INTERNATIONAL MARITIME ORGANIZATION

E

SUB-COMMITTEE ON HUMAN ELEMENT, TRAINING AND WATCHKEEPING
12th session
Agenda item 12

HTW 12/12
2 March 2026
Original: ENGLISH

REPORT TO THE MARITIME SAFETY COMMITTEE

Table of contents

LIST OF ANNEXES

1 INTRODUCTION – ADOPTION OF THE AGENDA

1.1 The twelfth session of the Sub-Committee on Human Element, Training and Watchkeeping (HTW) was held from 23 to 27 February 2026, chaired by Mr. H. Storhaug (Norway). The Vice-Chair, Capt. Berta Vargas (Republic of Panama), who was elected at the opening of the session for the calendar year 2026 following her nomination (HTW 12/10/4), was also present.

1.2 The session was attended by Members and Associate Members; representatives from the United Nations programmes, specialized agencies and other entities; observers from intergovernmental organizations with agreements of cooperation; and observers from non-governmental organizations in consultative status, as listed in document HTW 12/INF.1.

Opening address of the Secretary-General

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

Chair's remarks

1.4 The Chair thanked the Secretary-General for his opening address and stated that his advice and requests would be given every consideration in the deliberations of the Sub-Committee.

Adoption of the agenda and related matters

1.5 The Sub-Committee adopted the agenda (HTW 12/1) and agreed to be guided in its work, in general, by the annotations contained in document HTW 12/1/1 (Secretariat) and the arrangements in document HTW 12/1/2 (Chair).

2 DECISIONS OF OTHER IMO BODIES

General

2.1 The Sub-Committee, having noted the decisions and comments pertaining to its work made by SSE 11, III 11, NCSR 12, LEG 112, MEPC 83, TC 75, MSC 110 and C 134, as reported in document HTW 12/2 (Secretariat), agreed to take action as appropriate under the relevant agenda items.

Outcome of MSC 110

2.2 With regard to the decisions of MSC 110 (MSC 110/21, paragraphs 17.4, 17.8 and 18.29), the Sub-Committee noted that the Committee had:

.1 approved the revised Rules of Procedure of MSC, as necessary, to be issued as MSC.8/Circ.3;

.2 approved the draft revision of the Committees' method of work, containing amendments related to paragraph 5.21, to be disseminated as MSC-MEPC.1/Circ.5/Rev.7, subject to the concurrent approval of MEPC 84; and

.3 noted the need for the Secretariat to apply greater scrutiny to documents submitted and to reject those that did not meet the minimum requirements.

3 VALIDATED MODEL TRAINING COURSES

Report on the model courses programme under the Model Course Guidelines

3.1 The Sub-Committee had for its consideration document HTW 12/3 (Secretariat), providing:

.1 a report on the model courses that had been revised and submitted to this session for validation;

.2 a summary of the arrangements agreed for the validation of model courses by HTW 13 and HTW 14, and proposed additional arrangements for the validation of a model course by HTW 14; and

.3 an overview of the complete set of IMO model courses.

3.2 Following consideration, the Sub-Committee:

.1 took actions as outlined in paragraphs 3.3 to 3.15 below with regard to the validation of model courses at this session and the proposed additional arrangements for the validation of an additional model course by HTW 14 (HTW 12/3, paragraphs 5 to 8);

.2 accepted, with appreciation, South Africa's offer to take on the role as course developer for the revision of Model Courses 7.05 and 7.07 endorsed at HTW 11 for validation by HTW 13 and noted the adjustment made to the time frames for the revision of these model courses (HTW 12/3, paragraphs 3 and 4); and

.3 noted the overview of the complete set of IMO model courses, including those that did not fall under the purview of the HTW Sub-Committee.

Model courses planned to be validated at this session

3.3 The Sub-Committee recalled that HTW 10 had endorsed the revision of the following three model courses with a view to validation at this session:

.1 1.21 on Personal Safety and Social Responsibilities;

.2 1.37 on Chemical Tanker Cargo and Ballast Handling Simulator; and

.3 2.06 on Oil Tanker Cargo and Ballast Handling Simulator,

with their corresponding terms of reference and time frames (HTW 10/10, annexes 2, 3 and 7).

Draft revised Model Course 1.21 on Personal Safety and Social Responsibilities

3.4 The Sub-Committee noted that draft revised Model Course 1.21 had been developed by Chile, with relevant contributions by the ILO Secretariat, and reviewed by a review group coordinated by Mr. Jan Willem Verhoeff (Kingdom of the Netherlands) and expressed its appreciation for their hard work.

3.5 Having considered documents HTW 12/3/1 and Add.1 (Secretariat), containing the report of the review group and the draft revised model course, respectively, the Sub-Committee referred both to the Drafting Group on Model Courses, for finalization with a view to validation (see also paragraph 3.19).

Draft revised Model Course 1.37 on Chemical Tanker Cargo and Ballast Handling Simulator

3.6 The Sub-Committee noted that draft revised Model Course 1.37 had been developed by China and reviewed by a Review Group coordinated by Mr. Jan Willem Verhoeff (Kingdom of the Netherlands) and expressed its appreciation for their hard work.

3.7 Having considered documents HTW 12/3/2 and Add.1 (Secretariat), containing the report of the Review Group and the draft revised model course, respectively, the Sub-Committee referred both to the Drafting Group on Model Courses, for finalization with a view to validation (see also paragraph 3.19).

Draft revised Model Course 2.06 on Oil Tanker Cargo and Ballast Handling Simulator

3.8 The Sub-Committee noted that draft revised Model Course 2.06 had been developed by China and reviewed by a Review Group coordinated by Mr. Jan Willem Verhoeff (Kingdom of the Netherlands) and expressed its appreciation for their hard work.

3.9 Having considered documents HTW 12/3/3 and Add.1 (Secretariat), containing the report of the Review Group and the draft revised model course, respectively, the Sub-Committee referred both to the Drafting Group on Model Courses, for finalization with a view to validation (see also paragraph 3.19).

Model courses planned for validation by HTW 13 and HTW 14

3.10 The Sub-Committee recalled that HTW 11 had endorsed the revision of three model courses with a view to validation at HTW 13 and two model courses with a view to validation at HTW 14 (HTW 11/11, paragraphs 3.18 and 3.21).

Additional arrangements for HTW 14

3.11 With regard to the arrangements for the validation of an additional model course, i.e. Model Course 7.01 on Master and Chief Mate, as set out in document HTW 12/3 (paragraphs 5 to 8), the Sub-Committee noted that Model Course 7.01 should be better revised thoroughly after the comprehensive review of the 1978 STCW Convention and Code had been completed, in conjunction with Model Course 7.02 on Chief Engineer Officer and Second Engineer Officer.

3.12 In light of the foregoing, the Sub-Committee agreed that, owing to the changes concerning "bridge resource management" introduced in the STCW Code (table A-II-1) by the 2010 Manila Amendments and the consequential changes of contents in Model Course 1.22 on Bridge Resource Management; Model Course 7.01 should be revised to reflect those changes (see also document HTW 12/3, paragraphs 5 to 8), aligned with the template set out in the draft revised *Guidelines for the development, review and validation of model courses* (see appendix 2 of annex 2 to document HTW 11/11).

3.13 In this context, the Sub-Committee:

.1 endorsed the revision of Model Course 7.01 on Master and Chief Mate, with a limited scope as referred to in paragraph 3.12 above, for validation by HTW 14;

.2 endorsed the offer by China to take the role as course developer for the revision of this model course; and

.3 instructed the Drafting Group on Model Courses to prepare draft terms of reference, as well as the corresponding time frame for this model course (see paragraph 3.19).

Review Groups and coordinators

3.14 In accordance with section 5 of the *Guidelines for the development, review and validation of model courses* (MSC-MEPC.2/Circ.15/Rev.2), the Sub-Committee established a Review Group, as set out in annex 1, to work intersessionally by correspondence to review the additional Model Course 7.01 planned for validation by HTW 14 and encouraged interested Member States, international organizations and other experts to participate as members of the Group and notify their contact details to ModelCourses@imo.org within one month of the closure of this session.

3.15 In this context, the Sub-Committee selected Mr. Jan Willem Verhoeff (Kingdom of the Netherlands) as the coordinator for the Review Group established for the revision of Model Course 7.01.

Improving expert participation in the review process for the development and revision of IMO Model Courses

3.16 The Sub-Committee had for its consideration document HTW 12/3/4 (Secretariat), providing information about the concerns raised in previous sessions in relation to the low levels of participation of Member States, international organizations and other experts in the review process of model courses.

3.17 In the ensuing discussion, the Sub-Committee noted the commitment expressed by several delegations to contributing to the review process for the development and revision of model courses. Having noted the outcome of HTW 11 and TCC 75 in relation to this matter (HTW 12/3/4, paragraphs 7 and 8), the Sub-Committee also noted the interest expressed in the organization of, and participation in, capacity-building activities, which could contribute to enhancing the whole development and application of model courses and improve experts participation.

3.18 Subsequently, the Sub-Committee, agreed to instruct the Drafting Group on Model Courses to consider possible measures to enhance expert participation in the review process for the development and revision of model courses for advice to the Sub-Committee.

Establishment of the Drafting Group on Model Courses

3.19 The Sub-Committee established the Drafting Group on Model Courses, chaired by Mr. Jan Willem Verhoeff (Kingdom of the Netherlands), and instructed it, taking into account the comments made and decisions taken in plenary, to:

.1 consider documents HTW 12/3/1 and Add.1, HTW 12/3/2 and Add.1 and HTW 12/3/3 and Add.1, including the corresponding draft model courses and their alignment with the scope of the related provisions in the STCW Code and relevant instruments, and advise the Sub-Committee accordingly with a view to validating these draft model courses at this session;

.2 prepare draft terms of reference, as well as the corresponding time frames, in accordance with the template set out in appendix 2 of annex 2 to document HTW 11/11, for the revision of the Model Course 7.01 on Master and Chief Mate, with a view to validation by HTW 14; and

.3 taking into account document HTW 12/3/4, consider possible measures to enhance expert participation in the review process for the development and revision of model courses, and advise the Sub-Committee accordingly.

Report of the Drafting Group on Model Courses

3.20 Having approved the report of the Drafting Group (HTW 12/WP.7), in general, the Sub-Committee took actions as outlined in the ensuing paragraphs.

Validation of model courses

3.21 The Sub-Committee validated draft revised Model Courses:

.1 1.21 on Personal Safety and Social Responsibilities (HTW 12/WP.7, annex 1);

.2 1.37 on Chemical Tanker Cargo and Ballast Handling Simulator (HTW 12/WP.7, annex 2); and

.3 2.06 on Oil Tanker Cargo and Ballast Handling Simulator (HTW 12/WP.7, annex 3).

Recommendation to integrate Model Courses 1.37 and 2.06

3.22 The Sub-Committee agreed to the recommendation of integrating Model Courses 1.37, and 2.06 within Model Courses 1.01, 1.02 and 1.03 for future revision, and requested the Secretariat to take the necessary action at the next session (HTW 12/WP.7, paragraph 17).

Terms of reference for the revision of Model Course 7.01

3.23 The Sub-Committee approved the draft terms of reference for the revision of Model Course 7.01 on Master and Chief Mate, as set out in annex 2, with a view to validation by HTW 14, as appropriate.

Expert participation in the review process for the development and revision of model courses

3.24 The Sub-Committee invited Member States and international organizations to take further actions to enhance expert participation in the review process for the development and revision of model courses, taking into account the proposed measures prepared by the Group (HTW 12/WP.7, paragraph 21 and annex 5).

3.25 In this context, the Sub-Committee noted the intervention by the Secretary-General, emphasizing the importance of model courses for the effective implementation of the STCW Convention and Code, noting that many Parties relied on them when developing training programmes. The Secretary-General also expressed concerns about the low level of participation in review groups and encouraged interested Member States and international organizations to nominate experts to actively participate, stressing the need for expert engagement in the development and revision of model courses, particularly in light of the potential revision of a large number of model courses arising from the ongoing comprehensive review of the 1978 STCW Convention and Code and its possible impact on implementation.

4 ROLE OF THE HUMAN ELEMENT

MASS related training programmes

4.1 The Sub-Committee noted the information provided in document HTW 12/INF.12 (Russian Federation), regarding MASS training programmes developed and practised in two maritime universities in the Russian Federation.

5 REPORTS ON UNLAWFUL PRACTICES ASSOCIATED WITH CERTIFICATES OF COMPETENCY

General

5.1 Having recalled the relevant information and instruments concerning unlawful practices associated with certificates of competency (e.g. MSC/Circ.900 on *Fraudulent certificates of competency* and resolution A.892(21) on *Unlawful practices associated with certificates of competency and endorsements*; and STCW regulation I/5 on National provisions), the Sub-Committee also recalled that it had repeatedly urged Member States and international organizations to submit proposals on a strategy to address the problems associated with fraudulent certificates of competency.

Reports on fraudulent certificates

5.2 The Sub-Committee noted the information provided in document HTW 12/INF.2 (Secretariat), containing a summary of reports received by the Secretariat on fraudulent certificates detected in 2024 and 2025.

5.3 In this context, the Sub-Committee considered whether the submission of this information by means of a document should be discontinued. While the Sub-Committee noted the value of the submission of this information by means of a document, it was also noted that the methods and timelines used by Parties to provide the information to the Secretariat did not facilitate the preparation and timely submission of a document to the Sub-Committee. Taking into account the ongoing GISIS review and data management project, the Sub-Committee encouraged Parties to submit reports on fraudulent certificates through the STCW GISIS module. In this context, the Sub-Committee requested the Secretariat to explore, after this session, appropriate options for sharing information on fraudulent certificates.

Outcome of MSC 110 and LEG 112 on prevention of fraudulent certificates

5.4 The Sub-Committee noted that MSC 108 had invited the Legal Committee (LEG) to consider measures to improve cooperation between Parties to detect and to prevent unlawful practices, and to prosecute anyone responsible for selling and/or issuing fraudulent certificates, including through cooperation between national law enforcement agencies, for advice to the Sub-Committee. Subsequently, MSC 110 had noted the views of LEG 112 provided on this

matter, in particular that the issue of exchanging information on criminal cases by Parties was beyond the remit of IMO; and that the Sub-Committee should consider measures to improve verification mechanisms of seafarers' certificates under the STCW Convention, including, for example, further digitalization of certificates, which was in line with, and complementary to, the instructions already provided by MSC 108 to the Sub-Committee (MSC 108/20, paragraph 16.9.1).

5.5 In this context, the Sub-Committee recalled that HTW 11 had considered these measures, which were now part of the list of specific areas for the comprehensive review of the STCW Convention.

6 COMPREHENSIVE REVIEW OF THE 1978 STCW CONVENTION AND CODE

General

6.1 The Sub-Committee recalled the progress made and actions taken at HTW 11 in relation to this output (HTW 11/11, paragraphs 6.40, 6.42 and 6.43), and noted relevant actions taken at MSC 110 (MSC 110/21, paragraphs 13.5 to 13.9), in particular concerning the completion of phase 1 (review/identification of gaps) and the consequent instruction to the Sub-Committee to organize phase 2 (revision) of the comprehensive review.

6.2 The Sub-Committee also noted that MSC 110, following endorsement of an alternative road map to expedite the work (MSC 110/13/1), had invited C 134 to approve the budget allocation for a new project-funded technical officer post in the Subdivision for Operational Safety and Human Element (Maritime Safety Division) to support the work on this output, which was subsequently approved by C 134 (C 134/D, paragraph 12.3.1).

6.3 The Sub-Committee further noted that MSC 110 had instructed the Sub-Committee to further consider recommendation 5 in the report of the Study on the effectiveness and effective implementation of the ISM Code (MSC 109/INF.3, annex) in relation to non-technical skills training of those involved in the implementation of ISM provisions and to advise the Committee accordingly and, in this context, had invited interested Member States and international organizations to submit relevant proposals to HTW 12 (MSC 110/21, paragraph 18.15).

Documents relating to amendments to the Convention and Code

6.4 The Sub-Committee, in light of the considerable number of proposals received at this session concerning amendments to the Convention and Code, agreed to proceed with the consideration of documents on the basis of annex 1 to document HTW 12/WP.3, in particular to consider in the plenary only those documents referred to in paragraph 2.1 of document HTW 12/WP.3, and took action as outlined in the ensuing paragraphs.

Documents received with no gap number(s) associated

Development of amendments to chapters II and III of the Convention and Code for the training of seafarers on ships using alternative fuels and new technologies

6.5 The Sub-Committee had for its consideration document HTW 12/6/85 (Austria et al.), proposing the development of training provisions in the Convention and Code based on the *Generic interim guidelines on training for seafarers on ships using alternative fuels and new technologies* (STCW.7/Circ.25), as part of the ongoing comprehensive review.

6.6 In the ensuing discussion, the Sub-Committee noted:

.1 the decision made at HTW 10 that:

.1 the work related to the development of training provisions for seafarers on ships using alternative fuels should be separate from the work on the comprehensive review of the STCW Convention and Code; and

.2 the existing output of the Committee on "Development of a safety regulatory framework to support the reduction of GHG emissions from ships using new technologies and alternative fuels" could be utilized to develop training provisions for seafarers on ships using alternative fuels, taking into account the ongoing work by MSC, the CCC Sub-Committee and any other relevant bodies; and

.2 that the Organization had not adopted mandatory safety provisions on alternative fuels and new technologies, which would underpin the development of mandatory training provisions in the STCW Code.

6.7 Subsequently, the Sub-Committee agreed to consider document HTW 12/6/85 under agenda item 7 on Development of a safety regulatory framework to support the reduction of GHG emissions from ships using new technologies and alternative fuels.

Proposal for additional KUPs and a new standard of competence for ratings forming part of a navigational watch

6.8 The Sub-Committee had for its consideration document HTW 12/6/98 (India), proposing additional KUPs and a new standard of competence for ratings forming part of a navigational watch, while noting that the proposals in the document were not linked with any gaps agreed during phase 1.

6.9 In the ensuing discussion, the Sub-Committee noted that document HTW 12/6/98 was a resubmission of document HTW 11/6/16, reformatted in accordance with the template set out in document HTW 12/6. The Sub-Committee also noted that ISWG-STCW 1 had agreed that no gaps had been identified to justify the addition of either new knowledge, understanding and proficiency (KUP) or a new competence for ratings forming part of a navigational watch.

6.10 Subsequently, the Sub-Committee agreed not to proceed with the proposed amendments in document HTW 12/6/98.

Increasing the tonnage limitations and propulsion power limitations in the Convention

6.11 The Sub-Committee had for its consideration document HTW 12/6/158 (Türkiye), proposing increasing the tonnage limitations and propulsion power limitations in the Convention and Code to reflect current fleet characteristics.

6.12 In this regard, the Sub-Committee noted that HTW 11, having considered document HTW 11/6/6 (Türkiye) proposing addressing the tonnage limitations for masters and deck officers, and propulsion power limitations for chief engineer and engineer officers, had:

.1 agreed that a study on the evolution of shipping and ship types would be required to make any informed decision;

.2 agreed to keep this matter in abeyance; and

.3 invited interested Member States and international organizations to submit concrete proposals on how to address these limitations and provide reliable information to set up any new figures.

6.13 In the ensuing discussion, recognizing the value of considering the current values for tonnage and propulsion power limitations to ensure their alignment with the evolution of the fleet worldwide, the Sub-Committee noted that undertaking this work would entail a comprehensive, risk-based and safety-focused analysis both to ensure that the standards of competence were maintained and aligned with operational realities and ascertain any impact on other IMO instruments that use these criteria.

6.14 Subsequently, the Sub-Committee agreed that this matter would require consideration at the policy level and decided not to proceed with the proposed amendments contained in document HTW 12/6/158.

Commenting documents

Addressing gap number 148 in relation to training provisions for search and rescue (SAR)

6.15 The Sub-Committee had for its consideration document HTW 12/6/161 (Morocco), commenting on document HTW 12/6/103 (Australia and IMRF) in relation to the training provisions for search and rescue (SAR) and their relevance.

6.16 In the ensuing discussion, the Sub-Committee noted the relevance of updating the relevant competencies in table A-II/3 to reflect emerging challenges and new technologies in the field of SAR. The Sub-Committee also noted concerns expressed regarding any potential reduction of SAR training requirements, particularly for ships engaged in near-coastal voyages, and emphasized that SAR training under the STCW Convention and Code should be preserved, strengthened and modernized.

6.17 Following consideration, the Sub-Committee, having noted that document HTW 12/6/108 (Republic of Korea) also proposed draft amendments to address the same gap number 148, agreed to refer document HTW 12/6/161 to the Working Group, for consideration together with documents HTW 12/6/103 and HTW 12/6/108.

Addressing gaps in relation to substitution of part of the approved seagoing service periods with simulator training

6.18 The Sub-Committee had for its consideration document HTW 12/6/162 (The Nautical Institute), commenting on documents HTW 12/6/36 (United States), HTW 12/6/75 (Brazil et al.), HTW 12/6/120 (Japan) and HTW 12/6/156 (Israel), which provided draft amendments to STCW regulation II/1 to allow for substitution of part of the approved seagoing service periods with simulator training, to address gap number 112.

6.19 In the ensuing discussion, the Sub-Committee noted differing views regarding the replacement of a portion of seagoing service with approved simulator training to obtain the first certificate of competence by officers, taking into account the advantages and disadvantages of this replacement, including:

.1 the unique value of experimental learning at sea, as a fundamental element to the development of professional judgement, leadership and the broader competences expected of an officer of the watch;

.2 the ability of simulators to provide exposure to a wider range of ship types, operational conditions and emergency scenarios, and facilitating access to training when sea service opportunities might be limited; and

.3 the need for sufficient safety-related evidence to demonstrate equivalence between simulator training and actual shipboard experience.

6.20 The Sub-Committee also noted the statement made by the delegation of India expressing concerns regarding the proposals to substitute part of the required 12 months of sea service with simulator training, emphasizing that, in the absence of robust evidence and sufficient clarity on the extent of such substitution, amendments to regulation II/1 would be premature. The full statement is set out in annex 8.

6.21 The Sub-Committee further noted that article IX of the STCW Convention already permitted Administrations to adopt alternative educational and training arrangements, including those involving seagoing service, and the proposed amendments to chapters II and III of the STCW Convention and Code would provide the necessary foundation for the application by Parties of the alternative arrangements provided in this article in a transparent manner.

6.22 Subsequently, the Sub-Committee agreed to refer document HTW 12/6/162 to the Working Group, for consideration together with documents HTW 12/6/36, HTW 12/6/75, HTW 12/6/120 and HTW 12/6/156.

Training regarding enclosed space management and twenty-first century skills

6.23 The Sub-Committee had for its consideration document HTW 12/6/163 (India), commenting on how to address the cumulative impact emanating from the amendments proposed in document HTW 12/6/2 (ICS) to address gap number 123.

6.24 Having noted general support for the proposed measures to mitigate the increase of theoretical and practical training as contained in document HTW 12/6/163, the Sub-Committee agreed to refer this document to the Working Group, for consideration together with document HTW 12/6/2.

Documents may be considered at a future session of the Sub-Committee

6.25 The Sub-Committee had for its consideration documents:

.1 HTW 12/6/117 (Russian Federation), providing draft amendments to sections A-I/12 (Standards governing the use of simulators) and B-I/12 (Guidance regarding the use of simulators) of the Code to address gap numbers 96 and 97; and

.2 HTW 12/6/153 (Azerbaijan), providing draft amendments to STCW regulation I/8 (Quality standards) to address gap number 56.

6.26 The Sub-Committee, having noted that the proposed amendments and the corresponding gaps went beyond the scope of work of this session in accordance with the work plan for phase 2 of the comprehensive review (HTW 11/WP.4, annex 2), agreed to keep these proposals in abeyance to be considered, as appropriate, at a future stage in accordance with the work plan and the updated road map.

Remaining documents

Template and guidance to harmonize submissions for phase 2

6.27 Having considered document HTW 12/6 (Secretariat), providing a template and guidance to harmonize proposals for amendments in phase 2 of the comprehensive review, including linking them to agreed gaps and ensuring clarity and conciseness; and HTW 12/6/1 (Secretariat), providing the consolidated authentic text of chapters II and III of the STCW Convention and Code to facilitate the preparation of draft amendments, the Sub-Committee:

.1 invited Member States and international organizations to adhere to the use of the template in document HTW 12/6, as well as the guidance contained in this document to ensure the efficient organization of work; and

.2 requested the Secretariat to continue publishing consolidated authentic texts of relevant chapters of the Convention, to serve as a basis for the proposed amendments for future revision work in phase 2.

6.28 In this context, the Sub-Committee noted that the footnotes were not part of the authentic texts of the STCW Convention and Code; therefore, they could be considered at a future stage, as necessary.

Draft work plan for phase 2 and road map

6.29 The Sub-Committee, recalling that MSC 110 had endorsed the alternative road map (MSC 110/13/1) (see paragraph 6.2) and instructed the Sub-Committee to organize phase 2 (revision) of the comprehensive review accordingly, agreed to instruct the Working Group, taking into account the progress made and annex 2 to document HTW 11/WP.4, to update the road map and work plan in accordance with document MSC 110/13/1.

Information documents

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

.1 HTW 12/INF.5 (INTERTANKO), on guidance developed by INTERTANKO for seafarers considering moving ashore;

.2 HTW 12/INF.7 (IAMU), on the survey conducted by the International Association of Maritime Universities (IAMU) regarding the potential cumulative impact of the ongoing comprehensive review of the STCW Convention and Code on maritime education and training (MET) institutions; in this connection, the Sub-Committee noted the statement by the representative of ICS on the cumulative impact of the additional competences that the comprehensive review might entail and the need to not underestimate its effects on seafarers; the full statement is set out in annex 8; and

.3 HTW 12/INF.11 (Republic of Korea), on the mandatory human rights protection training programme, including the prevention of and response to violence and harassment, including sexual harassment, bullying and sexual assault, for all seafarers serving on Korean-flagged ships, as well as personnel engaged in seafarer-related duties.

6.31 The Sub-Committee also noted the information provided in document HTW 12/INF.13 (Secretariat), on the status of development and trial of the STCW GISIS module. In this connection, the Sub-Committee encouraged the Parties to make use of the new GISIS module and, in particular, to submit information on dispensations and fraudulent certificates to fulfil reporting obligations of Parties emanating from the Convention. This is with a view to discontinuing the submission of documents by the Secretariat to the Sub-Committee from this session onwards, i.e. report on dispensations issued under article VIII of the STCW Convention (HTW 12/INF.3).

Lessons learned for improving the assessment and mitigation of risk associated with parametric rolling of ships

6.32 The Sub-Committee noted that III 11 had invited HTW 12 to consider the matters raised in document III 11/4/5 (Canada) concerning the risk associated with parametric rolling of ships, as part of the ongoing comprehensive review of the STCW Convention and Code (III 11/16, paragraphs 4.35 and 16.6).

6.33 In this connection, the Sub-Committee, having considered document III 11/4/5, providing the safety issue identified in the investigation into the loss of cargo and subsequent fire on board **Zim Kingston**, agreed to refer it to the Working Group, for further consideration, if time permitted.

Establishment of the Working Group on the Comprehensive Review of the 1978 STCW Convention and Code

6.34 The Sub-Committee established the Working Group on the Comprehensive Review of the 1978 STCW Convention and Code, chaired by the Vice-Chair of the Sub-Committee, Captain Berta Vargas (Panama), and instructed it, taking into account the comments made and decisions taken in plenary, to:

.1 consider the documents listed in document HTW 12/WP.3 (paragraph 2.2 and annex 1), with a view to agreeing on the appropriate approach to address the associated gaps and prepare draft amendments accordingly;

.2 prepare draft amendments to chapters II and III of the STCW Convention and Code, based on annexes 2 to 7 of document HTW 12/WP.3 and taking into account any additional information contained, and actions requested, in the underlying documents, including, inter alia, information on the cumulative impact of the proposed amendments, as well as commenting documents HTW 12/6/161, HTW 12/6/162 and HTW 12/6/163, and if time permitted, document III 11/4/5;

.3 provide an oral report on the progress made on actions .1 to .2 above, on Friday, 27 February 2026;

.4 taking into account the progress made during this session and annex 2 to document HTW 11/WP.4, update the road map and work plan in accordance with document MSC 110/13/1, and advise the Sub-Committee accordingly, as part of the oral report referred to in action .3 above; and

.5 submit a written report to HTW 13.

Outcomes of the Working Group on the Comprehensive Review of the 1978 STCW Convention and Code

6.35 Having considered the relevant outcome and progress made by the Working Group on Comprehensive Review of the 1978 STCW Convention and Code related to this item, orally reported by the Chair of the Working Group, the Sub-Committee in particular:

.1 noted that the Working Group had considered the documents listed in document HTW 12/WP.3, paragraph 2.2 and discussed the appropriate approach to address the associated gaps;

.2 noted that gap numbers 2 and 3 could be addressed by amending chapters II and III, therefore invited interested Member States and international organizations to submit proposals on draft amendments to chapters II and/or III to address gap numbers 2 and 3 to HTW 13;

.3 noted that ISWG-STCW 2 would continue the development of draft amendments to chapters II and III, and that the road map and work plan would be updated and harmonized based on the progress made; and

.4 authorized the establishment of an intersessional Correspondence Group on Comprehensive Review of the 1978 STCW Convention and Code, if needed,[1] focused on outstanding parts of the terms of reference (see paragraph 6.34 above) and authorized the Secretariat, if required, to include in the final report of HTW 12 the details of the coordinator and the detailed terms of reference.

Report of the Correspondence Group on STCW Oversight and Verification Processes

6.36 The Sub-Committee recalled that MSC 110 had endorsed the course of action proposed by the Sub-Committee on the matter of enhancement of the communication of information provisions related to the oversight and verification processes and its relationship with IMSAS (HTW 11/11, paragraph 6.17); and invited the III Sub-Committee to note the possible integration of the STCW oversight system and IMSAS (HTW 11/11, paragraph 6.17.4).

6.37 The Sub-Committee had for its consideration document HTW 12/6/20 (Norway), containing the report of the Correspondence Group on STCW Oversight and Verification Processes.

6.38 In the ensuing discussion, the Sub-Committee:

.1 noted the relevant discussions in the Correspondence Group (HTW 12/6/20, paragraphs 6 to 9, 10 to 41 and 42 to 45, and the annex);

.2 agreed on the basic elements and basic outline for the consolidation of the oversight system and IMSAS (HTW 12/6/20, paragraphs 46 to 47) and that any further work would build upon these elements and outline;

.3 agreed on the issues to be resolved to achieve the consolidation of both systems (HTW 12/6/20, paragraph 48); and

[1] It should be noted that ISWG-STCW 2 agreed not to establish a correspondence group due to the complexity and volume of the work remaining and the number of correspondence groups already established at HTW 12.

.4 agreed to instruct the Working Group on the STCW Oversight and Verification Processes to be established to further progress the work on enhancement and integration of the STCW oversight system and IMSAS (see paragraph 6.39 below).

Establishment of the Working Group on the STCW Oversight and Verification Processes

6.39 The Sub-Committee established the Working Group on the STCW Oversight and Verification Processes, chaired by Mr. Nick Makar (Marshall Islands), and instructed it, taking into account document HTW 12/6/20 and the comments made and decisions taken in plenary, to:

.1 further progress the work on enhancement and integration of the STCW oversight system and IMSAS, including consideration of:

.1 the role of competent persons/STCW experts within the IMSAS audit team;

.2 how the report of the independent evaluation, including which specific parts thereof, should be addressed during the audit process; and

.3 how to enhance the effectiveness and robustness of the so-called "White List", including the linkage with STCW-related findings;

.2 depending on the outcome of the above-mentioned instructions, prepare relevant draft amendments to the STCW Convention and Code, and identify the potential impact on the Framework and Procedures for the IMO Member State Audit Scheme (IMSAS), particularly with respect to the scope of IMSAS; and

.3 consider whether an intersessional correspondence group should be established and, if so, prepare draft terms of reference for consideration and approval by the Sub-Committee.

Report of the Working Group on the STCW Oversight and Verification Processes

6.40 Having considered the report of the Working Group (HTW 12/WP.5), the Sub-Committee approved it in general, noted the discussions of the Group, and took action as outlined in the ensuing paragraphs.

6.41 The Sub-Committee approved the following additional principles (HTW 12/WP.5, paragraph 16), as the basis for future discussion:

.1 using the description of the consolidated process in document HTW 12/6/20 (annex, page 4), as a basis;

.2 incorporating the assessment of the independent evaluation report made by competent persons/auditors into the subsequent IMSAS audit as part of the preparation of the audit;

.3 clarifying the oversight system within STCW (e.g. scope, timeline, responsibilities of competent persons/auditors as well as MSC, the IMO

Secretary-General and STCW Parties, transparency and disclosure, training/criteria of competent persons/auditors, content of the independent evaluation report);

.4 aligning the cycle of STCW with the cycle of IMSAS, e.g. change from five years to nine years;

.5 reiterating that the initial reporting process was distinct from the subsequent reporting process;

.6 continuing exploring options (e.g. grading or status systems) to add a transparent and dynamic mechanism to enhance the "White List"; and

.7 establishing a transition mechanism between the current "White List" system and the new one.

Re-establishment of the Correspondence Group on the STCW Oversight and Verification Processes

6.42 The Sub-Committee, taking into account the additional principles in paragraph 6.41, re-established the Correspondence Group on the STCW Oversight and Verification Processes, under the coordination of Norway,[2] and instructed it to:

.1 undertake a review of the STCW Convention and Code to identify which specific provisions should be subject to verification under the oversight process (independent evaluation and IMSAS);

.2 develop the framework for the STCW oversight system, inter alia:

.1 scope based on the outcome of sub-paragraph .1 above;

.2 timeline;

.3 responsibilities of competent persons/auditors as well as the Maritime Safety Committee, the IMO Secretary-General and STCW Parties;

.4 transparency and disclosure;

.5 criteria for competent persons/auditors; and

.6 content of the independent evaluation report.

.3 based on the outcome of the above discussion, review and update the description of the consolidated process set out in document HTW 12/6/20 (annex, page 4);

.4 depending on the outcome of the above-mentioned instructions:

[2] **Coordinator:**
Mr. Haakon Storhaug
Senior Adviser
Norwegian Maritime Authority
Norway
Email: hst@sdir.no

.1 identify and prepare relevant draft amendments of the STCW Convention and Code and relevant guidance and procedures, addressing the outcome of sub-paragraphs.1 and.2 above; and

.2 identify the potential impact on the IMO Member State Audit Scheme, with a view to identifying resource implications and initiating revision of MSC-MEPC.2/Circ.19 (Guidance in relation to the IMO Member State Audit Scheme (IMSAS) to assist in the implementation of the III Code by Member States) as well as the Auditor Manual; and

.5 if time permitted, to continue exploring options (e.g. grading or status systems) on how to proceed with a transparent and dynamic mechanism to enhance the "White List" and to establish a transition mechanism between the current "White List" system and the new one.

7 DEVELOPMENT OF A SAFETY REGULATORY FRAMEWORK TO SUPPORT THE REDUCTION OF GHG EMISSIONS FROM SHIPS USING NEW TECHNOLOGIES AND ALTERNATIVE FUELS

General

7.1 The Sub-Committee noted that MSC 110 had:

.1 noted the agreement of the Sub-Committee to develop generic interim guidelines on training for seafarers on ships using alternative fuels and new technologies in parallel with several individual sets of fuel/technology-specific interim guidelines; and

.2 approved STCW.7/Circ.25 on *Generic interim guidelines on training for seafarers on ships using alternative fuels and new technologies*, and invited MEPC 84 to note this action accordingly.

7.2 The Sub-Committee also noted that the Committee had been developing a list of recommendations to address existing barriers and gaps related to alternative fuels and new technologies (MSC 110/WP.9, annex 1).

Report of the Correspondence Group

7.3 The Sub-Committee considered document HTW 12/7 (China), containing the report of the Correspondence Group on Development of Training Provisions for Seafarers on Ships Using Alternative Fuels and New Technologies, which had been established at HTW 11, approved it in general and took action as outlined in the ensuing paragraphs.

Interim guidelines on training for seafarers on ships using methyl/ethyl alcohol as fuel

7.4 The Sub-Committee noted the Group's deliberations on the development of the draft interim guidelines on training for seafarers on ships using methyl/ethyl alcohol as fuel (HTW 12/7, paragraphs 7, 23 to 26 and annex 1); and instructed the Working Group to be established at this session to finalize these draft interim guidelines based on annex 1 to document HTW 12/7.

Interim guidelines on training for seafarers on ships using ammonia as fuel

7.5 The Sub-Committee noted the Group's deliberations and the progress made on drafting the interim guidelines on training for seafarers on ships using ammonia as fuel (paragraphs 7, 27 to 30 and annex 2). In this context, the Sub-Committee had for its consideration document HTW 12/7/4 (RINA), recommending that all seafarers serving on ammonia-fuelled ships, regardless of rank or duties, receive basic training prior to service due to the specific hazards of ammonia fuel.

7.6 In the ensuing discussion, having noted general support for addressing the hazards associated with the use of ammonia as fuel on ships, the Sub-Committee also noted concerns regarding the proposed scope, particularly the expansion of the basic training to all seafarers, highlighting that strengthening familiarization programmes under STCW regulation I/14 would ensure ammonia hazard awareness by all personnel on board.

7.7 Subsequently, the Sub-Committee agreed that the application scope of the mandatory training instrument for seafarers on ships using ammonia as fuel should be a policy decision to be made at a future stage, and instructed the Working Group to further develop the draft interim guidelines based on annex 2 to document HTW 12/7.

Interim guidelines on training for seafarers on ships using other specific fuels/technologies

7.8 The Sub-Committee noted the Group's deliberations and the progress made concerning the drafting of interim training guidelines for other specific fuels/technologies (HTW 12/7, paragraphs 6, 8, 31, 32 and annexes 3 to 6); and instructed the Working Group to further develop draft interim guidelines on training for seafarers on ships using alternative fuels and new technologies, addressing hydrogen fuel cell-powered ships, the use of LPG and hydrogen as fuel, and battery-powered ships.

Interim guidelines on training for seafarers on ships using wind propulsion systems

7.9 Having noted the Group's invitation to interested Member States and international organizations to submit proposals to HTW 12 to consider the development of draft interim guidelines on training for seafarers on ships using wind propulsion systems, the Sub-Committee considered document HTW 12/7/3 (Austria et al.), proposing the expansion of the terms of reference of the Working Group to include the development of draft interim guidelines on training for seafarers on ships using wind propulsion systems.

7.10 In the ensuing discussion, the Sub-Committee noted general support for initiating the development of interim training provisions for wind propulsion, whilst recognizing that the development of safety provisions in relation to ships using wind propulsion systems and wind-assisted power was work in progress at the SDC Sub-Committee based on the decisions by MSC 110.

7.11 Subsequently, the Sub-Committee agreed to instruct the Working Group to initiate the development of draft interim guidelines on training for seafarers on ships using wind propulsion systems and wind-assisted power, taking into account document HTW 12/7/3 and the progress made on the development of relevant safety provisions by other IMO bodies, in particular the SDC Sub-Committee.

Development of familiarization training guidelines

7.12 Having noted the Group's invitation to interested Member States and international organizations to submit proposals to HTW 12 to consider the matter of developing familiarization training guidelines, the Sub-Committee considered document HTW 12/7/1 (ICS and ITF), proposing amendments to STCW regulation V/3 and section B-V/3 of the STCW Code to address the familiarization of seafarers on ships subject to the IGF Code.

7.13 Having noted the value of the proposal, the Sub-Committee also noted concerns expressed that the proposed amendments to regulation V/3 and section B-V/3 of the Code might extend beyond the scope of familiarization, which could be alternatively addressed by strengthening the provisions in regulation I/14 and section B-I/14 of the Code on alternative fuel hazards while maintaining technical training within the established competency framework.

7.14 Subsequently, having recalled:

.1 the agreement at MSC 108 to develop training provisions for seafarers on ships using alternative fuels under this output (MSC 108/20, paragraph 5.3), and that HTW 11 had noted that training provisions on alternative fuels and new technologies should be developed as non-mandatory provisions, first, with a view to addressing them as amendments to the STCW Convention and Code in the future (HTW 11/11, paragraph 7.3); and

.2 that HTW 11 had decided to keep the proposals in relation to the amendments on this matter to the STCW Convention and Code in abeyance, e.g. annex 4 to document HTW 11/6, documents HTW 11/7/4 (India) and HTW 11/7/7 (Japan) for consideration when relevant draft amendments to the STCW Convention and Code were developed,

the Sub-Committee instructed the Working Group to further consider document HTW 12/7/1 in the context of future work linked with the comprehensive review of the STCW Convention and Code.

Work plan for the development of training provisions for seafarers serving on ships using alternative fuels and new technologies

7.15 The Sub-Committee had for its consideration document HTW 12/7/2 (Brazil et al.), proposing a training framework for seafarers serving on ships using alternative fuels and new technologies.

7.16 Following consideration, the Sub-Committee agreed to develop a work plan for the development of training provisions for seafarers serving on ships using alternative fuels and new technologies, taking into account that:

.1 the work plan should address both the development of interim training guidelines for seafarers serving on ships using alternative fuels and the development of relevant amendments to the STCW Convention and Code;

.2 the work plan should be closely aligned with the corresponding work plans of, and the safety provisions developed by, other IMO bodies;

.3 all relevant documents submitted to date, including documents HTW 12/6/85 (Austria et al.), HTW 12/7/1 (ICS and ITF), HTW 12/7/2 (Brazil et al.), as well as HTW 11/7/4 (India), HTW 11/7/7 (Japan) and annex 4 to

document HTW 11/6 (Secretariat), should be further considered in the context of the development of relevant amendments to the STCW Convention and Code; and

.4 the development of relevant amendments to the STCW Convention and Code, which may include amendments to chapters II, III and V, would be incorporated into the process of the comprehensive review of the STCW Convention and Code, based on the progress made by the Sub-Committee and other relevant bodies (see paragraph 7.16.2).

7.17 Subsequently, the Sub-Committee instructed the Working Group to prepare a work plan for the development of training provisions for seafarers on ships using alternative fuels and new technologies, taking into account the progress made on the development of the interim training guidelines and the outline provided in paragraph 7.16.

7.18 The delegation of the Cook Islands made a statement supporting the continued progress on training provisions for alternative fuels and new technologies, while expressing concerns and emphasizing that safety had to remain paramount and decarbonization objectives should not unduly accelerate decisions where operational experience was limited. The delegation called for precautionary, technically mature and robust ammonia training guidelines, cautioned against treating methanol and ammonia as procedurally equivalent given their different risk profiles and the limited operational experience using ammonia as fuel, and urged that ammonia guidelines met a robust threshold before submission to the Committee in order to minimize the risk of hazardous incidents and impacts on crew and the marine environment. The full statement is set out in annex 8.

Establishment of the Working Group on Development of Training Provisions for Seafarers on Ships Using Alternative Fuels and New Technologies

7.19 The Sub-Committee established the Working Group on Development of Training Provisions for Seafarers on Ships Using Alternative Fuels and New Technologies, chaired by Mr. Darrick Leow (Singapore), and instructed it, taking into account the comments made and decisions taken in plenary, to:

.1 finalize the draft interim guidelines on training for seafarers on ships using methyl/ethyl alcohols as fuel, based on annex 1 to document HTW 12/7;

.2 further develop, towards finalization, the draft interim guidelines on training for seafarers on ships using ammonia as fuel, based on annex 2 to document HTW 12/7;

.3 further develop the draft interim guidelines on training for seafarers on ships using alternative fuels and new technologies, addressing:

.1 hydrogen fuel cell-powered ships, taking into account annex 3 to document HTW 12/7, MSC.1/Circ.1647 on the *Interim guidelines for the safety of ships using fuel cell power installations*, and relevant parts of document HTW 11/7/1;

.2 the use of LPG as fuel, taking into account annex 4 to document HTW 12/7, MSC.1/Circ.1666 on the *Interim guidelines for the safety of ships using LPG fuels* and relevant parts of document HTW 11/7/1;

.3 the use of hydrogen as fuel, taking into account annex 5 to document HTW 12/7, relevant parts of documents HTW 11/7/2, HTW 11/7/6, HTW 11/INF.7 and HTW 11/INF.16; and

.4 battery-powered ships, taking into account annex 6 to documents HTW 12/7 and HTW 11/7/3;

.4 initiate the development of draft interim guidelines on training for seafarers on ships using wind propulsion systems and wind-assisted power, taking into account document HTW 12/7/3 and progress made on relevant safety provisions by other IMO bodies;

.5 prepare the work plan for the development of training provisions for seafarers on ships using alternative fuels and new technologies, taking into account the progress made on the development of respective interim training guidelines and the outline provided in paragraph 7.16; and

.6 consider whether the re-establishment of a correspondence group would be necessary, and advise the Sub-Committee, accordingly, including the preparation of draft terms of reference for the group, as appropriate.

Report of the Working Group

7.20 Having considered the report of the Working Group (HTW 12/WP.6), the Sub-Committee approved it in general and took action as outlined in the ensuing paragraphs.

Interim guidelines on training for seafarers

7.21 The Sub-Committee agreed to the draft interim guidelines on:

.1 training for seafarers on ships using methyl/ethyl alcohols as fuel, as set out in annex 3; and

.2 training for seafarers on ships using ammonia as fuel, as set out in annex 4,

for submission to MSC 111 with a view to approval as STCW.7 circulars.

7.22 The Sub-Committee noted the deliberations of the Group on the scope of application of the draft STCW.7 circular on interim guidelines on training for seafarers on ships using ammonia as fuel and invited the Committee to decide whether separate training guidelines should be developed for seafarers on ships subject to IGC Code using ammonia cargo as fuel, taking into account that those guidelines had been developed based on instruments not applicable to ships subject to the IGC Code (MSC.1/Circ.1687, STCW regulation V/3 and section A-V/3 of the STCW Code) and that the Committee's ongoing work in relation to "one ship, one code" policy (HTW 12/WP.6, paragraphs 4.2).

7.23 The Sub-Committee also noted the deliberations of the Group on fuel/technology-specific draft interim guidelines, in particular, the need for further progressing the work intersessionally via a correspondence group (HTW 12/WP.6, paragraph 5.1).

7.24 The Sub-Committee further noted the deliberations of the Group on the development of draft interim guidelines on training for seafarers on ships using wind propulsion systems and wind-assisted power, in particular, the need for further progressing the work intersessionally via a correspondence group (HTW 12/WP.6, paragraphs 6.1).

Development of a work plan

7.25 The Sub-Committee agreed to the work plan for the development of training provisions for seafarers on ships using alternative fuels and new technologies, as set out in annex 5 (HTW 12/WP.6, paragraph 7.1 to 7.6 and annex 3).

7.26 In this context, the Sub-Committee invited interested Member States and international organizations to submit relevant proposals to HTW 13 on draft generic competences/KUPs and draft amendments to the STCW Convention and Code chapters II, III and/or V for consideration under output 3.8 with a view to incorporating them into the work under output 6.17 (HTW 12/WP.6, paragraph 7.3).

Establishment of the Correspondence Group on the Development of Training Provisions for Seafarers on Ships Using Alternative Fuels and New Technologies

7.27 The Sub-Committee established the Correspondence Group on Development of Training Provisions for Seafarers on Ships Using Alternative Fuels and New Technologies, under the coordination of China,[3] and instructed it, taking into account the comments made and decisions taken at this session, to:

.1 further develop the draft interim guidelines on training for seafarers on ships using alternative fuels and new technologies, addressing:

.1 hydrogen fuel cell-powered ships, taking into account annex 3 to document HTW 12/7, MSC.1/Circ.1647 on *Interim guidelines for the safety of ships using fuel cell power installations*, and relevant parts of document HTW 11/7/1;

.2 the use of LPG as fuel, taking into account annex 4 to document HTW 12/7, MSC.1/Circ.1666 on the *Interim guidelines for the safety of ships using LPG fuels* and relevant parts of document HTW 11/7/1;

.3 the use of hydrogen as fuel, taking into account annex 5 to document HTW 12/7 and relevant parts of documents HTW 11/7/2, HTW 11/7/6, HTW 11/INF.7 and HTW 11/INF.16; and

.4 battery-powered ships, taking into account annex 6 to document HTW 12/7 and document HTW 11/7/3;

.2 develop draft interim guidelines on training for seafarers on ships using wind propulsion systems and wind-assisted power; and

.3 submit a report to HTW 13.

7.28 In this context, the Sub-Committee encouraged interested Member States and international organizations to take active participation in the Correspondence Group, with a

[3] **Coordinator:**
Ms. Sisi Pan
Deputy Director, Seafarers Management Department
China Maritime Safety Administration-Guangdong Agency
Phone: +86 18922227044
Email: cicypan2021@163.com

view to making contributions towards the development of interim training guidelines for seafarers on ships using alternative fuels and new technologies.

8 SCOPING EXERCISE AND ENHANCEMENT OF THE EFFECTIVENESS OF PROVISIONS ON FATIGUE AND SEAFARERS' HOURS OF WORK AND REST

General

8.1 The Sub-Committee recalled that MSC 105 had agreed to include in its post-biennial agenda an output on "Scoping exercise and enhancement of the effectiveness of provisions on fatigue and seafarers' hours of work and rest", with two sessions needed to complete the item, assigning the HTW Sub-Committee as the coordinating organ, in association with the III Sub-Committee as and when requested by the HTW Sub-Committee (MSC 105/20, paragraph 18.31.1).

8.2 In this regard, the Sub-Committee noted that MSC 110 (MSC 110/21, paragraph 18.14) had:

.1 agreed to move the output on "Scoping exercise and enhancement of the effectiveness of provisions on fatigue and seafarers' hours of work and rest" from its post-biennial agenda to the biennial agenda of the HTW Sub-Committee for the 2026-2027 biennium, and the provisional agenda for HTW 12, with a target completion year of 2027;

.2 instructed the HTW and III Sub-Committees, when carrying out this work, to consider recommendation 4 in the report of the Study on the effectiveness and effective implementation of the ISM Code (MSC 109/INF.3 (Secretariat), annex); and

.3 instructed the HTW Sub-Committee to consider the elements raised in document MSC 110/18/21 (Bangladesh et al.), taking into account document MSC 110/INF.10 (Egypt et al.), under this output, noting the ongoing work to address an identified gap on hours of rest under the comprehensive review of the 1978 STCW Convention and Code (MSC 110/21, paragraph 18.23).

8.3 The Sub-Committee also noted that III 11 invited the Sub-Committee to consider that (III 11/16, paragraphs 5.45 and 16.7):

.1 significant limitations had been identified in terms of port State control on work/rest hour compliance and safe manning levels; and

.2 there was an important role and responsibility on flag States and companies, and development of guidance could be considered to help clarify the interrelationship between the requirements discussed in document III 11/7 (Canada et al.) and, ultimately, to improve implementation.

Scoping exercise and enhancement of the effectiveness of provisions on fatigue

8.4 The Sub-Committee had for its consideration documents:

.1 HTW 12/8 (Indonesia et al.), proposing a four-phase work plan to complete the scoping exercise, including the establishment of an intersessional correspondence group to progress this work in an expeditious manner; and

.2 HTW 12/8/1 (China), proposing preliminary recommendations for the scoping exercise on fatigue and seafarers' hours of work and rest, including a non-exhaustive list of regulatory instruments and the identified key gaps.

8.5 Having recognized that documents HTW 12/8 and HTW 12/8/1 complemented each other and provided a useful contribution to the scoping exercise, the Sub-Committee noted that an intersessional correspondence group should be established to progress the work on this output. The Sub-Committee also noted views supporting a structured, evidence-based and proportionate phased approach to assess the scale and nature of the problem before considering any regulatory changes.

8.6 The Sub-Committee further noted the importance of close coordination with ILO in due time, particularly in light of potential updates to the MLC, 2006, to ensure alignment between IMO and ILO instruments and to promote coherent and consistent implementation.

8.7 Following the discussion, the Sub-Committee:

.1 agreed that preparatory work to undertake the scoping exercise would be necessary and that this could be carried out by a drafting group at this session, including the preparation of a list of:

.1 relevant documents providing evidence and understanding of the issues identified in the context of fatigue and hours of work and rest;

.2 IMO and other international organizations' instruments relevant to the scoping exercise;

.3 any other documents of international interest, that contribute to the overall understanding of the issue; and

.2 based on the aforementioned tasks, agreed that a correspondence group could be established to start intersessionally the assessment of the material and instruments gathered.

Establishment of the Drafting Group on the Scoping Exercise of Fatigue-Related Provisions

8.8 The Sub-Committee established the Drafting Group on the Scoping Exercise of Fatigue-Related Provisions, to be chaired by Mr. Shaun Rogers (United Kingdom), and instructed it, taking into account the comments made and decisions taken in plenary, including relevant outcomes from MSC 110 and III 11, as well as documents HTW 12/8, HTW 12/8/1, MSC 110/18/21 and MSC 110/INF.10, to:

.1 prepare a preliminary list of documents submitted to IMO which contribute to the understanding of issues and concerns regarding seafarer fatigue and hours of work and rest, which may include casualty reports in GISIS;

.2 prepare a preliminary list of IMO instruments relevant to matters affecting the provisions for seafarer fatigue and hours of work and rest;

.3 prepare a preliminary list of instruments of other UN bodies, including but not limited to the International Labour Organization (ILO), which directly or indirectly affect IMO provisions regarding seafarer fatigue and hours of work and rest;

.4 prepare a preliminary list of any other documents of international interest, that contribute to the overall understanding of the issue; and

.5 based on the progress made on actions .1 to .4 above, prepare draft terms of reference for a correspondence group on the scoping exercise of fatigue-related provisions, with a view to continuing the work intersessionally and further assessing the information presented therein in order to identify and address any gaps in instruments related to seafarer fatigue and hours of work and rest and/or issues concerning their effective implementation.

8.9 The Sub-Committee noted the concerns expressed by the delegation of the Cook Islands, supported by the delegation of the Marshall Islands, that the scope of the task outlined in paragraph 8.8 might require the establishment of a working group instead of a drafting group, emphasizing that these concerns were not intended to diminish the importance of the work under this agenda item. In this context, the Sub-Committee further noted the delegation's concerns about a recent practice in some IMO bodies of assigning substantive tasks to drafting groups, potentially exceeding their intended function.

Report of the Drafting Group

8.10 Having considered the report of the Drafting Group (HTW 12/WP.4), the Sub-Committee approved it in general and agreed to:

.1 the preliminary list of documents submitted to IMO relevant to issues and concerns regarding seafarer fatigue and hours of work and rest (HTW 12/WP.4, paragraph 8.1 and annex 1);

.2 the preliminary list of IMO instruments relevant to matters affecting the provisions for seafarer fatigue and hours of work and rest (HTW 12/WP.4, paragraph 8.2 and annex 2);

.3 the preliminary list of instruments of other UN bodies, which affect IMO provisions regarding seafarer fatigue and hours of work and rest (HTW 12/WP.4, paragraph 8.3 and annex 3); and

.4 the preliminary list of other documents of international interest, that might contribute to the overall understanding of the issue (HTW 12/WP.4, paragraph 9 and annex 4).

Establishment of the Correspondence Group on the Scoping Exercise of Fatigue-related Provisions

8.11 The Sub-Committee established the Correspondence Group on the Scoping Exercise of Fatigue-related Provisions, under the coordination of the United Kingdom,[4] and instructed it, taking into account documents HTW 12/8 and HTW 12/8/1, the comments made and decisions taken at this session, to:

.1 conduct a scoping exercise on the current regulatory framework on seafarer fatigue and hours of work and rest, based on the preliminary list of IMO

[4] **Coordinator:**
Ms. Hazel Lewis
United Kingdom Maritime and Coastguard Agency
Email: Hazel.Lewis@mcga.gov.uk

instruments relevant to matters affecting the provisions for seafarer fatigue and hours of work and rest, set out in document HTW 12/WP.4, annex 2, taking into account the preliminary lists of:

.1 documents submitted to IMO which contribute to the understanding of issues and concerns regarding seafarer fatigue and hours of work and rest (HTW 12/WP.4, annex 1);

.2 instruments of other UN bodies, including but not limited to the International Labour Organization (ILO), which affect IMO provisions regarding seafarer fatigue and hours of work and rest (HTW 12/WP.4, annex 3);

.3 other relevant documents submitted to IMO or to the correspondence group, including those listed in HTW 12/WP.4, annex 4, containing other documents of international interest, that might contribute to the overall understanding of seafarer fatigue, and hours of work and rest;

.2 assess the information obtained to understand the root causes of seafarer fatigue and concerns related to hours of work and rest;

.3 based on the assessment, undertake a gap analysis to understand the effectiveness of the current implementation of IMO instruments, taking into account relevant instruments of other UN bodies;

.4 if time permitted, identify how to enhance the effectiveness of the provisions related to the implementation of seafarer hours of work and rest and fatigue;

.5 develop draft terms of reference for any working group to be established by HTW 13, for approval of the Sub-Committee; and

.6 submit a written report to HTW 13.

9 BIENNIAL STATUS REPORT AND PROVISIONAL AGENDA FOR HTW 13

General

9.1 The Sub-Committee noted that MSC 110 had:

.1 confirmed that there was no need to modify the current terms of reference of the Sub-Committee, which had been reproduced in annex 32 to document MSC 110/21 (MSC 110/21, paragraphs 13.14 and 18.98);

.2 agreed to include in the biennial agenda of the III Sub-Committee for the 2026-2027 biennium and the provisional agenda for III 12 an output on "Comprehensive revision of the guidelines on the implementation of the ISM Code by Administrations and companies", with a target completion year of 2028, assigning the III Sub-Committee as the coordinating organ, in association with the HTW Sub-Committee, as and when requested by the III Sub-Committee, and invited MEPC 84 to become a parent organ in this output (MSC 110/21, paragraph 18.5);

.3 agreed to move the output on "Scoping exercise and enhancement of the effectiveness of provisions on fatigue and seafarers' hours of work and rest" from the post-biennial agenda of the Committee to the biennial agenda of the HTW Sub-Committee for the 2026-2027 biennium, and the provisional agenda for HTW 12, with a target completion year of 2027 (MSC 110/21, paragraph 18.14); and

.4 agreed to include in its post-biennial agenda an output on "Development of guidelines addressing risks of falls from height", with four sessions needed to complete the output, assigning the HTW Sub-Committee as the coordinating organ, in association with the III Sub-Committee, as and when requested by the HTW Sub-Committee, while noting that the HTW Sub-Committee would not be able to undertake the work on this output until the current work on the Comprehensive review of the 1978 STCW Convention and Code had been completed (MSC 110/21, paragraph 18.46).

Biennial status report

9.2 The Sub-Committee agreed to the biennial status report, as set out in annex 6, for consideration by MSC 111.

Proposed provisional agenda for HTW 13

9.3 Taking into account the progress made at this session, the Sub-Committee prepared the proposed provisional agenda for HTW 13, as set out in annex 7, for approval by MSC 111.

Arrangements for working and drafting groups during the next session

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

.1 comprehensive review of the 1978 STCW Convention and Code;

.2 STCW oversight and verification processes;

.3 development of training provisions for seafarers on ships using alternative fuels and new technologies;

.4 scoping exercise of fatigue-related provisions; and

.5 model courses.

whereby the Chair, taking into account the documents received on the respective subjects, would advise the Sub-Committee well in time before HTW 13 on the final selection of such groups.

Intersessional and Correspondence Groups established at this session

9.5 The Sub-Committee established the following Correspondence Groups due to report to HTW 13:

.1 STCW Oversight and Verification Processes;

.2 Development of Training Provisions for Seafarers on Ships Using Alternative Fuels and New Technologies; and

.3 Scoping Exercise of Fatigue-related Provisions.

9.6 The Sub-Committee noted that, in order to make as much progress as possible intersessionally, the coordinators of correspondence groups should have the flexibility to convene virtual meetings using a suitable platform in order to consider any of the terms of reference, as necessary.

9.7 The Sub-Committee invited MSC 111 to approve the holding of an intersessional meeting on the Comprehensive review of the 1978 STCW Convention and Code (ISWG-STCW 3) immediately after HTW 13 in 2027, for subsequent endorsement by the Council.

Date of the next session

9.8 The Sub-Committee noted that the thirteenth session of the Sub-Committee would be announced in due course when the programme of meetings for 2027 had been prepared.

10 ELECTION OF CHAIR AND VICE-CHAIR FOR 2027

10.1 In accordance with the Rules of Procedure of the Maritime Safety Committee, the Sub-Committee:

.1 elected Attorney Sharon De Chavez-Aledo of the Philippines as Chair for 2027; and

.2 re-elected Captain Berta Vargas of Panama as Vice-Chair for 2027.

11 ANY OTHER BUSINESS

Uncertainty regarding application of new seafarer violence and harassment training to existing seafarers

11.1 The Sub-Committee had for its consideration document HTW 12/11 (ICS), informing about the identified uncertainty of, and proposing possible solutions for, the application of resolution MSC.560(108) on amendments to table A-VI/1-4 of the STCW Code (provisions on violence and harassment), which entered into force on 1 January 2026.

11.2 The Sub-Committee recalled that there were several documents submitted under agenda item 6, containing proposals to address the gaps identified in relation to addressing violence and harassment, including sexual harassment, bullying and sexual assault, which were considered by the Working Group on the Comprehensive Review of the 1978 STCW Convention and Code.

11.3 During the consideration, the Sub-Committee recognized the shared objective of the Organization of ensuring a safe, respectful and inclusive working environment on board ships and, in this context, acknowledged the value of the new training requirements introduced by resolution MSC.560(108) to table A-VI/1-4 of the STCW Code.

11.4 Noting differing views regarding the applicability of the amendments to table A-VI/1-4, particularly in relation to seafarers already holding valid basic training certification issued prior to 1 January 2026, the Sub-Committee recognized that the scope of application of these provisions was already defined in section A-VI/1-4 of the Code and considered whether

harmonized guidance from the Organization could support consistent implementation and avoid uncertainty in certification, inspection and enforcement.

11.5 In this connection, the Sub-Committee noted differing views on the need for a draft STCW.7 circular or MSC circular to address the aforementioned issues, taking into account that article X of the 1978 STCW Convention provided that certificates had to be accepted unless there were clear grounds for believing that a certificate had been fraudulently obtained or that the holder was not the person to whom it was originally issued.

11.6 Following consideration, the Sub-Committee instructed the Working Group on Comprehensive Review of the 1978 STCW Convention and Code to further consider document HTW 12/11 (ICS) regarding the application of resolution MSC.560(108) on amendments to table A-VI/1-4 of the STCW Code and, if necessary, prepare a draft STCW.7 circular providing the necessary guidance.

11.7 The Sub-Committee further noted the intervention by the Secretary-General, who emphasized that the 1978 STCW Convention and Code did not distinguish between "existing" and "new" seafarers. He recalled that the new training requirements adopted by resolution MSC.560(108) to table A-VI/1-4 of the STCW Code were intended to strengthen, for all seafarers, personal safety and social responsibilities competence and to reinforce standards of professional conduct at sea. He further stressed that all seafarers had the right to a workplace free from violence and harassment and urged Member States to implement the new training requirements in an appropriate and effective manner.

Outcome of the Working Group on Comprehensive Review of the 1978 STCW Convention and Code

11.8 Having considered the relevant outcome of the Working Group on Comprehensive Review of the 1978 STCW Convention and Code related to this agenda item, verbally reported by the Chair of the Working Group, the Sub-Committee endorsed the conclusions of the Working Group that:

.1 the application scope of the amendments to table A-VI/1-4 of the STCW Code, adopted by resolution MSC.560(108), was sufficiently clear;

.2 further guidance on the implementation of the amendments was not necessary; and

.3 the practical implementation of the amendments should be left to the Parties to the Convention.

Report on dispensations issued under article VIII of the STCW Convention

11.9 The Sub-Committee noted the information provided by the Secretariat in document HTW 12/INF.3, relating to the reports on dispensations granted for 2024 to 2025, which had been submitted by STCW Parties in accordance with article VIII of the Convention.

FSU Operator Certification Programme: An Alternative Offshore Competency Framework

11.10 The Sub-Committee noted the information provided by Malaysia in document HTW 12/INF.4, relating to Malaysia's Floating Storage Unit (FSU) Operator Certification Programme: An Alternative Offshore Competency Framework.

Digital format of qualification certificates for maritime professionals

11.11 The Sub-Committee noted the information provided by Brazil in document HTW 12/INF.6, relating to activities undertaken by Brazil on the digital format of qualification certificates for maritime professionals.

Information on celebrations of China Dalian Seafarers Cultural Week: practices and insights

11.12 The Sub-Committee noted the information provided by China in document HTW 12/INF.8, relating to the celebrations of China Dalian Seafarers Cultural Week: practices and insights.

Fishing vessel safety-related training

11.13 The Sub-Committee noted the information provided by FAO in document HTW 12/INF.9 relating to fishing vessel safety-related training. In this context, the observer from FAO made a statement stressing the importance of continued collaboration with IMO and ILO to enhance safety and sustainability in the sector; highlighting capacity-building initiatives, including a joint course on implementation of the "Three Treaties", and expressing readiness to contribute to the review of STCW-F-related IMO Model Courses and to a future revision of the FAO/ILO/IMO guidance.

11.14 Having recalled that HTW 11 had endorsed the revision of Model Courses 7.05 on Skipper on a Fishing Vessel; 7.07 on Chief Engineer Officer and Second Engineer Officer on a Fishing Vessel; 7.06 on Officer in Charge of a Navigational Watch on a Fishing Vessel; and 1.33 on Safety of Fishing Operations (support level), the Sub-Committee invited FAO to contribute to the development of these model courses.

Expression of condolences

11.15 The Sub-Committee expressed its sincere condolences on the passing of Professor Emeritus Kinzo Inoue of Kobe University on 19 January 2026 and recognized his significant contributions to maritime education, including his pioneering work in ship-handling simulators and his role as a founder of the International Association of Maritime Universities (IAMU).

12 ACTION REQUESTED OF THE COMMITTEE

Consideration of the report of the Sub-Committee

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

12.2 During the meeting held on Friday, 27 February 2026, delegations were given an opportunity to provide comments on the draft report (HTW 12/WP.1). Subsequently, a revised report (HTW 12/WP.1/Rev.1) was published on Monday, 2 March 2026, to allow delegations to provide further editorial corrections and improvements by correspondence, including finalizing individual statements, until Monday, 9 March 2026, 23.59 (UTC), in accordance with paragraphs 4.39 and 4.40 of the Committees' method of work (MSC-MEPC.1/Circ.5/Rev.6).

Action requested of the Committee

12.3 The Maritime Safety Committee, at its 111th session, is invited to:

.1 invite Member States and international organizations to take actions to enhance expert participation in the review process for the development and revision of model courses (paragraphs 3.24 and 3.25);

.2 note that the Sub-Committee initiated phase 2 (revision) of the comprehensive review of the 1978 STCW Convention and Code and that the work plan was updated based on the progress made (paragraphs 6.1 to 6.42);

.3 approve the draft interim guidelines on training for seafarers on ships using methyl/ethyl alcohol as fuel and the associated draft STCW.7 circular and invite MEPC 85 to note this action, accordingly (paragraph 7.21.1 and annex 3);

.4 approve the draft interim guidelines on training for seafarers on ships using ammonia as fuel and the associated draft STCW.7 circular and invite MEPC 85 to note this action, accordingly (paragraph 7.21.2 and annex 4);

.5 decide whether separate training guidelines should be developed for seafarers on ships subject to IGC Code using ammonia cargo as fuel, taking into account that the draft interim guidelines on training for seafarers on ships using ammonia as fuel had been developed based on instruments not applicable to ships subject to IGC Code (MSC.1/Circ.1687, STCW regulation V/3 and section A-V/3 of the STCW Code) and the Committee's ongoing developments in relation to "one ship, one code" policy (paragraph 7.22 and HTW 12/WP.6, paragraphs 4.2);

.6 endorse the work plan for the development of training provisions for seafarers on ships using alternative fuels and new technologies (paragraph 7.25 and annex 5);

.7 note the biennial status report of the Sub-Committee for the 2026-2027 biennium (paragraph 9.2 and annex 6);

.8 approve the provisional agenda for HTW 13 (paragraph 9.3 and annex 7); and

.9 approve the establishment of an Intersessional Working Group on the Comprehensive Review of the 1978 STCW Convention and Code, to take place immediately after HTW 13, subject to endorsement by Council (paragraph 9.7).

***

ANNEX 1

REVIEW GROUP FOR MODEL COURSE PLANNED FOR VALIDATION BY HTW 14

REVIEW GROUP ON REVISED MODEL COURSE 7.01 ON MASTER AND CHIEF MATE

Course developer: China		
Coordinator: Netherlands **Mr. Jan Willem Verhoeff,** j.w.verhoeff@hva.nl		
Members of the Review Group		
No.	**Name**	**Email**
1	Prof. Feng Zhou (China)	fengzhou@shmtu.edu.cn
2	Dr. Joanna-Eugenia Bakouni (Denmark)	joanna.bakouni@maersktraining.com
3	Mr. Alexander Al Weissi (Germany)	alexander.alweissi@bg-verkehr.de
4	Ms Sabine Zeller (Germany)	zeller@berufsbildung-see.de
5	Mr. Christopher Brunclik (Liberia)	cbrunclik@liscr.com
6	Mr. Carl Drumgoole (Liberia)	cdrumgoo@liscr.com
7	Capt. Mohd Yusrino bin Taib (Malaysia)	myusrino.taib@alam.edu.my taibmohdyusrino@yahoo.com
8	Mr. André Theodor Heimdal (Norway)	atsi@sdir.no
9	Prof. Woo Kun Lee (Republic of Korea)	ccc9237@gmail.com
10	Mr. Charles Bright (United States)	Charles.J.Bright@uscg.mil
11	Mr. James Cavo (United States)	James.D.Cavo@uscg.mil
12	Ms. Stephanie Debow Southwick (United States)	Stephanie.A.DEBOW-SOUTHWICK@uscg.mil
13	Capt. Vinayak Mohla (GlobalMET)	mohlav@angloeastern.com
14	Mr. Mike Esplago (ISWAN)	Mike.Esplago@iswan.org.uk

***

ANNEX 2

TERMS OF REFERENCE FOR THE REVISION OF MODEL COURSE 7.01 ON MASTER AND CHIEF MATE

Introduction

1 HTW 9, having validated the revised Model Course 1.22 on Bridge Resource Management for addressing the KUP "Bridge resource management" under the function of "Navigation at the operational level" in table A-II/1 of the Code, agreed that, owing to the change of the contents of Model Course 1.22 on Bridge Resource Management, the references and the associated KUPs in Model Course 7.01 on Master and Chief Mate (management level) would require updating.

Consequently, HTW 11 requested the Secretariat to include Model Course 7.01 in its periodic review for consideration at the next session with a view to its subsequent revision and HTW 12 endorsed the revision of Model Course 7.01.

Objectives

2 The revision of Model Course 7.01 on Master and Chief Mate, should address the practical aspects of all competencies and related knowledge, understanding and proficiency (KUP) requirements of section A-II/2 and table A-II/2 of the STCW Code, taking into account the guidance of section B-II/2 of the STCW Code. The model course should not exceed the competencies and KUPs of the STCW Code, but needs to consider and incorporate the latest technological developments and best practices of the industry. The model course development should support competency-based outcomes in line with column 4 of table A-II/2 of the STCW Code. The course should also consider the wide range of ship types and their navigation systems and equipment when operating in different regions of the world.

Activities

3 The course developer will revise IMO Model Course 7.01 on Master and Chief Mate, based on regulation II/2 of the 1978 STCW Convention and section A-II/2 and table A-II/2 of the STCW Code, taking into account the model course development guidance for course developers in MSC-MEPC.2/Circ.15/Rev.[3], appendix 3. The references and bibliography should make citations using the Harvard style of referencing while the common abbreviations for IMO model courses in part C (Detailed outline) should be retained, e.g. R1 for SOLAS 1974.

4 The course developer will revise IMO Model Course 7.01 on Master and Chief Mate, based on section A-II/2 and table A-II/2 of the STCW Code, considering the following matters:

1. the review should be regarded as an update instead of a complete review;

2. due to the change of the content of Model Course 1.22, the reference of this model course should be deleted where necessary or replaced by other text;

3. reference materials that are outdated should be removed or replaced with updated references; and

4. the model course should be rearranged using the template for IMO model courses according to the guidance for course developers in MSC-MEPC.2/Circ.15/Rev.[3], appendix 9.

5 The course developer will submit the first draft to the Secretariat (i.e. Head, Maritime Training and Human Element) for review and development of the model course. The course developer will then prepare a second draft, taking into account any feedback provided by the Secretariat and return it to the Secretariat.

6 The Secretariat will forward the second draft model course to the review group, which will then provide its comments and guidance, as appropriate, to the course developer for inclusion in the final draft. The course developer will update the draft and return it, via the Secretariat, to the review group to assist the group in writing its report. The course developer will finalize the draft model course and communicate it to the Secretariat for submission to the relevant session of the Committee/Sub-Committee, for consideration and validation, as appropriate.

Reporting

7 The model course should be drafted in English, using an electronic format compatible with Microsoft Word, and be submitted to the Secretariat in accordance with the deadlines specified below. All parties to the revision and review process are encouraged to exchange comments and information and seek feedback at any appropriate time. The suggested dates should not serve as a limitation for the exchange of information.

Deadline	Action to be taken
9 October 2026	The course developer prepares the first draft of the model course to be forwarded to the Secretariat.
18 December 2026	The Secretariat will conduct a review of the first draft for adequacy and consistency with instructions, and may suggest changes, where appropriate.
26 February 2027	The course developer will then prepare the second draft with the proposed revisions from the Secretariat and return it to the Secretariat for conveying it to the model course review group.
30 April 2027	The review group returns any comments and guidance to the course developer for additional edits and development, as appropriate.
25 June 2027	The course developer submits the final revised draft of the model course to the Secretariat for forwarding it to the review group to assist the group in writing its report.
3 September 2027	The review group coordinator submits the report of the group to the Secretariat, including the evaluation questionnaire as contained in appendix 6 of MSC-MEPC.2/Circ.15/Rev.[3].

8 All material shall be prepared in accordance with intellectual property rights, and the copyright remains within IMO.

COURSE DEVELOPER SPECIFIC INSTRUCTIONS / TERMS OF REFERENCE

MODEL COURSE 7.01 ON MASTER AND CHIEF MATE	
1) The overall goal of this model course is to provide guidance for the training and assessment of seafarer competence for the function Navigation at the Management Level, for the function Cargo Handling and Stowage at the Management Level and the background knowledge to support Controlling the Operation of the Ship and Care for Persons on Board at the Management Level addressing the practical aspects of all competences and related KUP requirements in accordance with table A-II/2 of the STCW Code. IMO model courses are intended for a global audience and must be adaptable to a wide variety of candidates and teaching resources.	
2) This model course is subject to validation by the Sub-Committee on Human Element, Training and Watchkeeping (HTW). The final revised draft of the model course should be submitted to the Head of the Maritime Training and Human Element (ModelCourses@imo.org) no later than **25 June 2027** with the following subject line: **Revised Model Course 7.01 on Master and Chief Mate for submission to HTW 14**	
3) The following Member States, organizations and subject matter experts (SME) have indicated their availability to work with you on this project. Their contact information is listed below. You are also encouraged to use other resources that may be available to you.	
Country, Organization, SME	Contact information
To be confirmed after HTW 12	
4) This model course has some common and equal education and training requirements as are found in the listed model courses. The education and training requirements must use similar vernacular and be based upon the same information. However, alterations to reflect individual shipboard departmental requirements are expected.	
Model course	Education and training requirements

MODEL COURSE 7.01 ON MASTER AND CHIEF MATE	
7.02 Chief Engineer and 2nd Engineer	STCW regulation III/2, and table A-III/2, of the STCW Code
1.27 Operational use of Electronic Chart Display and Information Systems	STCW regulation II/2, and table A-II/2, of the STCW Code
1.08 Radar Navigation at Management Level	STCW regulation II/2, and table A-II/2, of the STCW Code
1.34 Automatic Identification Systems (AIS)	STCW regulation II/2, and table A-II/2, of the STCW Code
1.40 Use of Leadership and Managerial Skills	STCW regulation II/2, and table A-II/2, of the STCW Code

5) This model course has some common but lower-level education and training requirements than those found in the listed model courses. These education and training requirements must use a simpler taxonomy or topics to reflect their prerequisite nature.

Model course	Education and training requirements
N/A	

6) This model course has some common but higher-level education and training requirements than those found in the listed model courses. The education and training requirements must use a more advanced taxonomy or topics to reflect the advanced nature of the material presented.

Model course	Education and training requirements
7.03 Officer in Charge of a Navigational Watch 1.22 Bridge Resource management	STCW regulation II/1, and table A-II/1, of the STCW Code

7) This model course is to be included within these other model courses.

Model course	Education and training requirements
N/A	

8) This model course is to include these other model courses.

Model course	Education and training requirements
N/A	

9) This model course is to include education and training requirements from other IMO instruments.

MODEL COURSE 7.01 ON MASTER AND CHIEF MATE	
Convention and Codes	Education and training requirements
N/A	
These specific instructions are to provide the course developer with guidelines to use during the development of a model course. They are as inclusive as possible. However, the course developer may, at their discretion and in consultation and agreement with the Secretariat, adapt these instructions to meet the intent and goals of the Committee/Sub-Committee.	

***

ANNEX 3

DRAFT STCW.7 CIRCULAR

INTERIM GUIDELINES ON TRAINING FOR SEAFARERS ON SHIPS USING METHYL/ETHYL ALCOHOL AS FUEL

1 The Sub-Committee on Human Element, Training and Watchkeeping (HTW), at its eleventh session (10 to 14 February 2025), agreed that generic interim guidelines on training for seafarers on ships using alternative fuels and new technologies should be developed in parallel with several individual sets of fuel/technology-specific interim guidelines.

2 The Maritime Safety Committee (the Committee), at its 110th session (18 to 27 June 2025), noted the above-mentioned agreement by the HTW Sub-Committee and approved STCW.7/Circ.25 on *Generic interim guidelines on training for seafarers on ships using alternative fuels and new technologies*.

3 The Committee, at its […] session ([DATE]), approved the *Interim guidelines on training for seafarers on ships using methyl/ethyl alcohol as fuel* (the Interim Guidelines), prepared by the HTW Sub-Committee, at its twelfth session (23 to 27 February 2026), as set out in the annex. These Interim Guidelines serve as the primary reference for the development of training of seafarers on ships using methyl/ethyl alcohol as fuel.

4 The Committee agreed to keep the Interim Guidelines under review, taking into account operational experience gained with their application.

5 Member States are invited to bring the Interim Guidelines to the attention of all parties concerned.

ANNEX

INTERIM GUIDELINES ON TRAINING FOR SEAFARERS ON SHIPS USING METHYL/ETHYL ALCOHOL AS FUEL

1 INTRODUCTION

1.1 The purpose of these Interim Guidelines is to provide a reference for the development and approval of training for seafarers on ships using methyl/ethyl alcohol as fuel to support the reduction of greenhouse gas emissions from international shipping.

Application

1.2 Unless expressly provided otherwise, these Interim Guidelines apply to seafarers on ships using methyl/ethyl alcohol as fuel.

1.3 Where specific provisions of this document differ from the requirements of mandatory instruments applicable to seafarers working on ships using methyl/ethyl alcohol, the provisions of those mandatory instruments should take precedence.

Goal

1.4 The goal of these Interim Guidelines is to provide an international standard for the development and approval of training of seafarers serving on ships using methyl/ethyl alcohol as fuel.

General provisions for training and familiarization

1.5 All seafarers serving on board ships using methyl/ethyl alcohol as fuel should, prior to being assigned shipboard duties, be familiarized with their specific duties and with all ship arrangements, installations, equipment, procedures and ship characteristics that are relevant to their routine or emergency duties, as specified in regulation I/14.5 of the STCW Convention.

1.6 In accordance with MSC.1/Circ.1621 on *Interim guidelines for the safety of ships using methyl/ethyl alcohol as fuel*, paragraph 16.6, masters, officers, ratings and other personnel on ships using methyl/ethyl alcohol as fuel should be trained and qualified in accordance with regulation V/3 of the STCW Convention and section A-V/3 of the STCW Code, taking into account the specific hazards of methyl/ethyl alcohol used as fuel.

1.7 In addition, seafarers should receive appropriate training on the associated risks and emergency procedures, in accordance with their duties and responsibilities.

1.8 On that basis, the following training approach comprising basic and advanced training levels may be applied:

.1 basic training for seafarers responsible for designated safety duties associated with the care, use or in emergency response to the fuel and systems on board ships using methyl/ethyl alcohol as fuel should be delivered in accordance with the knowledge, understanding and proficiency (KUPs) specified in table 1 of these Interim Guidelines and should meet the standard competence specified therein; and

.2 advanced training for the masters, engineer officers and all personnel with immediate responsibility for the care and use of fuel and systems on board ships using methyl/ethyl alcohol as fuel should be delivered in accordance with the KUPs specified in tables 1 and 2 of these Interim Guidelines and should meet the standard competence specified therein.

1.9 The competences in tables 1 and 2 of these Interim Guidelines have been developed based on the standards of competences for basic and advanced training set out in STCW.7/Circ.25 on the *Generic interim guidelines on training for seafarers using alternative fuels and new technologies*.

2 TRAINING REQUIREMENTS

General

2.1 Prior to being assigned duties on board a ship using methyl/ethyl alcohol as fuel, all seafarers should receive appropriate training in accordance with this section.

2.2 The Administration may, in respect of ships of less than 500 gross tonnage, except for passenger ships, if it considers that a ship's size and the length or character of its voyage are such as to render the application of the full requirements of this section unreasonable or impracticable, exempt the seafarers on such a ship or class of ships from some of the requirements, bearing in mind the safety of people on board, the ship and property and the protection of the marine environment.

2.3 Seafarers responsible for designated safety duties associated with the care, use or in emergency response to the fuels and fuel systems on board ships using methyl/ethyl alcohol as fuel should receive basic training or instruction in accordance with paragraphs 3.1 and 3.2 and should meet the standard of competence specified therein.

2.4 Masters, engineer officers and all personnel with immediate responsibility for the care and use of fuels and fuel systems on ships using methyl/ethyl alcohol as fuel should receive advanced training in accordance with paragraph 3.3 and 3.4 below and should meet the standard of competence specified therein, taking into account the knowledge, understanding and proficiencies to meet the standard of competence specified in paragraph 3.1, as appropriate.

2.5 Basic and advanced training should be given by qualified personnel experienced in the handling and characteristics of the fuels and fuel systems used and the safety procedures involved.

2.6 It is important to emphasize the need to take account of risk analyses. All risk analyses carried out should be made available to participants during training.

3 STANDARDS OF COMPETENCE

Standard of competence for basic training

3.1 Seafarers responsible for designated safety duties associated with the care, use or in emergency response to the use of the fuels and fuel systems on board ships using methyl/ethyl alcohol as fuel should, before being assigned to shipboard duties:

.1 receive basic training or instruction as determined by the Administration on the use of methyl/ethyl alcohol and related fuel systems so as to:

.1 contribute to the safe operation of a ship;

.2 take precautions to prevent hazards on a ship;

.3 apply occupational health and safety precautions and measures;

.4 carry out fire-fighting operations on a ship;

.5 respond to emergencies; and

.6 take precautions to prevent pollution of the environment from ships; and

.2 be required to provide evidence of having achieved the standard of competence provided to undertake their duties and responsibilities through:

.1 demonstration of competence in accordance with the methods and criteria for evaluating competence determined by the Administration; and

.2 examination or continuous assessment as part of a training programme determined by the Administration.

3.2 Documentary evidence should be issued by the Administration indicating that the holder has completed the basic training.

Standard of competence for advanced training

3.3 Masters, engineer officers and all personnel with immediate responsibility for the care and use of the fuels and fuel systems on board ships using methyl/ethyl alcohol as fuel should, before being assigned to shipboard duties:

.1 receive advanced training in addition to the competences outlined in paragraph 3.1.1 above as determined by the Administration on the use of methyl/ethyl alcohol and related fuel systems so as to:

.1 be familiar with physical and chemical properties of the fuels and/or characteristics of the systems aboard ships;

.2 operate controls of the fuels and fuel systems related to propulsion plant and engineering systems and services and safety devices on ships;

.3 be able to safely perform and monitor all operations related to the fuels and fuel systems used on board ships;

.4 plan and monitor safe bunkering, stowage and securing of the fuels on board ships;

.5 take precautions to prevent pollution of the environment from ships;

.6 monitor and control compliance with legislative requirements;

.7 take precautions to prevent hazards;

.8 apply occupational health and safety precautions and measures on board ships; and

.9 have knowledge of the prevention, control and fire-fighting and extinguishing systems on board ships;

.2 be required to provide evidence of having achieved the standard of competence provided to undertake their duties and responsibilities through:

.1 demonstration of competence in accordance with the methods and criteria for evaluating competence determined by the Administration; and

.2 examination or continuous assessment as part of a training programme determined by the Administration; and

3.4 Documentary evidence should be issued by the Administration indicating that the holder has completed the advanced training.

4 EMERGENCY EXERCISES

4.1 Emergency exercises related to the fuels and fuel systems on board ships using methyl/ethyl alcohol as fuel should be conducted at regular intervals. The response and safety system for hazard and accident control should be reviewed and tested.

Table 1

Specification of minimum standard of competence in basic training for seafarers onboard ships using methyl/ethyl alcohol as fuel (assessed against table A-V/3-1 of the STCW Code for reference)

Competence	Knowledge, Understanding and Proficiency
	Methyl/ethyl alcohol
1 Contribute to the safe operation of a ship	1.1 Basic knowledge of design and operational characteristics of ships using methyl/ethyl alcohol as fuel under atmospheric storage conditions 1.2 Basic knowledge of fuel systems and fuel storage systems: .1 methyl/ethyl alcohol as fuel on board ships .2 fuel systems of methyl/ethyl alcohol as fuel on board ships .3 atmospheric storage of methyl/ethyl alcohol as fuel on board ships .4 general arrangement of fuel storage systems on board ships using methyl/ethyl alcohol as fuel (including Fuel Preparation Room (FPR) and Tank Connection Space) .5 non-hazardous areas, hazardous areas, including adjacent spaces with hazardous areas .6 typical fire safety plan .7 monitoring, control and safety systems aboard ships using methyl/ethyl alcohol as fuel 1.3 Basic knowledge of fuels and fuel storage systems' operations on board ships using methyl/ethyl alcohol as fuel: .1 fuel-handling systems and equipment, piping systems and valves including its safe isolation .2 fuel tank/storage including atmospheric storage level monitoring

Competence	Knowledge, Understanding and Proficiency
	Methyl/ethyl alcohol
	.3 relief systems, protections screens and tank atmosphere control systems .4 basic bunkering operations and bunkering systems. .5 fuel leak monitoring and detection .6 fuel system accidents including spill containment system, emergency release arrangements 1.4 Basic knowledge of the physical and chemical properties of methyl/ethyl alcohol as fuel on board ships, including: .1 properties and characteristics of methyl/ethyl alcohol 1.5 Knowledge and understanding of safety requirements and safety management on board ships using methyl/ethyl alcohol as fuel
2 Take precautions to prevent hazards on a ship	2.1 Basic knowledge of the hazards associated with operations on ships using methyl/ethyl alcohol as fuel, including: .1 health hazards .2 environmental hazards .3 reactivity hazards .4 corrosion hazards (accelerated stress corrosion cracking when in contact with water) .5 ignition, explosion and flammability hazards .6 sources of ignition

Competence	Knowledge, Understanding and Proficiency
	Methyl/ethyl alcohol
	.7 electrostatic hazards .8 toxicity hazards .9 fuel batch differences .10 leakage 2.2 Basic knowledge of hazard controls: .1 emptying, inerting, gas freeing and monitoring techniques .2 anti-static measures .3 ventilation protocols .4 segregation .5 inhibition .6 measures to prevent ignition, fire and explosion .7 atmospheric control .8 flammable and toxic vapour testing 2.3 Understanding of fuel characteristics on ships using methyl/ethyl alcohol as fuel as found on a Safety Data Sheet (SDS)

Competence	Knowledge, Understanding and Proficiency Methyl/ethyl alcohol
3 Apply occupational health and safety precautions and measures	3.1 Proper use of gas-measuring instruments and similar equipment .1 gas detection (flammable and toxic levels of methyl/ethyl alcohol) 3.2 Proper use of specialized safety equipment and protective devices, including: .1 breathing apparatus .2 protective clothing .3 resuscitators .4 rescue and escape equipment 3.3 Basic knowledge of safe working practices and procedures in accordance with legislation and industry guidelines and personal shipboard safety relevant to ships using methyl/ethyl alcohol as fuel, including: .1 precautions to be taken before entering enclosed spaces, hazardous area zones, including spaces adjacent to hazardous areas .2 precautions to be taken before and during repair and maintenance work .3 material compatibilities with methyl/ethyl alcohol fuel systems .4 safety measures for hot and cold work .5 measures for decontaminating personal protective equipment, tools or equipment 3.4 Basic knowledge of first aid with reference to a Safety Data Sheet (SDS)

Competence	Knowledge, Understanding and Proficiency Methyl/ethyl alcohol
4 Carry out fire-fighting operations on a ship	4.1 Knowledge of the methods and fire-fighting appliances to detect, control and extinguish fires of methyl/ethyl alcohol fuels including portable heat-detection devices.
5 Respond to emergencies	5.1 Basic knowledge of emergency procedures including emergency shutdown protocols, but not limited to: .1 loss of containment .2 spill during bunkering .3 fire/explosion .4 over-pressurization/ overfilling .5 collision .6 personnel injury
6 Take precautions to prevent pollution of the environment from the release of fuels found on ships	6.1 Basic knowledge of measures to be taken in the event of leakage/spillage of fuels from ships using methyl/ethyl alcohol as fuel, including the need to: .1 report relevant information to the responsible persons .2 awareness of shipboard spill/leakage response procedures .3 awareness of appropriate personal protection when responding to a spill/leakage of methyl/ethyl alcohol .4 the shipboard fuel pollution emergency plan

Table 2

Specification of minimum standard of competence in advanced training for seafarers on board ships using methyl/ethyl alcohol as fuel (assessed against table A-V/3-2 of the STCW Code for reference)

Competence	Knowledge, Understanding and Proficiency
	Methyl/ethyl alcohols
1 Familiarity with physical and chemical properties of fuels aboard ships	1.1 Basic knowledge and understanding of simple chemistry and physics and the relevant definitions related to safe bunkering and use of methyl/ethyl alcohol used as fuel: .1 the chemical structure of methyl/ethyl alcohol .2 the properties and characteristics of methyl/ethyl alcohol including: .1 simple physical laws .2 states of matter .3 liquid and vapour densities .4 flashpoint, upper and lower flammable limits, auto-ignition temperature .5 combustion properties: heating values .6 knocking .7 pollutant characteristics of methyl/ethyl alcohol .3 the properties of single liquids .4 the nature and properties of solutions (flammability and corrosivity of water-methyl/ethyl mixtures) .5 thermodynamic units

Competence	Knowledge, Understanding and Proficiency Methyl/ethyl alcohols
	.6 basic thermodynamic laws and diagrams 1.2 Understanding the information contained in a Safety Data Sheet (SDS) about methyl/ethyl alcohol
2 Operate controls of fuel related to propulsion plant and engineering systems and services and safety devices on ships	2.1 Operating principles of marine power plants 2.2 Ships' auxiliary machinery 2.3 Knowledge of marine engineering terms
3 Ability to safely perform and monitor all operations related to the fuels used on board ships	3.1 Knowledge of design and characteristics of ships using methyl/ethyl alcohol as fuel 3.2 Knowledge of ship design, systems, and equipment found on ships using methyl/ethyl alcohol as fuel, including: .1 fuel systems for different propulsion systems .2 general arrangement and construction, including the schematic and piping diagram of the fuel system as well as layout of storage tanks .3 fuel storage systems on board ships using methyl/ethyl alcohol as fuel, including materials of construction and insulation .4 fuel-handling equipment and instrumentations on board ships: .1 fuel pumps and pumping arrangements .2 fuel pipelines (double-walled piping) and valves .3 expansion devices

Competence	Knowledge, Understanding and Proficiency Methyl/ethyl alcohols
	.4 flame screens and arrestors .5 temperature monitoring systems .6 fuel tank level-gauging systems .7 tank pressure monitoring and control systems .5 fuel system atmosphere control systems (inert gas, nitrogen), including storage, generation and distribution .6 toxic and flammable gas-detecting systems .7 alarm and fuel Emergency Shut Down system (ESD) 3.3 Knowledge of planned maintenance systems .1 the coating or material requirements or compatibility specifically for methyl/ethyl alcohol equipment including tanks .2 the procedures to be taken for invasive maintenance of the methyl/ethyl alcohol system .3 the process for safe isolation of equipment or components and return to service e.g. use of double block and bleed valve system 3.4 Knowledge of the regulatory framework to ensure the protection of methyl/ethyl alcohol fuel tanks and piping systems 3.5 Knowledge of fuel system theory and characteristics, including types of fuel system pumps and their safe operation on board ships using methyl/ethyl alcohol as fuel

Competence	Knowledge, Understanding and Proficiency Methyl/ethyl alcohols
	.1 low pressure pumps .2 high-pressure pumps .3 heat exchangers 3.6 Knowledge of safe procedures and checklists for taking fuel tanks in and out of service, including: .1 inerting .2 gas freeing .3 initial loading .4 tank atmosphere pressure control .5 emptying systems
4 Plan and monitor safe bunkering, stowage and securing of the fuel on board ships	4.1 Knowledge of ships using methyl/ethyl alcohol as fuel 4.2 Ability to use all data available on board related to bunkering, storage and securing of methyl/ethyl alcohol as fuel 4.3 Ability to establish clear and concise communications between the ship and the terminal, truck or the bunker- supply ship 4.4 Knowledge of safety and emergency procedures and preparedness for operation of machinery, fuel and control systems for ships using methyl/ethyl alcohol as fuel 4.5 Proficiency in the operation of bunkering systems on board ships using methyl/ethyl alcohol as fuel including:

Competence	Knowledge, Understanding and Proficiency Methyl/ethyl alcohols
	.1 procedures related to pre-bunkering including tank conditioning and post-bunkering .2 knowledge of vapour return/recovery system .3 emergency procedures .4 ship-shore/ship-ship interface and use of ship-shore checklist related to methyl/ethyl alcohol. .5 implementing and monitoring of the non-hazardous areas associated with the bunkering process 4.6 Proficiency to perform fuel system measurements and calculations, including: .1 maximum fill quantity .2 On Board Quantity (OBQ) .3 Minimum Remain On Board (ROB) .4 fuel consumption calculations 4.7 Ability to ensure the safe management of bunkering and other methyl/ethyl alcohol related operations concurrent with other onboard operations, both in port and at sea
5 Take precautions to prevent pollution of the environment from the release of fuels from ships	5.1 Knowledge of the effects of pollution on human and environment .1 awareness of the dynamics of gas plume and modelling techniques 5.2 Knowledge of measures to be taken in the event of spillage/leakage .1 hazard control checklists in mitigating potential risks

Competence	Knowledge, Understanding and Proficiency Methyl/ethyl alcohols
	.2 shipboard fuel pollution emergency plan
6 Monitor and control compliance with legislative requirements	6.1 Knowledge and understanding of relevant provisions of the International Convention for the Prevention of Pollution from Ships (MARPOL), as amended and other relevant IMO instruments, industry guidelines and port regulations as commonly applied 6.2 Proficiency in the use of the IGF Code and related documents
7 Take precautions to prevent hazards	7.1 Knowledge and understanding of the hazards and control measures associated with fuel system operations on board ships using methyl/ethyl alcohol as fuel, including: .1 flammability (including water-methyl/ethyl mixtures) .2 explosion .3 toxicity .4 reactivity .5 corrosivity .6 health hazards .7 inert gas composition .8 electrostatic hazards 7.2 Proficiency to calibrate and use monitoring and fuel detection systems, instruments and equipment on board ships using methyl/ethyl alcohol as fuel 7.3 Knowledge and understanding of dangers of non-compliance with relevant rules/regulations

Competence	Knowledge, Understanding and Proficiency Methyl/ethyl alcohols
	7.4 Knowledge and understanding of risks assessment method analysis on board ships using methyl/ethyl alcohol as fuel 7.5 Ability to elaborate and develop risks analysis related to risks on board ships using methyl/ethyl alcohol as fuel 7.6 Ability to elaborate and develop safety plans and safety instructions for ships using methyl/ethyl alcohol as fuel 7.7 Knowledge of hot work, enclosed spaces, hazardous areas, spaces adjacent to hazardous areas and tank entry including permitting procedures.
8 Apply occupational health and safety precautions and measures on board a ship	8.1 Proper use of specialized safety equipment and protective devices compatible with methyl/ethyl alcohol exposure, including: .1 breathing apparatus and evacuating equipment .2 protective clothing and equipment .3 resuscitators .4 rescue and personal escape equipment 8.2 Knowledge of function, limitation (if any) of gas-measuring instruments and similar equipment: .1 atmosphere testing and gas detection including toxic levels of methyl/ethyl alcohol 8.3 Knowledge of safe working practices and procedures in accordance with legislation and industry guidelines and personal shipboard safety relevant to ships using methyl/ethyl alcohol as fuel, including:

Competence	Knowledge, Understanding and Proficiency
	Methyl/ethyl alcohols
	.1 precautions to be taken before and during repair and maintenance work .2 material compatibilities with methyl/ethyl alcohol systems .3 electrical safety .4 ship/shore safety checklist .5 safety measures for hot and cold work 8.4 Basic knowledge of first aid with reference to a Safety Data Sheet (SDS)
9 Knowledge of the prevention, control and fire-fighting and extinguishing systems on board ships	9.1 Fire organization and action to be taken on ships using methyl/ethyl alcohol as fuel 9.2 Special hazards associated with fuel systems and fuel handling on ships using methyl/ethyl alcohol as fuel 9.3 Fire-fighting system operations 9.4 Reporting and notifying relevant authorities and involved parties

***

ANNEX 4

DRAFT STCW.7 CIRCULAR

INTERIM GUIDELINES ON TRAINING FOR SEAFARERS ON SHIPS USING AMMONIA AS FUEL

1 The Sub-Committee on Human Element, Training and Watchkeeping (HTW), at its eleventh session (10 to 14 February 2025), agreed that generic interim guidelines on training for seafarers on ships using alternative fuels and new technologies should be developed in parallel with several individual sets of fuel/technology-specific interim guidelines.

2 The Maritime Safety Committee (the Committee), at its 110th session (18 to 27June 2025), noted the above-mentioned agreement by the HTW Sub-Committee and approved STCW.7/Circ.25 on *Generic interim guidelines on training for seafarers on ships using alternative fuels and new technologies*.

3 The Committee, at its […] session ([DATE]), approved the *Interim guidelines on training for seafarers on ships using ammonia as fuel* (the Interim Guidelines), prepared by the HTW Sub-Committee, at its twelfth session (23 to 27 February 2026), as set out in the annex. These Interim Guidelines serve as the primary reference for the development of training of seafarers on ships using ammonia as fuel.

4 The Committee agreed to keep the Interim Guidelines under review, taking into account operational experience gained with their application.

5 Member States are invited to bring the Interim Guidelines to the attention of all parties concerned.

ANNEX

INTERIM GUIDELINES ON TRAINING FOR SEAFARERS ON SHIPS USING AMMONIA AS FUEL

1 INTRODUCTION

1.1 The purpose of these Interim Guidelines is to provide a reference for the development and approval of training for seafarers on ships using ammonia as fuel to support the reduction of greenhouse gas emissions from international shipping.

Application

1.2 Unless expressly provided otherwise, these Interim Guidelines apply to seafarers on ships using ammonia as fuel.

1.3 Where specific provisions of this document differ from the requirements of mandatory instruments applicable to seafarers working on ships using ammonia, the provisions of those mandatory instruments should take precedence.

Goal

1.4 The goal of these Interim Guidelines is to provide an international standard for the development and approval of training of seafarers serving on ships using ammonia as fuel.

General provisions for training and familiarization

1.5 All seafarers serving on board ships using ammonia as fuel should, prior to being assigned shipboard duties, be familiarized with their specific duties and with all ship arrangements, installations, equipment, procedures, and ship characteristics that are relevant to their routine or emergency duties, as specified in regulation I/14.5 of the STCW Convention.

1.6 In accordance with MSC.1/Circ.1687 on *Interim guidelines for the safety of ships using ammonia as fuel*, paragraph 19.2.2, masters, officers, ratings, and other personnel on ships using ammonia as fuel should have received training and be qualified in the use of gaseous fuel in accordance with the regulation V/3 of the STCW Convention and section A-V/3 of the STCW Code, taking into account the specific hazards of ammonia used as fuel.

1.7 In addition, seafarers should receive appropriate training on the associated risks and emergency procedures, in accordance with their duties and responsibilities.

1.8 On that basis, the following training approach comprising basic and advanced training levels may be applied:

.1 basic training for seafarers responsible for designated safety duties associated with the care, use or in emergency response to the fuel and systems on board ships using ammonia as fuel should be delivered in accordance with the knowledge, understanding and proficiency (KUPs) specified in table 1 of these Interim Guidelines and should meet the standard competence specified therein; and

.2 advanced training for the masters, engineer officers and all personnel with immediate responsibility for the care and use of fuel and systems on board ships using ammonia as fuel should be delivered in accordance with the KUPs specified in tables 1 and 2 of these Interim Guidelines and should meet the standard competence specified therein.

1.9 The competences in tables 1 and 2 of these Interim Guidelines have been developed based on the standards of competences for basic and advanced training set out in STCW.7/Circ.25 on the *Generic interim guidelines on training for seafarers using alternative fuels and new technologies*.

2 TRAINING REQUIREMENTS

General

2.1 Prior to being assigned duties on board a ship using ammonia as fuel, all seafarers should receive appropriate training in accordance with this section.

2.2 The Administration may, in respect of ships of less than 500 gross tonnage, except for passenger ships, if it considers that a ship's size and the length or character of its voyage are such as to render the application of the full requirements of this section unreasonable or impracticable, exempt the seafarers on such a ship or class of ships from some of the requirements, bearing in mind the safety of people on board, the ship and property and the protection of the marine environment.

2.3 Seafarers responsible for designated safety duties associated with the care, use or in emergency response to the fuels and fuel systems on board ships using ammonia as fuel should receive basic training or instruction in accordance with paragraphs 3.1 and 3.2 below and should meet the standard of competence specified therein.

2.4 Masters, engineer officers and all personnel with immediate responsibility for the care and use of fuels and fuel systems on ships using ammonia as fuel should receive advanced training in accordance with paragraph 3.3 and 3.4 and should meet the standard of competence specified therein, taking into account the knowledge, understanding and proficiencies to meet the standard of competence specified in paragraph 3.1, as appropriate.

2.5 Basic and advanced training should be given by qualified personnel experienced in the handling and characteristics of the fuels and fuel systems used, and the safety procedures involved.

2.6 It is important to emphasize the need to take account of risk analyses. All risk analyses carried out should be made available to participants during training.

3 STANDARDS OF COMPETENCE

Standard of competence for basic training

3.1 Seafarers responsible for designated safety duties associated with the care, use or in emergency response to the use of the fuels and fuel systems on board ships using ammonia as fuel should, before being assigned to shipboard duties:

.1 receive basic training or instruction as determined by the Administration on the use of ammonia and related fuel systems so as to:

.1 contribute to the safe operation of a ship;

.2 take precautions to prevent hazards on a ship;

.3 apply occupational health and safety precautions and measures;

.4 carry out fire-fighting operations on a ship;

.5 respond to emergencies; and

.6 take precautions to prevent pollution of the environment from ships; and

.2 be required to provide evidence of having achieved the standard of competence provided to undertake their duties and responsibilities through:

.1 demonstration of competence in accordance with the methods and criteria for evaluating competence determined by the Administration; and

.2 examination or continuous assessment as part of a training programme determined by the Administration.

3.2 Documentary evidence should be issued by the Administration indicating that the holder has completed the basic training.

Standard of competence for advanced training

3.3 Masters, engineer officers and all personnel with immediate responsibility for the care and use of the fuels and fuel systems on board ships using ammonia as fuel should, before being assigned to shipboard duties:

.1 receive advanced training in addition to the competences outlined in paragraph 3.1.1 above as determined by the Administration on the use of ammonia and related fuel systems so as to:

.1 be familiar with physical and chemical properties of the fuels and/or characteristics of the systems aboard ships;

.2 operate controls of the fuels and fuel systems related to propulsion plant and engineering systems and services and safety devices on ships;

.3 be able to safely perform and monitor all operations related to the fuels and fuel systems used on board ships;

.4 plan and monitor safe bunkering, stowage and securing of the fuels on board ships;

.5 take precautions to prevent pollution of the environment from ships;

.6 monitor and control compliance with legislative requirements;

.7 take precautions to prevent hazards;

.8 apply occupational health and safety precautions and measures on board ships; and

.9 have knowledge of the prevention, control and fire-fighting and extinguishing systems on board ships;

.2 be required to provide evidence of having achieved the standard of competence provided to undertake their duties and responsibilities through:

.1 demonstration of competence in accordance with the methods and criteria for evaluating competence determined by the Administration; and

.2 examination or continuous assessment as part of a training programme determined by the Administration; and

3.4 Documentary evidence should be issued by the Administration indicating that the holder has completed the advanced training.

4 EMERGENCY EXERCISES

4.1 Emergency exercises related to the fuels and fuel systems on board ships using ammonia as fuel should be conducted at regular intervals. The response and safety system for hazard and accident control should be reviewed and tested.

Table 1

Specification of minimum standard of competence in basic training for seafarers on board ships using ammonia as fuel (assessed against table A-V/3-1 of the STCW Code for reference)

Competence	Knowledge, Understanding and Proficiency
	Ammonia
1 Contribute to the safe operation of a ship	1.1 Design and operational characteristics of ships using ammonia as fuel under different storage conditions 1.2 Basic knowledge of fuel systems and fuel storage systems: .1 ammonia as fuel on board ships .2 types of ammonia fuels storage systems .3 atmospheric, low temperature, compressed or pressurized storage of ammonia fuels on board ships. .4 general arrangement of fuel systems and fuel storage systems on board ships using ammonia as fuel, including Fuel Preparation Room (FPR) and Tank Connection Space. .5 Provisions for hazardous areas, toxic spaces and toxic areas .6 typical fire safety plan .7 monitoring, control and safety systems aboard ships using ammonia as fuel. 1.3 Basic knowledge of fuels and fuel storage systems' operations on board ships using ammonia as fuel: .1 piping systems and valves .2 atmospheric, pressurized, compressed or low-temperature storage

Competence	Knowledge, Understanding and Proficiency Ammonia
	.3 relief systems, protection screens, and ammonia vapour treatment systems .4 basic bunkering operations and bunkering systems related to ammonia .5 protection against high-pressure, low-temperature accidents .6 fuel leak monitoring and detection 1.4 Basic knowledge of the physical and chemical properties of ammonia as fuel on board ships, including: .1 properties and characteristics of ammonia .2 pressure and temperature relationship of ammonia in gaseous and liquefied phases .3 Understanding the consequences and behaviour of ammonia being discharged into water, air and on deck (in vapour and liquid form) 1.5 Knowledge and understanding of safety requirements and safety management on board ships using ammonia as fuel.
2 Take precautions to prevent hazards on a ship	2.1 Basic knowledge of the hazards associated with operations on ships using ammonia as fuel, including but not limited to: .1 health hazards .2 environmental hazards .3 reactivity hazards

Competence	Knowledge, Understanding and Proficiency
	Ammonia
	.4 corrosion hazards associated with ammonia, including its reaction with water and moisture .5 ignition, implosion, explosion and flammability hazards .6 sources of ignition .7 electrostatic hazards .8 toxicity hazards and threshold level .9 liquid pools, vapour leaks and clouds including vapour dispersion .10 low temperatures .11 pressure hazards .12 external environmental conditions that affect operations 2.2 Basic knowledge of hazard controls: .1 emptying, inerting, drying, gas freeing and monitoring techniques .2 anti-static measures .3 ventilation protocols (considering toxic vapour releases) .4 release protocols (during purging, engine shutdown etc.) including treatment systems .5 segregation .6 measures to prevent ignition, fire, implosion and explosion

Competence	Knowledge, Understanding and Proficiency Ammonia
	.7 atmospheric and temperature control .8 gas testing .9 protection against low-temperature damages 2.3 Understanding of fuel characteristics on ships using ammonia as fuel as found on a Safety Data Sheet (SDS)
3 Apply occupational health and safety precautions and measures	3.1 Proper use of gas-measuring instruments and similar equipment: .1 gas detection (flammable and toxic levels of ammonia) 3.2 Proper use of specialized safety equipment and protective devices compatible with ammonia exposure, including: .1 breathing apparatus .2 protective clothing .3 resuscitators .4 rescue and escape equipment 3.3 Basic knowledge of safe working practices and procedures in accordance with legislation and industry guidelines and personal shipboard safety relevant to ships having ammonia as fuel, including: .1 precautions to be taken before entering hazardous areas, toxic areas, toxic spaces, and spaces adjacent to these areas.

Competence	Knowledge, Understanding and Proficiency Ammonia
	.2 precautions to be taken before and during repair and maintenance work .3 material compatibilities with ammonia systems .4 safety measures for hot and cold work .5 measures for decontaminating personal protective equipment, tools or equipment. 3.4 Basic knowledge of first aid with reference to a Safety Data Sheet (SDS)
4 Carry out fire-fighting operations on a ship	4.1 Knowledge of the methods and fire-fighting appliances to detect, control and extinguish fires of ammonia fuels including portable heat-detection devices.
5 Respond to emergencies	5.1 Basic knowledge of contingency plan, emergency procedures and preparedness, including but not limited to: .1 ammonia leaks and escape .2 use safe havens .3 search and rescue from ammonia-contaminated area .4 personal injury .5 training and safety drills, including understanding the role of the Ammonia Release Mitigation System (ARMS) and double-walled pipes as safety measures to tackle toxicity hazards

Competence	Knowledge, Understanding and Proficiency
	Ammonia
6 Take precautions to prevent pollution of the environment from the release of fuels found on ships	6.1 Basic knowledge of measures to be taken in the event of leakage/spillage/venting of fuels from ships using ammonia as fuel, including the need to: .1 report relevant information to the responsible persons .2 awareness of shipboard spill/leakage/venting response procedures .3 awareness of appropriate personal protection when responding to a spill/leakage/venting of ammonia

Table 2

Specification of minimum standard of competence in advanced training for seafarers on board ships using ammonia as fuel (assessed against table A-V/3-2 of the STCW Code for reference)

Competence	Knowledge, Understanding and Proficiency
	Ammonia
1 Familiarity with physical and chemical properties of fuels aboard ships	1.1 Basic knowledge and understanding of simple chemistry and physics and the relevant definitions related to safe bunkering and use of ammonia used as fuel: .1 the chemical structure of ammonia .2 the properties and characteristics of ammonia including: .1 simple physical laws .2 states of matter of ammonia including phase changes .3 liquid and vapour densities .4 liquefaction of gases .5 boil-off of low-temperature fuel (ammonia) .6 diffusion and mixing of gases .7 compression and expansion of gases .8 critical pressure and temperature of gases .9 flashpoint of ammonia, upper and lower flammable limits, auto-ignition temperature .10 saturated vapour pressure/ reference temperature

Competence	Knowledge, Understanding and Proficiency Ammonia
	.11 hydrate formation .12 combustion properties: heating values .13 pollutant characteristics of ammonia fuels .3 the nature and properties of solutions (toxicity and corrosivity of water-ammonia mixtures) .4 thermodynamic units .5 basic thermodynamic laws and diagrams .6 properties of materials and compatibility with ammonia .7 quality of fuel including the effect of impurities .8 effect of low temperature, including ductile or brittle fracture for liquid low-temperature fuels 1.2 Understanding the information contained in a Safety Data Sheet (SDS) about ammonia fuels
2 Operate controls of fuel related to propulsion plant and engineering systems and services and safety devices on ships	2.1 Operating principles of marine power plants 2.2 Knowledge of Ships' auxiliary machinery 2.3 Knowledge of marine engineering terms
3 Ability to safely perform and monitor all operations related to the fuels used on board ships	3.1 Knowledge of design and characteristics of ships using ammonia as fuel under different storage conditions

Competence	Knowledge, Understanding and Proficiency
	Ammonia
	3.2 Knowledge of ship design, systems, and equipment found on ships having ammonia as fuel, including: .1 fuel systems for different propulsion systems .2 general arrangement and construction .3 fuel storage systems on board ships using ammonia as fuel, including materials of construction and insulation .4 fuel-handling equipment and instrumentations on board ships: .1 fuel pumps and pumping arrangements .2 fuel pipelines (double-walled piping) and valves .3 vapour/boil-off management .4 expansion devices .5 temperature and pressure monitoring systems .6 fuel tank level-gauging systems .7 tank pressure monitoring and control systems .5 low-temperature fuel tanks temperature and pressure maintenance .6 fuel system atmosphere control systems (nitrogen), including storage, generation and distribution .7 fuel residue and effluent drain system

Competence	Knowledge, Understanding and Proficiency
	Ammonia
	.8 lubricants and compressors, or other equipment .9 toxic and flammable gas-detecting systems .10 flame detection systems .11 vapour / boil-off gas (BOG) management and control systems including liquefaction and reliquefaction .12 alarm and fuel Emergency Shut Down system (ESD) 3.3 Knowledge of fuel system theory and characteristics, including types of fuel system pumps and their safe operation on board ships using ammonia as fuel .1 low pressure pumps .2 high-pressure pumps .3 compressors .4 vaporizers .5 heaters .6 heat exchangers .7 filters .8 ventilation system related to spaces where fuel vapours could be present .9 venting and vapour systems for the ammonia fuel

Competence	Knowledge, Understanding and Proficiency Ammonia
	.10 pressure build-up units 3.4 Knowledge of safe procedures and checklists for taking fuel tanks in and out of service, including: .1 inerting .2 gas freeing .3 tank preparation (conditioning/drying) .4 initial loading .5 temperature and pressure control .6 heating of fuel .7 vapour management .8 emptying systems
4 Plan and monitor safe bunkering, stowage and securing of the fuel on board ships	4.1 General knowledge of ships using ammonia as fuel 4.2 Ability to use all data available on board related to bunkering, storage and securing of ammonia as fuel 4.3 Ability to establish clear and concise communications between the ship and the terminal, truck or the bunker-supply ship 4.4 Knowledge of safety and emergency procedures for operation of machinery, fuel and control systems for ships using ammonia as fuel

Competence	Knowledge, Understanding and Proficiency Ammonia
	4.5 Proficiency in the operation of bunkering systems on board ships using ammonia as fuel including: .1 procedures related to pre-bunkering including tank conditioning and post-bunkering .2 emergency procedures .3 ship-shore/ship-ship interface and use of ship-shore checklist related to ammonia. 4.6 Proficiency to perform fuel system measurements and calculations, including: .1 maximum fill quantity .2 On Board Quantity (OBQ) .3 Minimum Remain On Board (ROB) .4 fuel consumption calculations 4.7 Ability to ensure the safe management of bunkering and other ammonia related operations concurrent with other onboard operations, both in port and at sea
5 Take precautions to prevent pollution of the environment from the release of fuels from ships	5.1 Knowledge of the effects of pollution on human and environment .1 awareness of the dynamics of gas plume and modelling techniques 5.2 Knowledge of measures to be taken in the event of spillage/leakage/venting (including management of ammonia-contaminated water) 5.3 Understanding of procedures to prevent pollution of the environment

Competence	Knowledge, Understanding and Proficiency Ammonia
	5.4 Knowledge of measures to be taken towards the local or port authority in case of larger emissions of ammonia or the release of a gas plume
6 Monitor and control compliance with legislative requirements	6.1 Knowledge and understanding of relevant provisions of the International Convention for the Prevention of Pollution from Ships (MARPOL), as amended and other relevant IMO instruments, industry guidelines and port regulations as commonly applied 6.2 Proficiency in the use of the applicable regulatory codes and related documents as appropriate to ship
7 Take precautions to prevent hazards	7.1 Knowledge and understanding of the hazards and control measures associated with fuel system operations on board ships having ammonia as fuel, including but not limited to: .1 flammability .2 implosion and explosion, including Boiling Liquid Expanding Vapour Explosion (BLEVE) .3 toxicity hazards and threshold level .4 reactivity (interactions with water/moisture (hygroscopic)) .5 corrosivity .6 health hazards .7 inert gas composition .8 electrostatic hazards

Competence	Knowledge, Understanding and Proficiency
	Ammonia
	.9 liquid or vapour leaks .10 phase change hazards .11 pressurized gases .12 low temperature 7.2 Proficiency to calibrate and use monitoring and fuel/gas detection systems, instruments and equipment on board ships using ammonia as fuel 7.3 Knowledge and understanding of dangers of non-compliance with relevant rules/regulations 7.4 Knowledge and understanding of risks assessment method analysis on board ships using ammonia as fuel 7.5 Ability to elaborate and develop risks analysis related to risks on board ships using ammonia as fuel 7.6 Ability to elaborate and develop safety plans and safety instructions for ships using ammonia as fuel 7.7 Knowledge of hot work, toxic spaces, toxic areas, hazardous areas, enclosed spaces, spaces adjacent to hazardous areas and tank entry, including permitting procedures
8 Apply occupational health and safety precautions and measures on board a ship	8.1 Proper use of specialized safety equipment and protective devices compatible with ammonia exposure, including: .1 breathing apparatus and evacuating equipment .2 protective clothing and equipment

Competence	Knowledge, Understanding and Proficiency
	Ammonia
	.3 resuscitators .4 rescue and personal escape equipment .5 personal toxicity and gas monitoring equipment and portable gas meters 8.2 Knowledge of function, limitation (if any) of gas-measuring instruments and similar equipment: .1 atmosphere testing and gas detection including toxic levels of ammonia 8.3 Knowledge of safe working practices and procedures in accordance with legislation and industry guidelines and personal shipboard safety relevant to ships having ammonia as fuel, including: .1 precautions to be taken before and during repair and maintenance work .2 material compatibilities with ammonia systems .3 electrical safety .4 ship/shore safety checklist .5 safety measures for hot and cold work .6 precautions for cold burn and frostbite .7 emergency muster stations/safe havens .8 measures for decontaminating personal protective equipment, tools, or equipment after exposure to ammonia 8.4 Basic knowledge of first aid with reference to a Safety Data Sheet (SDS)

Competence	Knowledge, Understanding and Proficiency
	Ammonia
9 Knowledge of the prevention, control and fire-fighting and extinguishing systems on board ships	9.1 Fire organization and action to be taken on ships using ammonia as fuel 9.2 Special hazards associated with fuel systems and fuel handling on ships using ammonia as fuel 9.3 Fire-fighting system operations 9.4 Reporting and notifying relevant authorities and involved parties

***

ANNEX 5

WORK PLAN FOR THE DEVELOPMENT OF TRAINING PROVISIONS FOR SEAFARERS ON SHIPS USING ALTERNATIVE FUELS AND NEW TECHNOLOGIES

Note 1: HTW 11 agreed that the development of training provisions for different fuels and technologies should be closely aligned with the corresponding work plan of, and the safety provisions developed by, other IMO bodies, particularly the CCC Sub-Committee (HTW 11/11, paragraph 7.8.4)

Note 2: MSC 110 endorsed the road map developed by the HTW Sub-Committee for the comprehensive review of the 1978 STCW Convention and Code (MSC 110/13/1 refers)

Note 3: **I**nformation provided under the column "Other IMO bodies / work plans" is based on documents CCC 11/16, annex 5 and SDC 12/WP.5, annex 1.

Work items

This work plan covers the following work items:

.1 development of interim guidelines on training for seafarers on ships using alternative fuels and new technologies, addressing, in particular:

.1 Methyl/ethyl alcohols

.2 Ammonia

.3 Hydrogen fuel cell

.4 LPG

.5 Hydrogen

.6 Battery power

.7 Wind propulsion systems and wind-assisted power

.2 development of relevant amendments to the STCW Convention and Code, with the intention to incorporate them into the process of the comprehensive review of the STCW Convention and Code under output 6.17.

Year	HTW Sub-Committee	MSC	Other IMO bodies / work plans
2026	**HTW 12** - Consideration of the report of the Correspondence Group - Finalization of interim training guidelines on **methyl/ethyl alcohols** and **ammonia** - Continued development of interim training guidelines on **hydrogen fuel cell, LPG, hydrogen** and **battery power** - Initiation of the work on interim training guidelines on **wind propulsion systems and wind-assisted power** - Consideration of the establishment of a correspondence group and agree to its ToR - Invitation for submissions to HTW 13 for proposals on draft generic competences/KUPs and amendments to the STCW Convention and Code chapters (II, III and/or V) for consideration under output 3.8, with a view to incorporating them into the process of the comprehensive review of the STCW Convention and Code under output 6.17 - Report of HTW 12 to MSC 111	**MSC 111** (summer) - Consideration of the report of HTW 12 - Approval of interim training guidelines on **methyl/ethyl alcohols** and **ammonia**	**CCC 12** (autumn) - Finalization of the revision of Interim guidelines for the safety of ships using **methyl/ethyl alcohol** as fuel - Finalization of the revision of the Interim guidelines for the safety of ships using **low-flashpoint oil fuels**

Year	HTW Sub-Committee	MSC	Other IMO bodies / work plans
2027	**HTW 13** (spring) - Consideration of the report of the Correspondence Group - Continued development, towards finalization, of interim training guidelines on **hydrogen fuel cell, LPG, hydrogen**, **battery power** and **wind propulsion systems and wind-assisted power** - Consideration of documents [1] concerning draft generic competences/KUPs and amendments to the STCW Convention and Code chapters (II, III and/or V), under output 3.8, with a view to incorporating them into the process of the comprehensive review of the STCW Convention and Code under output 6.17 - Update the work plan, including prioritization of fuel/technology-specific guidelines, taking into account the progress made during the session and at other IMO bodies - Consideration of the establishment of a correspondence group and agree to its ToR - Report of HTW 13 to MSC 113	**MSC 113** (summer) - Consideration of the report of HTW 13 - Approval of interim training guidelines on [**hydrogen fuel cell, LPG, hydrogen**, **battery power** and **wind propulsion systems and wind-assisted power**]	**CCC 13** (autumn) - Finalization of the revision of the Interim guidelines for the safety of ships using **fuel cell power installations**

[1] Taking into account all relevant documents, including HTW 12/6/85 (Austria et al.), HTW 12/7/1 (ICS and ITF), HTW 12/7/2 (Brazil et al.), as well as HTW 11/7/4 (India), HTW 11/7/7 (Japan) and annex 4 to document HTW 11/6 (Secretariat).

Year	HTW Sub-Committee	MSC	Other IMO bodies / work plans
2028	**HTW 14** (spring) - Consideration of the report of the Correspondence Group - Continued development, towards finalization, of interim training guidelines on [**hydrogen fuel cell, LPG, hydrogen**, **battery power** and **wind propulsion systems and wind-assisted power**] - Finalization of draft generic competences/KUPs and amendments to the STCW Convention and Code chapters (II, III and/or V), under output 3.8, with a view to incorporating them into the process of the comprehensive review of the STCW Convention and Code under output 6.17 - Update the work plan, including prioritization of fuel/technology-specific guidelines, taking into account the progress made during the session and at other IMO bodies - Consideration of the establishment of a correspondence group and agree to its ToR - Report of HTW 14 to MSC 114	**MSC 114** (summer) - Consideration of the report of HTW 14 - Approval of interim training guidelines on [**…**]	**CCC 14** (autumn) - Finalization of the interim guidelines for the safety of ships using **onboard carbon capture and storage systems** - Finalization of the revision of the Interim guidelines on the safety of ships using **ammonia** as fuel

Year	HTW Sub-Committee	MSC	Other IMO bodies / work plans
2029	**HTW 15** (spring) - Consideration of the report of the Correspondence Group - Continued development / finalization of interim training guidelines on additional alternative fuels and new technologies, as needed - Incorporation of the finalized generic competences/KUPs and amendments to the STCW Convention and Code chapters (II, III and/or V) into process of the comprehensive review of the STCW Convention and Code under output 6.17 - Update the work plan, taking into account the progress made during the session and at other IMO bodies - Report of HTW 15 to MSC 116	**MSC 116** (summer) - Consideration of the report of HTW 15 - Approval of interim training guidelines on [**…**]	**CCC 15** (autumn) - Finalization of the revision of the Interim guidelines on the safety of ships using **LPG** as fuel - Finalization of the interim guidelines for the safety of ships using **LOHC or metal hydrides as hydrogen storage** **SDC 15** - Finalization of the interim guidelines for the safety of ships using **wind propulsion and wind-assisted power**

***

ANNEX 6

BIENNIAL STATUS REPORT FOR THE 2026-2027 BIENNIUM

Sub-Committee on Human Element, Training and Watchkeeping (HTW)									
Reference to SD, if applicable	Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ	Status of output for Year 1	Status of output for Year 2	References
1. Improve implementation	1.11	Measures to harmonize port State control (PSC) activities and procedures worldwide	Continuous	MSC / MEPC	HTW / PPR / NCSR	III	No work requested		MSC 101/24, paragraph 21.48; MEPC 75/18, paragraphs 11.10 and 11.11; MSC 104/18, paragraph 13.7.1; MSC 108/20, paragraph 13.7.1; MSC 109/22, paragraph 15.7 MEPC 78/17, paragraphs 7.73 and 9.8; MEPC 79/15, paragraphs 9.5 and 9.6; MEPC 81/16, paragraph 10.9.1
1. Improve implementation	1.14	Development of engine control room alert management (ECRAM) performance standards	2028	MSC	HTW / SSE	SDC	No work requested		MSC 110/21, paragraph 18.43

Sub-Committee on Human Element, Training and Watchkeeping (HTW)									
Reference to SD, if applicable	Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ	Status of output for Year 1	Status of output for Year 2	References
1. Improve implementation	1.26	Revision of MARPOL Annex IV and associated guidelines	2027	MEPC	III / HTW	PPR	No work requested		MEPC 71/17, paragraphs14.8 and 14.9; MEPC 72/17, paragraph 15.10; MEPC 73/19, paragraph 15.19; PPR 6/20, section 14; and MEPC 74/18, paragraph 14.5; MEPC 78/17, paragraph 14.11 PPR 9/21, section 14; MEPC 78/17, paragraphs 14.7 to 14.11; MEPC 80/17, paragraph 9.19; MEPC 81/16, section 5
2. Integrate new, emerging and advancing technologies in the regulatory framework	2.3	Amendments to the IGF Code and development of guidelines for alternative fuels and related technologies	Continuous	MSC	HTW / PPR/ SDC / SSE	CCC	No work requested		MSC 94/21, paragraphs 18.5 and 18.6; MSC 96/25, paragraphs. 10.1 to 10.3; MSC 97/22, paragraph 19.2; PPR 6/20, paragraph 3.39;

Sub-Committee on Human Element, Training and Watchkeeping (HTW)									
Reference to SD, if applicable	Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ	Status of output for Year 1	Status of output for Year 2	References
									MSC 102/24, paragraph 21.4; MSC 106/19, paragraph 16.42, MSC 108/20, sections 3 and 14; MSC 109/22, sections 3 and 14
3. Respond to climate change	3.8	Development of a safety regulatory framework to support the reduction of GHG emissions from ships using new technologies and alternative fuels	Continuous	MSC	MEPC / CCC/ HTW / III / SDC / SSE	MSC	No work requested		MSC 108/20, paragraph 5.4; MSC 109/22, section 6; MSC 110/21, section 6
4. Engage in ocean governance	4.3	Follow-up work emanating from the Action Plan to Address Marine Plastic Litter from Ships	2027	MEPC	III / HTW / PPR		No work requested		MEPC 74/18, paragraph 8.37.3 and annex 21; HTW 8/16, section 8 MEPC 78/17, section 8; MEPC 79/15, section 8; MEPC 80/17, section 8

Sub-Committee on Human Element, Training and Watchkeeping (HTW)									
Reference to SD, if applicable	Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ	Status of output for Year 1	Status of output for Year 2	References
6. Address the human element	6.1	Role of the human element	Continuous	MSC / MEPC	III / PPR / CCC / SDC / SSE / NCSR	HTW	Ongoing		MSC 89/25, paragraphs 10.10, 10.16 and 22.39 and annex 21; HTW 8/16, section 4; HTW 9/15, section 4; and HTW 10/10, section 4
6. Address the human element	6.2	Validated model training courses	Continuous	MSC / MEPC	III / PPR / CCC / SDC/ SSE / NCSR	HTW	Ongoing		MSC 100/20, paragraphs 10.3 to 10.6 and 17.28; MSC 105/20, section 16; HTW 8/16, paragraphs 3.3, 3.4 and 13.4; and HTW 9/15, section 3; HTW 10/10, section 3
6. Address the human element	6.3	Reports on unlawful practices associated with certificates of competency	Continuous	MSC	HTW		Completed		MSC 83/28, paragraph 12.2; HTW 8/16, section 5; and HTW 9/15, section 5; HTW 10/10, section 5

Sub-Committee on Human Element, Training and Watchkeeping (HTW)									
Reference to SD, if applicable	Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ	Status of output for Year 1	Status of output for Year 2	References
6. Address the human element	6.5	Comprehensive revision of the guidelines on the implementation of the ISM Code by Administrations and companies	2028	MSC / MEPC	HTW	III	No work requested		MSC 110/21, paragraph 18.5
6. Address the human element	6.6	Revision of the IMO Standard Marine Communication Phrases (resolution A.918(22))	2028	MSC	HTW	NCSR	No work requested		
6. Address the human element	6.9	Scoping exercise and enhancement of the effectiveness of provisions on fatigue and seafarers' hours of work and rest	2027	MSC	HTW / III		Ongoing		MSC 110/21, paragraph18.14
6. Address the human element	6.17	Comprehensive review of the 1978 STCW Convention and Code	[2031]	MSC	HTW		In progress		MSC 105/20, paragraph 18.13; MSC 107/20, paragraph 17.71; MSC 108/20, paragraph 16.5
7. Ensure regulatory effectiveness	7.20	Develop measures to prevent the loss of containers at sea	2026	MSC	HTW / III / NCSR / SDC	CCC	No work requested		MSC 108/20, paragraphs 3.9 to

Sub-Committee on Human Element, Training and Watchkeeping (HTW)									
Reference to SD, if applicable	Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ	Status of output for Year 1	Status of output for Year 2	References
									3.12 and 3.70, MSC.550(108)
7. Ensure regulatory effectiveness	7.42	Revision of the Interim explanatory notes for the assessment of passenger ship systems' capabilities after a fire or flooding casualty (MSC.1/Circ.1369) and related circulars	2027	MSC	HTW / SSE	SDC	No work requested		MSC 108/20, paragraph 15.23.3; MSC 105/20, paragraphs 15.24.2 and 18.54; MSC 103/21, paragraph 18.31.

OUTPUTS ON THE COMMITTEE'S POST-BIENNIAL AGENDA THAT FALL UNDER THE PURVIEW OF THE SUB-COMMITTEE

Sub-Committee on Human Element, Training and Watchkeeping (HTW)								
Number	Biennium (when the output was placed on the post-biennial agenda)	Reference to strategic direction, if applicable	Description	Parent organ(s)	Associated organ(s)	Coordinating organ(s)	Timescale (sessions)	References
210	2022-2023	6	Development of guidance to address time pressure and related organizational factors	MSC	III	HTW	1	MSC 107/20, paragraph 17.23
233	2024-2025	6	Development of guidelines addressing risks of falls from height	MSC	III	HTW	4	MSC 110/21, paragraph 18.46

***

ANNEX 7

PROPOSED PROVISIONAL AGENDA FOR HTW 13

Opening of the session

1 Adoption of the agenda

2 Decisions of other IMO bodies

3 Validated model training courses (6.2)

4 Role of the human element (6.1)

5 Reports on unlawful practices associated with certificates of competency (6.3)

6 Comprehensive review of the 1978 STCW Convention and Code (6.17)

7 Development of a safety regulatory framework to support the reduction of GHG emissions from ships using new technologies and alternative fuels (3.8)

8 Scoping exercise and enhancement of the effectiveness of provisions on fatigue and seafarers' hours of work and rest (6.9)

9 Biennial agenda and provisional agenda for HTW 14

10 Election of Chair and Vice-Chair for 2028

11 Any other business

12 Report to the Maritime Safety Committee

***

ANNEX 8

STATEMENTS BY DELEGATIONS AND OBSERVERS*

AGENDA ITEM 6

Statement by the delegation of India

"Thank you Chair.

We thank all the distinguished delegates for submitting their well-reasoned papers on the subject of substituting part of minimum mandatory sea time with simulator training.

India had earlier submitted a paper HTW 11/6/29 where we had highlighted our concerns on the proposal to substitute part of minimum sea going service of 12 months with simulator training. Several member states have proposed for substituting up to 2-3 months of the 12 months of sea service with simulator training. India also notes the advice given in the Nautical Institute paper HTW 12/6/162.

India re-iterates that safety is the heart of the competency required from an officer of navigational watch.

Chair, India wholeheartedly supports the inclusion of newer technologies such as simulators, virtual realty training aids etc. and would indeed support for substituting part of the 36 months sea service required under Chapter II.

In the absence of any concrete and robust evidence on the subject, we do not see any compelling reasons to amend Reg. II/1 para 2.2 & particularly para 2.3 or to add other provisions which allow the administrations to partly substitute minimum 12 months sea service with simulator training.

India further notes that as yet, not a lot of clarity exist as to the extent to which simulator training and other methods can substitute for the approved sea-going service related to the onboard training. Therefore, though the subject has been identified as a gap, immediate amendment may not be necessary at this stage particularly since such flexibility already exist in Article IX (equivalents).

India therefore supports the advice given in the Nautical Institute paper and requests this paper to be taken up in the Working Group.

India would request that our intervention may kindly be placed in the report of the Sub-Committee.

Thank you Chair."

Statement by the representative of ICS

* Statements have been included in this annex in the order in which they are listed in the report, sorted by agenda items, and in the language of submission (including translation into any other language if such translation was provided).

"ICS thanks IAMU for document HTW 12/INF.7. An important issue has been raised in this document, that is, the cumulative impact of the proposals submitted to the session. We note that in the template for submitting proposals, there exists a table to address the cumulative impact on maritime training institutes, on seafarers and maritime administrations. However, we observe that this cumulative impact for many of the proposals submitted has been underestimated.

The document by IAMU correctly mentions about the impact of introducing new competences and the possibility that instead of introducing new competences, the idea that under the existing competences, the knowledge, understanding and proficiencies may instead be expanded. The document also provides a survey on the issues that training institutes are facing to deliver the existing competences. So with this in regard, we request the Sub-Committee to instruct the Working Group to consider HTW 12/INF.7 when individual proposals are being discussed because we believe that the impact on training institutes, seafarers and maritime administrations has not been fully addressed."

AGENDA ITEM 7

Statement by the delegation of the Cook Islands

"Thank you, Chair.

The Cook Islands thanks the submitters of documents under this agenda item, and the coordinator and members of the Correspondence Group for their work.

We support continued progress on the development of training provisions for seafarers onboard ships using alternative fuels and new technologies, recognizing both the pace of decarbonization and the need for internationally harmonized standards to avoid regulatory gaps as these ships enter service.

However, safety must remain the primary driver of this work. Decarbonization objectives are essential, but they should not unduly accelerate technical decisions where operational experience remains limited. Our challenge is therefore one of balanced sequencing: guidance must be timely, but also technically mature and precautionary.

For small island developing States with large exclusive economic zones, robust ammonia training standards are directly linked not only to crew safety, but also to pollution prevention and marine ecosystem protection. The potential consequences of a toxic release in or near coastal waters can be disproportionate for vulnerable marine environments and fisheries-dependent economies. This reinforces the importance of ensuring that any global baseline for ammonia is precautionary and operationally robust from the outset.

While the methanol guidelines are close to completion and benefit from increasing operational experience and a comparatively well-understood risk profile, the situation with ammonia is fundamentally different. Ammonia, as an atmospheric pollutant, presents acute toxicity risks, significant atmospheric dispersion characteristics, and potentially severe consequences for both crew and the marine environment in the event of leakage or accidental release. Operational experience with ammonia-fuelled ships remains limited and we should therefore avoid treating the methanol and ammonia guidelines as procedurally equivalent.

We therefore believe that the ammonia guidelines should be standalone, and should meet a clearly precautionary and operationally robust threshold before submission to MSC, to ensure proper training of our seafarers, not the least Engine room personnel, and minimize risks of human errors that may lead to hazardous situations for the crew and the marine environment. The initial global baseline should favour clarity and a conservative approach.

On familiarization, we see merit in strengthening provisions within the guidelines and we note that there are other approaches that were proposed. However, careful sequencing is essential. Reopening Convention-level provisions at this stage may interact with the ongoing comprehensive STCW review and could delay urgently needed safety clarifications. Strengthening familiarization within the guidelines may therefore provide a pragmatic and timely solution.

We also support the inclusion of wind propulsion, as wind propulsion presents a comparatively lower safety and environmental hazard profile than certain alternative fuels and can contribute to reduced reliance on higher-risk pathways. Any such provisions should remain proportionate, risk-based and technically scoped.

Finally, the Cook Islands remains committed to advancing this important work, and please append this intervention to the Sub-Committee's report.

Thank you, Chair."