and Mr. David Anderson (Australia) for their excellent service during the last five terms of office when they served as Chair and Vice-Chair, respectively.

14 REVISION OF THE INTERIM RECOMMENDATIONS FOR CARRIAGE OF LIQUEFIED HYDROGEN IN BULK

Background

14.1 The Sub-Committee recalled that MSC 108 had adopted resolution MSC.565(108) on *Revised interim recommendations for carriage of liquefied hydrogen in bulk* (MSC 108/20, paragraph 14.11 and annex 20).

14.2 The Sub-Committee also recalled that MSC 108 had agreed to include the output on "Revision of the Interim recommendations for carriage of liquefied hydrogen in bulk" in the provisional agenda of CCC 10 and to extend the target completion year to 2026.

Membrane-type cargo containment system for the carriage of liquefied hydrogen in bulk

14.3 The Sub-Committee considered the following documents:

.1 CCC 10/14 (Republic of Korea), describing the concept and safety requirements of a recently developed membrane-type cargo containment system for the carriage of liquefied hydrogen in bulk, and proposing to add these details to the *Revised interim recommendations for carriage of liquefied hydrogen in bulk*;

.2 CCC 10/14/1 (IACS), commenting on document CCC 10/14 and proposing that further considerations are required before the *Revised interim recommendations for carriage of liquefied hydrogen in bulk*, as adopted by resolution MSC.565(108), can be amended; and

.3 CCC 10/14/2 (Republic of Korea), commenting on paragraphs 11.3 and 12.3 of the annex to document CCC 10/14; providing further explanations for paragraphs 12.3.1 and 12.3.2; and including supplementary descriptions regarding the features of fire hazards in case of hydrogen leakage into inter-barrier space in membrane-type cargo containment systems for the development of the Interim recommendations for the carriage of liquefied hydrogen in bulk.

14.4 In this context, the Sub-Committee noted the following views expressed on this matter:

.1 as demand for hydrogen, one of the carbon-free fuels, is expected to grow to achieve the targets of the IMO GHG Strategy, the need for a liquefied hydrogen carrier that can supply large amounts of hydrogen will also grow. Therefore, it is proposed to revise the Interim Recommendations for carriage of liquefied hydrogen in bulk to include a membrane-type of cargo tank capable of transporting large quantities of liquefied hydrogen to meet the increasing demand. Taking into account the target completion year of 2026, an informal group could be established to revise the Interim recommendations, with a view to reporting to CCC 11; and

.2 specific guidelines on generating, maintaining and monitoring the vacuum in insulation spaces, along with emergency procedures in case of cargo leakage or loss of vacuum, are well-justified. However, under the stated conditions wherein both primary and secondary insulation spaces are maintained in vacuum, in such a scenario it would then introduce a "single point of failure" risk, i.e. if the vacuum system fails, it could compromise the entire containment system, especially considering the rapid condensation of air at such low temperatures. This risk might necessitate additional backup systems or fail-safe arrangements to mitigate potential failures.

14.5 Following discussions, the Sub-Committee agreed to invite interested Member States and international organizations to work jointly with a view to making a submission to CCC 11, containing a draft revised version of resolution MSC.565(108), taking into account documents CCC 10/14, CCC 10/14/1 and CCC 10/14/2.

15 ANY OTHER BUSINESS

Proposed editorial corrections to mandatory and related instruments

15.1 The Sub-Committee considered document CCC 10/15 (France), proposing editorial corrections to SOLAS regulation II-2/19, as well as to some other related instruments.

15.2 Following the discussion, the Sub-Committee noted the following views expressed on document CCC 10/15:

.1 although there are inconsistencies between the IMSBC Code and SOLAS, and within SOLAS itself, as to how to describe dangerous goods in solid form in bulk, these inconsistencies in SOLAS have been present, practically speaking, as long as those parts of SOLAS 74 have been in effect, and they were not amended as and when the transport of packaged dangerous goods and then solid bulk cargoes were implemented in SOLAS in a mandatory fashion. Although the proposed amendments to SOLAS could be seen as editorial, they could also be dealt with by a UI, until the relevant chapters are proposed to be amended. For the proposal to clarify the application of the Document of Compliance for dangerous goods for solid bulk cargoes, the proposal can be supported, recalling that this issue has been raised over several years. The proposed interpretation of SOLAS provisions is supported. However, it should be noted that this may not have been the interpretation of flag Administrations and their recognized organizations over the years. Again, this could be dealt with by a UI, if it is agreed to be a better way to implement these amendments before the next set of proposed amendments to the relevant chapters; and

.2 the proposed amendments are acceptable for the most part. However, with regard to section 6 of annex 2 of document CCC 10/15, it should be noted that the proposal would alter the meaning in SOLAS.

15.3 After consideration, the Sub-Committee:

.1 invited interested Member States and international organizations to submit a proposal to the MSC for a new output concerning the proposals to amend SOLAS regulation II-2/19 and FAL.2/Circ.133-MEPC.1/Circ.902-MSC.1/Circ.1646-LEG.2/Circ.4 on *List of certificates and documents required to be carried on board ships, 2022*; and

.2 agreed to the proposals in document CCC 10/15 to amend MSC.1/Circ.1266 on *Carriage of dangerous goods*, in principle, and referred these proposed amendments to E&T 41 for further consideration, with a view to approval at MSC 110.

Common guidance on the presentation and loading of vehicles

15.4 The Sub-Committee noted that this issue (CCC 10/INF.9) had been considered under agenda item 6 (see paragraphs 6.30 to 6.33).

List of risk-prevention-related areas in connection with containership fire safety

15.5 The Sub-Committee noted that this issue (SSE 10/20, paragraphs 10.39 and 10.40; CCC 10/15/1 and CCC 10/15/2) had been considered under agenda item 6 (see paragraphs 6.44 to 6.49 and 6.55).

E-learning module on "Safe transport of class 7 by sea"

15.6 The Sub-Committee recalled that FAL 48 had noted the information contained in document FAL 48/19/2 (IAEA) on the e-learning platform for safe transport of radioactive material (V2.0), established by IAEA, which aimed to enhance knowledge and awareness among professionals (regulators, industry) involved in this sector. To address the delays and denials of shipments, IAEA was planning to develop a module on "Safe transport of class 7 by sea" in coordination with IMO, which would be available on the IAEA's platform (FAL 48/20, paragraph 19.8).

15.7 The Sub-Committee also recalled that FAL 48 had noted the support expressed by some delegations for IAEA to work on the preparation of a module on "Safe transport of class 7 by sea"; and that FAL 48 had invited CCC 10 to consider the outcome of the discussions regarding IAEA's request in connection with the preparation of the module on "Safe transport of class 7 by sea", and to take action, as appropriate. FAL 48 had also invited IAEA to be kept informed about the development and implementation of the new e-learning platform (FAL 48/20, paragraph 19.9).

15.8 Having noted with appreciation the initiative for developing a module on "Safe transport of class 7 by sea", the Sub-Committee agreed to request the Secretariat to cooperate with IAEA to develop the module.

IACS unified interpretation GF 20 of paragraph 5.3 of the Interim guidelines for the safety of ships using methyl/ethyl alcohol as fuel (MSC.1/Circ.1621)

15.9 The Sub-Committee noted the information contained in document CCC 10/INF.10 (IACS), informing the Sub-Committee of IACS unified interpretation GF 20 of paragraph 5.3 of MSC.1/Circ.1621 regarding arrangements for methyl/ethyl alcohol fuel tanks.

15.10 Following the discussion, the Sub-Committee noted the following views expressed regarding this matter:

.1 UI in document CCC 10/INF.10 differs in nature from the UI presented in document CCC 10/INF.3, because the former concerns a non-mandatory instrument. Document CCC 10/INF.10 was submitted for information purposes and could be noted only, unless the Sub-Committee would find it appropriate to consider that recommendatory instrument. This approach is in line with paragraph 5.11 of the Organization and method of work, which states that subsidiary bodies should avoid developing interpretations of guidelines; and

.2 regardless of whether the instrument in question is mandatory or non-mandatory in nature, the same principles for considering UIs should apply. In addition, regarding non-mandatory instruments, instead of UI, in principle, an amendment should be proposed, as appropriate.

15.11 After consideration, the Sub-Committee agreed to report the outcome of the consideration of document CCC 10/INF.10 to the MSC, in conjunction with reporting on other UI-related matters (see paragraphs 5.58 to 5.61 and section 10).

"Hazard Assessment of Ores and Concentrates for Marine Transport" – updated guidance 2024

15.12 The Sub-Committee noted the information contained in document CCC 10/INF.14 (IIMA), concerning the forthcoming publication of updated guidance on "Hazard Assessment of Ores and Concentrates for Maritime Transport" by the International Council on Mining and Metals (ICMM).

Guidelines for the treatment of residual aluminum phosphide (hydrogen phosphide) fumigants

15.13 The Sub-Committee noted that this issue (CCC 10/INF.19) had been considered under agenda item 5 (see paragraphs 5.7 to 5.13).

Introduction to 7% nickel steel for cryogenic applications

15.14 The Sub-Committee noted the information contained in document CCC 10/INF.20 (Japan), introducing 7% nickel steel for cryogenic applications.

Introduction of shipboard carriage and storage technology using methyl-cyclo-hexane for green hydrogen production with wind

15.15 The Sub-Committee noted the information contained in document CCC 10/INF.22 (Japan) on the "Wind Hunter" concept that enables ships to produce green hydrogen on board and to deliver to shore, while the ship emits zero emissions throughout the entire process of its sail. Document CCC 10/INF.22 introduced the process of producing green hydrogen on board; the ongoing demonstration project, "Wind Hunter"; as well as potential SOLAS-related concerns that may arise in realizing the Wind Hunter project.

Expressions of appreciation

15.16 The Sub-Committee noted a statement made by the delegation of ITF, as set out in annex 9.

15.17 The Sub-Committee expressed its appreciation and bid farewell to Mr. Bill Liddell (United Kingdom) who had attended IMO for 25 years.

16 ACTION REQUESTED OF THE COMMITTEES

Consideration of the report of the Sub-Committee

16.1 The draft report of the session (CCC 10/WP.1) was prepared by the Secretariat for consideration by the Sub-Committee.

16.2 During the meeting held on Friday, 20 September 2024, delegations were given an opportunity to provide comments on the draft report (CCC 10/WP.1), for the Secretariat to prepare the revised draft report (CCC 10/WP.1/Rev.1), incorporating the comments made, as well as the outcome of the consideration of the actions requested of the Sub-Committee by the working and drafting groups established at this session. Member States and international organizations wishing to provide further editorial corrections and improvements, including finalizing individual statements, were given the deadline of Friday, 9 October 2024, 23.59 (UTC+1), to do so by correspondence, in accordance with paragraphs 4.37 and 4.38 of the Organization and Method of Work.

Action requested of the Committees

16.3 The Maritime Safety Committee, at its 109th session, is invited to:

[to be prepared by the Secretariat in consultation with the Chair after the meeting]

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

[to be prepared by the Secretariat in consultation with the Chair after the meeting]

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

[to be prepared by the Secretariat in consultation with the Chair after the meeting]

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ANNEXES

[to be prepared by the Secretariat after the session]