

## **IMO SUB-COMMITTEE ON CARRIAGE OF CARGOES AND CONTAINERS (CCC) 20 – 29 SEPTEMBER 2023**

The IMO Sub-Committee on Carriage of Cargoes and Containers held its 9<sup>th</sup> session, hybrid, (CCC 9), at IMO HQ from Wednesday 20 through Friday 29 September 2023 under the Chairmanship of Mrs Maryanne Adams (Marshall Islands) and her Vice Chair, Mr David Anderson (Australia), both of whom were re-elected for 2024. InterManager was represented in plenary discussion, also the Working Group on revision of Resolution A.1050(27). The session was attended by delegations from Member States, Associate Members of IMO and observers from inter-governmental and non-governmental organisations in consultative status.

### PROVISIONAL AGENDA.

- 1 Adoption of the agenda – p 3
- 2 Decisions of other IMO bodies – p 3/4/5
- 3 Amendments to the IGF Code and development of guidelines for alternative fuels and related technologies – p 5 - 8
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Three Working Groups (WG), and two Drafting Groups (DG) were formed and chaired as follows:

- WG1 Development of technical provisions for safety of ships using alternative fuels (agenda item 3), Mr. C. Allgeier (Germany).
- WG2 Amendments to the IGF Code and review of the IGC Code (agenda items 3 and 4), Mr. E. Linsner (Marshall Islands).
- WG3 Review of resolution A.1050(27) (agenda item 8), Dr. S. Ota (Japan).
- DG1 Amendments to IMDG Code (agenda item 6), Mr. S. Webb (United States).
- DG2 Revision of the interim recommendations for carriage of liquefied hydrogen in bulk (agenda item 7), Mr. D. Anderson (Australia).

ADDRESS BY THE SECRETARY-GENERAL OF IMO. In the absence of the Secretary-General, Mr Kitack Lim, the welcoming address was delivered on his behalf by Mrs Heike Deggim, Director Maritime Safety Division.

Mrs Deggim expressed deepest condolences to the Libyan Authorities and the families of those who lost their lives in the massive flooding in eastern Libya following storm Daniel, also to the Government of the Kingdom of Morocco and to all those impacted by the devastating earthquake.

Turning to this year's World Maritime theme, "MARPOL at 50 – Our commitment goes on", she said that this reflects the Organisation's long history of protecting the environment from the impact of shipping via a robust regulatory framework, that of MARPOL, the International Convention for the Prevention of Pollution from Ships. The theme for 2024 chosen by the IMO Council at its 129<sup>th</sup> session is: "Navigating the world, safety first", underlining IMO's commitment and work to enhance maritime safety by addressing the full range of safety regulatory implications arising from new and adapted technologies and the introduction of alternative fuels, among others.

Delving into the agenda, she observed that efforts to develop amendments to the IGF Code and guidelines for alternative fuels and related technologies will be progressed as also will interim guidelines for the safety of ships using hydrogen and ammonia as fuel, taking into account technical provisions for the use of low-flashpoint oil fuel, whilst gathering experience on the use of methanol and fuel cells.

The ongoing revision of the IGC Code involves a large number of amendments but these will be considered systematically and thoroughly; the Editorial & Technical Group (E & T) will finalise the latest amendments to the International Maritime Dangerous Goods (IMDG) Code for submission to MSC 108 for adoption in the form of a consolidated version of the whole IMDG Code.

Mrs Deggim emphasised the importance of a new item on the agenda, that of the revision [championed by InterManager and members of the HEIG] of the recommendations for entering enclosed spaces on board ships, adopted by resolution A.1050(27). She stated that an alarming frequency of accidents related to entering enclosed spaces has been observed, resulting in a profoundly distressing culmination of human lives lost. She therefore urged the Sub-Committee to comprehensively review the existing recommendations with a view to improving such guidance.

Concluding, on behalf of the Secretary-General, Mrs Deggim extended best wishes to all delegates for every success in the Sub-Committee's deliberations.

**1. ADOPTION OF THE AGENDA.** The agenda was duly adopted.

**2. DECISIONS OF OTHER IMO BODIES.**

**General.** The Sub-Committee noted the outcomes of MSC 106, MSC 107, C 128, MEPC 79 and MEPC 80 relevant to the work of the Sub-Committee, as reported in documents CCC 9/2 and CCC 9/2/1 (Secretariat).

**Maritime transport of plastic pellets.** The Sub-Committee noted that PPR 10, in considering the matter concerning reduction of the environmental risk associated with maritime transport of plastic pellets, had agreed to request input by the CCC Sub-Committee, as follows:

.1 note the text of the draft circular (set out in annex 9 to the report of PPR 10) on the recommendations for the carriage of plastic pellets by ships in freight containers; and,

.2 provide advice on what further recommendation on packaging measures, if any, would be appropriate for inclusion in paragraph 1.1 of the circular, considering the discussion by the Working Group.

In this context, the Sub-Committee had three documents for its consideration, and after a prolonged plenary discussion, the Sub-Committee agreed that the draft MEPC circular should be retained as set out in annex 9 to document PPR 10/18, in particular that the draft text in paragraph 1.1 should not be amended and that a reference to the IMDG Code need not be included.

Subsequently, the Sub-Committee invited PPR 11 to note this decision and, that paragraphs 39 to 44 of document CCC 9/2/2 could be considered, with a view to providing further clarifications in the draft MEPC circular, if appropriate.

**Current situation after the Russia Federation's withdrawal from the Black Sea Grain Initiative.** The Sub-Committee noted Ukraine's statement pointing out that the Russian

Federation had deliberately blackmailed the world with the threat of a food crisis, whilst simultaneously continuing illicit trafficking of Ukrainian agricultural products. These had been looted from the temporarily occupied territories in Luhansk, Donetsk, Kherson and Zaporizhzhia regions, whilst systematically attacking the Ukrainian ports of Big Odesa and those on the Danube River to prevent the export of Ukrainian grain by sea. The delegation also stated its efforts to restore free shipping in the Black Sea region and to minimise the impacts of a possible world food crisis, in particular that under the special maritime corridor (announced at the 129th session of the IMO Council). Five vessels had used this corridor to exit Ukraine's territorial waters since 15 August whilst two bulkers arrived recently at the port of Chornomorsk to load about 20,000 tons of wheat, strengthening and broadening Ukrainian's military presence in the Black Sea to increase the security for ships; and the establishment of a compensation scheme. This has a budget of \$540 million intended to support commercial shipping to and from Ukraine and underpin liability arising from attacks on merchant ships that enter the Black Sea with the intention of loading and/or unloading goods in Ukraine's territory. The delegation also stated that, given the obvious failure of the Russian Federation to blockade Ukrainian ports, any attempts to revive the defective Grain Initiative by proposing concessions to Russia and loosening the sanctions regimes would be counterproductive. Ukraine therefore called upon the international community and reputable international organisations like the UN, IMO, FAO, UNCTAD and others to focus their efforts on restoring the free shipping in the Black Sea region and minimising the impacts of a possible world food crisis.

The delegations of Australia, Canada, Spain (supported by Belgium, Cyprus, Denmark, France, Finland, Germany, Greece, Ireland, Italy, Kingdom of the Netherlands, Norway, Poland, Portugal, Sweden and the European Commission), Japan, United Kingdom and United States also made statements, expressing their solidarity with Ukraine and the Ukrainian people. The majority of delegations that spoke condemned the Russian Federation's systematic attacks on Ukrainian ports' infrastructure and grain storage facilities in the Odesa region and their attempts to destroy the Odesa port plus those on the Danube River following their withdrawal from the Black Sea Grain Initiative last July. They welcomed the efforts made by Ukraine aimed at safeguarding the safety, stability and freedom of international navigation in the Black Sea and preventing a global food crisis, calling on the Russian Federation to refrain from threatening international supply chains that support other countries and provide food by targeting civilian cargo ships.

The Sub-Committee noted the statement made by the delegation of the Russian Federation underlining the fact that previous delegations, yet again, have produced a series of unfounded facts in order to mislead IMO Member States, inter alia, with regard to the alleged attacks on civilian cargo ships. The delegation yet again stressed that the matters raised are outside the mandate of this technical Sub-Committee. In respect of the Black Sea Grain Initiative, on many occasions its routes had been used by Ukrainian forces to commit terrorist attacks. Apart from this, the second part of the Black Sea Grain Initiative package of providing Russian grain and fertilisers to alleviate a food crisis had never worked, because NATO countries directly blocked this humanitarian effort and instead of contributing to it preferred to further supply arms and munitions to Ukraine. It was confirmed that for any such initiative to be effective and successful, the interests of all the parties involved should be respected and acted upon.

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

**Background.** The Sub-Committee recalled that CCC 8 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.

**Report of the Correspondence Group.** The Sub-Committee had for its consideration the report of the Correspondence Group on Development of Technical Provisions for the Safety of Ships using Alternative Fuels and took action as follows:

**Interim guidelines for ships using hydrogen as fuel.** The Sub-Committee noted the discussions and progress made by the Group on the development of Interim guidelines for ships using hydrogen as fuel. Five submissions were discussed in plenary, following which the Sub-Committee instructed the Working Group on Development of Technical Provisions for Safety of Ships using Alternative Fuels (WG 1), to further develop the draft Interim guidelines for ships using hydrogen as fuel, towards finalisation.

**Safety provisions for ships using low-flashpoint oil fuels.** The Sub-Committee noted the Group's discussion on the development of safety provisions for ships using low-flashpoint oil fuels. Having considered document CCC 9/3/10 (Russian Federation), commenting on document CCC 9/3 with a proposal to use an approach to provide safety by means of controlling air temperature in engine-rooms, as well as relevant specific proposals to the text of draft Interim guidelines for the safety of ships using low flashpoint oil fuels prepared by the Correspondence Group, the Sub-Committee also took note of a number of views expressed in plenary on the development of safety provisions for ships using low-flashpoint oil fuels as follows:

- leakage of low-flashpoint diesel fuels into conventional engine-rooms will result in potentially dangerous increased concentrations of ignitable fuel vapour and in this regard, the multi-walled fuel pipes concept provides the best protection in all situations, regardless of the ambient engine-room temperature;
- a temperature-controlled machinery space concept can be further considered as an equivalent measure provided the temperature is always kept at least 15 degrees centigrade below the lowest allowable flashpoint of the fuel;
- the provisions for a potential temperature-controlled machinery space concept should be complemented by proactive mitigating mechanisms such as automatic changeover to fuels meeting the 60°C flashpoint requirement, if the temperature limit is exceeded;
- the Sub-Committee should further develop the draft Interim guidelines for the safety of ships using low flashpoint oil fuels which would allow the shipping industry to extend its fuel options that have already been used safely in marine applications;



- studies provided to previous sessions, e.g. CCC 6/INF.6 on the FSA Study on the use of low-flashpoint oil fuels, should be taken into account in the further development of the draft Interim guidelines; and,
- document CCC 6/INF.6 should be taken into account in the course of further development of the guidelines.

Following discussion, the Sub-Committee instructed WG 1, time permitting, to further develop the draft Interim guidelines for ships using low-flashpoint oil fuels, based on annex 2 to document CCC 9/3/Add.1.

**Interim guidelines for ships using ammonia as fuel.** The Sub-Committee noted the discussions and progress made by the CG on the development of Interim guidelines for ships using ammonia as fuel (CCC 9/3, 18 to 27 and annexes 4 to 7). The Sub-Committee had seven submissions for consideration and these were all discussed in plenary and in the ensuing debate, the following views were noted:

- When discussing toxicity, it is imperative to further consider the flammability of ammonia;
- spaces should be protected with fixed gas detection systems sending a separate alarm when the ammonia concentration exceeds a certain level to avoid explosive situations and onboard personnel should be provided with portable ammonia gas detection equipment;
- document CCC 9/3/1 should be forwarded to the Working Group to be taken into account when further developing the draft Interim guidelines on the use of ammonia as a fuel;
- the draft Interim guidelines should consider all potential sources of ammonia when a ship is in operation to cover all in-service and maintenance activities;
- for the further development of the draft Interim guidelines, safety principles for toxic fuels should be agreed upon, though for conventional fuel such as LNG fuel under the IGF Code was developed by focusing on lower explosive limit related to fire and explosions;
- the study on the toxicity and corrosivity of ammonia as a marine fuel should continue, in particular the safe use of mechanical ventilation on board should be carefully considered;
- a number of important areas still need further consideration, e.g. toxicity criteria, impact of ammonia vapours and location of gas detectors, also a comprehensive review on the existing instruments is needed; and,
- the use of toxic fuel is unprecedented and the health risk for crew should be highlighted; therefore, a conservative approach on the development of safety provisions in relation to ammonia should be taken.

In this context, the Sub-Committee instructed WG 1 to further develop the draft Interim guidelines for ships using ammonia as fuel, towards finalisation, based on annex 4 to document CCC 9/3.

**Work plan for the development of the IGF Code and safety provisions for alternative fuels.** The Sub-Committee recalled that CCC 8 updated the work plan for the development of the IGF Code and safety provisions for alternative fuels, whilst MSC 107 agreed to include, in the biennial agenda of the Committee for 2024-2025, a continuous output on "Development of a safety regulatory framework to support the reduction of GHG emissions from ships using new technologies and alternative fuels"; the goal of this output being to develop a regulatory framework (to include regulations and/or guidelines) to address new alternative fuels and new technologies for the safe reduction of ships' GHG emissions.

Three submissions were considered, one by IACS summarising the experience gained in the use of the Interim guidelines for the safety of ships using fuel cell power installations; the second by Singapore highlighting the technical considerations when transposing the Interim guidelines for the safety of ships using methyl/ethyl alcohol as fuel (MSC.1/Circ.1621) into mandatory instruments under the IGF Code; and the third by China highlighting the technical considerations when transposing the Interim guidelines for the safety of ships using methyl/ethyl alcohol as fuel (MSC.1/Circ.1621) into mandatory instruments under the IGF Code. China also submitted an Information paper presenting the full report of an experimental study of ventilation effect and arrangement for onboard enclosed spaces containing methanol.

Following a fairly extensive discussion, the Sub-Committee instructed WG 1 to update the work plan for the development of the IGF Code and safety provisions on alternative fuels, based on annex 2 to document CCC 8/18, and taking into account documents CCC 9/3/4, CCC 9/3/6, CCC 9/3/7 and CCC 9/INF.23.

**Report of the Working Group on development of technical provisions for safety of ships using alternative fuels (WG 1).** Having considered WG 1's report, the Sub-Committee approved it in general and took action as follows:

- .1 noted the progress made on the draft interim guidelines for the safety of ships using hydrogen as fuel;
- .2 agreed to the use of the term "side shell" instead of the term "ship's side", as contained in the IGF Code, to align with SOLAS chapter II-1;
- .3 agreed to the clerical error in the IGF Code and to rectify it by including it in the draft IGF Code amendments developed under agenda item 3;
- .4 noted the progress made on the draft interim guidelines for the safety of ships using ammonia as fuel, as well as the matters to be considered by correspondence;
- .5 noted that, due to time constraints, the Group did not consider the draft guidelines for the use of oil fuels with a flashpoint between 52°C and 60°C;
- .6 agreed to the updated work plan;
- .7 agreed to the convening of an intersessional working group from 9 to 13 September 2024, immediately prior to CCC 10, subject to concurrent approval by MSC 108 and

endorsement by the Council, taking into account the urgency of providing guidance to Administrations, shipowners and the industry at large on the safe use of hydrogen and ammonia as fuel;

.8 agreed to re-establish the Correspondence Group on Development of Technical Provisions for Safety of Ships using Alternative Fuels, with the terms of reference prepared by the Group, and; and,

.9 authorised the Correspondence Group to convene remote meetings using a suitable platform in order to consider any of the terms of reference, as necessary, for the further development of the three sets of draft guidelines mentioned in the draft terms of reference.

**Draft amendments to the IGF Code.** The Sub-Committee had five documents for consideration and following discussion, instructed the Working Group on Amendments to the IGF Code and Review of the IGC Code (WG 2), to prepare a draft set of amendments to the IGF Code, based on annex to document CCC 9/4/Add.1 and taking into account documents CCC 9/3/3, CCC 9/3/5, CCC 9/3/8 and CCC 9/3/9.

**WG 2 Report.** Having considered the part of the report of the Working Group on Amendments to the IGF Code and Review of the IGC Code, the Sub-Committee approved it in general and took action as follows:

.1 noted the Group's discussion on the draft amendments to the IGF Code and that the Group had finalised them;

.2 invited interested Member States and international organisations to further develop the requirements on methodology and boundary conditions to be used in dispersion analysis stipulated in new draft sub-paragraph 12.5.2.4 of the IGF Code to ensure that uniform and acceptable results are obtained throughout the application of this requirement; and,

.3 agreed to the draft amendments of the IGF Code, together with the associated check/monitoring sheet and record format, with a view to approval at MSC 108 and subsequent adoption at MSC 109;

**4. REVIEW OF THE IGC CODE.** The Sub-Committee recalled that CCC 8 had established a Correspondence Group to further progress amendments to the IGC and IGF Codes. Document CCC 9/4 (Marshall Islands), provided a report by the CG which the Sub-Committee approved in general and took action under the following headings which were subsequently discussed in WG 1: High manganese austenitic steel; Cargo tank filling; Draft amendments to the IGC Code; LPG cargo as fuel; Risk assessment; Additional submissions on other LPG cargoes; Addition of an ESD protected machinery space safety concept; Consequential amendments to the IGC Code; and, Draft check/monitoring sheet for amendments to the IGC Code.

Having considered the part of WG 1's report on Amendments to the IGF Code and Review of the IGC Code related to this agenda item, the Sub-Committee approved it in general and took action as follows:



- .1 noted the Group's discussion and progress made on the draft amendments to the IGC Code for finalisation at CCC 10, with a view to approval at MSC 109, and subsequent adoption at MSC 110;
- .2 noted the Group's consideration on the need to develop guidelines for the use of cargoes identified as toxic products which are required to be carried in type 2G/2PG ships as fuel;
- .3 endorsed the Group's confirmation that high manganese austenitic steel is considered resistant to ammonia stress corrosion cracking and, therefore, suitable for ammonia cargo and/or fuel tanks containing ammonia;
- .4 agreed the draft MSC circular on Revised guidelines on the application of high manganese austenitic steel for cryogenic service, with a view to approval by MSC 108 and circulation as MSC.1/Circ.1599/Rev.3;
- .5 agreed the draft MSC circular on Guidelines for the acceptance of alternative metallic materials for cryogenic service in ships carrying liquefied gases in bulk and ships using gases or other low-flashpoint fuels, with a view to approval by MSC 108;
- .6 endorsed the Group's view that safety risks should be addressed by a set of amendments to the IGC Code;
- .7 agreed the draft MSC circular on Interim guidelines for use of LPG cargo as fuel, for approval by MSC 108;
- .8 noted the Group's consideration on the need to develop draft amendments to the IGC Code with respect to the safe use of LPG as fuel based on the interim guidelines, if agreed, as well as such provisions for safe use of LPG as fuel for gas carriers carrying cargoes listed in chapter 19 of the IGC Code other than LPG;
- .9 noted the Group's discussion on the draft UI proposals and that due to time restrictions, not all the UIs have been addressed and, therefore, further work is needed intersessionally;
- .10 regarding the application of the new IGC Code amendments to new and/or existing ships:
  - .1 endorsed the Group's agreement that under the current scope of the output, the revision work of the IGC Code should be done as an amendment and not as a new code replacing the 2014 Code; and,
  - .2 invited MSC 108 to note the discussion, that the current scope of the output might need to be revisited; and,

.3 agreed the recommendation to establish a correspondence group to further progress the work intersessionally, with draft terms of reference as prepared by the Group.

**5. AMENDMENTS TO THE IMSBC CODE AND SUPPLEMENTS.** 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. The Sub-Committee further noted that, after consideration of the submissions under this agenda item, it would provide clear advice and instruction to E&T 40, in order to prepare draft amendments (08-25) to the IMSBC Code, for consideration at CCC 10.

**Report of E&T 37.** The Sub-Committee considered document CCC 9/5 (Secretariat), the report of E&T 37, together with the related documents submitted to the session, which covered the following matters:

Amendment 07-23 to the IMSBC Code; Fish meal; CELESTINE; Alignment of the IMSBC Code with SOLAS on declaration of solid bulk density; Substance identification number for solid bulk cargoes; Proposed amendments to the individual schedule for COAL; Possible consequences for the individual schedule for CHARCOAL in the IMSBC Code if UN 1361 is considered as dangerous goods regardless of the result of the UN N.4 test; Proposal for amendments to the IMSBC Code in connection with the carriage requirement of spare charges for SCBAs (self-contained breathing apparatuses); IMSBC Code schedules for iron ore pellets; Chemical gypsum powder; Contaminated soil; Proposal for amending the recommendations on the safe use of pesticides in ships applicable to the fumigation of cargo holds (MSC.1/Circ.1264); 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); Reclassification of CASTOR BEANS or CASTOR MEAL or CASTOR POMACE or CASTOR FLAKE UN 2969 as MHB (TX and/or CR) and amendment of Bulk Cargo Shipping Name; Amendment of 4.2 of the IMSBC Code regarding the cargo information to be provided by the shipper and the sample cargo declaration form; and, Proposal for amendment to the individual schedule for DIRECT REDUCED IRON (A) Briquettes, hot-moulded.

Proposals for new individual schedules were given to: Phosphate rock fines (uncalcined); Zinc slag (coarse); Untreated incinerator bottom ash (U-IBA); Iron ore briquettes; Asphalt granulates (non-hazardous); Pea protein concentrate pellets (non-hazardous); Petroleum coke (calcined or uncalcined); and, Wheat gluten pellets.

**Proposed draft Unified Interpretations of Appendix 1 – Individual schedules of solid bulk cargoes of the IMSBC Code.** The Sub-Committee had for its consideration document CCC 9/10 (IACS), proposing draft unified interpretations of appendix 1 – individual schedules of solid bulk cargoes of the IMSBC Code concerning certified safe type electrical equipment for ships carrying materials hazardous only in bulk (MHB). Following discussion, the Sub-Committee invited IACS, taking into account the views expressed, to submit a new proposal to E&T 40 for further consideration.

**Draft amendment 08-25 to the IMSBC Code and Instructions to the E&T Group.** The Sub-Committee instructed E&T 40 to prepare the draft amendments (08-25) to the IMSBC Code, based on the documents submitted to CCC 9 and related documents submitted to E&T 40, taking into account comments made and decisions taken by the Sub-Committee, and submit a written report to CCC 10. E&T 40 was also instructed to consider new proposals, if submitted, and to advise CCC 10 accordingly.

## **6. AMENDMENTS TO THE IMDG CODE AND SUPPLEMENTS.**

**General.** The Sub-Committee recalled that MSC 105 had adopted amendments (41-22) to the IMDG Code by resolution MSC.501(105), which enters into force on 1 January 2024. It was also recalled that CCC 8 had instructed the Editorial and Technical Group (E&T 38) to prepare the draft amendments (42-24) to the IMDG Code and the draft editorial corrections to amendment 41-22 to the IMDG Code. The Sub-Committee noted that, after consideration of the submissions under this agenda item, it should provide clear advice, instruction and authorisation to E&T 39, in order to finalise the draft amendments (42-24) to the IMDG Code, with a view to adoption at MSC 108 in 2024.

The following matters were discussed in plenary prior to commissioning the drafting group:

Editorial corrections to the English, French and Spanish versions of amendment 41-22 to the IMDG Code; Carbon; Stabilised substances; Draft amendment 42-44 to the IMDG Code; Amendments to the EmS Guide; Revision of IAEA's [SSR-6 (Rev.1)] regulations for the safe transport of radioactive material; Issues to be considered by the UNTDG Sub-Committee; and, Report of the Correspondence Group on the Review of Transport Provisions for Vehicles.

Proposals related to amendment 42-24 included: Clarification of assigning portable tank special provision for the degree of filling; Amendment to paras 7.2.6.1 and 5.4.3.1 of the IMDG Code; Stowage and segregation of lithium battery energy storage cabinets; and, Amendments to the shipping conditions of seed cakes in the IMDG Code.

**Establishment of a drafting group.** Having considered the above matters, the Sub-Committee established the Drafting Group on Amendments to the IMDG Code and instructed it accordingly.

**Report of the Drafting Group on Amendments to the IMDG Code.** Having considered the report of the Drafting Group on Amendments to the IMDG Code, the Sub-Committee approved it in general and took action as follows:

.1 noted the deliberations of the Group on the draft new UN 3556, UN 3557 and UN 3558; and agreed, in principle, to the corresponding draft amendments to the IMDG Code and referred them to E&T 39 for further consideration, with a view to incorporation, as appropriate, into draft amendment 42-24 to the IMDG Code;

.2 noted the deliberations of the Group on CARBON and the corresponding draft amendments to the IMDG Code prepared by the Group, noting that there are remaining

issues in square brackets to be resolved; and agreed, in principle, to the draft amendments to the IMDG Code, referring them to E&T 39 for further consideration, with a view to incorporation, as appropriate, into draft amendment 42-24 to the IMDG Code;

.3 noted the deliberations of the Group on special provisions for seed cakes and agreed to invite interested Member States and international organisations to submit further proposals and information on SP929 to CCC 10;

.4 noted the deliberations of the Group on competent authorities and agreed, in principle, to the corresponding draft amendments to the IMDG Code, noting that there are remaining issues in square brackets to be resolved; and refer them to E&T 39 for further consideration, with a view to incorporation, as appropriate, into draft amendment 42-24 to the IMDG Code; and agreed to invite interested Member States and international organisations to submit further proposals and information on SP907, SP926 and SP928 to CCC 10;

.5 noted the deliberations of the Group on stowage of n.o.s. substances of class 4.3 and agreed, in principle, to the corresponding draft amendments to the IMDG Code and refer them to E&T 39 for further consideration, with a view to incorporation, as appropriate, into draft amendment 42-24 to the IMDG Code; and agreed to invite Germany, in cooperation with other interested Member States to submit a corresponding proposal for new UN numbers to UNTDG; and,

.6 agreed the Group's recommendation to re-establish the correspondence group on the review of transport provisions for vehicles with stipulated terms of reference; and also to encourage active participation in the work of the correspondence group.

## **7. REVISION OF THE INTERIM RECOMMENDATIONS FOR CARRIAGE OF LIQUEFIED HYDROGEN IN BULK.**

**Background.** The Sub-Committee recalled that MSC 105 had agreed to include in the biennial agenda of the CCC Sub-Committee for 2022-2023 and the provisional agenda for CCC 8 an output on "Revision of the Interim recommendations for carriage of liquefied hydrogen in bulk", with a target completion year of 2024. CCC 8 invited interested Member States and international organisations to contact the delegation of Japan with a view to jointly work informally on a submission to CCC 9, which was duly done.

**Revision of the interim recommendations.** The Sub-Committee had for its consideration document CCC 9/7 providing draft revised interim recommendations for carriage of liquefied hydrogen in bulk and following discussion, it was agreed that parts A to C of the draft revised interim recommendations should be finalised by a drafting group during this session, using the annex of document CCC 9/7 as a basis.

**Report of the Drafting Group.** Having considered the report of the Drafting Group on Revision of the Interim recommendations for carriage of liquefied hydrogen in bulk, the Sub-Committee approved it in general and, in particular:

.1 agreed to the draft revised interim recommendations for carriage of liquefied hydrogen in bulk, for submission to MSC 108 for approval; and,

.2 noted that the work under this output has been completed.

## **8. REVISION OF RESOLUTION A.1050(27) TO ENSURE THE SAFETY OF PERSONNEL ENTERING ENCLOSED SPACES ON BOARD SHIPS.**

**Background.** MSC 106 agreed to include, in the biennial agenda of the CCC Sub-Committee for 2022-2023 and the provisional agenda of CCC 9, an 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 CCC Sub-Committee; and MSC 106 also agreed that the new output would absorb the ongoing work of the CCC Sub-Committee on the matter.

**Consideration of documents submitted to this session.** A total of sixteen documents were submitted on this item, of which InterManager contributed three plus a further three Information papers. In the ensuing discussion, the Sub-Committee noted that:

.1 Documents for which InterManager was responsible, CCC 9/8, CCC 9/8/1 and CCC 9/8/2, as well as the supporting documents CCC 9/INF.3, CCC 9/INF.4 and CCC 9/INF.5, incorporated many previous submissions and discussions on how best to improve the existing Assembly resolution. This information was used, together with statistical analyses of enclosed space accidents, to develop and propose amendments to the resolution. The aforementioned documents emphasised a need for the proposed major changes following examination of historic accidents, investigation reports, and recommendations, as well as statistical analyses of those accidents. Suggested modifications aim to prevent reoccurrence of these groups of accidents given that many of them highlight the need for a comprehensive and better thought-out enclosed space register, as well as carefully considered contingency planning measures to combat situations which do not go according to plan;

.2 In addition to further improvement of resolution A.1050(27), implementation is the key and in this regard, it should be noted that training and drills are requirements under SOLAS regulation III/19. This part may be separated from resolution A.1050(27), and the contents could be realigned as supporting guidelines for the regulation. Similarly, issues concerning gas detection devices are relevant to SOLAS regulation XI-1/7, as well as the related unified interpretations. With regard to gas detection of toxic cargoes, PPR 10 concluded that amendments to the IBC Code are required, while general discussion will continue at the ESPH Technical Group. Ventilation and gas detection are, in general, matters for SOLAS chapter II-2, also the IBC, IGC, IGF, IMSBC and IMDG Code as well. Therefore, discussion in the SDC, SSE, PPR and CCC Sub-Committees is also needed from the perspective of safe entry. Finally, whilst it should be noted that implementation of the ISM Code was addressed at MSC 107 and also at III 9, there is room for further improvement linked with the "time pressure" matter under the HTW Sub-Committee.



It is essential that the discussion is linked with existing instruments and discussion, rather than consideration solely within resolution A.1050(27);

.3 The analysis in document CCC 9/8/2 (InterManager et al) can be supported, and document CCC 9/8/4 points in the right direction. All the relevant documents should be considered at the Working Group;

.4 Documents CCC 9/8/1, CCC 9/8/2 and CCC 9/8/3 should form the basis for work in the Working Group;

.5 The HTW Sub-Committee should be involved at a later stage concerning training requirements; and,

.6 Many toxic products contained in the IBC Code cannot be tested because there are no suitable gas detectors or gas detection tubes that can measure the presence of these products in the atmosphere. When there are no means for testing, the crew is required to don a self-contained breathing apparatus (SCBA) to enter the tank. The risk in this context concerns the crew who have to use tank hatches, high ladders and tank structures, whilst wearing a SCBA. In this context, document CCC 9/8/7 should be referred to the Working Group.

The Sub-Committee agreed that, upon finalisation of the amendments to resolution A.1050(27) and the identification of impacts on, or consequential amendments to, other IMO instruments, CCC 10 could consider involvement of other IMO organs, as necessary.

**Holistic approach on the human element.** The Sub-Committee had for its consideration document CCC 9/13/1 (Secretariat), providing background information on the holistic approach to the human element, including an initial indication of relevant work of the Sub-Committee related to the human element. After consideration, the Sub-Committee:

.1 noted the information provided in document CCC 9/13/1 on the CCC Sub-Committee's involvement in the human element within its remit, in particular with regard to the implications for the human element arising from handling of dangerous goods and the development of alternative fuels and related technologies;

.2 noting the broad number of relevant areas under the Sub-Committee's purview, observed that more time may be needed to conduct a detailed analysis; and,

.3 with regard to ongoing developments under this agenda item, in particular the relevant proposals in document CCC 9/8, instructed the Working Group on Revision of Resolution A.1050(27) to consider how the outcomes of the revision of resolution A.1050(27) could best contribute to a holistic approach on the human element, taking into account document CCC 9/13/1.

**Report of the Working Group.** The Working Group on Revision of Resolution A.1050(27) (WG 3) was established under the chairmanship of Dr. S. Ota (Japan). InterManager's drafted and coordinated submission CCC 9/8/2 was the base document for

the WG's consideration and following the Groups improvements to the text, sculpted by 23 Member States and 11 NGO organisations, was approved in general, and in particular, the Sub-Committee:

.1 noted the discussion and progress made by the Group on the draft amendments to resolution A.1050(27), i.e., the draft revised recommendations for entering enclosed spaces aboard ships;

.2 noted the deliberation of the Group with regard to the holistic approach on the human element and invited MSC to note that the proper implementation of the ISM Code, in particular an effective implementation of resolution A.1050(27) through the Safety Management System, is crucial to ensure the safety of enclosed space entry; and,

.3 approved the recommendation to establish a correspondence group, having stipulated the terms of reference, and to report back to CCC 10 in September 2024.

InterManager will continue to participate and contribute to the Working Group.

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

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

### **Inspection programmes for cargo transport units carrying dangerous goods.**

The Sub-Committee noted document CCC 9/INF.2 (Secretariat), containing the consolidated results from 2022 of container inspection programmes, submitted by Canada, Chile, Finland, the United States and Hong Kong, China, through GISIS. The Sub-Committee was informed that, out of the 51,330 CTUs inspected, 4,024 CTUs were found to have deficiencies, meaning that 7.84% of the CTUs inspected had deficiencies. With regard to the type of deficiencies, placarding and marking, securing/stowage inside the unit, marking and labelling of packages and serious structural deficiencies were the main culprits. The Sub-Committee expressed its appreciation to those Member States that had submitted the results of container inspection programmes and urged Member States who had not yet carried out container inspection programmes to submit the relevant information to the Organisation in accordance with MSC.1/Circ.1649. In this context, the Sub-Committee also noted a statement made by the observer from WSC, expressing great concern on the low reporting numbers on container inspection results and emphasising the importance of joint efforts by the maritime authorities and industry to enhance the safety of containers.

**Updates from the Secretariat.** The Sub-Committee noted the following verbal updates provided by the Secretariat:

.1 the technical development on updates to the GISIS module on Reports of CTUs inspections in accordance with MSC.1/Circ.1649 had been ongoing and the Sub-Committee would be informed on the status of such updates;

.2 the Secretariat had been following the instructions from MSC on the implementation of MSC.1/Circ.1649 in collaboration with the FAO/International Plant Protection Convention (IPPC), in particular participating in IPPC's work through its Focus Group on Sea Containers; and,

.3 IPPC is preparing its recommendation regarding how to reduce the introduction of pests through the container pathway.

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

**General.** The Sub-Committee recalled that this was a continuous item on the Sub-Committee's biennial agenda and 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.

**11. BIENNIAL STATUS REPORT AND PROVISIONAL AGENDA FOR CCC 10.** Taking into account the progress made at this session, the Sub-Committee prepared the updated biennial status report for the 2022-2023 biennium, and the proposed biennial agenda for the 2024-2025 biennium, for submission to C 130, with a view to approval by A 33, MSC 108 and MEPC 81, as appropriate.

**Intersessional meetings.** The Sub-Committee noted that MSC 107 approved two intersessional meetings of the E&T Group for the IMSBC Code, one in the spring of 2024 and another one immediately after CCC 10.

**Date of the next session.** The Sub-Committee noted that the tenth session of the Sub-Committee has been tentatively scheduled to take place from 16 to 20 September 2024.

**12. ELECTION OF CHAIR AND VICE-CHAIR FOR 2024.** In accordance with the Rules of Procedure of the Maritime Safety Committee and the Marine Environment Protection Committee, the Sub-Committee unanimously re-elected Mrs. MaryAnne Adams (Marshall Islands) as Chair and Mr. David Anderson (Australia) as Vice-Chair, both for 2024.

## **13. ANY OTHER BUSINESS.**

**Estimate of containers lost at sea.** The Sub-Committee noted with appreciation the information contained in document CCC 9/INF.25 (Australia et al.), providing updates on the progress of the Top Tier JIP on container losses, also document CCC 9/13 (WSC), providing a 2023 update on an estimate of the losses. It was decided to forward the above

documents to CCC 10 as they provide useful information for consideration under the new agenda item on "Development of measures to prevent the loss of containers at sea".

**BoxTech Technical Characteristics Database.** The Sub-Committee had for its consideration document CCC 9/13/3 (BIC), providing an update on BIC's progress in further developing the BoxTech Global Container Database. Following discussion, the Sub-Committee invited BIC to submit proposals to CCC 10 under the agenda item on "Development of measures to prevent the loss of containers at sea" as to how BoxTech could further contribute in improving safety in this regard.

**ACEP information.** The Sub-Committee considered document CCC 9/13/4 (BIC), providing updated reports on the activity of the Global ACEP Database since CCC 8, in particular that it raised awareness about the lack of audits to ensure that operators continue to inspect containers according to the requirements set out in the programme and in accordance with the CSC Convention in certain cases. In this context, the Sub-Committee noted, with appreciation, BIC's continued efforts in maintaining and running the Global ACEP Database as a free service for all users. Administrations and stakeholders were urged to consider the benefits of the Global ACEP Database in making their ACEP information publicly available, encouraging them to periodically evaluate, by audits or other equivalent means, that the provisions of the approved programme are being fully followed.

**ISO's actions to support reducing GHG emissions in the maritime sector.** The Sub-Committee noted, with appreciation, the information contained in document CCC 9/INF.26 (ISO), providing information on the work being conducted within ISO in support of GHG maritime emission reductions goals. In this context, the Sub-Committee invited interested Member States and international organisations to participate in the ISO standards development process.

**14. SUMMARY OF CCC 9 ACHIEVEMENTS.** The meeting achieved the following:

- .1 Finalising the draft interim guidelines for the safety of ships using LPG cargo as fuel;
- .2 Significant progress made in the development of safety provisions for ships using hydrogen and ammonia as fuel together with an update of the work-plan for the development of provisions for new alternative fuels;
- .3 Finalising the revised Guidelines on the application of high manganese austenitic steel for cryogenic service,
- .4 Finalising the revised Guidelines for the acceptance of alternative metallic materials for cryogenic service in ships carrying liquefied cargoes in bulk and ships using gases or other low flashpoint fuels;
- .5 Finalising the revised interim recommendations for carriage of liquefied Hydrogen in bulk;

.6 Agreement on draft amendments to the IMDG Code which will be sent to MSC 108 for adoption following finalisation by the E&T group at their meeting next week;

.7 Agreement reached on the response to the PPR Sub-Committee concerning the reduction of the environmental risks associated with the transport of plastic pellets;

.8 Finalised the set of draft amendments to the IGF Code; and,

.9 Made progress on the revision of resolution A.1050(27) to ensure the safety of personnel entering enclosed spaces on board ships.

End

Captain Paddy McKnight