INTERNATIONAL MARITIME ORGANIZATION

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MARITIME SAFETY COMMITTEE
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Agenda item 20

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REPORT OF THE MARITIME SAFETY COMMITTEE ON ITS 108TH SESSION

Attached are annexes 1 to 7 and 9 to 28 to the report of the Maritime Safety Committee on its 108th session (MSC 108/20).

(See document MSC 108/20/Add.2 for annex 8)

LIST OF ANNEXES

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ANNEX 1

RESOLUTION MSC.549(108)
(adopted on 23 May 2024)

AMENDMENTS TO CHAPTER II-1 OF THE INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING ALSO article VIII(b) of the International Convention for the Safety of Life at Sea, 1974 ("the Convention"), concerning the amendment procedure applicable to the annex to the Convention, other than to the provisions of chapter I,

HAVING CONSIDERED, at its 108th session, amendments to the Convention proposed and circulated in accordance with article VIII(b)(i) of the Convention,

1 ADOPTS, in accordance with article VIII(b)(iv) of the Convention, amendments to the Convention, the text of which is set out in the annex to the present resolution;

2 DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the said amendments shall be deemed to have been accepted on 1 July 2027, unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet have notified the Secretary-General of their objections to the amendments;

3 INVITES Contracting Governments to the Convention to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 January 2028 upon their acceptance in accordance with paragraph 2 above;

4 REQUESTS the Secretary-General, for the purposes of article VIII(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the annex to all Contracting Governments to the Convention;

5 ALSO REQUESTS the Secretary-General to transmit copies of this resolution and its annex to Members of the Organization which are not Contracting Governments to the Convention.

ANNEX

AMENDMENTS TO THE INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974

CHAPTER II-1
CONSTRUCTION – STRUCTURE, SUBDIVISION AND STABILITY, MACHINERY AND ELECTRICAL INSTALLATIONS

Part A-1
Structure of ships

Regulation 3-4
Emergency towing arrangements and procedures

1 The following new section 2 is added after existing section 1 (Emergency towing arrangements on tankers) and the subsequent section and paragraphs therein are renumbered accordingly:

"**2 Emergency towing arrangements on ships other than tankers**

2.1 Emergency towing arrangements shall be fitted on ships, other than tankers, of not less than 20,000 gross tonnage, constructed on or after 1 January 2028.

2.2 For ships, other than tankers, constructed on or after 1 January 2028:

.1 the arrangements shall, at all times, be capable of rapid deployment in the absence of main power on the ship to be towed and easy connection to the towing ship; and

.2 emergency towing arrangements shall be of adequate strength taking into account the size of the ship, and the expected forces during bad weather conditions. The design and construction and prototype testing of emergency towing arrangements shall be approved by the Administration, based on the guidelines developed by the Organization.

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ANNEX 2

RESOLUTION MSC.550(108)
(adopted on 23 May 2024)

AMENDMENTS TO CHAPTERS II-2 AND V OF THE INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING ALSO article VIII(b) of the International Convention for the Safety of Life at Sea, 1974 ("the Convention"), concerning the amendment procedure applicable to the annex to the Convention, other than to the provisions of chapter I,

HAVING CONSIDERED, at its 108th session, amendments to the Convention proposed and circulated in accordance with article VIII(b)(i) of the Convention,

1 ADOPTS, in accordance with article VIII(b)(iv) of the Convention, amendments to the Convention, the text of which is set out in the annex to the present resolution;

2 DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the said amendments shall be deemed to have been accepted on 1 July 2025, unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet have notified the Secretary-General of their objections to the amendments;

3 INVITES Contracting Governments to the Convention to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 January 2026 upon their acceptance in accordance with paragraph 2 above;

4 REQUESTS the Secretary-General, for the purposes of article VIII(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the annex to all Contracting Governments to the Convention;

5 ALSO REQUESTS the Secretary-General to transmit copies of this resolution and its annex to Members of the Organization which are not Contracting Governments to the Convention.

ANNEX

AMENDMENTS TO THE INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974

CHAPTER II-2
CONSTRUCTION – FIRE PROTECTION, FIRE DETECTION AND FIRE EXTINCTION

Part B
Prevention of fire and explosion

Regulation 4
Probability of ignition

1 At the end of paragraph 2.1.7, the word "and" is deleted and at the end of paragraph 2.1.8, "." is replaced by "; and".

2 The following new sub-paragraph is added after existing paragraph 2.1.8:

".9 oil fuel delivered to and used on board ships shall not jeopardize the safety of ships or adversely affect the performance of the machinery or be harmful to personnel."

Part C
Suppression of fire

Regulation 7
Detection and alarm

5 Protection of accommodation and service spaces and control stations

3 Paragraph 5.2 is replaced by the following:

"**5.2 Requirements for passenger ships carrying more than 36 passengers**

A fixed fire detection and fire alarm system shall be so installed and arranged as to provide smoke detection in service spaces, control stations and accommodation spaces, including corridors, stairways and escape routes within accommodation spaces. Smoke detectors need not be fitted in private bathrooms and galleys. Spaces having little or no fire risk such as voids, public toilets, carbon dioxide rooms and similar spaces need not be fitted with a fixed fire detection and fire alarm system. Detectors fitted in cabins, when activated, shall also be capable of emitting, or cause to be emitted, an audible alarm within the space where they are located."

4 Section 5.5 (Cargo ships) is replaced by the following:

"**5.5 Cargo ships**

(The requirements of paragraph 5.5 shall apply to ships constructed on or after 1 January 2026. Ships constructed before 1 January 2026 shall comply with the previously applicable requirements of paragraph 5.5.)

Accommodation and service spaces and control stations of cargo ships shall be protected by a fixed fire detection and fire alarm system and/or an automatic sprinkler, fire detection and fire alarm system as follows depending on a protection method adopted in accordance with regulation 9.2.3.1.

5.5.1 *Method IC*

A fixed fire detection and fire alarm system shall be so installed and arranged as to provide smoke detection in all corridors, stairways and escape routes within accommodation spaces and in all control stations and cargo control rooms.

5.5.2 *Method IIC*

An automatic sprinkler, fire detection and fire alarm system of an approved type complying with the relevant requirements of the Fire Safety Systems Code shall be so installed and arranged as to protect accommodation spaces, galleys and other service spaces, except spaces which afford no substantial fire risk such as void spaces, sanitary spaces, etc. In addition, a fixed fire detection and fire alarm system shall be so installed and arranged as to provide smoke detection in all corridors, stairways and escape routes within accommodation spaces and in all control stations and cargo control rooms.

5.5.3 *Method IIIC*

A fixed fire detection and fire alarm system shall be so installed and arranged as to detect the presence of fire in all accommodation spaces and service spaces providing smoke detection in corridors, stairways and escape routes within accommodation spaces, except spaces which afford no substantial fire risk such as void spaces, sanitary spaces, etc. In addition, a fixed fire detection and fire alarm system shall be so installed and arranged as to provide smoke detection in all corridors, stairways and escape routes within accommodation spaces and in all control stations and cargo control rooms."

Regulation 9
Containment of fire

6 Protection of cargo space boundaries

5 Paragraph 6.1 is deleted and the subsequent paragraphs are renumbered accordingly.

Part G
Special requirements

Regulation 20
Protection of vehicle, special category and ro-ro spaces

6 The title of regulation 20 is replaced by the following:

"**Regulation 20 Protection of vehicle, special category, open and closed ro-ro spaces, and weather decks intended for the carriage of vehicles**"

1 Purpose

7 Paragraph 1.1 is replaced by the following:

".1 fire protection systems shall be provided to adequately protect the ship from the fire hazards associated with vehicle, special category and ro-ro spaces, and weather deck intended for the carriage of vehicles;"

2 General requirements

2.1 Application

8 The following new paragraph 2.1.3 is added after existing paragraph 2.1.2:

"2.1.3 Passenger ships constructed before 1 January 2026, including those constructed before 1 July 2012, shall also comply with regulations 20.4.1.6, 20.4.4 and 20.6.2.3, as adopted by resolution MSC.550(108)."

3 Precaution against ignition of flammable vapours in closed vehicle spaces, closed ro-ro spaces and special category spaces

9 Paragraph 3.1.5 is replaced by the following:

"***3.1.5 Permanent openings***

In cargo ships, permanent openings in the side plating, the ends or deckhead of the space shall be so situated that a fire in the cargo space does not endanger stowage areas and embarkation stations for survival craft and accommodation spaces, service spaces and control stations in superstructures and deckhouses above the cargo spaces."

4 Detection and alarm

10 The following new paragraph is added under the existing title of section 4 (Detection and alarm):

"Passenger ships constructed before 1 January 2026, including those constructed before 1 July 2012, shall comply with the requirements of paragraph 4.1.6 not later than the first survey on or after 1 January 2028."

4.1 Fixed fire detection and fire alarm systems

11 Section 4.1 (Fixed fire detection and fire alarm systems) is replaced by the following:

"**4.1 Fixed fire detection and fire alarm systems**

The requirements of paragraphs 4.1.1 through 4.1.4 shall only apply to passenger ships constructed on or after 1 January 2026. Passenger ships constructed before 1 January 2026, including those constructed before 1 July 2012, shall comply with the requirements of paragraph 4.1.6 and the previously applicable requirements of paragraph 4.1. The requirements of paragraph 4.1.5 shall apply to cargo ships constructed on or after 1 January 2026. Cargo ships constructed before 1 January 2026 shall comply with the previously applicable requirements of paragraph 4.1.

4.1.1 In vehicle, special category and ro-ro spaces, there shall be provided an individually identifiable fixed fire detection and fire alarm system. The system shall comply with the requirements of the Fire Safety Systems Code.

4.1.1.1 The fixed fire detection and fire alarm system shall provide smoke and heat detection throughout vehicle, special category and ro-ro spaces. The Administration may accept linear heat detectors as the required system for heat detection. The system shall be capable of rapidly detecting the onset of fire. The location of detectors shall be to the satisfaction of the Administration, taking into account the

effects of ventilation and other relevant factors. After being installed, the system shall be tested under normal ventilation conditions and shall give an overall response time to the satisfaction of the Administration.

4.1.2 If a fixed water-based deluge system is used for vehicle, special category and ro-ro spaces, then a fire detection and fire alarm system identifiable to the same sections of the deluge system shall be arranged.

4.1.3 The fire detection and fire alarm system shall be designed with a system interface which provides logical and unambiguous presentation of the information, to allow a quick and correct understanding and decision-making. In particular, section numbering of the alarm system shall coincide with that of other systems, such as a fixed water-based fire-extinguishing system or video monitoring system, if available.

4.1.4 There shall be provided a fixed fire detection and fire alarm system for the area on the weather deck intended for the carriage of vehicles. The fixed fire detection system shall be capable of rapidly detecting the onset of the fire anywhere on the area. The type of detectors and their spacing and location shall be to the satisfaction of the Administration, taking into account the effects of weather conditions, cargo obstruction and other relevant factors. Different settings may be used for specific operation sequences, such as during loading or unloading and during voyage, in order to reduce the false alarms.

4.1.5 In cargo ships, vehicle spaces, special category spaces and ro-ro spaces shall be provided with a fixed fire detection and fire alarm system complying with the requirements of the Fire Safety Systems Code. The fixed fire detection system shall be capable of rapidly detecting the onset of fire. The type of detectors and their spacing and location shall be to the satisfaction of the Administration, taking into account the effects of ventilation and other relevant factors. After being installed, the system shall be tested under normal ventilation conditions and shall give an overall response time to the satisfaction of the Administration.

4.1.6 For passenger ships constructed before 1 January 2026, including those constructed before 1 July 2012, a fixed fire detection and fire alarm system complying with the requirements of the Fire Safety Systems Code shall be provided in special category spaces, open and closed ro-ro and vehicle spaces. The fixed fire detection system shall be capable of rapidly detecting the onset of fire. The fixed fire detection and fire alarm system shall provide smoke and heat detection throughout vehicle, special category and ro-ro spaces. In this context, heat detectors shall comply with the spacing and coverage area requirements as applicable for smoke detectors. Heat detectors are only required where there is already a smoke detector."

4.3 Special category spaces

12 Paragraph 4.3.1 is replaced by the following:

"4.3.1 An efficient fire patrol system shall be maintained in special category spaces."

13 The following new section 4.4 is added after existing section 4.3 (Special category spaces):

"**4.4 Video monitoring**

The requirements of paragraphs 4.4.1 and 4.4.2 apply to ships constructed on or after 1 January 2026. Passenger ships with vehicle, special category or ro-ro spaces constructed before 1 January 2026, including those constructed before 1 July 2012, shall comply with the requirements of paragraphs 4.4.1 and 4.4.2 not later than the first survey on or after 1 January 2028.

4.4.1 For passenger ships, an effective video monitoring system shall be arranged in vehicle, special category and ro-ro spaces for continuous monitoring of these spaces. The system shall be provided with immediate playback capability to allow for quick identification of fire location, as far as practicable. Cameras shall be installed to cover the whole space, high enough to see over cargo and vehicles after loading.

4.4.2 The videos recorded by this monitoring system shall be available for replay at a continuously manned control station or at the safety centre for at least seven days for installation on ro-ro passenger ships constructed on or after 1 January 2026 and 24 hours for existing ro-ro passenger ships constructed before 1 January 2026, including those constructed before 1 July 2012. The correspondence between any one video camera and the section of the fixed water-based fire-extinguishing system protecting the space covered by this camera shall be clearly displayed close to the video monitor. Continuous monitoring of the video image by the crew is not required."

5 Structural fire protection

14 Section 5 (Structural fire protection) is replaced by the following, together with the associated footnote:

"**5 Structural fire protection and arrangement of openings**

This paragraph applies to passenger ships constructed on or after 1 January 2026. Passenger ships constructed before 1 January 2026 shall comply with the previously applicable requirements of paragraph 5.

5.1 Structural fire protection

5.1.1 In passenger ships carrying more than 36 passengers, the boundary bulkheads and decks of special category and ro-ro spaces shall be insulated to "A-60" class standard. However, where a category (5), (9) and (10) space, as defined in regulation 9.2.2.3, is on one side of the division, the standard may be reduced to "A-0". Where fuel oil tanks are below a special category space, the integrity of the deck between such spaces may be reduced to "A-0" standard.

5.1.2 Where a special category space or ro-ro space is subdivided with internal decks, the fire rating of these decks shall be determined based on the capacity and arrangement of the fixed water-based fire-extinguishing system. If the fixed water-based fire-extinguishing system cannot simultaneously cover the applicable area above and below a given deck, this deck shall be of "A-30" standard while any ramps and doors between decks shall be made of steel and of a design being as tight as practical.

5.2 Arrangement of openings in ro-ro spaces and special category spaces

5.2.1 Openings in the side plating, the ends or deckhead of the ro-ro space shall be situated and arranged so that a fire in the ro-ro space does not endanger:

.1 stowage areas for survival craft;

.2 embarkation stations and assembly stations, including access to such stations; and

.3 accommodation spaces, control stations and normally occupied service spaces in superstructures and deckhouses above the ro-ro space.

Openings are not permitted for all decks directly below these objects and within a safety distance of minimum 6.0 m measured horizontally.

5.2.2 This requirement does not apply to openings fitted with closing arrangements, such as ramps and doors. Ramps and doors shall be of steel for all decks directly below accommodation spaces, control stations and normally occupied service spaces, and minimum "A-0" for all decks directly below survival craft, embarkation stations and assembly stations.

5.2.3 Openings are, however, accepted in ro-ro spaces below accommodation spaces, control stations and normally occupied service spaces, when the fire integrity of the ship's side, including windows and doors, is "A-60" on boundaries in a rectangular area measured 6.0 m horizontally forward and aft of the openings and vertically minimum two deck levels above the deck level with the opening. "A-0" windows protected by a water-based system with an application rate of at least 5.0 L/min per square metre may be accepted as equivalent to "A-60" windows. Ventilation inlets shall be designed to minimize the risk of contamination.*

* Refer to regulations 5.2, 8.2, 9.7.1.5 and 20.3.1.4.

5.2.4 Openings for mechanical ventilation of ro-ro and special category spaces are permitted below accommodation spaces, service spaces and control stations in superstructures, if the opening is protected by a closing device, with a closing arrangement not likely to be cut off in case of a fire in the ro-ro spaces, capable of being closed from a readily accessible position. The closing device shall be made of steel or other fire-resistant material. Such openings are not permitted below survival craft, the emergency generator and air intakes for the engine-room(s).

5.2.5 Notwithstanding the above, air intakes serving machinery used for the ship's main propulsion, power generation and emergency power generation shall be in a position minimizing the risk of being contaminated by a fire in the ro-ro space or special category space.

5.3 Arrangement of weather deck intended for the carriage of vehicles

5.3.1 Appropriate arrangements shall be made so that a fully developed fire on weather decks intended for the carriage of vehicles does not endanger:

.1 stowage areas for survival craft;

.2 embarkation stations and assembly stations including access to these; and

.3 accommodation spaces, control stations and normally occupied service spaces in superstructures and deckhouses adjacent to the weather deck.

5.3.2 Appropriate arrangements shall be made providing a safety distance, measured horizontally, from the designated vehicle lanes of more than 6.0 m to accommodation spaces, control stations and normally occupied service spaces in superstructures and deckhouses adjacent to the weather deck.

5.3.3 The safety distance can be reduced to 3.0 m when boundaries, including windows and doors, within 6.0 m are of "A-60" integrity. Alternatively, "A-0" boundaries protected by a water-based system with an application rate of at least 5.0 L/min per square metre may be accepted as equivalent.

5.3.4 Survival craft and embarkation stations, including access to these, shall be protected with a safety distance of more than 12.0 m. Safety distances shall be measured horizontally.

5.3.5 Notwithstanding the above, air intakes serving machinery used for the ship's main propulsion, power generation and emergency power generation shall be in a position minimizing the risk of being contaminated by a fire on the weather deck intended for carriage of vehicles."

6 Fire extinction

6.1 Fixed fire-extinguishing systems

15 The explanatory paragraph under the title of existing section 6.1 (Fixed fire-extinguishing systems) is replaced by the following:

"(The requirements of paragraphs 6.1.1 and 6.1.2 shall apply to ships constructed on or after 1 July 2014. Ships constructed before 1 July 2014 shall comply with the previously applicable requirements of paragraphs 6.1.1 and 6.1.2. The requirements of paragraphs 6.2.1 and 6.2.2 shall apply to ro-ro passenger ships constructed on or after 1 January 2026. Passenger ships with vehicle, special category or ro-ro spaces constructed before 1 January 2026, including those constructed before 1 July 2012, shall comply with the requirements of paragraph 6.2.3 not later than the first survey on or after 1 January 2028.)"

16 The following new section 6.2 is inserted after existing section 6.1 (Fixed fire-extinguishing systems) and the subsequent section (Portable fire extinguishers) and its paragraphs are renumbered accordingly:

"**6.2 Fixed water-based fire-extinguishing system on weather decks intended for carriage of vehicles**

6.2.1 In passenger ships, a fixed water-based fire-extinguishing system based on monitor(s) shall be installed in order to cover weather decks intended for the carriage of vehicles. The monitor(s) shall comply with the provisions of the Fire Safety Systems Code.

6.2.2 In passenger ships, drainage shall be provided where a fixed water-based fire-extinguishing system is installed to cover weather decks intended for carriage of vehicles. The system shall be sized to remove no less than 125% of the combined capacity of both the monitor(s) and the required number of fire hose nozzles.

6.2.3 For passenger ships constructed before 1 January 2026, including those constructed before 1 July 2012, a fixed water-based fire-extinguishing system based on monitor(s) shall be installed in order to protect areas on weather decks intended for the carriage of vehicles. Monitors shall be located in positions which ensure unobstructed protection of vehicles in the area on the weather deck intended for carriage for vehicles, as far as practicable. Operation of monitors shall be ensured by safe access ways or remote control not to be impaired by a fire in the area protected by that monitor. Capacity of each monitor shall be at least 1,250 L/min. The Administration may permit lower flow rates when the required rate is not practical given the size and arrangement of the ship. The Administration may also permit alternative arrangements for ships that have already installed a fixed water-based fire-extinguishing system based on monitor(s) prior to 1 January 2026."

17 The following new section 7 is added after existing section 6 (Fire extinction) with the associated footnotes:

"**7 Decision-making**

(The requirements of paragraph 7 shall apply to passenger ships constructed on or after 1 January 2026.)

In passenger ships, vehicle, special category and ro-ro spaces, where fixed pressure water-spraying systems are fitted, shall be provided with suitable signage and marking on deckhead and bulkhead and on the vertical boundaries allowing easy identification of the sections of the fixed fire-extinguishing system. Suitable signage and markings shall be adapted to typical patterns of crew movement taking into consideration obstruction by cargo or fixed installations. Section number signs shall be of photoluminescent material.* The section numbering indicated inside the space shall be same as section valve identification and section identification at the safety centre or continuously manned control station.

* Refer to chapter 11 of the FSS Code for the evaluation and testing of photoluminescent material."

Regulation 23
Safety centre on passenger ships

6 Control and monitoring of safety systems

18 Paragraph 6.10 is replaced by the following:

".10 fire detection and fire alarm system;"

CHAPTER V
SAFETY OF NAVIGATION

Regulation 31
Danger messages

19 The following new paragraphs are inserted after existing paragraph 1, together with the associated footnote:

"2.1 The master of every ship involved in the loss of freight container(s), shall communicate the particulars of such an incident by appropriate means without delay and to the fullest extent possible to ships in the vicinity, to the nearest coastal State, and also to the flag State.

2.2 In the event of the ship referred to in paragraph 2.1 being abandoned, or in the event of a report from such a ship being incomplete or unobtainable, the company, as defined in regulation IX/1.2, shall, to the fullest extent possible, assume the obligations placed upon the master by this regulation.

2.3 The flag State, once informed in accordance with paragraph 2.1, shall report to the Organization on the loss of freight container(s).*

* Refer to *Notification and circulation through the Global Integrated Shipping Information System (GISIS)* (resolution A.1074(28)).

2.4 The master of every ship that observes freight container(s) drifting at sea, shall communicate the particulars of such an observation by appropriate means without delay and to the fullest extent possible to ships in the vicinity and to the nearest coastal State."

20 Existing paragraphs 2, 3 and 4 are renumbered as paragraphs 3, 4 and 5, respectively.

Regulation 32
Information required in danger messages

21 The following new paragraph is inserted after existing paragraph 2 (Tropical cyclones (storms)):

"3 Loss or observation of freight container(s)

.1 Loss of freight container(s) from a ship

It is recognized that at the time of the initial reporting, not all of the information elements may be available. Any subsequent and/or additional information shall be reported by the master at the earliest opportunity after the initial reporting. The report shall include:

.1 General information

- Type of report: Loss of freight container(s) from a ship
- Time (Universal Coordinated Time) and date
- Ship's identity (IMO number/name/call sign/MMSI)
- From: Master of the ship, or contact details of their representative reporting on master's behalf
- To: Nearest coastal State where the incident occurred and flag State
- The message number: In chronological order if other freight container loss messages are sent following the first one.

At the earliest, safe and practicable opportunity, a thorough inspection shall be conducted. The number or estimated number of lost freight container(s) shall be verified. A message containing this verified number shall be marked as "final" and sent to the same recipients.

.2 Position reporting*

Position in latitude and longitude, or true bearing and distance in nautical miles from a clearly identified landmark (where possible)

- Position of the ship when freight container(s) were lost; or
- If the position of the ship when the freight container(s) were lost is not known, the estimated position of the ship when the freight container(s) were lost; or
- If an estimated position of the ship when the freight container(s) were lost is not known or cannot be determined, the position of the ship upon discovery of the loss.

* Where available, a system of mechanical, electronic and/or visual aids can be used, allowing near real-time reporting of the drop point of the freight container(s).

.3 Total number or estimated number of freight container(s) lost, as appropriate:

.4 Type of goods in freight container(s):

- Dangerous goods: Yes/No
- UN number (if known)

.5 Description of freight container(s) lost as far as available and practicable:

.1 Dimension of freight container(s) (e.g. 20 foot);

.2 Type(s) of freight container(s) (e.g. reefer); and

.3 Number or estimated number of empty freight container(s).

.6 The master may provide additional information, if available and practicable, for example but not limited to:

- Cargo description according to the dangerous goods manifest (if applicable)
- Description of any cargo spill
- Wind direction and speed
- Sea current direction and speed
- Estimated drift direction and speed of lost freight container(s)
- Sea state and wave height

.2 Observation of freight container(s) drifting at sea

.1 General information

- Type of report: Observation of freight container(s) drifting at sea
- Time (Universal Coordinated Time) and date
- Ship's identity (IMO number/name/call sign/MMSI)
- From: Master of the ship
- To: Nearest coastal State to the position of observation

.2 Position reporting

Time (Universal Coordinated Time), date and position of the observed freight container(s) in latitude and longitude, or true bearing and distance in nautical miles from a clearly identified landmark (where possible)

.3 Total number of freight container(s) observed

.4 The master may provide additional information, if available and practicable, for example but not limited to:

- Dimension of freight container(s) (e.g. 20 foot)
- Type(s) of freight container(s) (e.g. reefer)
- Description of any cargo spill
- Wind direction and speed
- Sea current direction and speed
- Estimated drift direction and speed of observed freight container(s)
- Sea state and wave height "

22 Existing paragraphs 3, 4 and 5 are renumbered as paragraphs 4, 5 and 6, respectively.

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ANNEX 3

RESOLUTION MSC.551(108)
(adopted on 23 May 2024)

AMENDMENTS TO THE INTERNATIONAL CODE OF SAFETY FOR SHIPS USING GASES OR OTHER LOW-FLASHPOINT FUELS (IGF CODE)

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

NOTING resolution MSC.391(95), by which it adopted the International Code of Safety for Ships using Gases or other Low-flashpoint Fuels (IGF Code), which has become mandatory under chapters II-1 and II-2 of the International Convention for the Safety of Life at Sea, 1974 ("the Convention"),

NOTING ALSO article VIII(b) and regulation II-1/2.28 of the Convention concerning the procedure for amending the IGF Code,

HAVING CONSIDERED, at its 108th session, amendments to the IGF Code proposed and circulated in accordance with article VIII(b)(i) of the Convention:

1 ADOPTS, in accordance with article VIII(b)(iv) of the Convention, amendments to the IGF Code, the text of which is set out in the annex to the present resolution;

2 DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the said amendments shall be deemed to have been accepted on 1 July 2025, unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet have notified the Secretary-General of their objections to the amendments;

3 INVITES Contracting Governments to the Convention to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 January 2026 upon their acceptance in accordance with paragraph 2 above;

4 REQUESTS the Secretary-General, for the purposes of article VIII(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the annex to all Contracting Governments to the Convention;

5 ALSO REQUESTS the Secretary-General to transmit copies of this resolution and its annex to Members of the Organization which are not Contracting Governments to the Convention.

ANNEX

AMENDMENTS TO THE INTERNATIONAL CODE OF SAFETY FOR SHIPS USING GASES OR OTHER LOW-FLASHPOINT FUELS (IGF CODE)

Part A

2 General

2.2 Definitions

1 The following new paragraph 2.2.43 is added after existing paragraph 2.2.42:

"2.2.43 *Ship constructed on or after 1 January 2026* means:

.1 for which the building contract is placed on or after 1 January 2026; or

.2 in the absence of a building contract, the keels of which are laid or which are at a similar stage of construction on or after 1 July 2026; or

.3 the delivery of which is on or after 1 January 2030."

4 General requirements

4.2 Risk assessment

2 Paragraph 4.2.2 is replaced by the following:

"4.2.2 For ships to which part A-1 applies, the risk assessment required by 4.2.1 need only be conducted where explicitly required by paragraphs 5.10.5, 5.12.3, 6.4.1.1, 6.4.15.4.7.2, 8.3.1.1, 8.4.2, 13.4.1, 13.7 and 15.8.1.10 as well as by paragraphs 4.4 and 6.8 of the annex."

Part A-1
Specific requirements for ships using natural gas as fuel

5 Ship design and arrangement

5.3 Regulation - General

3 Paragraph 5.3.3.3 is replaced by the following:

"5.3.3.3 For independent tanks the protective distance shall be measured to the tank shell (the primary barrier of the fuel containment system). For membrane tanks the distance shall be measured to the bulkheads surrounding the tank insulation."

4 Paragraph 5.3.4.4 is replaced by the following:

"5.3.4.4 For independent tanks the protective distance shall be measured to the tank shell (the primary barrier of the fuel containment system). For membrane tanks the distance shall be measured to the bulkheads surrounding the tank insulation."

5.12 Regulations for airlocks

5 Paragraph 5.12.1 is replaced by the following:

"5.12.1 For ships constructed on or after 1 January 2026, an air lock is a space enclosed by gastight bulkheads with two substantially gastight doors spaced at least 1.5 m and not more than 2.5 m apart. Unless subject to the requirements of the International Convention on Load Line, the sill height of the door leading to the hazardous area shall not be less than 300 mm. The doors shall be self-closing without any holding back arrangements."

6 Fuel containment system

6.4 Regulations for liquefied gas fuel containment

6.4.15 Tank types

6.4.15.3 Type C independent tanks

6.4.15.3.1 Design basis

6 Paragraph 6.4.15.3.1.2 is replaced by the following:

"6.4.15.3.1.2 The design vapour pressure shall not be less than:

$$P_0 = 0.2 + AC(\rho_r)^{1.5} \text{ (MPa)}$$

where:

$A = 0.00185 (\sigma_m / \Delta\sigma_A)^2$

with:

σ_m = design primary membrane stress;

$\Delta\sigma_A$ = allowable dynamic membrane stress (double amplitude at probability level Q = 10^{-8}) and equal to:

- 55 N/mm^2 for ferritic-perlitic, martensitic and austenitic steel;

- 25 N/mm^2 for aluminium alloy (5083-O);

C = a characteristic tank dimension to be taken as the greatest of the following:

h, $0.75b$ or 0.45ℓ,

with:

h = height of tank (dimension in ship's vertical direction) (m);

b = width of tank (dimension in ship's transverse direction) (m);

ℓ = length of tank (dimension in ship's longitudinal direction) (m);

ρ_r = the relative density of the fuel (ρ_r = 1 for fresh water) at the design temperature."

6.7 Regulations for pressure relief system

6.7.3 Sizing of pressure relieving system

6.7.3.1 Sizing of pressure relief valves

7 The chapeau of paragraph 6.7.3.1.1 is replaced by the following:

"6.7.3.1.1 For ships constructed on or after 1 January 2026, the pressure relief system for each liquefied gas fuel tank shall be designed so that, regardless of the state of any one PRV, the capacity of the residual PRVs meets the combined relieving capacity requirements of the system. The combined relieving capacity shall be the greater of the following, with no more than 20% rise in liquefied gas fuel tank pressure above the MARVS. The tank shall not be loaded until the full relieving capacity is restored:"

8 Paragraph 6.7.3.1.1.2 is replaced by the following:

"6.7.3.1.1.2 vapours generated under fire exposure computed using the following formula:

$$Q = FGA^{0.82}\ (m^3/s)$$

where:

Q = minimum required rate of discharge of air at standard conditions of 273.15 Kelvin (K) and 0.1013 MPa.

F = fire exposure factor for different liquefied gas fuel tank types:

F = 1.0 for tanks without insulation located on deck;

…"

6.9 Regulations for the maintaining of fuel storage condition

6.9.1 Control of tank pressure and temperature

9 The chapeau of paragraph 6.9.1.1 is replaced by the following:

"6.9.1.1 For ships constructed on or after 1 January 2026, with the exception of liquefied gas fuel tanks designed to withstand the full gauge vapour pressure of the fuel under conditions of the upper ambient design temperature, liquefied gas fuel tanks' pressure and temperature shall be maintained at all times within their design range by means acceptable to the Administration, e.g. by one or more of the following methods:"

7 Material and general pipe design

7.3 Regulations for general pipe design

7.3.2 Wall thickness

10 Paragraph 7.3.2.1 is replaced by the following:

"7.3.2.1 For ships constructed on or after 1 January 2026, the minimum wall thickness shall be calculated as follows:

$$t = (t_0 + b + c) / (1 - |a|/100) \text{ (mm)}$$

where:

t_0 = theoretical thickness

$t_0 = PD / (2.0Ke + P)$ (mm)

with:

P = design pressure (MPa) referred to in 7.3.3;

D = outside diameter (mm);

K = allowable stress (N/mm²) referred to in 7.3.4; and

e = efficiency factor equal to 1.0 for seamless pipes and for longitudinally or spirally welded pipes, delivered by approved manufacturers of welded pipes, that are considered equivalent to seamless pipes when non-destructive testing on welds is carried out in accordance with recognized standards. In other cases an efficiency factor of less than 1.0, in accordance with recognized standards, may be required depending on the manufacturing process;

b = allowance for bending (mm). The value of b shall be chosen so that the calculated stress in the bend, due to internal pressure only, does not exceed the allowable stress. Where such justification is not given, b shall be:

$$b = D \cdot t_0 / 2.5r \text{ (mm)}$$

with:

r = mean radius of the bend (mm);

c = corrosion allowance (mm). If corrosion or erosion is expected the wall thickness of the piping shall be increased over that required by other design regulations. This allowance shall be consistent with the expected life of the piping; and

a = negative manufacturing tolerance for thickness (%), i.e. where a is the manufacturing tolerance of -5%, $|a|$ is equal to 5 and shall be entered into the formula as 1- (5/100)."

8 Bunkering

8.4 Regulations for manifold

11 Paragraph 8.4.1 is replaced by the following, together with the associated footnotes:

"8.4.1 The bunkering manifold shall be designed to withstand the external loads during bunkering. The connections at the bunkering station shall be arranged in order to achieve a dry-disconnect operation in one of the followings ways:

.1 a dry-disconnect / connect coupling in accordance with a standard at least equivalent to those acceptable to the Organization;[1] or

.2 a manual connect coupler or hydraulic connect coupler, used to connect the bunker system to the receiving vessel bunkering manifold presentation flange;[2] or

.3 a bolted flange to flange assembly.[2]

1 Refer to the recommendations by the International Organization for Standardization, in particular publication: ISO 21593:2019, Ships and marine technology — Technical requirements for dry-disconnect/connect couplings for bunkering liquefied natural gas.

2 Refer to the recommendations by the International Organization for Standardization, in particular publication: ISO 20519:2021 - Ships and Marine Technology - Specification for Bunkering of Liquefied Natural Gas Fuelled Vessels.

12 The following new paragraphs are added after existing paragraph 8.4.1, together with the associated footnote:

"8.4.2 When intended to use either of the connections specified in paragraphs 8.4.1.2 and 8.4.1.3, these shall be combined with operating procedures that ensure a dry-disconnect is achieved. The arrangement shall be subject to special consideration informed by a bunkering arrangement risk assessment[2] conducted at the design stage and considering dynamic loads at the bunkering manifold connection to a recognized standard acceptable to the Administration, the safe operation of the ship and other hazards that may be relevant to the ship during bunkering operation. The fuel handling manual required by 18.2.3 shall include documentation that the bunkering arrangement risk assessment was conducted, and that special consideration was granted under this requirement."

"8.4.3 An emergency release coupler (ERC) / Emergency Release System (ERS) or equivalent means shall be provided, unless installed on the bunkering supply side of the bunkering line, and the said means shall be in accordance with a standard equivalent to those acceptable to the Organization;[2] it shall enable a quick physical disconnection "dry break-away" of the bunker system in an emergency event."

2 Refer to the recommendations by the International Organization for Standardization, in particular publication: ISO 20519:2021 - Ships and Marine Technology - Specification for Bunkering of Liquefied Natural Gas Fuelled Vessels.

9 Fuel supply to consumers

9.3 Regulations on redundancy of fuel supply

13 Paragraph 9.3.1 is replaced by the following:

"9.3.1 For ships constructed on or after 1 January 2026, for single fuel installations the fuel supply system shall be arranged with redundancy and segregation, so that a leakage in one system, or failure of one of the fuel supply essential auxiliaries, does not lead to an unacceptable loss of power. In the event of a leakage or failure, and in accordance with SOLAS regulation II-1/26.3, the Administration, having regard to overall safety considerations, may accept a partial reduction in propulsion capability from normal operation."

9.4 Regulations on safety functions of gas supply system

14 Paragraph 9.4.7 is replaced by the following:

"9.4.7 For ships constructed on or after 1 January 2026, in cases where the master gas fuel valve is automatically shut down when the safety system as required in 15.2.2 is activated, the complete gas supply pipe between this master gas fuel valve and the double block and bleed valves and between the double block and bleed valves and the consumer shall be automatically vented."

15 Paragraph 9.4.8 is replaced by the following:

"9.4.8 For ships constructed on or after 1 January 2026, there shall be one manually operated shutdown valve in the gas supply line to each gas consumer upstream of the double block and bleed valves to assure safe isolation during maintenance on the gas consumer."

9.6 Regulations for fuel supply to consumers in gas-safe machinery spaces

16 Paragraph 9.6.1.1 is replaced by the following:

"9.6.1 Gas fuel piping in gas-safe machinery spaces shall be completely enclosed by a double pipe or duct fulfilling one of the following conditions:

.1 the gas fuel piping shall be a double wall piping system with the gas fuel contained in the inner pipe. The space between the concentric pipes shall be pressurized with inert gas at a pressure greater than the gas fuel pressure. Suitable alarms shall be provided to indicate a loss of inert gas pressure between the pipes; or"

9.8 Regulations for the design of ventilated duct, outer pipe against inner pipe gas leakage

17 Paragraph 9.8.1 is replaced by the following:

"9.8.1 For ships constructed on or after 1 January 2026, the design pressure of the outer pipe or duct of fuel systems shall not be less than the maximum working pressure of the inner pipe. Alternatively, the design pressure of the outer pipe or duct may be calculated in accordance with 9.8.2."

18 The chapeau of paragraph 9.8.2 is replaced by the following:

"9.8.2 For ships constructed on or after 1 January 2026, alternatively to 9.8.1, the design pressure of the outer pipe or duct shall be taken as the higher of the following:"

19 Paragraph 9.8.4 is replaced by the following:

"9.8.4 For ships constructed on or after 1 January 2026, the duct shall be pressure-tested to show that it can withstand the expected maximum pressure at fuel pipe rupture."

11 Fire safety

11.3 Regulations for fire protection

20 Paragraph 11.3.1 is replaced by the following:

"11.3.1 For ships constructed on or after 1 January 2026, fuel preparation rooms shall, for the purpose of the application of SOLAS regulation II-2/9, be regarded as a machinery space of category A."

11.6 Regulations for dry chemical powder fire-extinguishing system

21 Paragraph 11.6.2 is replaced by the following:

"11.6.2 In addition to any other portable fire extinguishers that may be required elsewhere in IMO instruments, one portable dry powder extinguisher of at least 5 kg capacity shall be located near the bunkering station and in the fuel preparation room. For ships constructed before 1 January 2026, the portable dry powder extinguisher shall be provided in the fuel preparation room not later than the first survey on or after 1 January 2026."

12 Explosion prevention

12.5 Hazardous area zones

22 Paragraph 12.5.1 is replaced by the following:

"***12.5.1 Hazardous area zone 0***

For ships constructed on or after 1 January 2026, this zone includes, but is not limited to, the interiors of fuel tanks, any pipework for pressure relief or other venting systems for fuel tanks, pipes and equipment containing fuel, and interbarrier spaces as defined by paragraph 2.2.15.2."

12.5.2 Hazardous area zone 1

23 Paragraph 12.5.2.1 is replaced by the following:

".1 for ships constructed on or after 1 January 2026, tank connection spaces and fuel storage hold spaces[2]; …

[2] Fuel storage hold spaces for type C tanks are normally not considered as zone 1."

15 Control, monitoring and safety systems

15.4 Regulations for bunkering and liquefied gas fuel tank monitoring

15.4.1 Level indicators for liquefied gas fuel tanks

24 Paragraph 15.4.1.3 is replaced by the following:

".3 For ships constructed on or after 1 January 2026, liquefied gas fuel tank liquid level gauges may be of the following types:

.1 indirect devices which determine the amount of fuel by means such as weighing or in-line flow metering;

.2 closed devices which do not penetrate the liquefied gas fuel tank, such as devices using radioisotopes or ultrasonic devices; or

.3 closed devices which penetrate the liquefied gas fuel tank but which form part of a closed system and keep the gas fuel from being released. Such devices shall be considered as tank connections. If the closed gauging device is not mounted directly onto the tank, it shall be provided with a shutoff valve located as close as possible to the tank."

Part B-1

16 Manufacture, workmanship and testing

16.3 Welding of metallic materials and non-destructive testing for the fuel containment system

16.3.5 Production weld tests

25 Paragraph 16.3.5.1 is replaced by the following:

"16.3.5.1 For all fuel tanks and process pressure vessels except membrane tanks, production weld tests shall generally be performed for approximately each 50 m of butt-weld joints and shall be representative of each welding position. For secondary barriers, the same type production tests as required for primary barriers shall be performed, except that the number of tests may be reduced subject to agreement with the Administration. Tests, other than those specified in 16.3.5.2 to 16.3.5.5, may be required for fuel tanks or secondary barriers."

Part C-1

18 Operation

18.4 Regulations for bunkering operations

18.4.1 Responsibilities

26 Paragraph 18.4.1.1.1 is replaced by the following:

"18.4.1.1 Before any bunkering operation commences, the master of the receiving ship or their representative and the representative of the bunkering source (Persons In Charge, PIC) shall:

.1 agree in writing the transfer procedure, including cooling down and if necessary, gassing up; the maximum transfer rate at all stages; minimum and maximum limiting transfer pressure and temperature; bunkering line PRVs settings; and volume to be transferred;"

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ANNEX 4

RESOLUTION MSC.552(108)
(adopted on 23 May 2024)

AMENDMENTS TO THE INTERNATIONAL CODE FOR THE SAFE CARRIAGE OF GRAIN IN BULK (RESOLUTION MSC.23(59))

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

NOTING resolution MSC.23(59), by which it adopted the International Code for the Safe Carriage of Grain in Bulk ("the Grain Code"), which has become mandatory under chapter VI of the International Convention for the Safety of Life at Sea, 1974 ("the Convention"),

NOTING ALSO article VIII(b) and regulation VI/8.1 of the Convention concerning the procedure for amending the Grain Code,

HAVING CONSIDERED, at its 108th session, amendments to the Grain Code proposed and circulated in accordance with article VIII(b)(i) of the Convention,

1 ADOPTS, in accordance with article VIII(b)(iv) of the Convention, amendments to the Grain Code, the text of which is set out in the annex to the present resolution;

2 DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the said amendments shall be deemed to have been accepted on 1 July 2025, unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet have notified the Secretary-General of their objections to the amendments;

3 INVITES Contracting Governments to the Convention to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 January 2026 upon their acceptance in accordance with paragraph 2 above;

4 REQUESTS the Secretary-General, for the purposes of article VIII(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the annex to all Contracting Governments to the Convention;

5 ALSO REQUESTS the Secretary-General to transmit copies of this resolution and its annex to Members of the Organization which are not Contracting Governments to the Convention.

ANNEX

AMENDMENTS TO THE INTERNATIONAL CODE FOR THE SAFE CARRIAGE OF GRAIN IN BULK (RESOLUTION MSC.23(59))

Part A
Specific requirements

2 Definitions

1 The following new definition is added after existing paragraph 2.7:

"2.8 The term *specially suitable compartment, partly filled in way of the hatch opening, with ends untrimmed* refers to a specially suitable compartment which is not filled to the maximum extent possible in way of the hatch opening but is filled to a level equal with or above the bottom edge of the hatch end beams and has not been trimmed outside the periphery of the hatch opening by the provisions of A 10.4."

10 Stowage of bulk grain

2 The reference to "B 6" in paragraph 10.3.1 is replaced with "B 7".

3 The following new paragraph is inserted after existing paragraph 10.3 and the subsequent paragraphs are renumbered accordingly:

"10.4 In any "specially suitable compartment, partly filled in way of the hatch opening, with ends untrimmed", the bulk grain shall be filled to a level equal with or above the bottom edge of the hatch end beams but may be at its natural angle of repose outside the periphery of the hatch opening. A compartment may qualify for this classification if it is "specially suitable" as defined in A 2.7, in which case dispensation may be granted from trimming the ends of that compartment."

4 Renumbered paragraph 10.7 (existing paragraph 10.6) is replaced by the following:

"10.7 After loading, all free grain surfaces in partly filled compartments shall be level unless the compartment is partly filled in accordance with the provisions of A 10.4, in which case the free grain surface in way of the hatch opening only shall be level."

5 The reference to "B 5.2" in renumbered paragraph 10.10.3 (existing paragraph 10.9.3) is replaced with "B 6.2".

12 Divisions loaded on both sides

6 The reference to "A 12.1.3" in paragraph 12.3.3 is replaced with "A 12.1.2".

14 Saucers

7 The reference to "A 10.9" in paragraph 14.1 is replaced with "A 10.10".

Part B
Calculation of assumed heeling moments and general assumptions

1 General assumptions

8 The following new paragraph 1.1.5 is added after existing paragraph 1.1.4:

".5 In a "specially suitable compartment, partly filled in way of the hatch opening, with ends untrimmed" which is exempted from trimming under the provisions of A 10.4, it shall be assumed that the surface of the grain after loading will slope in all directions away from the filling area at an angle of 30° from the lower edge of the hatch end beam. However, if feeding holes are provided in the hatch end beams in accordance with table B 1-2 and the free grain surface in way of the hatch opening is above the level of the feeding holes, then the surface of the grain after loading shall be assumed to slope in all directions, at an angle of 30° from a line on the hatch end beam which is the mean of the peaks and valleys of the actual grain surface as shown in figure B-1."

9 The reference to "B 5" in paragraph 1.2 is replaced with "B 6".

10 Paragraph 1.5 is replaced by the following:

"1.5 In "partly filled compartments" and "specially suitable compartments, partly filled in way of the hatch opening, with ends untrimmed", the adverse effect of the vertical shift of grain surfaces shall be taken into account as follows:

Total heeling moment = 1.12 x calculated transverse heeling moment."

2 Assumed volumetric heeling moment of a filled compartment, trimmed

11 The reference to "A 10.9" in paragraph 2.6 is replaced with "A 10.10".

12 The reference to "A 10.9" in the Note (2) for figure B 2-1 in paragraph 2.8 is replaced with "A 10.10".

13 The reference to "A 10.9" in the Note (3) for figure B 2-3 in paragraph 2.9 is replaced with "A 10.10".

3 Assumed volumetric heeling moment of a filled compartment, untrimmed

14 In paragraph 3.1, the word "provision" is replaced with "provisions".

15 The following new section 4 is inserted after existing section 3 (Assumed volumetric heeling moment of a filled compartment, untrimmed) and the subsequent sections and paragraphs are renumbered accordingly:

"**4 Assumed volumetric heeling moment of a specially suitable compartment, partly filled in way of the hatch opening, with ends untrimmed**

4.1 All the provisions for "filled compartments, trimmed" set forth in B 2 shall also apply to "specially suitable compartments, partly filled in way of the hatch opening, with ends untrimmed" except as noted below.

4.2 In a "specially suitable compartment, partly filled in way of the hatch opening, with ends untrimmed" which is exempted from trimming under the provisions of A 10.4, the resulting grain surface in way of the hatch opening and the resulting grain surface in the ends, forward and aft of the hatchway, after shifting shall be assumed to be at an angle of 25° to the horizontal."

16 The references to "figure B 4" in renumbered section 5 (Assumed volumetric heeling moments in trunks) are replaced with "figure B 5".

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ANNEX 5

RESOLUTION MSC.553(108)
(adopted on 23 May 2024)

AMENDMENTS TO THE INTERNATIONAL CODE ON THE ENHANCED PROGRAMME OF INSPECTIONS DURING SURVEYS OF BULK CARRIERS AND OIL TANKERS, 2011 (2011 ESP CODE)

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

NOTING resolution A.1049(27), by which the Assembly adopted the International Code on the Enhanced Programme of Inspections during Surveys of Bulk Carriers and Oil Tankers, 2011 ("the 2011 ESP Code"), which has become mandatory under chapter XI-1 of the International Convention for the Safety of Life at Sea, 1974 ("the Convention"),

NOTING ALSO article VIII(b) and regulation XI-1/2 of the Convention concerning the procedure for amending the 2011 ESP Code,

HAVING CONSIDERED, at its 108th session, amendments to the 2011 ESP Code, proposed and circulated in accordance with article VIII(b)(i) of the Convention:

1 ADOPTS, in accordance with article VIII(b)(iv) of the Convention, amendments to the 2011 ESP Code the text of which is set out in the annex to the present resolution;

2 DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the said amendments shall be deemed to have been accepted on 1 July 2025, unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet have notified the Secretary-General of their objections to the amendments;

3 INVITES Contracting Governments to the Convention to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 January 2026 upon their acceptance in accordance with paragraph 2 above;

4 REQUESTS the Secretary-General, for the purposes of article VIII(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the annex to all Contracting Governments to the Convention;

5 ALSO REQUESTS the Secretary-General to transmit copies of this resolution and its annex to Members of the Organization which are not Contracting Governments to the Convention.

ANNEX

AMENDMENTS TO THE INTERNATIONAL CODE ON THE ENHANCED PROGRAMME OF INSPECTIONS DURING SURVEYS OF BULK CARRIERS AND OIL TANKERS, 2011 (2011 ESP CODE)

ANNEX A
CODE ON THE ENHANCED PROGRAMME OF INSPECTIONS DURING SURVEYS OF BULK CARRIERS

Part A
Code on the enhanced programme of inspections during surveys of bulk carriers having single-side skin construction

Annex 5
Procedures for approval and certification of a firm engaged in thickness measurement of hull structures

2 Procedures for approval and certification

Auditing of the firm

1 Paragraph 2.2 is replaced by the following:

"2.2 Upon reviewing of the documents submitted with satisfactory results, the firm shall be audited by the Administration in order to ascertain that the firm is duly organized and managed in accordance with the documents submitted and is capable of conducting thickness measurement of the hull structure of ships."

Part B
Code on the enhanced programme of inspections during surveys of bulk carriers having double-side skin construction

Annex 5
Procedures for approval and certification of a firm engaged in thickness measurement of hull structures

2 Procedures for approval and certification

Auditing of the firm

2 Paragraph 2.2 is replaced by the following:

"2.2 Upon reviewing of the documents submitted with satisfactory results, the firm shall be audited by the Administration in order to ascertain that the firm is duly organized and managed in accordance with the documents submitted and is capable of conducting thickness measurement of the hull structure of ships."

ANNEX B
CODE ON THE ENHANCED PROGRAMME OF INSPECTIONS DURING SURVEYS OF OIL TANKERS

Part A
Code on the enhanced programme of inspections during surveys of double-hull oil tankers

Annex 8
Procedures for approval and certification of a firm engaged in thickness measurement of hull structures

2 Procedures for approval and certification

Submission of documents

3 The chapeau of paragraph 2.1 is replaced by the following:

"2.1 The following documents shall be submitted to the Administration for approval:"

Auditing of the firm

4 Paragraph 2.2 is replaced by the following:

"2.2 Upon reviewing of the documents submitted with satisfactory results, the firm shall be audited by the Administration in order to ascertain that the firm is duly organized and managed in accordance with the documents submitted and is capable of conducting thickness measurement of the hull structure of ships."

Part B
Code on the enhanced programme of inspections during surveys of oil tankers other than double-hull oil tankers

Annex 7
Procedures for approval and certification of a firm engaged in thickness measurement of hull structures

2 Procedures for approval and certification

Submission of documents

5 The chapeau of paragraph 2.1 is replaced by the following:

"2.1 The following documents shall be submitted to the Administration for approval:"

Auditing of the firm

6 Paragraph 2.2 is replaced by the following:

"2.2 Upon reviewing of the documents submitted with satisfactory results, the firm shall be audited by the Administration in order to ascertain that the firm is duly organized and managed in accordance with the documents submitted and is capable of conducting thickness measurement of the hull structure of ships."

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ANNEX 6

RESOLUTION MSC.554(108)
(adopted on 23 May 2024)

AMENDMENTS TO THE INTERNATIONAL LIFE-SAVING APPLIANCE (LSA) CODE

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING ALSO resolution MSC.48(66), by which it adopted the International Life-Saving Appliance (LSA) Code ("the LSA Code"), which has become mandatory under chapter III of the International Convention for the Safety of Life at Sea (SOLAS), 1974 ("the Convention"),

RECALLING FURTHER article VIII(b) and regulation III/3.10 of the Convention concerning the procedure for amending the LSA Code,

HAVING CONSIDERED, at its 108th session, amendments to the LSA Code proposed and circulated in accordance with article VIII(b)(i) of the Convention,

1 ADOPTS, in accordance with article VIII(b)(iv) of the Convention, amendments to the LSA Code, the text of which is set out in the annex to the present resolution;

2 DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the amendments shall be deemed to have been accepted on 1 July 2025 unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet have notified the Secretary-General of their objections to the amendments;

3 INVITES Contracting Governments to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 January 2026 upon their acceptance in accordance with paragraph 2 above;

4 ALSO INVITES Contracting Governments to note the amendments in the annex are to be applied to life-saving appliances installed on or after 1 January 2026 where the expression "installed on or after 1 January 2026" means:

(a) for ships for which the building contract is placed on or after 1 January 2026, or in the absence of the contract, the keels of which are laid or which are at a similar stage of construction on or after 1 January 2026, all installations of the specified type on board those ships; or

(b) for ships other than those ships specified in (a) above, all installations of the specified type, having a contractual delivery date for the equipment or, in the absence of a contractual delivery date to the ship, actually delivered to the ship on or after 1 January 2026;

5 REQUESTS the Secretary-General, in conformity with article VIII(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the annex to all Contracting Governments to the Convention;

6 ALSO REQUESTS the Secretary-General to transmit copies of this resolution and its annex to Members of the Organization which are not Contracting Governments to the Convention.

ANNEX

AMENDMENTS TO THE INTERNATIONAL LIFE-SAVING APPLIANCE (LSA) CODE

CHAPTER II
PERSONAL LIFE-SAVING APPLIANCES

2.2 Lifejackets

2.2.1 General requirements for lifejackets

1 Paragraph 2.2.1.6.2 is replaced by the following:

".2 turn the body of unconscious, face-down persons in the water to a face-up position where the nose and mouth are clear of the water in an average time not exceeding that of the RTD plus 1 s;"

CHAPTER IV
SURVIVAL CRAFT

4.4 General requirements for lifeboats

4.4.7 Lifeboat fittings

2 Paragraph 4.4.7.6.8 is replaced by the following:

".8 to prevent an accidental release during recovery of the boat, the hook shall not be able to support any load unless the hook is completely reset. In the case of a hook which is capable of releasing the lifeboat or rescue boat with a load on the hook when it is not fully waterborne, the handle or safety pins shall not be able to be returned to the reset (closed) position, and any indicators shall not indicate the release mechanism is reset, unless the hook is completely reset. Additional danger signs shall be posted at each hook station to alert crew members to the proper method of resetting;"

3 Paragraph 4.4.7.6.17 is replaced by the following:

".17 where a single fall and hook system is used for launching a lifeboat or rescue boat in combination with a suitable painter, the requirements of paragraphs 4.4.7.6.7 and 4.4.7.6.15 need not be applicable; provided that the single fall and hook system does not have the capability to release the lifeboat or rescue boat with a load on the hook when it is not fully waterborne.

CHAPTER VI
LAUNCHING AND EMBARKATION APPLIANCES

6.1.2 Launching appliances using falls and a winch

4 Paragraph 6.1.2.8 is replaced by the following:

"6.1.2.8 The speed at which the fully loaded survival craft or rescue boat is lowered to the water shall not be less than that obtained from the formula:

$$S = 0.4 + 0.02H, \text{ or } 1.0, \text{ whichever is less}$$

where:

S is the lowering speed in metres per second and

H is the height in metres from the davit head to the waterline with the ship at the lightest sea-going condition."

5 Paragraph 6.1.2.10 is replaced by the following:

"6.1.2.10 The maximum lowering speed of a fully loaded survival craft or rescue boat shall be 1.3 m/s. The Administration may accept a maximum lowering speed other than 1.3 m/s, having regard to the design of the survival craft or rescue boat, the protection of its occupants from excessive forces, and the strength of the launching arrangements taking into account inertia forces during an emergency stop. Means shall be incorporated in the appliance to ensure that this speed is not exceeded."

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ANNEX 7

RESOLUTION MSC.555(108)
(adopted on 23 May 2024)

AMENDMENTS TO THE INTERNATIONAL CODE FOR FIRE SAFETY SYSTEMS (FSS CODE)

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING ALSO resolution MSC.98(73), by which it adopted the International Code for Fire Safety Systems ("the FSS Code"), which has become mandatory under chapter II-2 of the International Convention for the Safety of Life at Sea, 1974 ("the Convention"),

RECALLING FURTHER article VIII(b) and regulation II-2/3.22 of the Convention concerning the procedure for amending the FSS Code,

HAVING CONSIDERED, at its 108th session, amendments to the FSS Code, proposed and circulated in accordance with article VIII(b)(i) of the Convention,

1 ADOPTS, in accordance with article VIII(b)(iv) of the Convention, amendments to the FSS Code, the text of which is set out in the annex to the present resolution;

2 DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the amendments shall be deemed to have been accepted on 1 July 2025 unless, prior to that date, more than one third of the Contracting Governments to the Convention, or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet have notified the Secretary-General of their objections to the amendments;

3 INVITES Contracting Governments to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 January 2026 upon their acceptance in accordance with paragraph 2 above;

4 REQUESTS the Secretary-General, in conformity with article VIII(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the annex to all Contracting Governments to the Convention;

5 ALSO REQUESTS the Secretary-General to transmit copies of this resolution and its annex to Members of the Organization which are not Contracting Governments to the Convention.

ANNEX

AMENDMENTS TO THE INTERNATIONAL CODE FOR FIRE SAFETY SYSTEMS (FSS CODE)

CHAPTER 7
Fixed pressure water-spraying and water mist fire-extinguishing systems

2 Engineering specifications

1 The following new section 2.5 is added after existing section 2.4 (Fixed water-based fire-fighting systems for ro-ro spaces, vehicle spaces and special category spaces):

"**2.5 Fixed water-based fire-extinguishing system on ro-ro passenger ships' weather decks intended for the carriage of vehicles**

This paragraph details the specification of fixed water-based fire-extinguishing system on ro-ro passenger ships having weather decks intended for the carriage of vehicles as required by chapter II-2 of the Convention. The requirements of this paragraph shall apply to ro-ro passenger ships constructed on or after 1 January 2026.

2.5.1 The protected area shall be the entire length and width of the weather deck intended for the carriage of vehicles. The fixed monitor(s) shall be capable of delivering water to:

.1 the area of weather decks intended for carriage of vehicles; and

.2 the area, including superstructure boundaries located up to 8.0 m, measured horizontally, from the area intended for vehicle storage, or the next vertical boundaries, whichever is less.

2.5.2 The combined capacity of all fixed monitors shall be minimum 2.0 L/min per square metre of the protected area, but in no case shall the output of any monitor be less than 1,250 L/min. Even distribution of water shall be ensured.

2.5.3 The distance from the monitor to the farthest extremity of the protected area forward of that monitor shall not be more than 75% of the monitor throw in still air conditions.

2.5.4 Each monitor shall be located outside the area which it protects, in a safe position, with access not likely to be cut off in case of fire.

Monitors shall be installed in positions which allow for unobstructed water coverage with vehicles stowed to maximum capacity of the weather deck. However, areas that cannot be covered by water monitors shall be protected by water nozzles. Nozzles shall be designed and installed taking into account weather conditions and provide 5.0 L/min per square metre for the area they cover and have release controls in a position being accessible in case of a fire.

2.5.5 The system shall be available for immediate use and capable of continuously supplying water. The water supply shall be capable of simultaneously supplying water at the required rate for the entire width of the weather deck intended for carriage of vehicles and a length of 40 m, or the entire length of the weather deck if this is less than 40 m. In no case shall the supply capacity be less than that required for the largest monitor.

2.5.6 The system may be supplied by the fire main, the pump(s) serving other fixed water-based fire-fighting systems or a dedicated pump providing a continuous supply of seawater.

Where the ship's fire pumps are used to feed the monitor(s):

.1 it shall be possible to segregate the ship's fire main from the monitor(s) by means of a valve in order to operate both systems separately or simultaneously; and

.2 the capacity of the pumps shall be sufficient to serve both systems simultaneously, including two jets of water at the required pressure from the fire main system. In case the weather deck shall also carry dangerous goods, capacity for four jets of water at the required pressure shall be provided.

Where another fixed water-based fire-fighting system is used to feed the monitor(s):

.3 it shall be possible to segregate the other fixed water-based fire-fighting system from the monitor(s) by means of a valve in order to operate both systems separately or simultaneously; and

.4 the capacity of the pump(s) shall, in case of open ro-ro spaces, be sufficient to serve both systems simultaneously, minimum two sections of the fixed water-based fire-fighting system being close to the openings facing weather deck and one monitor serving the weather deck. For closed ro-ro spaces and special category spaces, simultaneous operation is not required."

CHAPTER 9
Fixed fire detection and fire alarm systems

1 Application

2 Paragraph 1.1 is replaced by the following:

"1.1 This chapter details the specification of fixed fire detection and fire alarm systems as required by chapter II-2 of the Convention. Unless expressly provided otherwise, the requirements of this chapter shall apply to ships constructed on or after 1 July 2012. The requirements of 2.3.1.5 and 2.4.2.2 of this chapter shall apply to ships constructed on or after 1 January 2026."

2 Engineering specifications

2.3 Component requirements

3 Paragraphs 2.3.1.3 and 2.3.1.4 are replaced by the following:

"2.3.1.3 Heat detectors and linear heat detectors shall be certified to operate before the temperature exceeds 78ºC but not until the temperature exceeds 54ºC, when the temperature is raised to those limits at a rate less than 1ºC per min, when tested according to relevant parts of standards EN 54:2001 and IEC 60092-504. Alternative testing standards may be used as determined by the Administration. At higher rates of temperature rise, the heat detector and linear heat detector shall operate within temperature limits to the satisfaction of the Administration having regard to the avoidance of detector insensitivity or oversensitivity.

2.3.1.4 The operation temperature of heat detectors and linear heat detectors in drying rooms and similar spaces of a normal high ambient temperature may be up to 130ºC, and up to 140ºC in saunas."

4 The following new paragraph 2.3.1.5 is inserted after the existing paragraph 2.3.1.4 and subsequent paragraphs are renumbered accordingly:

"2.3.1.5 Linear heat detectors shall be tested according to standards EN 54-22:2015 and IEC 60092-504. Alternative testing standards may be used as determined by the Administration."

2.4 Installation requirements

2.4.2 Positioning of detectors

5 Paragraph 2.4.2.2 and the associated table 9.1 (Spacing of detectors) therein are replaced by the following:

"**2.4.2.2** The maximum spacing of detectors shall be in accordance with the table below:

Table 9.1 – Spacing of detectors

Type of detector	Maximum floor area per detector (m^2)	Maximum distance apart between centres (m)	Maximum distance away from bulkheads (m)
Heat	37	9	4.5
Smoke	74	11	5.5
Combined smoke and heat	74	9	4.5

2.4.2.2.1 The Administration may require or permit other spacing based upon test data which demonstrate the characteristics of the detectors. Detectors located below movable ro-ro decks shall be in accordance with the above.

2.4.2.2.2 The distance between two sensor cables of the linear heat detection system shall not be more than 9.0 m, while the distance between such cables and bulkheads shall not be more than 4.5 m."

2.5 System control requirements

2.5.1 Visual and audible fire signals

6 The following new paragraphs 2.5.1.2, 2.5.1.3 and 2.5.1.4 are inserted after paragraph 2.5.1.1 and the subsequent paragraphs are renumbered accordingly:

"**2.5.1.2** On ro-ro passenger ships constructed on or after 1 January 2026, alarm notifications shall follow a consistent alarm presentation scheme (wording, vocabulary, colour and position). Alarms shall be immediately recognizable on the navigation bridge and shall not be compromised by noise or poor placing.

2.5.1.3 On ro-ro passenger ships constructed on or after 1 January 2026, the interface shall provide alarm addressability, allow the crew to identify the alarm history, the most recent alarm and the means to suppress alarms while ensuring the alarms with ongoing trigger conditions are still clearly visible.

2.5.1.4 On ro-ro passenger ships constructed on or after 1 January 2026, the smoke detector function in special category and ro-ro spaces may be disconnected during loading and unloading of vehicles. The time of disconnection shall be adapted to the time of loading/unloading and be automatically reset after this predetermined time. The central unit shall indicate whether the detector sections are disconnected or not. Disconnection of the heat detection function or manual call points shall not be permitted."

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ANNEX 9

RESOLUTION MSC.557(108)
(adopted on 23 May 2024)

AMENDMENTS TO THE PERFORMANCE STANDARD FOR PROTECTIVE COATINGS FOR DEDICATED SEAWATER BALLAST TANKS IN ALL TYPES OF SHIPS AND DOUBLE-SIDE SKIN SPACES OF BULK CARRIERS (RESOLUTION MSC.215(82), AS AMENDED)

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING ALSO resolution MSC.215(82), by which it adopted the Performance standard for protective coatings for dedicated seawater ballast tanks in all types of ships and double-side skin spaces of bulk carriers ("the Performance standard"), which has become mandatory under chapter II-1 of the International Convention for the Safety of Life at Sea (SOLAS), 1974 ("the Convention"), as amended by resolution MSC.341(91),

RECALLING FURTHER article VIII(b) and regulation II-1/3-2.2 of the Convention concerning the procedure for amending the Performance standard,

RECOGNIZING the need to keep the Performance standard up to date with regard to references to other IMO instruments contained therein,

HAVING CONSIDERED, at its 108th session, amendments to the Performance standard, proposed and circulated in accordance with VIII(b)(i) of the Convention,

1 ADOPTS, in accordance with Article VIII(b)(iv) of the Convention, amendments to the Performance standard for protective coatings for dedicated seawater ballast tanks in all types of ships and double-side skin spaces of bulk carriers, the text of which is set out in the annex to the present resolution;

2 DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the amendments shall be deemed to have been accepted on 1 July 2025, unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet have notified the Secretary-General of their objections to the amendments;

3 INVITES SOLAS Contracting Governments to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 January 2026 upon their acceptance in accordance with paragraph 2 above;

4 REQUESTS the Secretary-General, in conformity with Article VIII(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the annex to all Contracting Governments to the Convention;

5 ALSO REQUESTS the Secretary-General to transmit copies of this resolution and its annex to Members of the Organization which are not Contracting Governments to the Convention.

ANNEX

AMENDMENTS TO THE PERFORMANCE STANDARD FOR PROTECTIVE COATINGS FOR DEDICATED SEAWATER BALLAST TANKS IN ALL TYPES OF SHIPS AND DOUBLE-SIDE SKIN SPACES OF BULK CARRIERS (RESOLUTION MSC.215(82), AS AMENDED)

6 COATING INSPECTION REQUIREMENTS

6.1 General

1 The existing paragraph 6.1.1 is replaced by the following:

"6.1.1 To ensure compliance with this Standard, the following shall be carried out by qualified coating inspectors certified to AMPP Certified Coatings Inspector, FROSIO Inspector Level III or equivalent as verified by the Administration."

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ANNEX 10

RESOLUTION MSC.558(108)
(adopted on 23 May 2024)

AMENDMENTS TO THE PERFORMANCE STANDARD FOR PROTECTIVE COATINGS FOR CARGO OIL TANKS OF CRUDE OIL TANKERS (RESOLUTION MSC.288(87), AS AMENDED)

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING ALSO resolution MSC.288(87), by which it adopted the Performance standard for protective coatings for cargo oil tanks of crude oil tankers ("the Performance standard"), which has become mandatory under chapter II-1 of the International Convention for the Safety of Life at Sea (SOLAS), 1974 ("the Convention"), as amended by resolution MSC.342(91),

RECALLING FURTHER article VIII(b) and regulation II-1/3-11.3.1 of the Convention concerning the procedure for amending the Performance standard,

RECOGNIZING the need to keep the Performance standard up to date with regard to references to other IMO instruments contained therein,

HAVING CONSIDERED, at its 108th session, amendments to the Performance standard, proposed and circulated in accordance with VIII(b)(i) of the Convention,

1 ADOPTS, in accordance with Article VIII(b)(iv) of the Convention, amendments to the Performance standard for protective coatings for cargo oil tanks of crude oil tankers, the text of which is set out in the annex to the present resolution;

2 DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the amendments shall be deemed to have been accepted on 1 July 2025, unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet have notified the Secretary-General of their objections to the amendments;

3 INVITES SOLAS Contracting Governments to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 January 2026 upon their acceptance in accordance with paragraph 2 above;

4 REQUESTS the Secretary-General, in conformity with Article VIII(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the annex to all Contracting Governments to the Convention;

5 ALSO REQUESTS the Secretary-General to transmit copies of this resolution and its annex to Members of the Organization which are not Contracting Governments to the Convention.

ANNEX

AMENDMENTS TO THE PERFORMANCE STANDARD FOR PROTECTIVE COATINGS FOR CARGO OIL TANKS OF CRUDE OIL TANKERS (RESOLUTION MSC.288(87), AS AMENDED)

6 COATING INSPECTION REQUIREMENTS

6.1 General

1 The existing paragraph 6.1.1 is replaced by the following:

"6.1.1 To ensure compliance with this Standard, the following shall be carried out by qualified coating inspectors certified to AMPP Certified Coatings Inspector, FROSIO Inspector Level III or equivalent as verified by the Administration."

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ANNEX 11

RESOLUTION MSC.559(108)
(adopted on 23 May 2024)

AMENDMENTS TO THE REQUIREMENTS FOR MAINTENANCE, THOROUGH EXAMINATION, OPERATIONAL TESTING, OVERHAUL AND REPAIR OF LIFEBOATS AND RESCUE BOATS, LAUNCHING APPLIANCES AND RELEASE GEAR (RESOLUTION MSC.402(96))

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING ALSO resolution MSC.402(96), by which it adopted the Requirements for maintenance, thorough examination, operational testing, overhaul and repair of lifeboats and rescue boats, launching appliances and release gear ("the Requirements"), which has become mandatory under chapter III of the International Convention for the Safety of Life at Sea (SOLAS), 1974 ("the Convention"), as amended by resolution MSC.404(96),

RECALLING FURTHER article VIII(b) and regulation III/3.25 of the Convention concerning the procedure for amending the Requirements,

TAKING INTO ACCOUNT the amendments to the LSA Code adopted by resolution MSC.535(107), with respect to ventilation means, and openings of the ventilation system and their means of closing for totally enclosed lifeboats,

RECOGNIZING the need to keep the Requirements up to date with regard to annual thorough examination and operational testing of ventilation systems,

HAVING CONSIDERED, at its 108th session, amendments to the Requirements, proposed and circulated in accordance with VIII(b)(i) of the Convention,

1 ADOPTS, in accordance with Article VIII(b)(iv) of the Convention, amendments to the Requirements for maintenance, thorough examination, operational testing, overhaul and repair of lifeboats and rescue boats, launching appliances and release gear, the text of which is set out in the annex to the present resolution;

2 DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the amendments shall be deemed to have been accepted on 1 July 2025, unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet have notified the Secretary-General of their objections to the amendments;

3 INVITES SOLAS Contracting Governments to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 January 2026 upon their acceptance in accordance with paragraph 2 above;

4 REQUESTS the Secretary-General, in conformity with Article VIII(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the annex to all Contracting Governments to the Convention;

5 ALSO REQUESTS the Secretary-General to transmit copies of this resolution and its annex to Members of the Organization which are not Contracting Governments to the Convention.

ANNEX

AMENDMENTS TO THE REQUIREMENTS FOR MAINTENANCE, THOROUGH EXAMINATION, OPERATIONAL TESTING, OVERHAUL AND REPAIR OF LIFEBOATS AND RESCUE BOATS, LAUNCHING APPLIANCES AND RELEASE GEAR (RESOLUTION MSC.402(96))

6 SPECIFIC PROCEDURES FOR INSPECTION, MAINTENANCE, THOROUGH EXAMINATION, OPERATIONAL TESTING, OVERHAUL AND REPAIR

6.2 Annual thorough examination and operational test

1 Paragraph 6.2.3 is replaced by the following:

"6.2.3 For lifeboats (including free-fall lifeboats), rescue boats and fast rescue boats, the following items shall be thoroughly examined and checked for satisfactory condition and operation:

.1 condition of the boat structure including fixed and loose equipment (including a visual examination of the external boundaries of the void spaces, as far as practicable);

.2 engine and propulsion system;

.3 sprinkler system, where fitted;

.4 air supply system, where fitted;

.5 manoeuvring system;

.6 power supply system;

.7 bailing system;

.8 fender/skate arrangements;

.9 rescue boat righting system, where fitted; and

.10 ventilation system, where fitted."

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ANNEX 12

RESOLUTION MSC.560(108)
(adopted on 23 May 2024)

AMENDMENTS TO PART A OF THE SEAFARERS' TRAINING, CERTIFICATION AND WATCHKEEPING (STCW) CODE

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING ALSO article XII and regulation I/1.2.3 of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978 ("the 1978 STCW Convention"), concerning the procedures for amending part A of the Seafarers' Training, Certification and Watchkeeping Code ("the STCW Code"),

RECOGNIZING the need for training provisions to prevent and respond to bullying and harassment in the maritime sector, including sexual assault and sexual harassment,

HAVING CONSIDERED, at its 108th session, amendments to part A of the STCW Code, proposed and circulated in accordance with article XII(1)(a)(i) of the 1978 STCW Convention,

1 ADOPTS, in accordance with article XII(1)(a)(iv) of the 1978 STCW Convention, amendments to the STCW Code, the text of which is set out in the annex to the present resolution;

2 DETERMINES, in accordance with article XII(1)(a)(vii)(2) of the 1978 STCW Convention, that said amendments to the STCW Code shall be deemed to have been accepted on 1 July 2025, unless, prior to that date, more than one third of Parties or Parties the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant shipping of ships of 100 gross register tons or more have notified to the Secretary-General of the Organization that they object to the amendments;

3 INVITES Parties to note that, in accordance with article XII(1)(a)(ix) of the 1978 STCW Convention, the amendments to the STCW Code annexed hereto shall enter into force on 1 January 2026 upon their acceptance, in accordance with paragraph 2 above;

4 URGES Parties to implement the amendments to section A-VI/1 of the STCW Code at an early stage;

5 REQUESTS the Secretary-General, for the purposes of article XII(1)(a)(v) of the 1978 STCW Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the annex to all Parties to the 1978 STCW Convention;

6 ALSO REQUESTS the Secretary-General to transmit copies of this resolution and its annex to Members of the Organization which are not Parties to the 1978 STCW Convention.

ANNEX

AMENDMENTS TO PART A OF THE SEAFARERS' TRAINING, CERTIFICATION AND WATCHKEEPING (STCW) CODE

CHAPTER VI
STANDARDS REGARDING EMERGENCY, OCCUPATIONAL SAFETY, SECURITY, MEDICAL CARE AND SURVIVAL FUNCTIONS

Section A-VI/1
Mandatory minimum requirements for safety familiarization, basic training and instruction for all seafarers

1 Table A-VI/1-4 (Specification of minimum standard of competence in personal safety and social responsibilities) is replaced by the following:

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Comply with emergency procedures	Types of emergency which may occur, such as collision, fire, foundering Knowledge of shipboard contingency plans for response to emergencies Emergency signals and specific duties allocated to crew members in the muster list; muster stations; correct use of personal safety equipment Action to take on discovering potential emergency, including fire, collision, foundering and ingress of water into the ship Action to take on hearing emergency alarm signals Value of training and drills Knowledge of escape routes and internal communication and alarm systems	Assessment of evidence obtained from approved instruction or during attendance at an approved course	Initial action on becoming aware of an emergency conforms to established emergency response procedures Information given on raising alarm is prompt, accurate, complete and clear
Take precautions to	Basic knowledge of the impact of shipping on the	Assessment of evidence obtained	Organizational procedures

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
prevent pollution of the marine environment	marine environment and the effects of operational or accidental pollution on it Basic environmental protection procedures Basic knowledge of complexity and diversity of the marine environment	from approved instruction or during attendance at an approved course	designed to safeguard the marine environment are observed at all times
Observe safe working practices	Importance of adhering to safe working practices at all times Safety and protective devices available to protect against potential hazards aboard ship Precautions to be taken prior to entering enclosed spaces Familiarization with international measures concerning accident prevention and occupational health[1]	Assessment of evidence obtained from approved instruction or during attendance at an approved course	Safe working practices are observed and appropriate safety and protective equipment is correctly used at all times
Contribute to effective communications on board ship	Understand the principles of, and barriers to, effective communication between individuals and teams within the ship Ability to establish and maintain effective communications	Assessment of evidence obtained from approved instruction or during attendance at an approved course	Communications are clear and effective at all times
Contribute to effective human relationships on board ship	Importance of maintaining good human and working relationships aboard ship	Assessment of evidence obtained from approved instruction or during	Expected standards of work and behaviour are observed at all times

[1] The ILO Code of practice on accident prevention on board ship at sea and in port may be of assistance in the preparation of courses.

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	Basic teamworking principles and practice, including conflict resolution Social responsibilities; employment conditions; individual rights and obligations; dangers of drug and alcohol abuse	attendance at an approved course	
Contribute to the prevention of and response to violence and harassment[2], including sexual harassment, bullying and sexual assault	Prevention of violence and harassment: Basic knowledge and understanding of violence and harassment, including sexual harassment, bullying and sexual assault, and the continuum of harm Basic knowledge and understanding of the consequences of violence and harassment, including sexual harassment, bullying and sexual assault on victims, perpetrators, bystanders and stakeholders, and its effects on safety, health and well-being Understand that, among others, abuse of power relations, discrimination, stress, isolation, fatigue, drugs or alcohol may contribute to violence and harassment, including sexual harassment, bullying and sexual assault Responding to violence and harassment:	Assessment of evidence obtained from approved instruction or during attendance at an approved course	Acceptable practices and procedures designed for the prevention of violence and harassment, including sexual harassment, bullying and sexual assault are observed at all times Able to identify violence and harassment, including sexual harassment, bullying and sexual assault, and the continuum of harm and its effects Acceptable practices and procedures designed for the intervention in and reporting of violence and harassment, including sexual harassment, bullying and sexual assault are

[2] As defined in the ILO Violence and Harassment Convention, 2019 (No. 190).

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	Ability to identify violence and harassment, including sexual harassment, bullying and sexual assault Basic knowledge of the action to take to intervene in and report violence and harassment, including sexual harassment, bullying and sexual assault Understand the basic principles of trauma-informed response and how to provide appropriate support to a victim, bystanders and self		observed at all times
Understand and take necessary actions to control fatigue	Importance of obtaining the necessary rest Effects of sleep, schedules and the circadian rhythm on fatigue Effects of physical stressors on seafarers Effects of environmental stressors in and outside the ship and their impact on seafarers Effects of schedule changes on seafarer fatigue	Assessment of evidence obtained from approved instruction or during attendance at an approved course	Fatigue management practices are observed and appropriate actions are used at all times

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ANNEX 13

RESOLUTION MSC.561(108)
(adopted on 23 May 2024)

AMENDMENTS TO THE ANNEX TO THE INTERNATIONAL CONVENTION ON STANDARDS OF TRAINING, CERTIFICATION AND WATCHKEEPING FOR FISHING VESSEL PERSONNEL, 1995

(Revised annex to the 1995 STCW-F Convention)

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING ALSO article 10 of the International Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel, 1995 (1995 STCW-F Convention), concerning the procedures for amending the 1995 STCW-F Convention,

HAVING CONSIDERED, at its 108th session, draft amendments to the annex to the 1995 STCW-F Convention, circulated in accordance with article 10.2.1 thereof,

1 ADOPTS, in accordance with article 10.2.4 of the 1995 STCW-F Convention, amendments to the annex to the 1995 STCW-F Convention, the text of which is set out in the annex to the present resolution;

2 DETERMINES, in accordance with article 10.2.7.2 of the 1995 STCW-F Convention, that said amendments shall be deemed to have been accepted on 1 July 2025, unless, prior to that date, more than one third of the Parties have notified the Secretary-General of the Organization that they object to the amendments;

3 INVITES the Parties to note that, in accordance with article 10.2.9 of the 1995 STCW-F Convention, the amendments annexed hereto shall enter into force on 1 January 2026 upon their acceptance in accordance with paragraph 2 above;

4 REQUESTS the Secretary-General, for the purposes of article 10.2.5 of the 1995 STCW-F Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the annex to all Parties to the 1995 STCW-F Convention;

5 ALSO REQUESTS the Secretary-General to transmit copies of this resolution and its annex to Members of the Organization which are not Parties to the 1995 STCW-F Convention.

6 FURTHER REQUESTS the Secretary-General to prepare a consolidated certified text of the 1995 STCW-F Convention.

ANNEX

AMENDMENTS TO THE INTERNATIONAL CONVENTION ON STANDARDS OF TRAINING, CERTIFICATION AND WATCHKEEPING FOR FISHING VESSEL PERSONNEL (STCW-F), 1995

(Revised annex to the 1995 STCW-F Convention)

CHAPTER I
General provisions

Regulation I/1
Definitions

1 For the purpose of this annex, the following definitions apply:

.1 *Regulations* means regulations contained in the annex to the Convention;

.2 *Approved* means approved by the Party in accordance with these regulations;

.3 *Skipper* means the person having command of a fishing vessel;

.4 *Officer* means a member of the crew, other than the skipper, designated as such by national law or regulations or, in the absence of such designation, by collective agreement or custom;

.5 *Officer in charge of a navigational watch* means an officer qualified in accordance with the provisions of regulation II/2 or II/4 of this Convention;

.6 *Engineer officer* means an officer qualified in accordance with the provisions of regulation II/5-1-1, II/5-1-2 or II/5-2 of this Convention;

.7 *Chief engineer officer* means the senior engineer officer responsible for the mechanical propulsion and operation and maintenance of mechanical and electrical installations of the vessel;

.8 *Second engineer officer* means the engineer officer next in rank to the chief engineer officer and upon whom the responsibility for the mechanical propulsion and the operation and maintenance of the mechanical and electrical installations of the vessel will fall in the event of the incapacity of the chief engineer officer;

.9 *Radio operator* means a person holding an appropriate certificate issued or recognized by an Administration under the provisions of the Radio Regulations;

.10 *Radio Regulations* means the Radio Regulations complementing the Constitution and Convention of the International Telecommunication Union which is in force at any given time;

.11 *1978 STCW Convention* means the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978;

.12 *1993 Torremolinos Protocol* means the Torremolinos Protocol of 1993 relating to the Torremolinos International Convention for the Safety of Fishing Vessels, 1977;

.13 *2012 Cape Town Agreement* means the Cape Town Agreement of 2012 on the Implementation of the Provisions of the 1993 Torremolinos Protocol relating to the Torremolinos International Convention for the Safety of Fishing Vessels, 1977;

.14 *Month* means a calendar month or 30 days made up of periods of less than one month;

.15 *Seagoing service* means service on board a vessel relevant to the issue or revalidation of a certificate or other qualification;

.16 *Propulsion power* means the total maximum continuous rated output power, in kilowatts, of all the vessel's main propulsion machinery which appears on the vessel's certificate of registry or other official document;

.17 *Limited waters* means those waters in the vicinity of a Party as defined by its Administration within which a degree of safety is considered to exist which enables the standards of qualification and certification for all fishing vessel personnel to be set at a lower level than for service outside the defined limits. In determining the extent of limited waters, the Administration shall take into consideration the guidelines developed by the Organization;[1]

.18 *Unlimited waters* mean waters beyond limited waters;

.19 *Length (L)* shall be taken as 96% of the total length on a waterline at 85% of the least moulded depth measured from the keel line, or as the length from the foreside of the stem to the axis of the rudder stock on that waterline, if that be greater. In vessels designed with rake of keel the waterline on which this length is measured shall be parallel to the designed waterline;

.20 *Moulded depth* is the vertical distance measured from the keel line to the top of the working deck beam at side;

.21 *STCW-F Code* means the Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel Code, as adopted by resolution MSC.562(108), as may be amended by the Organization;

.22 *Owner* means the owner of the fishing vessel or any other organization or person, such as the manager, agent, operator, company, authorized representative or bareboat charterer, who has assumed the responsibility for the operation of the vessel from the owner and who, on assuming such responsibility, has agreed to take over the duties and responsibilities imposed on fishing vessel owners in accordance with the Convention, regardless of whether any other organization or person fulfils certain of the duties or responsibilities on behalf of the fishing vessel owner;

[1] Reference is made to annex 1 to resolution A.539(13) on *Certification of skippers and officers in charge of a navigational watch on fishing vessels of 24 metres in length and over*, adopted by the Organization.

.23 *Fishing vessel personnel* means every person employed or engaged in any capacity or carrying out an occupation on board any fishing vessel, including persons working on board who are paid on the basis of a share of the catch but excluding pilots, naval personnel, other persons in the permanent service of a government, shore-based persons carrying out work aboard a fishing vessel and fisheries observers;

.24 *Function* means a group of tasks, duties and responsibilities, as specified in the STCW-F Code, necessary for fishing vessel operation, safety of life at sea or protection of the marine environment;

.25 *Fishing training vessel* means a dedicated training vessel, designed for catching and storing fish, which provides a training opportunity for demonstration and assessment of the competences required by the provisions of chapter II of this annex;

.26 *GMDSS radio operator* means a person who is qualified in accordance with the provisions of regulation II/6 of the Convention;

.27 *Certificate of competency* means a certificate issued and endorsed for skippers, officers and GMDSS radio operators in accordance with the provisions of chapter II of this annex and entitling the lawful holder thereof to serve in the capacity and perform the functions involved at the level of responsibility specified therein; and

.28 *Certificate of proficiency* means a certificate, other than a certificate of competency issued to fishing vessel personnel, stating that the relevant requirements of training, competencies or seagoing service in the Convention have been met.

2 These regulations are supplemented by the mandatory provisions contained in part A of the STCW-F Code and:

.1 any reference to a requirement in a regulation also constitutes a reference to the corresponding section of part A of the STCW-F Code;

.2 in applying these regulations, the related guidance and explanatory material contained in part B of the STCW-F Code should be taken into account to the greatest degree possible in order to achieve a more uniform implementation of the Convention provisions on a global basis;

.3 amendments to part A of the STCW-F Code shall be adopted, brought into force and take effect in accordance with the provisions of article 10 of the Convention concerning the amendment procedure applicable to the annex; and

.4 part B of the STCW-F Code shall be amended by the Maritime Safety Committee in accordance with its rules of procedure.

Regulation I/2
Application

1 The Administration of a Party, if it considers it unreasonable or impracticable to apply the full requirements of regulations II/3, II/4 and II/5-1-1, II/5-1-2 or II/5-2 and the requirement of the use of the English language to personnel serving on board a fishing vessel of less than 45 metres in length operating exclusively from its ports and fishing within its limited waters, may determine which of these regulations should not apply, wholly or in part, to such personnel, without derogation from the principles of safety in the Convention. In such a case, the Administration concerned shall report to the Secretary-General on the details of the measures it has taken with respect to the training and certification of such personnel.

2 For the purpose of this Convention, the Administration may decide to use the following gross tonnage in place of length (L) as the basis for measurement for all chapters:

.1 a gross tonnage of 300 shall be considered equivalent to a length (L) of 24 metres; and

.2 a gross tonnage of 950 shall be considered equivalent to a length (L) of 45 metres.

Regulation I/3
Certificates and endorsements

1 Certificates of competency for fishing vessel personnel shall only be issued by the Administration if the requirements for service, age, medical fitness, training, qualification and examinations are met in accordance with these regulations.

2 A certificate of competency issued by a Party in compliance with paragraph 1 shall be endorsed by that Party attesting the issue of that certificate in the form as prescribed in format 1 or 2 of section A-I/3 of the STCW-F Code.

3 Certificates and endorsements shall be issued in the official language or languages of the issuing country. If the language used is not English, the text shall include a translation into that language.

4 In respect of radio operators, Parties may:

.1 include the additional knowledge required by regulation II/6 in the examination for the issue of a certificate complying with the Radio Regulations; or

.2 issue a separate certificate indicating that the holder has the additional knowledge required by regulation II/6.

5 The Administration which has recognized a certificate issued by or under the authority of another Party in compliance with regulation I/7 shall issue an endorsement attesting the recognition of that certificate in the form prescribed in format 3 of section A-I/3 of the STCW-F Code.

6 The endorsement shall expire as soon as the certificate endorsed expires or is withdrawn, suspended or cancelled by the Party which issued it and, in any case, not more than five years after the date of issue.

7 Appropriate certificates of competency issued under the provisions of the 1978 STCW Convention for the holder to serve as a chief engineer officer, an engineer officer or GMDSS radio operator shall be deemed to be a corresponding certificate for the purposes of paragraph 1 with regard to fishing vessels.

8 Medical certificates issued in accordance with the provisions of regulation I/9 of the 1978 STCW Convention shall be accepted as valid for the personnel of fishing vessels.

9 Subject to the variations permitted under formats 1, 2 and 3 of section A-I/3 of the STCW-F Code, Administrations may use a format different from the format given in the section provided that such format contains, as a minimum, the required information and that the particulars are inserted in Roman characters and Arabic figures.

Regulation I/4
Control procedures

1 Control exercised by a duly authorized officer under article 8 shall be limited to the following:

.1 verification that all fishing vessel personnel serving on board who are required to be certificated by this Convention are so certificated or hold the required dispensation. Such certificates shall be accepted unless there are clear grounds for believing that a certificate has been fraudulently obtained or that the holder of a certificate is not the person to whom that certificate was originally issued; and

.2 assessment of the ability of the fishing vessel personnel to maintain watchkeeping standards as required by the Convention if there are clear grounds for believing that such standards are not being maintained, because the following have occurred:

.1 the vessel has been involved in a collision, grounding or stranding; or

.2 there has been a discharge of substances from the vessel when under way, at anchor or at berth which is illegal under international conventions; or

.3 the vessel has been manoeuvred in an erratic or unsafe manner, whereby routeing measures adopted by the Organization, or safe navigation practices and procedures, have not been followed; or

.4 the vessel is otherwise being operated in such a manner as to pose a danger to persons, property or the environment.

2 In the event that deficiencies are found under paragraph 1, the officer carrying out the control shall forthwith inform, in writing, the skipper of the vessel and the Administration, so that appropriate action may be taken. Such notification shall specify the details of the deficiencies found and the grounds on which the Party determines that these deficiencies pose a danger to persons, property or the environment.

3 Deficiencies which may be deemed to pose a danger to persons, property or the environment include the following:

.1 failure of persons, required to hold a certificate, to have an appropriate certificate or dispensation;

.2 failure of navigational or engineering watch arrangements to conform to the requirements specified for the vessel by the Administration;

.3 absence in a watch of a person qualified to operate equipment essential to safe navigation, safety radio communications or the prevention of pollution; or

.4 inability to provide rested persons for the first watch at the commencement of a voyage, and for subsequent relieving watches.

Regulation I/5
Communication of information

1 The Secretary-General shall, on request, provide Parties with any information communicated under article 4.

2 A Party which fails to communicate information required by article 4 within 24 months after the date of entry into force of the Convention for a Party shall not be entitled to claim the privileges of this Convention until such time as the information has been received by the Secretary-General.

Regulation I/6
Administration of certification arrangements

1 Each Party undertakes to establish and maintain a means of ensuring that programmes incorporating such instruction and practical training as is necessary to achieve the competency standards are regularly monitored to ensure their effectiveness.

2 Each Party undertakes, to the extent practicable, to maintain a register or registers of all certificates and endorsements specified in regulations I/3 and II/1 to II/6 which are issued, have expired, or have been revalidated, reported lost, suspended or cancelled, and of dispensations issued, and provide information on the status of such certificates, endorsements and dispensations when so requested by another Party.

Regulation I/7
Recognition of certificates

1 Each Administration shall ensure, in order to recognize, by endorsement in accordance with regulation I/3, a certificate issued by or under the authority of another Party, that the requirements for standards of competence, as well as the issue and endorsement of certificates by that Party, are fully complied with.

2 Certificates issued by or under the authority of a non-Party shall not be recognized.

3 Notwithstanding the requirement of paragraph 1 of this regulation and paragraph 5 of regulation I/3, an Administration may, if circumstances require, allow a person to serve for a period not exceeding three months on board a vessel entitled to fly its flag while holding an appropriate and valid certificate issued by another Party without it being endorsed as required by paragraph 5 of regulation I/3 provided that documented proof is made available that application for an endorsement has been submitted to the Administration.

Regulation I/8
Transitional provisions

1 A certificate of competency or of service in a capacity for which this Convention requires a certificate and which before entry into force of the Convention for a Party is issued in accordance with the laws of that Party or the Radio Regulations shall be recognized as valid for service after entry into force of the Convention for that Party.

2 After the entry into force of the Convention for a Party, it may continue to issue certificates of competency in accordance with its previous practices for a period not exceeding five years. Such certificates shall be recognized as valid for the purpose of the Convention. During this transitional period, such certificates shall be issued only to persons who had commenced their sea service before entry into force of the Convention for that Party within the specific vessel department to which those certificates relate. The Party shall ensure that all other candidates for certification shall be examined and certificated in accordance with the Convention.

3 A Party may, within two years after entry into force of the Convention for that Party, issue a certificate of service to fishing vessel personnel who hold neither an appropriate certificate under the Convention nor a certificate of competency issued under its laws before entry into force of the Convention for that Party but who have:

.1 served in the capacity for which they seek a certificate of service for not less than three years at sea within the last seven years preceding entry into force of the Convention for that Party;

.2 produced evidence that they have performed that service satisfactorily; and

.3 satisfied the Party as to medical fitness, including eyesight and hearing, taking into account their age at the time of application.

For the purpose of the Convention, a certificate of service issued under this paragraph shall be regarded as the equivalent of a certificate issued under the Convention.

Regulation I/9
Dispensation

1 In circumstances of exceptional necessity, an Administration, if in its opinion this will not cause danger to persons, property or the environment, may issue a dispensation permitting a person to serve in a specified fishing vessel for a specified period not exceeding six months in a capacity, other than that of the radio operator, except as provided by the relevant Radio Regulations, for which the person does not hold the appropriate certificate, provided that the person to whom the dispensation is issued shall be adequately qualified to fill the vacant post in a safe manner, to the satisfaction of the Administration.

2 Any dispensation granted for a post shall be granted only to a person properly certificated to fill the post immediately below it. Where certification of the post below is not required by the Convention, a dispensation may be issued to a person whose competence and experience are, in the opinion of the Administration, clearly equivalent to the requirements for the post to be filled, provided that, if such a person holds no appropriate certificate, the person shall be required to pass a test accepted by the Administration as demonstrating that such a dispensation may safely be issued. In addition, the Administration shall ensure that the post in question is filled by the holder of an appropriate certificate as soon as possible.

3 Each Party shall, as soon as possible after 1 January each year, send a report to the Secretary-General giving information of the total number of dispensations in respect of each capacity for which a certificate is required, including nil returns.

Regulation I/10
Equivalents

1 The Convention shall not prevent a Party from retaining or adopting other educational and training arrangements, including those involving seagoing service and shipboard organization especially adapted to technical developments and to special types of vessels, provided that the level of seagoing service, knowledge and efficiency as regards navigational and technical handling of vessels ensures a degree of safety at sea and has a preventive effect as regards pollution at least equivalent to the requirements of the Convention.

2 Details of such arrangements shall be included in the report under article 4.

Regulation I/11
Use of simulators

1 The performance standards and other provisions set forth in section A-I/11 and such other requirements as are prescribed in part A of the STCW-F Code for any certificate concerned shall be complied with in respect of:

.1 all simulator-based training;

.2 any assessment of competency required by part A of the STCW-F Code which is carried out by means of a simulator; and

.3 any demonstration, by means of a simulator, of continued proficiency required by part A of the STCW-F Code.

Regulation I/12
Medical standards

1 Each Party shall establish standards of medical fitness for fishing vessel personnel and procedures for the issue of a medical certificate in accordance with the provisions of this regulation and of section A-I/12 of the STCW-F Code.

2 Each Party shall ensure that those responsible for assessing the medical fitness of fishing vessel personnel are medical practitioners recognized by the Party for the purpose of fishing vessel personnel medical examinations, in accordance with the provisions of section A-I/12 of the STCW-F Code.

3 Every crew member holding a certificate issued under the provisions of the Convention who is serving at sea shall also hold a valid medical certificate issued in accordance with the provisions of this regulation and of section A-I/12 of the STCW-F Code.

4 Every candidate for certification shall:

.1 be not less than 16 years of age; or

.2 be not less than 15 years of age provided that the candidate is authorized by the competent authority in accordance with national laws and practice;[2]

[2] Reference is made to article 9 of the ILO Work in Fishing Convention, 2007 (No.188).

.3 provide satisfactory proof of his or her identity; and

.4 meet the applicable medical fitness standards established by the Party.

5 Medical certificates shall remain valid for a maximum period of two years unless the crew member is under the age of 18, in which case the maximum period of validity shall be one year.

6 If the period of validity of a medical certificate expires in the course of a voyage, then the medical certificate shall continue in force until the next port of call where a medical practitioner recognized by the Party is available, provided that the period shall not exceed three months.

7 In urgent cases the Administration may permit a crew member to work without a valid medical certificate until the next port of call where a medical practitioner recognized by the Party is available, provided that:

.1 the period of permission does not exceed three months; and

.2 the crew member concerned is in possession of an expired medical certificate of recent date.

CHAPTER II
Certification of skippers, officers in charge of a navigational watch, engineer officers and radio operators

Regulation II/1
Mandatory minimum requirements for certification of skippers on fishing vessels of 24 metres in length and over operating in unlimited waters

1 Every skipper on a fishing vessel of 24 metres in length and over operating in unlimited waters shall hold a certificate of competency.

2 Every candidate for certification shall:

.1 meet the requirements for certification as an officer in charge of a navigational watch on fishing vessels of 24 metres in length and over operating in unlimited waters, and have approved seagoing service of not less than 12 months as an officer in charge of a navigational watch or skipper on fishing vessels of not less than 12 metres in length. However, the Party may allow the substitution of a period not exceeding six months of approved seagoing service as an officer in charge of a navigational watch on seagoing ships covered by the 1978 STCW Convention; and

.2 meet the standard of competence specified in section A-II/1 of the STCW-F Code.

3 A candidate who holds a valid certificate of competency issued in accordance with the provisions of the 1978 STCW Convention need not be reassessed in those standards of competence listed in section A-II/1 of the STCW-F Code that were required at a higher or equivalent level for the issuance of the corresponding 1978 STCW Convention certificate.

Regulation II/2
Mandatory minimum requirements for certification of officers in charge of a navigational watch on fishing vessels of 24 metres in length and over operating in unlimited waters

1 Every officer in charge of a navigational watch on a fishing vessel of 24 metres in length and over operating in unlimited waters shall hold a certificate of competency.

2 Every candidate for certification shall:

.1 be not less than 18 years of age;

.2 have approved seagoing service of not less than:

.1 12 months on fishing vessels or fishing training vessels of not less than 12 metres in length as part of an approved training programme which includes onboard training that meets the requirements of section A-II/2 of the STCW-F Code and is documented in an approved training record book; or

.2 two years in the deck department on fishing vessels of not less than 12 metres in length. However, the Administration may allow the substitution of the seagoing service by a period of special training not exceeding one year, provided that the period of the special training programme shall be at least equivalent in value to the period of the required seagoing service it substitutes or by a period of approved seagoing service evidenced by an approved record book covered by the 1978 STCW Convention;

.3 meet the standard of competence specified in section A-II/2 of the STCW-F Code; and

.4 meet the applicable requirements of regulation II/6, as appropriate for performing designated radio duties in accordance with the Radio Regulations.

3 A candidate who holds a valid certificate of competency issued in accordance with the provisions of the 1978 STCW Convention need not be reassessed in those standards of competence listed in section A-II/2 of the STCW-F Code that were required at a higher or equivalent level for the issuance of the corresponding 1978 STCW Convention certificate.

Regulation II/3
Mandatory minimum requirements for certification of skippers on fishing vessels of 24 metres in length and over operating in limited waters

1 Every skipper on a fishing vessel of 24 metres in length and over operating in limited waters shall, unless they hold certificates issued in compliance with regulation II/1, hold a certificate of competency issued in compliance with at least the provisions of this regulation.

2 Every candidate for certification shall:

.1 meet the requirements for certification as an officer in charge of a navigational watch on fishing vessels of 24 metres in length and over operating in limited or unlimited waters, and have approved seagoing service of not less than 12 months as an officer in charge of a navigational watch or skipper on fishing vessels of not less than 12 metres in length. However, a Party may allow the substitution of a period not exceeding six months of approved seagoing service as an officer in charge of a navigational watch on seagoing ships covered by the 1978 STCW Convention; and

.2 meet the standard of competence specified in section A-II/3 of the STCW-F Code.

3 The Party, bearing in mind the effect on the safety of all vessels and structures which may be operating in the same limited waters, should consider the limited waters it has defined in accordance with the definition given in regulation I/1 and determine any additional material that should be included in the standard of competence.

4 A candidate who holds a valid certificate of competency issued in accordance with the provisions of the 1978 STCW Convention need not be reassessed in those standards of competence listed in section A-II/3 of the STCW-F Code that were required at a higher or equivalent level for the issuance of the corresponding 1978 STCW Convention certificate.

Regulation II/4
Mandatory minimum requirements for certification of officers in charge of a navigational watch on fishing vessels of 24 metres in length and over operating in limited waters

1 Every officer in charge of a navigational watch on a fishing vessel of 24 metres in length and over operating in limited waters shall either hold a certificate issued in compliance with regulation II/2 or hold a certificate of competency issued in compliance with at least the provisions of this regulation.

2 Every candidate for certification shall:

.1 be not less than 18 years of age;

.2 have approved seagoing service of not less than:

.1 12 months on fishing vessels or fishing training vessels of not less than 12 metres in length as part of an approved training programme which includes onboard training that meets the requirements of section A-II/4 of the STCW-F Code and is documented in an approved training record book; or

.2 two years in the deck department on fishing vessels of not less than 12 metres in length. However, the Administration may allow the substitution of the seagoing service by a period of special training not exceeding one year, provided that the period of the special training programme shall be at least equivalent in value to the period of the required seagoing service it substitutes or by a period of approved seagoing service evidenced by an approved record book covered by the 1978 STCW Convention;

.3 meet the standard of competence specified in section A-II/4 of the STCW-F Code; and

.4 meet the appropriate requirements for performing designated radio duties in accordance with the Radio Regulations.

3 A candidate who holds a valid certificate of competency issued in accordance with the provisions of the 1978 STCW Convention need not be reassessed in those standards of competence listed in section A-II/4 of the STCW-F Code, which were required at a higher or equivalent level for the issuance of the corresponding 1978 STCW Convention certificate.

Regulation II/5-1-1
Mandatory minimum requirements for certification of chief engineer officers and second engineer officers on fishing vessels powered by main propulsion machinery of 3,000 kW propulsion power or more

1 Every chief engineer officer and second engineer officer on a seagoing fishing vessel powered by main propulsion machinery of 3,000 kW propulsion power or more shall hold a certificate of competency.

2 Every candidate for certification shall:

.1 meet the requirements for certification as an officer in charge of an engineering watch on fishing vessels powered by main propulsion machinery of 750 kW propulsion power or more and have approved seagoing service in that capacity:

.1 for certification as second engineer officer, have not less than 12 months as qualified engineer officer; and

.2 for certification as chief engineer officer, have not less than 36 months; however, this period may be reduced to not less than 24 months if not less than 12 months of such seagoing service has been served as second engineer officer; and

.2 have completed approved education and training and meet the standard of competence specified in section A-II/5-1-1 of the STCW-F Code.

Regulation II/5-1-2
Mandatory minimum requirements for certification of chief engineer officers and second engineer officers on fishing vessels powered by main propulsion machinery of between 750 kW and 3,000 kW propulsion power

1 Every chief engineer officer and second engineer officer on a seagoing fishing vessel powered by main propulsion machinery of between 750 kW and 3,000 kW propulsion power shall hold a certificate of competency.

2 Every candidate for certification shall:

.1 meet the requirements for certification as an officer in charge of an engineering watch on fishing vessels powered by main propulsion machinery of 750 kW propulsion power or more and:

.1 for certification as second engineer officer, have not less than 12 months of approved seagoing service as assistant engineer officer or engineer officer; and

.2 for certification as chief engineer officer, have not less than 24 months of approved seagoing service of which not less than 12 months shall be served while qualified to serve as second engineer officer; and

.2 have completed approved education and training and meet the standard of competence specified in section A-II/5-1-2 of the STCW-F Code.

3 Every engineer officer who is qualified to serve as second engineer officer on fishing vessels powered by main propulsion machinery of 3,000 kW propulsion or more, may serve as chief engineer officer on fishing vessels powered by main propulsion machinery of less than 3,000 kW propulsion power, provided the certificate is so endorsed.

Regulation II/5-2
Mandatory minimum requirements for certification of officers in charge of an engineering watch in a manned engine-room or designated duty engineers in a periodically unmanned engine-room on fishing vessels powered by main propulsion machinery of 750 kW propulsion power or more

1 Every officer in charge of an engineering watch in a manned engine-room or designated duty engineer officer in a periodically unmanned engine-room serving on a seagoing fishing vessel powered by main propulsion machinery of 750 kW propulsion power or more shall hold a certificate of competency.

2 Every candidate for certification shall:

.1 be not less than 18 years of age;

.2 have completed 12 months of combined workshop skills training and approved seagoing service of which not less than six months must be served on board fishing vessels or fishing training vessels as part of an approved training programme which includes onboard training that meets the requirements of section A-II/5-2 of the STCW-F Code and is documented in an approved training record book; or

.3 have completed 12 months of combined workshop skills training and approved seagoing service of which not less than six months must be served on ships or training ships being operated in accordance with the 1978 STCW Convention as part of an approved training programme which includes onboard training that meets the requirements of section A-II/5-2 of the STCW-F Code and is documented in an approved training record book; or

.4 have approved seagoing service of not less than 12 months in the engine-room. However, the Administration may allow, as deemed necessary, the substitution of up to six months of the seagoing service by a period of special training such as workshop skills training, provided that the special training programme is equivalent in value to the period of the required seagoing service it substitutes; and

.5 meet the standard of competence specified in section A-II/5-2 of the STCW-F Code.

3 The Party may vary the requirements for standard of competence and seagoing service for officers of fishing vessels engaged in voyages in limited waters bearing in mind the power of the propulsion machinery and the effect on the safety of all fishing vessels which may be operating in the same waters.

4 Training to achieve the necessary theoretical knowledge and practical experience shall take into account relevant international regulations and recommendations.

Regulation II/6
Mandatory minimum requirements for certification of GMDSS radio operators on board fishing vessels

Explanatory note

Mandatory provisions relating to radio watchkeeping are set forth in the Radio Regulations and in the 2012 Cape Town Agreement. Provisions for radio maintenance are set forth in the 2012 Cape Town Agreement. The referred provisions are mandatory in the Radio Regulations and will be mandatory in the 2012 Cape Town Agreement when it enters into force.

Application

1 Except as provided in paragraph 2, the provisions of this regulation shall apply to radio operators on fishing vessels operating within the Global Maritime Distress and Safety System (GMDSS) as prescribed by the international conventions.

2 Radio operators on fishing vessels that are not required to comply with the provisions of the GMDSS are not required to meet the provisions of this regulation, but are nevertheless required to comply with the Radio Regulations. The Administration shall ensure that the appropriate certificates as prescribed by the Radio Regulations are issued or recognized in respect of such radio operators.

Mandatory minimum requirements for certification of GMDSS radio operators

1 Every person in charge of or performing radiocommunication duties on a fishing vessel operating within the GMDSS shall hold an appropriate certificate related to the GMDSS, issued or recognized by the Administration under the provisions of the Radio Regulations.

2 In addition, every candidate for certification of competency under this regulation for service on a fishing vessel required by the 1993 Torremolinos Protocol or the 2012 Cape Town Agreement, when in force, to have a radio installation, shall:

.1 be not less than 18 years of age; and

.2 have completed approved education and training and meet the standard of competence specified in section A-II/6 of the STCW-F Code.

3 For endorsement of all types of certificates issued under the provisions of the Radio Regulations as meeting the requirements of the Convention, the required knowledge, understanding and proficiency is given in section A-II/6 of the STCW-F Code. In determining the appropriate level of knowledge and training the Party shall also take into account the relevant recommendations in section B-II/6 of the STCW-F Code.

Regulation II/7
Revalidation of certificates for skippers and officers

1 Every skipper and officer holding a certificate issued or recognized under this chapter of the Convention who is serving at sea or intends to return to sea after a period ashore shall, in order to continue to qualify for seagoing service, be required, at intervals not exceeding five years, to:

.1 meet the standards of medical fitness prescribed in regulation I/12; and

.2 establish continued professional competence in accordance with section A-II/7 of the STCW-F Code.

2 Each Party shall compare the standards of competence which it required of candidates for certificates issued before 1 January 2031 with those specified for the appropriate certificate in part A of the STCW-F Code, and shall determine the need for requiring the holders of such certificates to undergo appropriate refresher and updating training or assessment.

3 The Party shall, in consultation with those concerned, formulate or promote the formulation of a structure of refresher and updating courses as provided for in section A-II/7 of the STCW-F Code.

4 For the purpose of updating the knowledge of skippers and officers, each Administration shall ensure that the texts of recent changes in national and international regulations concerning the safety of life at sea, and the protection of the marine environment are made available to fishing vessels entitled to fly its flag.

Regulation II/8
Revalidation of certificates for GMDSS radio operators

1 Every GMDSS radio operator holding a certificate issued or recognized under this chapter of the Convention who is serving at sea or intends to return to sea after a period ashore shall, in order to continue to qualify for seagoing service, be required, at intervals not exceeding five years, to:

.1 meet the standards of medical fitness prescribed in regulation I/12; and

.2 establish continued professional competence in accordance with section A-II/8 of the STCW-F Code.

2 Each Party shall compare the standards of competence which it required of candidates for certificates issued before 1 January 2031 with those specified for the appropriate certificate in part A of the STCW-F Code, and shall determine the need for requiring the holders of such certificates to undergo appropriate refresher and updating training or assessment.

3 The Party shall, in consultation with those concerned, formulate or promote the formulation of a structure of refresher and updating courses as provided for in section A-II/8 of the STCW-F Code.

4 For the purpose of updating the knowledge of GMDSS radio operators, each Administration shall ensure that the texts of recent changes in national and international regulations concerning radiocommunications and relevant to the safety of life at sea are made available to fishing vessels entitled to fly its flag.

CHAPTER III
Basic training and onboard safety familiarization for all fishing vessel personnel

Regulation III/1
Mandatory minimum requirements for basic training and onboard safety familiarization for all fishing vessel personnel

1 Fishing vessel personnel shall, before being assigned to any shipboard duties:

.1 receive basic training approved by the Administration and onboard safety familiarization; and

.2 meet the appropriate standard of competence,

in accordance with section A-III/1 of the STCW-F Code.

2 Where basic training is not included in the qualification for the certificate to be issued, a certificate of proficiency shall be issued, indicating that the holder has successfully completed the course in basic training.

3 A candidate who holds a valid certificate of proficiency issued in accordance with the provisions of the 1978 STCW Convention need not be reassessed in those standards of competence listed in sections A-III/1-1, A-III/1-2, A-III/1-3 and A-III/1-4 of the STCW-F Code that were required at a higher or equivalent level for the issuance of the corresponding 1978 STCW Convention certificate.

CHAPTER IV
Watchkeeping

Regulation IV/1
Fitness for duty

The watch system shall be such that the efficiency of watchkeeping personnel is not impaired by fatigue. Duties shall be so organized that the first watch at the commencement of a voyage and the subsequent relieving watches are sufficiently rested and otherwise fit for duty.

Regulation IV/2
Basic watchkeeping principles to be observed on board fishing vessels

1 Administrations shall direct the attention of owners and operators of fishing vessels, skippers, chief engineer officers and all watchkeeping personnel to the requirements, principles and guidance set out in the STCW-F Code which shall be observed to ensure that a safe watch is maintained at all times.

2 The skipper of every fishing vessel shall ensure that watchkeeping arrangements are adequate for maintaining a safe watch or watches, taking into account the prevailing circumstances and conditions and that, under the skipper's general direction:

.1 officers in charge of the navigational watch are responsible for navigating the fishing vessel safely during their periods of duty, when they shall be physically present on the navigating bridge or in a directly associated location such as the chartroom or bridge control room at all times;

.2 radio operators are responsible for maintaining a continuous radio watch on appropriate frequencies during their periods of duty;

.3 officers in charge of an engineering watch, as defined in the STCW-F Code, under the direction of the chief engineer officer, shall be immediately available and on call to attend the machinery spaces and, when required, shall be physically present in the machinery space during their periods of responsibility; and

.4 an appropriate and effective watch or watches are maintained for the purpose of safety at all times.

3 The basic watchkeeping principles, including but not limited to those set out in the STCW-F Code, shall be taken into account on all fishing vessels. However, a Party may exclude very small fishing vessels operating in limited waters from fully observing the basic principles.

***

ANNEX 14

RESOLUTION MSC.562(108)
(adopted on 23 May 2024)

STANDARDS OF TRAINING, CERTIFICATION AND WATCHKEEPING FOR FISHING VESSEL PERSONNEL CODE (STCW-F CODE)

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECOGNIZING the importance of establishing detailed mandatory standards of competence and other mandatory provisions necessary to ensure that all fishing vessel personnel shall be properly educated and trained, adequately experienced, skilled and competent to perform their duties in a manner which provides for the safety of life and property at sea and the protection of the marine environment,

RECOGNIZING ALSO the need to allow for the timely amendment of such mandatory standards and provisions in order to effectively respond to changes in technology, operations, practices and procedures used on board fishing vessels,

BEARING IN MIND that a large percentage of maritime casualties and pollution incidents are caused by human error,

APPRECIATING that one effective means of reducing the risks associated with human error in the operation of seagoing fishing vessels is to ensure that the highest practicable standards of training, certification and competence are maintained in respect of fishing vessel personnel employed on such vessels,

DESIRING to achieve and maintain the highest practicable standards for the safety of life and property at sea and in port and for the protection of the environment,

NOTING resolution MSC.561(108), by which it adopted amendments to the annex to the International Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel, 1995 (1995 STCW-F Convention) which make the provisions of part A of the Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel Code (STCW-F Code) mandatory under the Convention,

HAVING CONSIDERED, at its 108th session, the draft STCW-F Code, comprised of part A (Mandatory standards regarding provisions of the annex to the 1995 STCW-F Convention) and part B (Recommended guidance regarding provisions of the annex to the 1995 STCW-F Convention),

NOTING that regulation I/1.2 of the revised annex to the 1995 STCW-F Convention provides that part A of the STCW-F Code supplements the regulations annexed to the Convention and that any reference to a requirement in a regulation also constitutes a reference to the corresponding section of part A of the STCW-F Code,

1 ADOPTS:

.1 part A (Mandatory standards regarding provisions of the annex to the 1995 STCW-F Convention) of the Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel Code (STCW-F Code), set out in annex 1 to the present resolution;

.2 part B (Recommended guidance regarding provisions of the annex to the 1995 STCW-F Convention) of the Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel Code (STCW-F Code), set out in annex 2 to the present resolution;

2 INVITES Parties to the 1995 STCW-F Convention to note:

.1 that the provisions of part A of the STCW-F Code will take effect for each Party to the Convention on the same date and in the same manner as the amendments to the annex to that Convention adopted by resolution MSC.561(108);

.2 that the guidance contained in part B of the STCW-F Code should be taken into account by all Parties to the Convention as from the date of entry into force of the amendments to the annex to that Convention adopted by resolution MSC.561(108).

3 REQUESTS the Secretary-General to transmit certified copies of the present resolution and the text of the STCW-F Code contained in annexes 1 and 2 to all Parties to the 1995 STCW-F Convention;

4 ALSO REQUESTS the Secretary-General to transmit copies of this resolution and its annexes to Members of the Organization which are not Parties to the 1995 STCW-F Convention.

ANNEX 1

STANDARDS OF TRAINING, CERTIFICATION AND WATCHKEEPING FOR FISHING VESSEL PERSONNEL CODE (STCW-F CODE)

Part A
Mandatory standards regarding provisions of the annex to the 1995 STCW-F Convention

Introduction

1 This part of the STCW-F Code contains mandatory provisions to which specific reference is made in the annex to the International Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel, 1995, as amended, hereinafter referred to as the 1995 STCW-F Convention. These requirements provide the minimum standards required to be maintained by Parties in order to give full and complete effect to the Convention.

2 Also contained in this part are standards of competence required to be demonstrated by candidates for the issue and revalidation of certificates of competency under the provisions of the 1995 STCW-F Convention. The abilities specified in the standards of competence are grouped, as appropriate, under the following seven functions:[1]

.1-F Navigation
.2-F Catch handling and stowage
.3-F Controlling the operation of the vessel and care for persons on board
.4-F Marine engineering
.5-F Electrical, electronic and control engineering
.6-F Maintenance and repair
.7-F Radiocommunications

at the following levels of responsibility:

.1 Management level
.2 Operational level
.3 Support level

Functions and levels of responsibility are identified by the subtitle in the tables of standards of competence given in chapter II of this part. The scope of the function at the level of responsibility stated in a subtitle is defined by the abilities listed under it in column 1 of the table. The meaning of "function" and "level of responsibility" is defined in general terms in section A-I/1 below.

3 The numbering of the sections of this part corresponds with the numbering of the regulations contained in the annex to the 1995 STCW-F Convention. The text of the sections may be divided into numbered parts and paragraphs, but such numbering is unique to that text alone.

[1] The suffix "-F" is aimed at making a distinction between the functions stipulated in the STCW Code and those in the STCW-F Code.

Chapter I
Standards regarding general provisions

Section A-I/1
Definitions

1 The definitions and clarifications contained in article II and regulation I/1 apply equally to the terms used in parts A and B of this Code. In addition, the following supplementary definitions apply only to this Code:

.1 *Standard of competence* means the level of proficiency to be achieved for the proper performance of functions on board vessels in accordance with the internationally agreed criteria as set forth herein and incorporating prescribed standards or levels of knowledge, understanding and demonstrated skill;

.2 *Management level* means the level of responsibility associated with:

.1 serving as skipper, chief engineer officer or second engineer officer on board a fishing vessel; and

.2 ensuring that all functions within the designated area of responsibility are properly performed;

.3 *Operational level* means the level of responsibility associated with:

.1 serving as officer in charge of a navigational or engineer watch or as radio operator on board a fishing vessel; and

.2 maintaining direct control over the performance of all functions within the designated area of responsibility in accordance with proper procedures and under the direction of an individual serving in the management level for that area of responsibility;

.4 *Support level* means the level of responsibility associated with performing assigned tasks, duties or responsibilities on board a fishing vessel under the direction of an individual serving in the operational or management level; and

.5 *Evaluation criteria* are the entries appearing in column 4 of the "Specification of Minimum Standard of Competence" tables in part A and provide the means for an assessor to judge whether or not a candidate can perform the related tasks, duties and responsibilities.

Section A-I/2
Application

(No provisions)

Section A-I/3
Certificates and endorsements

1 When provided in regulation I/3, paragraph 2, the certificate shall be issued in the format 1 to 3, as shown below.

Format 1

The format used to attest the issue of a certificate shall be as shown below, provided that the words "or until the date of expiry of any extension of the validity of this certificate as may be shown overleaf" appearing on the front of the form and the provisions for recording extension of the validity appearing on the back of the form are omitted where the certificate is required to be replaced upon its expiry.

(Official seal)

(COUNTRY)

CERTIFICATE ISSUED UNDER THE PROVISIONS OF THE INTERNATIONAL CONVENTION ON STANDARDS OF TRAINING, CERTIFICATION AND WATCHKEEPING FOR FISHING VESSEL PERSONNEL, 1995, AS AMENDED

The Government of . . . . . certifies that the holder of this certificate has been found duly qualified in accordance with the provisions of regulation . . . . . of the above Convention and has been found competent to serve as specified below, subject to any limitations indicated until . . . . . or until the date of expiry of any extension of the validity of this certificate as may be shown overleaf.
The lawful holder of this certificate may serve in the following capacity or capacities:

CAPACITY	LIMITATIONS APPLYING (IF ANY)

Certificate No. . . . . issued on . . . . . .

(Official seal)

. . . . . .

Signature of duly authorized official

. . . . . .

Name of duly authorized official

Date of birth of the holder of the certificate . . . . . .

Signature of the holder of the certificate . . . . . .

Photograph of the holder of the certificate

The validity of this certificate is hereby extended until . . . . . .

(Official seal)

. . . . . .
Signature of duly authorized official
Date of revalidation . . . . . .
. . . . . .
Name of duly authorized official

The validity of this certificate is hereby extended until . . . . . .

(Official seal)

. . . . . .
Signature of duly authorized official
Date of revalidation . . . . . .
. . . . . .
Name of duly authorized official

Format 2

The form used to attest the issue of a certificate shall be as shown below, provided that the words "or until the date of expiry of any extension of the validity of this endorsement as may be shown overleaf" appearing on the front of the form and the provisions for recording extension of the validity appearing on the back of the form are omitted where the endorsement is required to be replaced upon its expiry.

(Official seal)

(COUNTRY)

ENDORSEMENT ATTESTING THE ISSUE OF A CERTIFICATE UNDER THE PROVISIONS OF THE INTERNATIONAL CONVENTION ON STANDARDS OF TRAINING, CERTIFICATION AND WATCHKEEPING FOR FISHING VESSEL PERSONNEL, 1995, AS AMENDED

The Government of . . . . . certifies that certificate no. . . . . has been issued to . . . . . who has been found duly qualified in accordance with the provisions of regulation . . . . . of the above Convention and has been found competent to serve as specified below, subject to any limitations indicated until . . . . . or until the date of expiry of any extension of the validity of this endorsement as may be shown overleaf.
The lawful holder of this endorsement may serve in the following capacity or capacities specified in the applicable safe manning requirements of the Administration:

CAPACITY	LIMITATIONS APPLYING (IF ANY)

Endorsement No. . . . . issued on . . . . . .

(Official seal)

. . . . . .
Signature of duly authorized official

. . . . . .
Name of duly authorized official

Date of birth of the holder of the certificate . . . . . .

Signature of the holder of the certificate . . . . . .

Photograph of the holder of the certificate

The validity of this endorsement is hereby extended until . . . . . . *(Official seal)* . . . . . . *Signature of duly authorized official* Date of revalidation . . . . *Name of duly authorized official*
The validity of this endorsement is hereby extended until . . . . . . *(Official seal)* . . . . . . *Signature of duly authorized official* Date of revalidation . . . . *Name of duly authorized official*

Format 3

The form used to attest the recognition of a certificate shall be as shown below, except that the words "or until the date of expiry of any extension of the validity of this endorsement as may be shown overleaf" appearing on the front of the form and the provisions for recording extension of the validity appearing on the back of the form shall be omitted where the endorsement is required to be replaced upon its expiry.

(Official Seal)

(COUNTRY)

ENDORSEMENT ATTESTING THE RECOGNITION OF A CERTIFICATE UNDER THE PROVISIONS OF THE INTERNATIONAL CONVENTION ON STANDARDS OF TRAINING, CERTIFICATION AND WATCHKEEPING FOR FISHING VESSEL PERSONNEL, 1995, AS AMENDED

The Government of . . . . . certifies that certificate no. . . . . issued to . . . . . by or on behalf of the Government of . . . . . is duly recognized in accordance with the provisions of regulation I/7 of the above Convention, and the lawful holder is authorized to serve as specified below, subject to any limitations indicated until . . . . . or until the date of expiry of any extension of the validity of this endorsement as may be shown overleaf.
The lawful holder of this endorsement may serve in the following capacity or capacities specified in the applicable safe manning requirements of the Administration:

CAPACITY	LIMITATIONS APPLYING (IF ANY)

Endorsement No. . . . . issued on . . . . . .
(Official Seal)

. . . . . .
Signature of duly authorized official

. . . . . .
Name of duly authorized official

Date of birth of the holder of the certificate . . . . . .

Signature of the holder of the certificate . . . . . .

Photograph of the holder of the certificate

The validity of this endorsement is hereby extended until . . . . . . *(Official seal)* . . . . . . *Signature of duly authorized official* Date of revalidation . . . . *Name of duly authorized official*
The validity of this endorsement is hereby extended until . . . . . . *(Official seal)* . . . . . . *Signature of duly authorized official* Date of revalidation . . . . *Name of duly authorized official*

Section A-I/4
Control procedures

(No provisions)

Section A-I/5
Communication of information

(No provisions)

Section A-I/6
Administration of certification arrangements

(No provisions)

Section A-I/7
Recognition of certificates

(No provisions)

Section A-I/8
Transitional provisions

(No provisions)

Section A-I/9
Dispensation

(No provisions)

Section A-I/10
Equivalents

(No provisions)

Section A-I/11
Use of simulators

General performance standards for simulators used in training

1 Each Party shall ensure that any simulator used for simulator-based training shall:

.1 be suitable for the selected objectives and training tasks;

.2 be capable of simulating the operating capabilities of shipboard equipment concerned, to a level of physical realism appropriate to training objectives, and include the capabilities, limitations and possible errors of such equipment;

.3 have sufficient behavioural realism to allow a trainee to acquire the skills appropriate to the training objectives;

.4 provide a controlled operating environment capable of producing a variety of conditions, which may include emergency, hazardous or unusual situations relevant to the training objectives;

.5 provide an interface through which a trainee can interact with the equipment, the simulated environment and, as appropriate, the instructor; and

.6 permit an instructor to control, monitor and record exercises for the effective debriefing of the trainees.

General performance standards for simulators used in assessment of competence

2 Each Party shall ensure that any simulator used for the assessment of competence required under the Convention or for any demonstration of continued proficiency so required shall:

.1 be capable of satisfying the specified assessment objectives;

.2 be capable of simulating the operational capabilities of the shipboard equipment concerned to a level of physical realism appropriate to the assessment objectives, and include the capabilities, limitations and possible errors of such equipment;

.3 have sufficient behavioural realism to allow a candidate to exhibit the skills appropriate to the assessment objectives;

.4 provide an interface through which a candidate can interact with the equipment and simulated environment;

.5 provide a controlled operating environment, capable of producing a variety of conditions, which may include emergency, hazardous or unusual situations relevant to assessment objectives; and

.6 permit an assessor to control, monitor and record exercises for the effective assessment of the performance of candidates.

Additional performance standards

3 In addition to meeting the basic requirements set out in paragraphs 1 and 2, simulation equipment to which this section applies shall meet the performance standards given below in accordance with their specific type.

Radar simulation

4 Radar simulation equipment shall be capable of simulating the operational capabilities of navigational radar equipment which meets all applicable performance standards adopted by the Organization and incorporate facilities to:

.1 operate in the stabilized relative-motion mode and sea- and ground-stabilized true-motion modes;

.2 model weather, tidal streams, current, shadow sectors, spurious echoes and other propagation effects, and generate coastlines, navigational buoys and search and rescue transponders; and

.3 create a real-time operating environment incorporating at least two own-vessel stations with ability to change the own vessel's course and speed, and include parameters for at least 20 target vessels and appropriate communication facilities.

Simulator training objectives

5 Each Party shall ensure that the aims and objectives of simulator-based training are defined within an overall training programme and that specific training objectives and tasks are selected so as to relate as closely as possible to shipboard tasks and practices.

Training procedures

6 In conducting simulator-based training, instructors shall ensure that:

.1 trainees are adequately briefed beforehand on the exercise objectives and tasks and are given sufficient planning time before the exercise starts;

.2 trainees have adequate familiarization time on the simulator and with its equipment before any training or assessment exercise commences;

.3 guidance given and exercise stimuli are appropriate to the selected exercise objectives and tasks and to the level of trainee experience;

.4 exercises are effectively monitored, supported as appropriate by audio and visual observation of trainee activity and pre- and post-exercise evaluation reports;

.5 trainees are effectively debriefed to ensure that training objectives have been met and that operational skills demonstrated are of an acceptable standard;

.6 the use of peer assessment during debriefing is encouraged; and

.7 simulator exercises are designed and tested so as to ensure their suitability for the specified training objectives.

Assessment procedures

7 Where simulators are used to assess the ability of candidates to demonstrate levels of competency, assessors shall ensure that:

.1 performance criteria are identified clearly and explicitly and are valid and available to the candidates;

.2 assessment criteria are established clearly and are explicit to ensure reliability and uniformity of assessment and to optimize objective measurements and evaluation, so that subjective judgements are kept to the minimum;

.3 candidates are briefed clearly on the tasks and/or skills to be assessed and on the tasks and performance criteria by which their competency will be determined;

.4 assessment of performance takes into account normal operating procedures and any behavioural interaction with other candidates on the simulator or with simulator staff;

.5 scoring or grading methods to assess performance are used with caution until they have been validated; and

.6 the prime criterion is that a candidate demonstrates the ability to carry out a task safely and effectively to the satisfaction of the assessor.

Section A-I/12
Medical standards

1 Parties, when establishing standards of medical fitness for fishing vessel personnel as required by regulation I/12, shall adhere to the minimum in-service eyesight standards set out in table A-I/12 and take into account the criteria for physical and medical fitness set out in paragraph 2. They should also take into account the guidance given in section B-I/12 of this Code and the *Guidelines on the medical examination of fishing vessel personnel*. These standards may, to the extent determined by the Party without prejudice to the safety of the fishing vessel personnel or the fishing vessel, differentiate between those persons seeking to start a career at sea and those fishing vessel personnel already serving at sea and between different functions on board, bearing in mind the different duties of fishing vessel personnel. They shall also take into account any impairment or disease that will limit the ability of the fishing vessel personnel to effectively perform their duties during the validity period of the medical certificate.

2 The standards of physical and medical fitness established by the Party shall ensure that fishing vessel personnel satisfy the following criteria:

.1 have the physical capability, taking into account paragraph 5 below to fulfil all the requirements of the basic safety training as required by section A-III/1;

.2 demonstrate adequate hearing and speech to communicate effectively and detect any audible alarms;

.3 have no medical condition, disorder or impairment that will prevent the effective and safe conduct of their routine and emergency duties on board during the validity period of the medical certificate;

.4 are not suffering from any medical condition likely to be aggravated by service at sea or to render the fishing vessel personnel unfit for such service or to endanger the health and safety of other persons on board; and

.5 are not taking any medication that has side effects that will impair judgement, balance or any other requirements for effective and safe performance of routine and emergency duties on board.

3 Medical fitness examinations of fishing vessel personnel shall be conducted by appropriately qualified and experienced medical practitioners recognized by the Party.

4 Each Party shall establish provisions for recognizing medical practitioners. A register of recognized medical practitioners shall be maintained by the Party and made available to other Parties, companies and fishing vessel personnel on request.

5 Each Party shall provide guidance for the conduct of medical fitness examinations and issuing of medical certificates, taking into account the guidance given in section B-I/12 of this Code and the *Guidelines on the medical examination of fishing vessel personnel*. Each Party shall determine the amount of discretion given to recognized medical practitioners on the application of the medical standards, bearing in mind the different duties of fishing vessel personnel, except that there shall not be discretion with respect to the minimum eyesight standards for distance vision aided, near/immediate vision and colour vision in table A-I/12 for fishing vessel personnel in the deck department required to undertake lookout duties. A Party

may allow discretion on the application of these standards with regard to fishing vessel personnel in the engine department, on the condition that fishing vessel personnel's combined vision fulfils the requirements set out in table A-I/12.

6 Each Party shall establish processes and procedures to enable fishing vessel personnel who, after examination, do not meet the medical fitness standards or have had a limitation imposed on their ability to work, in particular with respect to time, field of work or operation area, to have their case reviewed in line with that Party's provisions for appeal.

7 The medical certificate provided for in regulation I/12, paragraph 3, shall include the following information at a minimum:

.1 Authorizing authority and the requirements under which the document is issued

.2 Fishing vessel personnel information

.1 Name: (last, first, middle)

.2 Date of birth: (day/month/year)

.3 Gender: (Male/Female)

.4 Nationality

.3 Declaration of the recognized medical practitioner

.1 Confirmation that identification documents were checked at the point of examination: Y/N

.2 Hearing meets the standards in section A-I/12? Y/N

.3 Unaided hearing satisfactory? Y/N

.4 Visual acuity meets standards in section A-I/12? Y/N

.5 Colour vision[2] meets standards in section A-I/12? Y/N

.1 Date of last colour vision test

.6 Fit for lookout duties? Y/N

.7 No limitations or restrictions on fitness? Y/N

If "N", specify limitations or restrictions

.8 Is the fishing vessel personnel free from any medical condition likely to be aggravated by service at sea or to render the fishing vessel personnel unfit for such service or to endanger the health of other persons on board? Y/N

.9 Date of examination: (day/month/year)

.10 Expiry date of certificate: (day/month/year)

[2] Note: Colour vision assessment only needs to be conducted every six years.

.4 Details of the issuing authority

.1 Official stamp (including name) of the issuing authority

.2 Signature of the authorized person

.5 Fishing vessel personnel's signature – confirming that the fishing vessel personnel has been informed of the content of the certificate and of the right to a review in accordance with paragraph 6 of section A-I/12

8 Medical certificates shall be in the official language of the issuing country. If the language used is not English, the text shall include a translation into that language.

Table A-I/12
Minimum in-service eyesight standards for fishing vessel personnel

STCW-F Convention regulation	Category of fishing vessel personnel	Distance vision aided[1]		Near/immediate vision	Colour Vision[3]	Visual Fields[4]	Night Blindness[4]	Diplopia (double vision)[4]
		One eye	Other eye	Both eyes together, aided or unaided				
II/1 II/2 II/3 II/4 II/7	Skippers, deck officers and fishing vessel personnel forming part of a navigational watch	0.5[2]	0.5	Vision required for fishing vessel's navigation (e.g. chart and nautical publication reference, use of bridge instrumentation and equipment, and identification of aids to navigation)	See note 6	Normal visual fields	Vision required to perform all necessary functions in darkness without compromise	No significant condition evident
II/5 II/5-1 II/5-2 II/7	All engineer officers and other fishing vessel personnel forming part of an engine-room watch	0.4	0.4 (see note 5)	Vision required to read instruments in close proximity, to operate equipment, and to identify systems/ components as necessary	See note 7	Sufficient visual fields	Vision required to perform all necessary functions in darkness without compromise	No significant condition evident
II/6 II/8	GMDSS radio operators	0.4	0.4	Vision required to read instruments in close proximity, to operate equipment and to identify systems/ components as necessary	See note 7	Sufficient visual fields	Vision required to perform all necessary functions in darkness without compromise	No significant condition evident

Notes:

1 Values given in Snellen decimal notation.

2 A value of at least 0.7 in one eye is recommended to reduce the risk of undetected underlying eye disease.

3 As defined in the *International Recommendations for Colour Vision Requirements for Transport* by the Commission Internationale de l'Eclairage (CIE-143-2001 including any subsequent versions).

4 Subject to assessment by a clinical vision specialist where indicated by initial examination findings.

5 Engine department personnel shall have a combined eyesight vision of at least 0.4.

6 CIE colour vision standard 1 or 2. Other equivalent confirmatory test methods currently recognized by the Administration may continue to be used.

7 CIE colour vision standard 1, 2 or 3. Other equivalent confirmatory test methods currently recognized by the Administration may continue to be used.

Chapter II
Standards regarding certification of skippers, officers in charge of a navigational watch, engineer officers and radio operators

Section A-II/1
Mandatory minimum requirements for certification of skippers on fishing vessels of 24 metres in length and over operating in unlimited waters

Standard of competence

1 Every candidate for certification as skipper on fishing vessels of 24 metres in length and over operating in unlimited waters shall be required to demonstrate the competence to undertake the tasks, duties and responsibilities listed in column 1 of table A-II/1.

2 The minimum knowledge, understanding and proficiency required for certification is listed in column 2 of table A-II/1. This incorporates, expands and extends in depth the subjects listed in column 2 of table A-II/2 for officers in charge of a navigational watch.

3 The level of knowledge of the subjects listed in column 2 of table A-II/1 shall be sufficient to enable the candidate to serve in the capacity of skipper.

4 Every candidate for certification shall be required to provide evidence of having achieved the required standard of competence in accordance with the methods for demonstrating competence and criteria for evaluating competence tabulated in columns 3 and 4 of table A-II/1.

Table A-II/1

Specification of minimum standard of competence for skippers on fishing vessels of 24 metres in length and over operating in unlimited waters

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Function: Navigation at the management level			
Plan a voyage and conduct navigation	*Navigation* Voyage planning and navigation for all conditions: .1 by acceptable methods of determining ocean tracks .2 within restricted waters .3 where applicable, in ice .4 in restricted visibility .5 where applicable, in traffic separation schemes .6 in areas affected by tides or currents .7 in all meteorological conditions	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate .4 approved laboratory equipment training using: chart catalogues, charts, nautical publications and vessel particulars	The equipment, charts and nautical publications required for the voyage are enumerated and appropriate to the safe conduct of the voyage The reasons for the planned route are supported by facts and statistical data obtained from relevant sources and publications Positions, courses, distances and time calculations are correct within accepted accuracy standards for navigational equipment All potential navigational hazards are accurately identified
Determine position and the accuracy of resultant position fix by any means	Position determination: .1 by celestial observations .2 by terrestrial observations, including the ability to use bearings from landmarks and aids to navigation such as lighthouses, beacons and buoys	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience	The primary method chosen for fixing the vessel's position is the most appropriate to the prevailing circumstances and conditions The fix obtained by celestial observations is within accepted accuracy levels The fix obtained by terrestrial

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	in conjunction with appropriate charts, notices to mariners and other publications to assess the accuracy of the resulting position fix .3 by using, to the satisfaction of the Party, electronic navigational aids as provided in fishing vessels, with specific reference to knowledge of their operating principles, limitations, sources of error, detection of misrepresentation of information and methods of correction to obtain accurate position fixing	.3 approved simulator training, where appropriate .4 approved laboratory equipment training using: (a) charts, nautical almanac, plotting sheets, chronometer, sextant and a calculator (b) charts, nautical publications and navigational instruments (azimuth mirror, sextant, log, sounding equipment, compass) and manufactures manuals (c) radar, terrestrial electronic position-fixing systems, satellite navigation systems and appropriate nautical charts and publications	observations is within accepted accuracy levels The accuracy of the resulting fix is properly assessed The fix obtained by the use of electronic navigational aids is within the accuracy standards of the systems in use. The possible errors affecting the accuracy of the resulting position are stated and methods of minimizing the effects of system errors on the resulting position are properly applied

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Determine and allow for compass errors	*Compasses* Ability to use terrestrial and celestial means to determine and apply the errors of the compasses	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate .4 approved laboratory equipment training using: celestial observations, terrestrial bearings and comparison between magnetic and gyro-compasses	The method and frequency of checks for errors of compasses ensures accuracy of information
Coordinate search and rescue operations	*Search and rescue* Thorough knowledge of and ability to apply the procedures in the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate .4 approved laboratory equipment training	The plan for coordinating search and rescue operations is in accordance with international guidelines and standards Radiocommunications are established and correct communication procedures are followed at all stages of the search and rescue operations

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
		using: relevant publications, charts, meteorological data, particulars of vessels involved, radiocommunication equipment and other available facilities	
Establish watchkeeping arrangements and procedures	*Watchkeeping* Thorough knowledge of the content, application and intent of the International Regulations for Preventing Collisions at Sea, 1972, specially annexes II and IV concerned with safe navigation Ability to demonstrate knowledge of basic principles to be observed in keeping a navigational watch as prescribed in chapter IV	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved simulator training, where appropriate	Watchkeeping arrangements and procedures are established and maintained in compliance with international regulations and guidelines so as to ensure the safety of navigation, protection of the marine environment and safety of the vessel and persons on board
Forecast weather and oceanographic conditions	*Meteorology and oceanography* Knowledge of meteorological instruments and their application Ability to apply meteorological information available Knowledge of characteristics of various weather systems, including,	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved laboratory equipment training	The likely weather conditions predicted for a determined period are based on all available information Actions taken to maintain safety of navigation minimize any risk to safety of the vessel Reasons for intended action are backed by statistical data and

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	at the discretion of the Party, tropical revolving storms and avoidance of storm centres and the dangerous quadrants Knowledge of weather conditions, such as fog, icebergs, ice accretion and freezing spray liable to endanger the vessel Ability to use appropriate navigational publications on tides and currents Ability to calculate times and heights of high and low water and estimate the direction and rate of tidal streams		observations of the actual weather conditions
Respond to navigational emergencies	*Emergency procedures* Precautions when beaching a vessel Action to be taken prior to, and after, grounding Action to be taken when the gear becomes fast to the ground or other obstruction Floating a grounded vessel, with and without assistance	Assessment of evidence obtained from examination or practical instruction, in-service experience and practical drills in emergency procedures	The type and scale of any problem is promptly identified and decisions and actions minimize the effects of any malfunction of the vessel's systems Communications are effective and comply with established procedures Decisions and actions maximize safety of persons on board

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	Action to be taken following a collision Temporary plugging of leaks Measures for the protection and safety of crew in emergencies Limiting damage and salving the vessel following a fire or explosion Abandoning ship Emergency steering, rigging, and use of jury steering and the means of rigging a jury rudder, where practicable Rescuing persons from a vessel in distress or from a wreck Man overboard procedures Towing and being towed		
Fishing vessel manoeuvring and handling	*Fishing vessel manoeuvring and handling* Manoeuvring and handling of a fishing vessel in all conditions including: .1 berthing, unberthing and anchor work under various conditions of wind and tide	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience	All decisions concerning berthing and anchoring are based on a proper assessment of the vessel's manoeuvring and engine characteristics and the forces to be expected while berthed alongside or lying at anchor While under way, a full assessment is

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	.2 manoeuvring in shallow water .3 management and handling of fishing vessels in heavy weather, including appropriate speed, particularly in following and quartering seas, assisting a vessel or aircraft in distress, means of keeping an unmanageable vessel out of a sea trough and lessening drift .4 manoeuvring the vessel during fishing operations, with special regard to factors which could adversely affect the vessel's safety during such operations .5 precautions in manoeuvring for launching rescue boats or survival craft in bad weather .6 methods of taking on board survivors from rescue boats or survival craft .7 where applicable, practical measures to be taken when navigating in ice, icebergs or conditions of ice accretion on board the vessel	.3 approved simulator training, where appropriate .4 approved manned scale vessel model, where appropriate	made of possible effects of shallow and restricted waters, ice, banks, tidal conditions, passing vessels and own vessel's bow and stern wave so that the vessel can be safely manoeuvred under various conditions of loading and weather

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	.8 the use of, and manoeuvring in, traffic separation schemes .9 the importance of navigating at reduced speed to avoid damage caused by own vessel's bow or stern wave .10 transhipment at sea of catch and other supplies to factory vessels and other vessels .11 refuelling at sea		
Fishing vessel power plants	*Fishing vessel power plants* Operating principles of marine power plants in fishing vessels Vessel's auxiliary machinery General knowledge of marine engineering terms	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate	Plant, auxiliary machinery and equipment are operated in accordance with technical specifications and within safe operating limits at all times
Maintain safe navigation through the use of information from navigation equipment and systems to assist command decision-making Note: Training and assessment in the use of ARPA is not required for those	An appreciation of system errors and thorough understanding of the operational aspects of navigational systems Blind pilotage planning Evaluation of navigational	Examination and assessment of evidence obtained from approved ARPA simulator and one or more of the following: .1 approved in-service experience	Information obtained from navigation equipment and systems is correctly interpreted and analysed, taking into account the limitations of the equipment and prevailing circumstances and conditions

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
who serve exclusively on vessels not fitted with ARPA. This limitation shall be reflected in the endorsement issued to the fishing vessel personnel concerned	information derived from all sources, including radar and ARPA, in order to make and implement command decisions for collision avoidance and for directing the safe navigation of the vessel The interrelationship and optimum use of all navigational data available for conducting navigation	.2 approved simulator training, where appropriate .3 approved laboratory equipment training	Action taken to avoid a close encounter or collision with another vessel is in accordance with the International Regulations for Preventing Collisions at Sea, 1972
Maintain the safety of navigation through the use of ECDIS and associated navigation systems to assist command decision-making Note: Training and assessment in the use of ECDIS is not required for those who serve exclusively on vessels not fitted with ECDIS. This limitation shall be reflected in the endorsement issued to the fishing vessel personnel concerned	Management of operational procedures, system files and data, including: .1 manage procurement, licensing and updating of chart data and system software to conform to established procedures .2 system and information updating, including the ability to update ECDIS system version in accordance with vendor's product development .3 create and maintain system configuration and backup files .4 create and maintain log files in	Assessment of evidence obtained from one of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved ECDIS simulator training	Operational procedures for using ECDIS are established, applied and monitored Actions taken to minimize risk to safety of navigation

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	accordance with established procedures .5 create and maintain route plan files in accordance with established procedures .6 use ECDIS logbook and track history functions for inspection of system functions, alarm settings and user responses Use ECDIS playback functionality for passage review, route planning and review of system functions		
Use the IMO Standard Marine Communication Phrases and use English in written and oral forum	*English language* Adequate knowledge of the English language to enable the skipper to use charts and other nautical publications, to understand meteorological information and messages concerning the vessel's safety and operation, and to communicate with other vessels or coast stations Ability to understand and use the IMO Standard Marine Communication Phrases	Assessment of evidence obtained from examination or practical instruction	English language navigational publications and messages relevant to the safety of the vessel are correctly interpreted or drafted Communications are clear and understood

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Transmit and receive information by visual signalling	*Visual signalling* Ability to use the International Code of Signals Ability to transmit and receive, by Morse light, distress signal SOS as specified in annex IV of the International Regulations for Preventing Collisions at Sea, 1972, and appendix 1 of the International Code of Signals, and visual signalling of single-letter signals as also specified in the International Code of Signals	Assessment of evidence obtained from examination or practical instruction and/or simulation	Communications within the operator's area of responsibility are consistently successful
Function: Catch handling and stowage at the management level			
Catch handling and stowage	*Catch handling and stowage* Stowage and securing of the catch on board vessels, including fishing gear Loading and discharging operations, with special regard to heeling moments from gear and catch	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate	The stowage and securing of the catch ensure that stability conditions remain within safe limits at all times during the voyage

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Function: Controlling the operation of the vessel and care for persons on board at the management level			
Control trim and stability	*Fishing vessel construction and stability* General knowledge of principal structural members of a vessel and the proper names of the various parts Knowledge of the theories and factors affecting trim and stability and measures necessary to preserve safe trim and stability Ability to demonstrate the application of stability data, stability and trim tables and precalculated operating conditions, and the use of the vessel's stability booklet Knowledge of effects of free surfaces and ice accretion, where applicable Knowledge of effects of water on deck Knowledge of the significance of weathertight and watertight integrity Knowledge of internationally recognized stability criteria and conditions	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate using: stability and trim tables and diagrams	Stability conditions are maintained within safe limits at all times Actions to ensure and maintain the watertight integrity of the vessel are in accordance with accepted practice

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea and the protection of the marine environment	*Maritime law* Knowledge of international maritime law as embodied in the international agreements and conventions as they affect the specific obligations and responsibilities of the skipper, particularly those concerning safety and the protection of the marine environment Particular regard shall be paid to the following subjects: .1 certificates and other documents required to be carried on board fishing vessels by international conventions, how they may be obtained and the period of their legal validity .2 responsibilities under a relevant international convention related to the safety of fishing vessels .3 responsibilities under the relevant requirements of chapter V of the International Convention for the Safety of Life at Sea, 1974	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate	Procedures for monitoring operations and maintenance comply with legislative requirements Potential non-compliance is promptly and fully identified Planned renewal and extension of certificates ensures continued validity of surveyed items and equipment

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	.4 responsibilities under the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 thereto .5 maritime declarations of health and the requirements of the International Health Regulations .6 responsibilities under the Convention on International Regulations for Preventing Collisions at Sea, 1972 .7 responsibilities under other international instruments affecting the safety of the vessel and crew The extent of knowledge of national maritime legislation is left to the discretion of the Party, but shall include national arrangements for implementing applicable international agreements and conventions .8 knowledge of relevant international instruments on		

Column 1 **Competence**	Column 2 **Knowledge, understanding and proficiency**	Column 3 **Methods for demonstrating competence**	Column 4 **Criteria for evaluating competence**
	safety and health of personnel on board fishing vessels .9 the principles and international standards applicable to the responsible conservation, management and development of living aquatic resources .10 knowledge of key international instruments and tools related to the fight against illegal, unreported and unregulated (IUU) fishing		
Maintain safety of the vessel's crew and the operational condition of life-saving and fire-fighting appliances	*Fire prevention and fire-fighting appliances* Organization of fire drills Classes and chemistry of fire Fire-fighting systems Understanding of action to be taken in the event of fire, including fires involving oil systems Knowledge of provisions concerning fire-fighting equipment Knowledge of fire prevention measures *Life-saving*	Assessment of evidence obtained from examination or approved training	Procedures for monitoring fire detection and safety systems ensure that all alarms are detected promptly and acted upon in accordance with established emergency procedures

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	Thorough knowledge of life-saving appliances provided on fishing vessels Ability to organize abandon ship drills and knowledge of the operation of survival craft and rescue boats, their launching appliances and arrangements, and their equipment, including radio life-saving appliances, EPIRBs, SARTs, immersion suits and thermal protective aids Actions to be taken to protect and safeguard all persons on board in emergencies Actions to limit damage and salve the vessel following a fire, explosion, collision or grounding *Maintenance* Maintenance of operational condition of life-saving, fire-fighting and other safety systems		
Organize and manage the provision of medical care on board	*Medical care* Knowledge of medical first aid procedures	Assessment of evidence obtained from approved training	Action taken and procedures following correctly apply and make full use of advice available

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	Knowledge of relevant procedures to provide adequate medical care on board Knowledge of procedures for obtaining medical advice by radio Thorough knowledge of the use of the following publications: .1 International Medical Guide for Ships or equivalent national publications .2 medical section of the International Code of Signals		

Section A-II/2
Mandatory minimum requirements for certification of officers in charge of a navigational watch on fishing vessels of 24 metres in length and over operating in unlimited waters

Standard of competence

1 Every candidate for certification as officer in charge of a navigational watch on fishing vessels of 24 metres in length and over operating in unlimited waters shall be required to demonstrate the competence to undertake the tasks, duties and responsibilities listed in column 1 of table A-II/2.

2 The minimum knowledge, understanding and proficiency required for certification is listed in column 2 of table A-II/2.

3 The level of knowledge of the subjects listed in column 2 of table A-II/2 shall be sufficient for officers of the watch to carry out their watchkeeping duties.

4 Every candidate for certification shall be required to provide evidence of having achieved the required standard of competence in accordance with the methods for demonstrating competence and the criteria for evaluating competence tabulated in columns 3 and 4 of table A-II/2.

Onboard training

5 Every candidate for certification as officer in charge of a navigational watch on fishing vessels of 24 metres in length and over operating in unlimited waters whose seagoing service, in accordance with paragraph 2.2 of regulation II/2, forms part of a training programme approved as meeting the requirements of this section shall follow an approved programme of onboard training which:

.1 ensures that, during the required period of seagoing service, the candidate receives systematic practical training and experience in the tasks, duties and responsibilities of an officer in charge of a navigational watch;

.2 is closely supervised and monitored by qualified officers aboard the vessels in which the approved seagoing service is performed; and

.3 is adequately documented in a training record book or a similar document.

Table A-II/2

Specification of minimum standard of competence for officers in charge of a navigational watch on fishing vessels of 24 metres in length and over operating in unlimited waters

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Function: Navigation at the operational level			
Plan and conduct a passage and determine position	*Celestial navigation* Ability to use a celestial body to determine compass errors *Terrestrial and coastal navigation* Ability to determine the vessel position by the use of: .1 landmarks .2 aids to navigation, including lighthouses, beacons and buoys .3 dead reckoning, taking into account winds, tides, currents, speed by propeller revolutions per minute and by log Thorough knowledge of and ability to use navigational charts and publications such as sailing directions, tide tables, notices to mariners and radio navigational warnings Electronic systems of position fixing and navigation Ability to determine the vessel's position by the use of electronic navigational	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate .4 approved laboratory equipment training using: chart catalogues, charts, nautical publications, radio navigational warnings, sextant, azimuth mirror, electronic navigation equipment, echo sounding equipment, compass	The information obtained from nautical charts and publications is relevant, interpreted correctly and properly applied. All potential navigational hazards are accurately identified The primary method of fixing the vessel's position is the most appropriate to the prevailing circumstances and conditions The position is determined within the limits of acceptable instrument/system errors The reliability of the information obtained from the primary method of position fixing is checked at appropriate intervals Calculations and measurements of navigational information are accurate The charts selected are the largest scale suitable for the area of navigation and charts and publications are corrected in accordance with the

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	aids to the satisfaction of the Party *Magnetic and gyro-compasses* Care and use of compasses and associated equipment *Meteorology* Knowledge of shipborne meteorological instruments and their application Knowledge of the characteristics of the various weather systems		latest information available Performance checks and tests to navigation systems comply with manufacturer's recommendations and good navigational practice Errors in magnetic and gyro-compasses are determined and correctly applied to courses and bearings Measurements and observations of weather conditions are accurate and appropriate to the passage
Maintain a safe navigational watch	*Watchkeeping* Thorough knowledge of the content, application and intent of the International Regulations for Preventing Collisions at Sea, 1972, specially annexes II and IV concerned with safe navigation Ability to demonstrate knowledge of the content of the basic principles to be observed in keeping a navigational watch as prescribed in chapter IV	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate .4 approved laboratory equipment training	The conduct, handover and relief of the watch conforms with accepted principles and procedures A proper lookout is maintained at all times and in such a way as to conform to accepted principles and procedures Lights, shapes and sound signals conform with the requirements contained in the International Regulations for Preventing Collisions at Sea, 1972, and are correctly recognized

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
			The frequency and extent of monitoring of traffic, the vessel and the environment conform with accepted principles and procedures A proper record is maintained of the movements and activities relating to the navigation of the vessel Responsibility for the safety of navigation is clearly defined at all times, including periods when the master is on the bridge and while under pilotage
Respond to a distress signal at sea	*Search and rescue* Adequate knowledge of search and rescue procedures based on the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual	Assessment of evidence obtained from examination or practical instruction and/or simulation	The distress or emergency signal is immediately recognized Contingency plans and instructions in standing orders are implemented and complied with
Fishing vessel manoeuvring and handling	*Fishing vessel manoeuvring and handling* Basic knowledge of manoeuvring and handling a fishing vessel, including the following: .1 berthing, unberthing, anchoring and manoeuvring	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience	Safe operating limits of vessel propulsion, steering and power systems are not exceeded in normal manoeuvres Adjustments made to the vessel's course and speed maintain safety of navigation

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	alongside other vessels at sea .2 manoeuvring during fishing operations with special regard to factors which could adversely affect the vessel's safety during such operations .3 effects of wind, tide and current on vessel handling .4 manoeuvring in shallow water .5 management of fishing vessels in heavy weather .6 rescuing persons and assisting a vessel or aircraft in distress .7 towing and being towed .8 man overboard procedure .9 where applicable, practical measures to be taken when navigating in ice or in conditions of ice accretion on board the vessel	.3 approved simulator training, where appropriate .4 approved training on a manned scale vessel model where appropriate	
Use of radar and ARPA to maintain safety of navigation Note: Training and assessment in the use of ARPA is not required for those who serve exclusively on vessels not fitted	*Radar navigation* Knowledge of the fundamentals of radar and automatic radar plotting aids (ARPA) Ability to operate and to interpret and analyse information	Assessment of evidence obtained from approved radar simulator and ARPA simulator plus in-service experience	Information obtained from radar and ARPA is correctly interpreted and analysed, taking into account the limitations of the equipment and prevailing circumstances and conditions

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
with ARPA. This limitation shall be reflected in the endorsement issued to the fishing vessel personnel concerned	obtained from radar, including the following: Performance, including: .1 factors affecting performance and accuracy .2 setting up and maintaining displays .3 detection of misrepresentation of information, false echoes, sea return, etc., racons and SARTs Use, including: .1 range and bearing; course and speed of other vessels; time and distance of closest approach of crossing, meeting overtaking vessels .2 identification of critical echoes; detecting course and speed changes of other vessels; effect of changes in own vessel's course or speed or both .3 application of the International Regulations for Preventing Collisions at Sea, 1972 .4 plotting techniques and relative- and true-motion concepts		Action taken to avoid a close encounter or collision with other vessels is in accordance with the International Regulations for Preventing Collisions at Sea, 1972 Decisions to amend course and/or speed are both timely and in accordance with accepted navigation practice Adjustments made to the vessel's course and speed maintain safety of navigation Communication is clear, concise and acknowledged at all times in a seamanlike manner Manoeuvring signals are made at the appropriate time and are in accordance with the International Regulations for Preventing Collisions at Sea, 1972

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	.5 parallel indexing Principal types of ARPA, their display characteristics, performance standards and the dangers of over-reliance on ARPA Ability to operate and to interpret and analyse information obtained from ARPA, including: .1 system performance and accuracy, tracking capabilities and limitations, and processing delays .2 use of operational warnings and system tests .3 methods of target acquisition and their limitations .4 true and relative vectors, graphic representation of target information and danger areas .5 deriving and analysing information, critical echoes, exclusion areas and trial manoeuvres		
Use of ECDIS to maintain the safety of navigation Note: Training and assessment in the use of ECDIS is not required for those	*Navigation using ECDIS* Knowledge of the capability and limitations of ECDIS operations, including:	Examination and assessment of evidence obtained from one or more of the following:	Monitors information on ECDIS in a manner that contributes to safe navigation Information obtained from ECDIS

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
who serve exclusively on vessels not fitted with ECDIS. This limitation shall be reflected in the endorsements issued to the fishing vessel personnel concerned	.1 thorough understanding of Electronic Navigational Chart (ENC) data, data accuracy, presentation rules, display options and other chart data formats .2 the dangers of over-reliance .3 familiarity with the functions of ECDIS required by performance standards in force Proficiency in operation, interpretation, and analysis of information obtained from ECDIS, including: .1 use of functions that are integrated with other navigation systems in various installations, including proper functioning and adjustment to desired settings .2 safe monitoring and adjustment of information, including own position, sea area display, mode and orientation, chart data displayed, route monitoring, user-created information layers, contacts (when interfaced with AIS and/or radar tracking) and radar overlay functions (when interfaced)	.1 approved training vessel experience .2 approved ECDIS simulator training	(including radar overlay and/or radar tracking functions, when fitted) is correctly interpreted and analysed, taking into account the limitations of the equipment, all connected sensors (including radar and AIS where interfaced), and prevailing circumstances and conditions Safety of navigation is maintained through Adjustments made to the vessel's course and speed through ECDIS-controlled track-keeping functions (when fitted) Communication is clear, concise and acknowledged at all times in a seamanlike manner

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	.3 confirmation of vessel position by alternative means .4 efficient use of settings to ensure conformance to operational procedures, including alarm parameters for anti-grounding, proximity to contacts and special areas, completeness of chart data and chart update status, and backup arrangements .5 adjustment of settings and values to suit the present conditions .6 situational awareness while using ECDIS including safe water and proximity of hazards, set and drift, chart data and scale selection, suitability of route, contact detection and management, and integrity of sensors		
Use the IMO Standard Marine Communication Phrases and use English in written and oral forum	*English language* Adequate knowledge of the English language to enable the officer to use charts and other nautical publications, to understand meteorological information and messages concerning vessel's safety and operation	Assessment of evidence obtained from examination or practical instruction	English language navigational publications and messages relevant to the safety of the vessel are correctly interpreted or drafted Communications are clear and understood

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	Ability to understand and use the IMO Standard Marine Communication Phrases		
Function: Catch handling and stowage at the operational level			
Catch handling and stowage	*Catch handling and stowage* Knowledge of safe handling and stowage of catch and the effect of these factors on the safety of the vessel	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate	Handling and stowage of catch are carried out in accordance with safety rules/regulations, equipment operating instructions and shipboard stowage limitation
Function: Controlling the operation of the vessel and care for persons on board at the operational level			
Ensure compliance with pollution prevention requirements and the protection of the marine environment	*Prevention of pollution of the marine environment* Knowledge of the precautions to be observed to prevent pollution of the marine environment Knowledge of the impacts of fishing on the environment including pollution related to Abandoned, Lost or otherwise Discarded Fishing Gear (ALDFG) in the context of annex V to the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate .4 approved laboratory equipment training	Procedures for monitoring shipboard operations and ensuring compliance with MARPOL requirements are fully observed

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	Protocol of 1978 thereto Understanding the importance of proactive measures to protect the marine environment		
Maintain seaworthiness of the vessel	*Vessel stability* Ability to use stability data, stability and trim tables and precalculated operating conditions Knowledge of: .1 the effects of suspended weight on stability .2 the effects of fishing gear operations on stability .3 the risks of following and quartering seas *Fishing vessel construction* General knowledge of the principal structural members of a vessel Understanding of the fundamentals of watertight integrity	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate .4 approved laboratory equipment training	The stability conditions comply with the IMO intact stability criteria under all conditions of loading Actions to ensure and maintain the watertight integrity of the vessel are in accordance with accepted practice

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Prevent, control and fight fires on board	*Fire prevention and fire-fighting appliances* Ability to organize fire drills Knowledge of classes and chemistry of fire Knowledge of fire-fighting systems Knowledge of action to be taken in the event of fire Knowledge of fire prevention measures and use of fire-fighting appliances	Assessment of evidence obtained from approved fire-fighting training and experience	The type and scale of the problem are promptly identified and initial actions conform with the emergency procedure and contingency plans for the vessel Evacuation, emergency shutdown and isolation procedures are appropriate to the nature of the emergency and are implemented promptly The order of priority, and the levels and timescales of making reports and informing personnel on board, are relevant to the nature of the emergency and reflect the urgency of the problem
Operate life-saving appliances	*Life-saving* Ability to direct abandon ship drills and knowledge of the operation of life-saving appliances and their equipment, including the two-way radio-telephone apparatus. Survival at sea techniques including participation in an approved survival at sea course	Assessment of evidence obtained from examination or approved training	Actions in responding to abandon ship and survival situations are appropriate to the prevailing circumstances and conditions and comply with accepted safety practices and standards

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Medical aid	*Medical aid* Knowledge of first aid procedures. Practical application of medical guides and advice by radio	Assessment of evidence obtained from approved training	The identification of probable cause, nature and extent of injuries or conditions is prompt and treatment minimizes immediate threat to life
Monitor compliance with legislative requirements	Basic working knowledge of the relevant IMO conventions and other relevant international instruments concerning safety of life at sea and protection of the marine environment Basic working knowledge of relevant international instruments concerning the responsible conservation, fishing management, responsible fisheries and development of living aquatic resources as well as key international instruments related to the fight against illegal, unreported and unregulated (IUU) fishing Understanding of the requirements which crews shall comply with Understanding the importance of sustainable development of the fishing industry	Assessment of evidence obtained from examination or approved training	Legislative requirements relating to safety of life at sea and protection of the marine environment are correctly identified

Section A-II/3
Mandatory minimum requirements for certification of skippers on fishing vessels of 24 metres in length and over operating in limited waters

Standard of competence

1 Every candidate for certification as skipper on fishing vessels of 24 metres in length and over operating in limited waters shall be required to demonstrate the competence to undertake the tasks, duties and responsibilities listed in column 1 of table A-II/3.

2 The minimum knowledge, understanding and proficiency required for certification is listed in column 2 of table A-II/3. This incorporates, expands and extends in depth the subjects listed in column 2 of table A-II/4 for officers in charge of a navigational watch.

3 The level of knowledge of the subjects listed in column 2 of table A-II/3 shall be sufficient to enable the candidate to serve in the capacity of skipper.

4 Every candidate for certification shall be required to provide evidence of having achieved the required standard of competence in accordance with the methods for demonstrating competence and criteria for evaluating competence tabulated in columns 3 and 4 of table A-II/3.

Table A-II/3

Specification of minimum standard of competence for skippers on fishing vessels of 24 metres in length and over operating in limited waters

Column 1 **Competence**	Column 2 **Knowledge, understanding and proficiency**	Column 3 **Methods for demonstrating competence**	Column 4 **Criteria for evaluating competence**
Function: Navigation at the management level			
Plan a voyage and conduct navigation	*Navigation* Voyage planning and navigation for all conditions: .1 by acceptable methods of determining ocean tracks .2 within restricted waters .3 where applicable, in ice .4 in restricted visibility .5 where applicable, in traffic separation schemes .6 in areas affected by tides or currents .7 in all meteorological conditions	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate .4 approved laboratory equipment training using: chart catalogues, charts, nautical publications and vessel particulars	The equipment, charts and nautical publications required for the voyage are enumerated and appropriate to the safe conduct of the voyage The reasons for the planned route are supported by facts and statistical data obtained from relevant sources and publications Positions, courses, distances and time calculations are correct within accepted accuracy standards for navigational equipment All potential navigational hazards are accurately identified
Determine position and the accuracy of resultant position fix by any means	Position determination: .1 by terrestrial observations, including the ability to use bearings from landmarks and aids to navigation such as lighthouses, beacons and buoys in conjunction with appropriate charts, notices to mariners	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience	The primary method chosen for fixing the vessel's position is the most appropriate to the prevailing circumstances and conditions The fix obtained by terrestrial observations is within accepted accuracy levels

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	and other publications to assess the accuracy of the resulting position fix .2 by using, to the satisfaction of the Party, modern ship electronic navigational aids as provided in fishing vessels concerned	.3 approved simulator training, where appropriate .4 approved laboratory equipment training using: (a) charts, nautical publications and navigational instruments (log, sounding equipment, compass) and manufactures manuals (b) radar, terrestrial electronic position-fixing systems, satellite navigation systems and appropriate nautical charts and publications	The accuracy of the resulting fix is properly assessed The fix obtained by the use of electronic navigational aids is within the accuracy standards of the systems in use. The possible errors affecting the accuracy of the resulting position are stated and methods of minimizing the effects of system errors on the resulting position are properly applied
Determine and allow for compass errors	*Compasses* Ability to use terrestrial means to determine and apply the errors of the compasses	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate .4 approved laboratory equipment training	The method and frequency of checks for errors of magnetic and gyro-compasses ensures accuracy of information

Column 1 Competence	Column 2 Knowledge, understanding and proficiency	Column 3 Methods for demonstrating competence	Column 4 Criteria for evaluating competence
		using: terrestrial bearings and comparison between magnetic and gyro-compasses	
Coordinate search and rescue operations	*Search and rescue* Knowledge of search and rescue procedures	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate .4 approved laboratory equipment training using: relevant publications, charts, meteorological data, particulars of vessels involved, radiocommunication equipment and other available facilities	The plan for coordinating search and rescue operations is in accordance with international guidelines and standards Radiocommunications are established and correct communication procedures are followed at all stages of the search and rescue operations
Establish watchkeeping arrangements and procedures	*Watchkeeping* Thorough knowledge of the content, application and intent of the International Regulations for Preventing Collisions at Sea, 1972, specially annexes II and IV concerned with safe navigation	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved simulator training, where appropriate	Watchkeeping arrangements and procedures are established and maintained in compliance with international regulations and guidelines so as to ensure the safety of navigation, protection of the marine environment and

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	Ability to demonstrate knowledge of the content, application and intent of the principles to be observed in keeping a navigational watch as prescribed in chapter IV Reporting in accordance with the general principles for ships reporting systems and with VTS procedures, where deemed appropriate by the Party		safety of the vessel and persons on board
Forecast weather and oceanographic conditions	*Meteorology and oceanography* Knowledge of meteorological instruments and their application Ability to apply meteorological information available Knowledge of characteristics of various weather systems affecting the limited waters concerned liable to endanger the vessel, at the discretion of the Party Knowledge of weather conditions affecting the limited waters concerned liable to endanger the vessel, at the discretion of the Party	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved laboratory equipment training	The likely weather conditions predicted for a determined period are based on all available information Actions taken to maintain safety of navigation minimize any risk to safety of the vessel Reasons for intended action are backed by statistical data and observations of the actual weather conditions Calculate times and heights of tides and estimate the direction and rate of tidal streams

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	Ability to calculate tidal conditions using appropriate navigational publications		
Respond to navigational emergencies	*Emergency procedures* Precautions when beaching a vessel Action to be taken prior to, and after, grounding Action to be taken when the gear becomes fast to the ground or other obstruction Floating a grounded vessel, with and without assistance Action to be taken following a collision Temporary plugging of leaks Measures for the protection and safety of crew in emergencies Limiting damage and salving the vessel following a fire or explosion Abandoning ship Emergency steering Rescuing persons from a vessel in distress or from a wreck	Assessment of evidence obtained from examination or practical instruction, in-service experience and practical drills in emergency procedures	The type and scale of any problem is promptly identified and decisions and actions minimize the effects of any malfunction of the vessel's systems Communications are effective and comply with established procedures Decisions and actions maximize safety of persons on board

Column 1 **Competence**	Column 2 **Knowledge, understanding and proficiency**	Column 3 **Methods for demonstrating competence**	Column 4 **Criteria for evaluating competence**
	Man overboard procedures Towing and being towed		
Fishing vessel manoeuvring and handling	*Fishing vessel manoeuvring and handling* Manoeuvring and handling of a fishing vessel in all conditions including: .1 berthing, unberthing and anchor work under various conditions of wind and tide .2 manoeuvring in shallow water .3 management and handling of fishing vessels in heavy weather, including appropriate speed, particularly in following and quartering seas, assisting a vessel or aircraft in distress, means of keeping an unmanageable vessel out of a sea trough and lessening drift .4 manoeuvring the vessel during fishing operations, with special regard to factors which could adversely affect the vessel's safety during such operations	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate .4 approved manned scale vessel model, where appropriate	All decisions concerning berthing and anchoring are based on a proper assessment of the vessel's manoeuvring and engine characteristics and the forces to be expected while berthed alongside or lying at anchor While under way, a full assessment is made of possible effects of shallow and restricted waters, ice, banks, tidal conditions, passing vessel and own vessel's bow and stern wave so that the vessel can be safely manoeuvred under various conditions of loading and weather

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	.5 precautions in manoeuvring for launching rescue boats or survival craft in bad weather .6 methods of taking on board survivors from rescue boats or survival craft .7 where applicable, practical measures to be taken when navigating in ice, icebergs or conditions of ice accretion on board the vessel .8 the use of, and manoeuvring in, traffic separation schemes .9 the importance of navigating at reduced speed to avoid damage caused by own vessel's bow or stern wave .10 transhipment at sea of catch and other supplies to factory vessels and other vessels		
Fishing vessel power plants	*Fishing vessel power plants* Operating principles of marine power plants in fishing vessels Vessel's auxiliary machinery	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience	Plant, auxiliary machinery and equipment is operated in accordance with technical specifications and within safe operating limits at all times

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	General knowledge of marine engineering terms	.3 approved simulator training, where appropriate	
Maintain safe navigation through the use of information from navigation equipment and systems to assist command decision-making Note: Training and assessment in the use of ARPA is not required for those who serve exclusively on vessels not fitted with ARPA. This limitation shall be reflected in the endorsement issued to the fishing vessel personnel concerned	An appreciation of system errors and thorough understanding of the operational aspects of navigational systems Blind pilotage planning Evaluation of navigational information derived from all sources, including radar and ARPA, in order to make and implement command decisions for collision avoidance and for directing the safe navigation of the vessel The interrelationship and optimum use of all navigational data available for conducting navigation	Examination and assessment of evidence obtained from approved ARPA simulator and one or more of the following: .1 approved in-service experience .2 approved simulator training, where appropriate .3 approved laboratory equipment training	Information obtained from navigation equipment and systems is correctly interpreted and analysed, taking into account the limitations of the equipment and prevailing circumstances and conditions Action taken to avoid a close encounter or collision with another vessel is in accordance with the International Regulations for Preventing Collisions at Sea, 1972
Maintain the safety of navigation through the use of ECDIS and associated navigation systems to assist command decision-making Note: Training and assessment in the use of ECDIS is not required for those who serve exclusively on vessels not fitted	Management of operational procedures, system files and data, including: .1 manage procurement, licensing and updating of chart data and system software to conform to established procedures	Assessment of evidence obtained from one of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved ECDIS simulator training	Operational procedures for using ECDIS are established, applied and monitored Actions taken to minimize risk to safety of navigation

Column 1 Competence	Column 2 Knowledge, understanding and proficiency	Column 3 Methods for demonstrating competence	Column 4 Criteria for evaluating competence
with ECDIS. This limitation shall be reflected in the endorsement issued to the fishing vessel personnel concerned	.2 system and information updating, including the ability to update ECDIS system version in accordance with vendor's product development .3 create and maintain system configuration and backup files .4 create and maintain log files in accordance with established procedures .5 create and maintain route plan files in accordance with established procedures .6 use ECDIS logbook and track history functions for inspection of system functions, alarm settings and user responses Use ECDIS playback functionality for passage review, route planning and review of system functions		
Maritime communication for safe navigation	*English language* Basic knowledge of the English language to enable the skipper to use appropriate nautical publications, to understand meteorological	Examination and assessment of evidence obtained from practical instruction	English language nautical publications and messages relevant to the safety of the vessel are correctly interpreted or drafted

Column 1 **Competence**	Column 2 **Knowledge, understanding and proficiency**	Column 3 **Methods for demonstrating competence**	Column 4 **Criteria for evaluating competence**
	information and messages concerning vessel's safety, and to communicate with other vessels		Communications are clear and understood
Function: Catch handling and stowage at the management level			
Catch handling and stowage	*Catch handling and stowage* Stowage and securing of the catch on board vessels, including fishing gear Loading and discharging operations, with special regard to heeling moments from gear and catch	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate	The stowage and securing of the catch ensure that stability conditions remain within safe limits at all times during the voyage
Function: Controlling the operation of the vessel and care for persons on board at the management level			
Control trim and stability	*Fishing vessel construction and stability* General knowledge of principal structural members of a vessel and the proper names of the various parts Knowledge of the theories and factors affecting trim and stability and measures necessary to preserve safe trim and stability Knowledge and ability to use stability documents or booklets, stability data, stability and trim tables and	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate using: stability and trim tables and diagrams	Stability conditions are maintained within safe limits at all times Actions to ensure and maintain the watertight integrity of the vessel are in accordance with accepted practice

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	precalculation for operating conditions. Knowledge of effects of free surfaces and ice accretion, where applicable Knowledge of effects of water on deck Knowledge of the significance of weathertight and watertight integrity Knowledge of internationally recognized stability criteria and conditions		
Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea and the protection of the marine environment	*Maritime law* Taking into account the limited waters as defined by the Party, knowledge of international maritime law as embodied in the international agreements and conventions as they affect the specific obligations and responsibilities of the skipper, particularly those concerning safety and the protection of the marine environment The extent of knowledge of national maritime legislation is left to the discretion of the Party, but shall include national arrangements for implementing	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate	Procedures for monitoring operations and maintenance comply with legislative requirements Potential non-compliance is promptly and fully identified Planned renewal and extension of certificates ensures continued validity of surveyed items and equipment

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	applicable international agreements and conventions		
Maintain safety of the vessel's crew and the operational condition of life-saving and fire-fighting appliances	*Fire prevention and fire-fighting appliances* Organization of fire drills Classes and chemistry of fire Fire-fighting systems Understanding of action to be taken in the event of fire, including fires involving oil systems Knowledge of provisions concerning fire-fighting equipment Knowledge of fire prevention measures *Life-saving* Thorough knowledge of life-saving appliances provided on fishing vessels. Ability to organize abandon ship drills and knowledge of the operation of survival craft and rescue boats, their launching appliances and arrangements, and their equipment, including radio life-saving appliances, EPIRBs, SARTs,	Assessment of evidence obtained from examination or approved training	Procedures for monitoring fire detection and safety systems ensure that all alarms are detected promptly and acted upon in accordance with established emergency procedures

Column 1 Competence	Column 2 Knowledge, understanding and proficiency	Column 3 Methods for demonstrating competence	Column 4 Criteria for evaluating competence
	immersion suits and thermal protective aids Actions to be taken to protect and safeguard all persons on board in emergencies Actions to limit damage and salve the vessel following a fire, explosion, collision or grounding *Maintenance* Maintenance of operational condition of life-saving, fire-fighting and other safety systems		
Organize and manage the provision of medical care on board	*Medical care* Knowledge of medical first aid procedures Knowledge of relevant procedures to provide adequate medical care on board Knowledge of procedures for obtaining medical advice by radio Practical application of medical guides and advice by radio including the ability to take effective action based on such knowledge in case of accident or illness that are likely to occur on board the vessel	Assessment of evidence obtained from examination or approved training	Action taken and procedures following correctly apply and make full use of advice available

Section A-II/4
Mandatory minimum requirements for certification of officers in charge of a navigational watch on fishing vessels of 24 metres in length and over operating in limited waters

Standard of competence

1 Every candidate for certification as officer in charge of a navigational watch on fishing vessels of 24 metres in length and over operating in limited waters shall be required to demonstrate the competence to undertake the tasks, duties and responsibilities listed in column 1 of table A-II/4.

2 The minimum knowledge, understanding and proficiency required for certification is listed in column 2 of table A-II/4.

3 The level of knowledge of the subjects listed in column 2 of table A-II/4 shall be sufficient for officers of the watch to carry out their watchkeeping duties.

4 Every candidate for certification shall be required to provide evidence of having achieved the required standard of competence in accordance with the methods for demonstrating competence and the criteria for evaluating competence tabulated in columns 3 and 4 of table A-II/4.

Onboard training

5 Every candidate for certification as officer in charge of a navigational watch on fishing vessels of 24 metres in length and over operating in limited waters whose seagoing service, in accordance with paragraph 2.2 of regulation II/4, forms part of a training programme approved as meeting the requirements of this section shall follow an approved programme of onboard training which:

.1 ensures that, during the required period of seagoing service, the candidate receives systematic practical training and experience in the tasks, duties and responsibilities of an officer in charge of a navigational watch;

.2 is closely supervised and monitored by qualified officers aboard the vessels in which the approved seagoing service is performed; and

.3 is adequately documented in a training record book or a similar document.

Table A-II/4

Specification of minimum standard of competence for officers in charge of a navigational watch on fishing vessels of 24 metres in length and over operating in limited waters

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Function: Navigation at the operational level			
Plan and conduct a passage and determine position	Terrestrial and coastal navigation Ability to determine the vessel position by the use of: .1 landmarks .2 aids to navigation, including lighthouses, beacons and buoys .3 dead reckoning, taking into account winds, tides, currents, speed by propeller revolutions per minute and by log Thorough knowledge of and ability to use navigational charts and publications such as sailing directions, tide tables, notices to mariners and radio navigational warnings Electronic systems of position fixing and navigation Ability to determine the vessel's position by the use of electronic navigational aids to the satisfaction of the Party *Compasses* Care and use of compasses and	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate .4 approved laboratory equipment training using: chart catalogues, charts, nautical publications, radio navigational warnings, azimuth mirror, electronic navigation equipment, echo sounding equipment, compass	The information obtained from nautical charts and publications is relevant, interpreted correctly and properly applied. All potential navigational hazards are accurately identified The primary method of fixing the vessel's position is the most appropriate to the prevailing circumstances and conditions The position is determined within the limits of acceptable instrument/system errors The reliability of the information obtained from the primary method of position fixing is checked at appropriate intervals Calculations and measurements of navigational information are accurate The charts selected are the largest scale suitable for the area of navigation and charts and publications are corrected in

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	associated equipment Ability to determine and apply compass errors *Meteorology* Knowledge of shipborne meteorological instruments and their application Knowledge of the characteristics of the various weather systems affecting the limited waters concerned *Echo sounders* Ability to operate the equipment and apply the information correctly *Steering control system* Knowledge of steering control systems and applicable operational procedures		accordance with the latest information available Performance checks and tests to navigation systems comply with manufacturer's recommendations and good navigational practice Errors in magnetic and gyro-compasses are determined and correctly applied to courses and bearings Measurements and observations of weather conditions are accurate and appropriate to the passage
Maintain a safe navigational watch	*Watchkeeping* Thorough knowledge of the content, application and intent of the International Regulations for Preventing Collisions at Sea, 1972, specially annexes II	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience	The conduct, handover and relief of the watch conforms with accepted principles and procedures A proper lookout is maintained at all times and in such a way as to conform to

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	and IV concerned with safe navigation Ability to demonstrate knowledge of the content of the basic principles to be observed in keeping a navigational watch as prescribed in chapter IV	.3 approved simulator training, where appropriate .4 approved laboratory equipment training	accepted principles and procedures Lights, shapes and sound signals conform with the requirements contained in the International Regulations for Preventing Collisions at Sea, 1972, and are correctly recognized The frequency and extent of monitoring of traffic, the vessel and the environment conform with accepted principles and procedures A proper record is maintained of the movements and activities relating to the navigation of the vessel Responsibility for the safety of navigation is clearly defined at all times, including periods when the master is on the bridge and while under pilotage
Respond to a distress signal at sea	*Search and rescue* Knowledge of search and rescue procedures	Assessment of evidence obtained from examination or practical instruction and/or simulation	The distress or emergency signal is immediately recognized Contingency plans and instructions in standing orders are implemented and complied with

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Fishing vessel manoeuvring and handling	*Fishing vessel manoeuvring and handling* Basic knowledge of manoeuvring and handling a fishing vessel, including the following: .1 berthing, unberthing, anchoring and manoeuvring alongside other vessels at sea .2 manoeuvring during fishing operations with special regard to factors which could adversely affect the vessel's safety during such operations .3 effects of wind, tide and current on vessel handling .4 manoeuvring in shallow water .5 management of fishing vessels in heavy weather .6 rescuing persons and assisting a vessel or aircraft in distress .7 towing and being towed .8 man overboard procedure .9 where applicable, practical measures to be taken when	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate .4 approved training on a manned scale vessel model where appropriate	Safe operating limits of vessel propulsion, steering and power systems are not exceeded in normal manoeuvres Adjustments made to the vessel's course and speed maintain safety of navigation

Column 1 **Competence**	Column 2 **Knowledge, understanding and proficiency**	Column 3 **Methods for demonstrating competence**	Column 4 **Criteria for evaluating competence**
	navigating in ice or in conditions of ice accretion on board the vessel		
Use of radar and ARPA to maintain safety of navigation Note: Training and assessment in the use of ARPA is not required for those who serve exclusively on vessels not fitted with ARPA. This limitation shall be reflected in the endorsement issued to the fishing vessel personnel concerned	*Radar navigation* Knowledge of the fundamentals of radar and automatic radar plotting aids (ARPA) Ability to operate and to interpret and analyse information obtained from radar, including the following: Performance, including: .1 factors affecting performance and accuracy .2 setting up and maintaining displays .3 detection of misrepresentation of information, false echoes, sea return, etc., racons and SARTs Use, including: .1 range and bearing; course and speed of other vessels; time and distance of closest approach of crossing, meeting overtaking vessels .2 identification of critical echoes; detecting course and	Assessment of evidence obtained from approved radar simulator and ARPA simulator plus in-service experience	Information obtained from radar and ARPA is correctly interpreted and analysed, taking into account the limitations of the equipment and prevailing circumstances and conditions Action taken to avoid a close encounter or collision with other vessels is in accordance with the International Regulations for Preventing Collisions at Sea, 1972 Decisions to amend course and/or speed are both timely and in accordance with accepted navigation practice Adjustments made to the vessel's course and speed maintain safety of navigation Communication is clear, concise and acknowledged at all times in a seamanlike manner Manoeuvring signals are made at the appropriate time and are in accordance with the International Regulations for

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	speed changes of other vessels; effect of changes in own vessel's course or speed or both .3 application of the International Regulations for Preventing Collisions at Sea, 1972 .4 plotting techniques and relative- and true-motion concepts .5 parallel indexing Principal types of ARPA, their display characteristics, performance standards and the dangers of over-reliance on ARPA Ability to operate and to interpret and analyse information obtained from ARPA, including: .1 system performance and accuracy, tracking capabilities and limitations, and processing delays .2 use of operational warnings and system tests .3 methods of target acquisition and their limitations .4 true and relative vectors, graphic representation of		Preventing Collisions at Sea, 1972

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	target information and danger areas .5 deriving and analysing information, critical echoes, exclusion areas and trial manoeuvres		
Use of ECDIS to maintain the safety of navigation Note: Training and assessment in the use of ECDIS is not required for those who serve exclusively on vessels not fitted with ECDIS. This limitation shall be reflected in the endorsements issued to the fishing vessel personnel concerned	*Navigation using ECDIS* Knowledge of the capability and limitations of ECDIS operations, including: .1 thorough understanding of Electronic Navigational Chart (ENC) data, data accuracy, presentation rules, display options and other chart data formats .2 the dangers of over-reliance .3 familiarity with the functions of ECDIS required by performance standards in force Proficiency in operation, interpretation, and analysis of information obtained from ECDIS, including: .1 use of functions that are integrated with other navigation systems in various	Examination and assessment of evidence obtained from one or more of the following: .1 approved training vessel experience .2 approved ECDIS simulator training	Monitors information on ECDIS in a manner that contributes to safe navigation Information obtained from ECDIS (including radar overlay and/or radar tracking functions, when fitted) is correctly interpreted and analysed, taking into account the limitations of the equipment, all connected sensors (including radar and AIS where interfaced), and prevailing circumstances and conditions Safety of navigation is maintained through adjustments made to the vessel's course and speed through ECDIS-controlled track-keeping functions (when fitted) Communication is clear, concise and acknowledged at all times in a seamanlike manner

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	installations, including proper functioning and adjustment to desired settings .2 safe monitoring and adjustment of information, including own position, sea area display, mode and orientation, chart data displayed, route monitoring, user-created information layers, contacts (when interfaced with AIS and/or radar tracking) and radar overlay functions (when interfaced) .3 confirmation of vessel position by alternative means .4 efficient use of settings to ensure conformance to operational procedures, including alarm parameters for anti-grounding, proximity to contacts and special areas, completeness of chart data and chart update status, and backup arrangements .5 adjustment of settings and values to suit the present conditions .6 situational awareness while using ECDIS including safe water and proximity of		

Column 1 **Competence**	Column 2 **Knowledge, understanding and proficiency**	Column 3 **Methods for demonstrating competence**	Column 4 **Criteria for evaluating competence**
	hazards, set and drift, chart data and scale selection, suitability of route, contact detection and management, and integrity of sensors		
Maritime communication for safe navigation	*English language* Basic knowledge of the English language to enable the officer to use appropriate nautical publications, to understand meteorological information and messages concerning vessel's safety, and to communicate with other vessels	Examination and assessment of evidence obtained from practical instruction	English language nautical publications and messages relevant to the safety of the vessel are correctly interpreted or drafted Communications are clear and understood
Function: Catch handling and stowage at the operational level			
Catch handling and stowage	*Catch handling and stowage* Knowledge of safe handling and stowage of catch and the effect of these factors on the safety of the vessel	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate	Handling and stowage of catch are carried out in accordance with safety rules/regulations, equipment operating instructions and shipboard stowage limitation
Function: Controlling the operation of the vessel and care for persons on board at the operational level			
Ensure compliance with pollution prevention requirements and the protection of the marine environment	*Prevention of pollution of the marine environment* Knowledge of the precautions to be observed to prevent	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience	Procedures for monitoring shipboard operations and ensuring compliance with MARPOL requirements are fully observed

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	pollution of the marine environment Knowledge of the impacts of fishing on the environment including pollution related to abandoned, lost or otherwise discarded fishing gear in the context of annex V of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 thereto Understanding the importance of proactive measures to protect the marine environment	.2 approved training vessel experience .3 approved simulator training, where appropriate .4 approved laboratory equipment training	
Maintain seaworthiness of the vessel	*Vessel stability* Ability to use stability data, stability and trim tables and precalculated operating conditions Knowledge of: .1 the effects of suspended weight on stability .2 the effects of fishing gear operations on stability .3 the risks of following and quartering seas	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate .4 approved laboratory equipment training .5 application of vessel stability data	The stability conditions comply with the IMO intact stability criteria under all conditions of loading Actions to ensure and maintain the watertight integrity of the vessel are in accordance with accepted practice

Column 1 Competence	Column 2 Knowledge, understanding and proficiency	Column 3 Methods for demonstrating competence	Column 4 Criteria for evaluating competence
	Fishing vessel construction General knowledge of the principal structural members of a vessel Understanding of the fundamentals of watertight integrity		
Prevent, control and fight fires on board	*Fire prevention and fire-fighting appliances* Ability to organize fire drills Knowledge of classes and chemistry of fire Knowledge of fire-fighting systems Knowledge of action to be taken in the event of fire Knowledge of fire prevention measures and use of fire-fighting appliances	Assessment of evidence obtained from approved fire-fighting training and experience	The type and scale of the problem is promptly identified and initial actions conform with the emergency procedure and contingency plans for the vessel Evacuation, emergency shutdown and isolation procedures are appropriate to the nature of the emergency and are implemented promptly The order of priority, and the levels and timescales of making reports and informing personnel on board, are relevant to the nature of the emergency and reflect the urgency of the problem
Operate life-saving appliances	*Life-saving* Knowledge of life-saving appliances provided on fishing vessels Organization of abandon ship drills	Assessment of evidence obtained from examination or approved training	Actions in responding to abandon ship and survival situations are appropriate to the prevailing circumstances and conditions and comply with accepted

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	and use of the equipment Knowledge of survival techniques Knowledge of personal responsibility		safety practices and standards
Medical aid	*Medical aid* Knowledge of first aid procedures. Practical application of medical guides and advice by radio	Assessment of evidence obtained from approved training	The identification of probable cause, nature and extent of injuries or conditions is prompt and treatment minimizes immediate threat to life
Monitor compliance with legislative requirements	Basic working knowledge of the relevant IMO conventions and other relevant international instruments concerning safety of life at sea and protection of the marine environment Basic working knowledge of relevant international instruments concerning the responsible conservation, fishing management, responsible fisheries and development of living aquatic resources as well as key international instruments related to the fight against illegal, unreported and unregulated (IUU) fishing	Assessment of evidence obtained from examination or approved training	Legislative requirements relating to safety of life at sea and protection of the marine environment are correctly identified

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	Understanding of the requirements which crews shall comply with Understanding the importance of sustainable development of the fishing industry		

Section A-II/5-1-1
Mandatory minimum requirements for certification of chief engineer officers and second engineer officers of fishing vessels powered by main propulsion machinery of 3,000 kW propulsion power or more

Standard of competence

1 Every candidate for certification as chief engineer officer and second engineer officer of fishing vessels powered by main propulsion machinery of 3,000 kW power or more shall be required to demonstrate abilities to undertake, the tasks, duties and responsibilities listed in column 1 of table A-II/5-1.

2 The minimum knowledge, understanding and proficiency required for certification is listed in column 2 of table A-II/5-1. This incorporates, expands and extends in depth the subjects listed in column 2 of table A-II/5-2 for officers in charge of an engineering watch.

3 Bearing in mind that a second engineer officer shall be in a position to assume the responsibilities of the chief engineer officer at any time, assessment in these subjects shall be designed to test the candidate's ability to assimilate all available information that affects the safe operation of the vessel’s machinery and the protection of the marine environment.

4 The level of knowledge of the subjects listed in column 2 of table A-II/5-1 shall be sufficient to enable the candidate to serve in the capacity of chief engineer officer or second engineer officer.

5 The Administration may omit knowledge requirements for types of propulsion machinery other than those machinery installations for which the certificate to be awarded shall be valid. A certificate awarded on such a basis shall not be valid for any category of machinery installation which has been omitted until the engineer officer proves to be competent in these knowledge requirements. Any such limitation shall be stated on the certificate and in the endorsement.

6 Every candidate for certification shall be required to provide evidence of having achieved the required standard of competence in accordance with the methods for demonstrating competence and the criteria for evaluating competence tabulated in columns 3 and 4 of table A-II/5-1.

Table A-II/5-1

Specification of minimum standard of competence for chief engineer officers and second engineer officers of fishing vessels powered by main propulsion machinery of 3,000 kW propulsion power or more

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Manage the operation of propulsion plant machinery Note: the Administration may omit knowledge requirements for types of propulsion machinery other than machinery installations for which the certificate to be awarded is to be valid	Design features, and operative mechanism of the following machinery and associated auxiliaries: .1 marine diesel engine .2 marine steam turbine .3 marine gas turbine .4 marine steam boiler	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate .4 approved laboratory equipment training	Explanation and understanding of design features and operating mechanisms are appropriate

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Plan and schedule operations Note: the Administration may omit knowledge requirements for types of propulsion machinery other than machinery installations for which the certificate to be awarded is to be valid	*Theoretical knowledge* Thermodynamics and heat transmission Mechanics and hydromechanics Propulsive characteristics of diesel engines, steam and gas turbines, including speed, output and fuel consumption Heat cycle, thermal efficiency and heat balance of the following: .1 marine diesel engine .2 marine steam turbine .3 marine gas turbine .4 marine steam boiler Refrigerators and refrigeration cycle Physical and chemical properties of fuels and lubricants Technology of materials Naval architecture and vessel construction, including damage control	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate .4 approved laboratory equipment training	The planning and preparation of operations is suited to the design parameters of the power installation and to the requirements of the voyage
Operation, surveillance, performance assessment and maintaining	*Practical knowledge* Start up and shut down main propulsion and auxiliary	Examination and assessment of evidence obtained from one or more of the following:	The methods of preparing for the start-up and of making available fuels, lubricants,

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
safety of propulsion plant and auxiliary machinery	machinery, including associated systems Operating limits of propulsion plant The efficient operation, surveillance, performance assessment and maintaining safety of propulsion plant and auxiliary machinery Functions and mechanism of automatic control for main engine Functions and mechanism of automatic control for auxiliary machinery including but not limited to: .1 generator distribution systems .2 steam boilers .3 oil purifier .4 refrigeration system .5 pumping and piping systems .6 steering gear system .7 catch-handling equipment and deck machinery	.1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate .4 approved laboratory equipment training	cooling water and air are the most appropriate Checks of pressures, temperatures and revolutions during the start-up and warm-up period are in accordance with technical specifications and agreed work plans Surveillance of main propulsion plant and auxiliary systems is sufficient to maintain safe operating conditions The methods of preparing the shutdown and of supervising the cooling down of the engine are the most appropriate The methods of measuring the load capacity of the engines are in accordance with technical specifications Performance is checked against bridge orders Performance levels are in accordance with technical specifications
Manage fuel, lubrication and ballast operations	Operation and maintenance of machinery, including	Examination and assessment of evidence obtained from one or more of the following:	Fuel and ballast operations meet operational requirements and

Column 1 **Competence**	Column 2 **Knowledge, understanding and proficiency**	Column 3 **Methods for demonstrating competence**	Column 4 **Criteria for evaluating competence**
	pumps and piping systems	.1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate	are carried out so as to prevent pollution of the marine environment
Manage operation of electrical and electronic control equipment	*Theoretical knowledge* Marine electrotechnology, electronics power electronics, automatic control engineering and safety devices Design features and system configurations of automatic control equipment and safety devices for the following: .1 main engine .2 generator and distribution system .3 steam boiler Design features and system configurations of operational control equipment for electrical motors Features of hydraulic and pneumatic control equipment	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate .4 approved laboratory equipment training	Operation of equipment and system is in accordance with operating manuals Performance levels are in accordance with technical specifications
Manage troubleshooting, restoration of electrical and electronic control	*Practical knowledge* Troubleshooting of electrical and electronic control equipment	Examination and assessment of evidence obtained from one or more of the following:	Maintenance activities are correctly planned in accordance with technical, legislative, safety and

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
equipment to operating condition	Function test of electrical, electronic control equipment and safety devices Troubleshooting of monitoring systems Software version control	.1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate .4 approved laboratory equipment training	procedural specifications Inspection, testing and troubleshooting of equipment are appropriate
Manage safe and effective maintenance and repair procedures	*Theoretical knowledge* Marine engineering practice *Practical knowledge* Manage safe and effective maintenance and repair procedures Planning maintenance, including statutory and class verifications Planning repairs	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved workshop training	Maintenance activities are correctly planned and carried out in accordance with technical, legislative, safety and procedural specifications Appropriate plans, specifications, materials and equipment are available for maintenance and repair Action taken leads to the restoration of plant by the most suitable method
Detect and identify the cause of machinery malfunctions and correct faults	*Practical knowledge* Detection of machinery malfunction, location of faults and action to prevent damage Inspection and adjustment of equipment Non-destructive examination	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate	The methods of comparing actual operating conditions are in accordance with recommended practices and procedures Actions and decisions are in accordance with recommended operating specifications and limitations

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
		.4 approved laboratory equipment training	
Ensure safe working practices	*Practical knowledge* Safe working practices	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved laboratory equipment training	Working practices are in accordance with legislative requirements, codes of practice, permits to work and environmental concerns
Control trim and stability	Understanding of fundamental principles of vessel construction and the theories and factors affecting trim and stability and measures necessary to preserve trim and stability Knowledge of the effect on trim and stability of a vessel in the event of damage to, and consequent flooding of a compartment and countermeasures to be taken Knowledge of IMO recommendations concerning vessel stability	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate	Stability and loading conditions are maintained within safety limits at all times
Maintain safety of the vessel and crew and the operational condition of life-saving and fire-fighting appliances	*Fire prevention and fire-fighting appliances* Organization of fire drills Classes and chemistry of fire	Assessment of evidence obtained from approved training	Procedures for monitoring fire detection and safety systems ensure that all alarms are detected promptly and acted upon in accordance with

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	Fire-fighting systems Understanding of action to be taken in the event of fire, including fires involving oil systems Knowledge of provisions concerning fire-fighting equipment Knowledge of fire prevention measures *Life-saving* Thorough knowledge of life-saving appliances provided on fishing vessels. Ability to organize abandon ship drills and knowledge of the operation of survival craft and rescue boats, their launching appliances and arrangements, and their equipment, including radio life-saving appliances, EPIRBs, SARTs, immersion suits and thermal protective aids Actions to be taken to protect and safeguard all persons on board in emergencies Actions to limit damage and salve the vessel following a fire, explosion, collision or grounding		established emergency procedures

Column 1 **Competence**	Column 2 **Knowledge, understanding and proficiency**	Column 3 **Methods for demonstrating competence**	Column 4 **Criteria for evaluating competence**
	Maintenance Maintenance of operational condition of life-saving, fire-fighting and other safety systems		
Develop emergency and damage control plans and handle emergency situations	Vessel construction, including damage control Methods and aids for fire prevention, detection and extinction Functions and use of life-saving appliances	Examination and assessment of evidence obtained from approved in-service training and experience	Emergency procedures are in accordance with the established plans for emergency situations

Section A-II/5-1-2
Mandatory minimum requirements for certification of chief engineer officers and second engineer officers on fishing vessels powered by main propulsion machinery of between 750 kW and 3,000 kW propulsion power

Standard of competence

1 Every candidate for certification as chief engineer officer and second engineer officer of seagoing fishing vessels powered by main propulsion machinery of between 750 kW and 3,000 kW power shall be required to demonstrate ability to undertake, at the management level, the tasks, duties and responsibilities listed in column 1 of table A-II/5-1.

2 The minimum knowledge, understanding and proficiency required for certification is listed in column 2 of table A-II/5-1. This incorporates, expands and extends in depth the subjects listed in column 2 of table A-II/5-2 for officers in charge of an engineering watch.

3 Bearing in mind that a second engineer officer shall be in a position to assume the responsibilities of the chief engineer officer at any time, assessment in these subjects shall be designed to test the candidate's ability to assimilate all available information that affects the safe operation of the vessel’s machinery and the protection of the marine environment.

4 The level of knowledge of the subjects listed in column 2 of table A-II/5-1 may be lowered but shall be sufficient to enable the candidate to serve in the capacity of chief engineer officer or second engineer officer at the range of propulsion power specified in this section.

5 Training and experience to achieve the necessary level of theoretical knowledge, understanding and proficiency shall take into account the relevant requirements of this part.

6 The Administration may omit knowledge requirements for types of propulsion machinery other than those machinery installations for which the certificate to be awarded shall be valid. A certificate awarded on such a basis shall not be valid for any category of machinery installation which has been omitted until the engineer officer proves to be competent in these knowledge requirements. Any such limitation shall be stated on the certificate and in the endorsement.

7 Every candidate for certification shall be required to provide evidence of having achieved the required standard of competence in accordance with the methods for demonstrating competence and the criteria for evaluating competence tabulated in columns 3 and 4 of table A-II/5-1.

Section A-II/5-2
Mandatory minimum requirements for certification of officers in charge of an engineering watch in a manned engine-room or designated duty engineers in a periodically unmanned engine-room of fishing vessels powered by main propulsion machinery of 750 kW propulsion power or more

Standard of competence

1 Every candidate for certification as officer in charge of an engineering watch in a manned engine-room or designated duty engineers in a periodically unmanned engine-room shall be required to demonstrate abilities to undertake, the tasks, duties and responsibilities listed in column 1 of table A-II/5-2.

2 The minimum knowledge, understanding and proficiency required for certification is listed in column 2 of table A-II/5-2.

3 The level of knowledge of the subjects listed in column 2 of table A-II/5-2 shall be sufficient to enable the candidate to serve in the capacity of engineer officer.

4 The Administration may omit knowledge requirements for types of propulsion machinery other than those machinery installations for which the certificate to be awarded shall be valid. A certificate awarded on such a basis shall not be valid for any category of machinery installation which has been omitted until the engineer officer proves to be competent in these knowledge requirements. Any such limitation shall be stated on the certificate and in the endorsement.

5 Every candidate for certification shall be required to provide evidence of having achieved the required standard of competence in accordance with the methods for demonstrating competence and the criteria for evaluating competence tabulated in columns 3 and 4 of table A-II/5-2.

Onboard training

6 Every candidate for certification as officer in charge of an engineering watch of a fishing vessel powered by main propulsion machinery of 750 kW or more whose seagoing service, in accordance with paragraphs 2.2 and 2.3 of regulation II/5-2, forms part of a training programme approved as meeting the requirements of this section shall follow an approved programme of onboard training which:

.1 ensures that, during the required period of seagoing service, the candidate receives systematic practical training and experience in the tasks, duties and responsibilities of an officer in charge of an engine-room watch;

.2 is closely supervised and monitored by a qualified and certificated engineer officer, or another appropriately experienced officer on board the vessels in which the approved seagoing service is performed; and

.3 is adequately documented in a training record book.

Table A-II/5-2

Specification of minimum standard of competence for officers in charge of an engineering watch in a manned engine-room or designated duty engineers in a periodically unmanned engine-room

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Function: Marine Engineering at the operational level			
Maintain a safe engineering watch	Thorough knowledge of principles to be observed in keeping an engineering watch, including: .1 duties associated with taking over and accepting a watch .2 routine duties undertaken during a watch .3 maintenance of the machinery space logs and the significance of the readings taken .4 duties associated with handing over a watch Safety and emergency procedures; changeover of remote/automatic to local control of all systems Safety precautions to be observed during a watch and immediate actions to be taken in the event of fire or accident, with particular reference to oil systems	Assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate .4 approved laboratory equipment training	The conduct, handover and relief of the watch conforms with accepted principles and procedures The frequency and extent of monitoring of engineering equipment and systems conforms to manufacturers' recommendations and accepted principles and procedures, including principles to be observed in keeping an engineering watch A proper record is maintained of the movements and activities relating to the vessel's engineering systems

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Use English in written and oral form	Adequate knowledge of the English language to enable the officer to use engineering publications and to perform engineering duties	Examination and assessment of evidence obtained from practical instruction	English language publications relevant to engineering duties are correctly interpreted Communications are clear and understood
Use internal communication systems	Operation of all internal communication systems on board	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate .4 approved laboratory equipment training	Transmission and reception of messages are consistently successful Communication records are complete, accurate and comply with statutory requirements
Operate main and auxiliary machinery and associated control systems Note: the Administration may omit knowledge requirements for types of propulsion machinery other than machinery installations for which the certificate to be awarded is to be valid	Basic construction and operation principles of machinery systems, including: .1 marine diesel engine .2 marine steam turbine .3 marine gas turbine .4 marine boiler .5 shafting installations, including propeller .6 other auxiliaries, including various pumps, air	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved laboratory equipment training	Construction and operating mechanisms can be understood and explained with drawings/instructions

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	compressor, purifier, freshwater generator, heat exchanger, refrigeration, air conditioning and ventilation systems .7 steering gear .8 automatic control systems .9 fluid flow and characteristics of lubricating oil, fuel oil and cooling systems .10 deck machinery Safety and emergency procedures for operation of propulsion plant machinery, including control systems Preparation, operation, fault detection and necessary measures to prevent damage for the following machinery items and control systems: .1 main engine and associated auxiliaries .2 steam boiler and associated auxiliaries and steam systems .3 auxiliary prime movers and associated systems .4 other auxiliaries, including refrigeration, air conditioning and ventilation systems	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate .4 approved laboratory equipment training	Operations are planned and carried out in accordance with operating manuals, established rules and procedures to ensure safety of operations and avoid pollution of the marine environment Deviations from the norm are promptly identified The output of plant and engineering systems consistently meets requirements, including bridge orders relating to changes in speed and direction

Column 1 Competence	Column 2 Knowledge, understanding and proficiency	Column 3 Methods for demonstrating competence	Column 4 Criteria for evaluating competence
			The causes of machinery malfunctions are promptly identified, and actions are designed to ensure the overall safety of the vessel and the plant, having regard to the prevailing circumstances and conditions
Operate fuel, lubrication, ballast and other pumping systems and associated control systems	Operational characteristics of pumps and piping systems, including control systems Operation of pumping systems: .1 routine pumping operations .2 operation of bilge and ballast pumping systems Oily-water separators (or similar equipment) requirements and operation	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate .4 approved laboratory equipment training	Operations are planned and carried out in accordance with operating manuals, established rules and procedures to ensure safety of operations and avoid pollution of the marine environment Deviations from the norm are promptly identified and appropriate action is taken
Function: Electrical, electronic and control engineering at the operational level			
Operate electrical, electronic and control systems	Basic configuration and operation principles of the following electrical, electronic and control equipment: .1 electrical equipment: .1 generator and distribution systems	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience	Operations are planned and carried out in accordance with operating manuals, established rules and procedures to ensure safety of operations Electrical, electronic and control systems can be understood and explained with drawings/instructions

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	.2 preparing, starting, paralleling and changing over generators .3 electrical motors including starting methodologies .4 high-voltage installations .5 sequential control circuits and associated system devices .2 electronic equipment: .1 characteristics of basic electronic circuit elements .2 flow chart for automatic and control systems .3 functions, characteristics and features of control systems for machinery items, including main propulsion plant operation control and steam boiler automatic controls .3 control systems: .1 various automatic control methodologies and characteristics .2 Proportional-Integral-Derivative (PID) control	.3 approved simulator training, where appropriate .4 approved laboratory equipment training	

Column 1 **Competence**	Column 2 **Knowledge, understanding and proficiency**	Column 3 **Methods for demonstrating competence**	Column 4 **Criteria for evaluating competence**
	characteristics and associated system devices for process control		
Maintenance and repair of electrical and electronic equipment	Safety requirements for working on shipboard electrical systems, including the safe isolation of electrical equipment required before personnel are permitted to work on such equipment Maintenance and repair of electrical system equipment, switchboards, electric motors, generator and DC electrical systems and equipment Detection of electric malfunction, location of faults and measures to prevent damage Construction and operation of electrical testing and measuring equipment Function and performance tests of the following equipment and their configuration: .1 monitoring systems .2 automatic control devices .3 protective devices The interpretation of electrical and simple electronic diagrams	Examination and assessment of evidence obtained from one or more of the following: .1 approved workshop skills training .2 approved practical experience and tests .3 approved in-service experience .4 approved training vessel experience	Safety measures for working are appropriate Selection and use of hand tools, measuring instruments and testing equipment are appropriate and interpretation of results is accurate Dismantling, inspecting, repairing and reassembling equipment are in accordance with manuals and good practice Reassembling and performance testing is in accordance with manuals and good practice

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Function: Maintenance and repair at the operational level			
Appropriate use of hand tools, machine tools and measuring instruments for fabrication and repair on board	Characteristics and limitations of materials used in construction and repair of vessels and equipment Characteristics and limitations of processes used for fabrication and repair Properties and parameters considered in the fabrication and repair of systems and components Methods for carrying out safe emergency/temporary repairs Safety measures to be taken to ensure a safe working environment and for using hand tools, machine tools and measuring instruments Use of hand tools, machine tools and measuring instruments Use of various types of sealants and packings	Assessment of evidence obtained from one or more of the following: .1 approved workshop skills training .2 approved practical experience and tests .3 approved in-service experience .4 approved training vessel experience	Identification of important parameters for fabrication of typical vessel-related components is appropriate Selection of materials is appropriate Fabrication is to designated tolerances Use of equipment and hand tools, machine tools and measuring instruments is appropriate and safe

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Maintenance and repair of shipboard machinery and equipment	Safety measures to be taken for repair and maintenance, including the safe isolation of shipboard machinery and equipment required before personnel are permitted to work on such machinery or equipment Appropriate basic mechanical knowledge and skills Maintenance and repair, such as dismantling, adjustment and reassembling of machinery and equipment The use of appropriate specialized tools and measuring instruments Design characteristics and selection of materials in construction of equipment Interpretation of machinery drawings and handbooks Interpretation of piping, hydraulic and pneumatic diagrams	Examination and assessment of evidence obtained from one or more of the following: .1 approved workshop skills training .2 approved practical experience and tests .3 approved in-service experience .4 approved training vessel experience	Safety procedures followed are appropriate Selection of tools and spare gear is appropriate Dismantling, inspecting, repairing and reassembling equipment is in accordance with manuals and good practice Recommissioning and performance testing is in accordance with manuals and good practice Selection of materials and parts is appropriate

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Function: Controlling the operation of the vessel and care for persons on board at the operational level			
Ensure compliance with pollution prevention requirements	*Prevention of pollution of the marine environment* Knowledge of the impacts of fishing on the environment Knowledge of the precautions to be taken to prevent pollution of the marine environment Anti-pollution procedures and all associated equipment Understanding the importance of proactive measures to protect the marine environment	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved training	Procedures for monitoring shipboard operations and ensuring compliance with MARPOL requirements are fully observed Actions to ensure that a positive environmental reputation is maintained
Maintain seaworthiness of the vessel	*Vessel stability* Working knowledge and application of stability, trim and stress tables, diagrams and stress-calculating equipment Understanding of the fundamentals of watertight integrity Understanding of fundamental actions to be taken in the event of partial loss of intact buoyancy *Vessel construction* General knowledge of the principal structural members of a vessel	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training vessel experience .3 approved simulator training, where appropriate .4 approved laboratory equipment training	The stability conditions comply with IMO intact stability criteria under all conditions of loading Actions to ensure and maintain the watertight integrity of the vessel are in accordance with accepted practice

Column 1 **Competence**	Column 2 **Knowledge, understanding and proficiency**	Column 3 **Methods for demonstrating competence**	Column 4 **Criteria for evaluating competence**
	and the proper names for the various parts		
Prevent, control and fight fires on board	*Fire prevention and fire-fighting appliances* Ability to organize fire drills Knowledge of classes and chemistry of fire Knowledge of fire-fighting systems Knowledge of action to be taken in the event of fire Knowledge of fire prevention measures and use of fire-fighting appliances	Assessment of evidence obtained from approved fire-fighting training and experience	The type and scale of the problem is promptly identified and initial actions conform with the emergency procedure and contingency plans for the vessel Evacuation, emergency shutdown and isolation procedures are appropriate to the nature of the emergency and are implemented promptly The order of priority, and the levels and timescales of making reports and informing personnel on board, are relevant to the nature of the emergency and reflect the urgency of the problem
Operate life-saving appliances	*Life-saving* Ability to direct abandon ship drills and knowledge of the operation of life-saving appliances and their equipment, including the two-way radio-telephone apparatus Survival at sea techniques including participation in an approved survival at sea course	Assessment of evidence obtained from examination or approved training	Actions in responding to abandon ship and survival situations are appropriate to the prevailing circumstances and conditions and comply with accepted safety practices and standards

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Medical aid	*Medical aid* Knowledge of first aid procedures Practical application of medical guides and advice by radio	Assessment of evidence obtained from approved training	The identification of probable cause, nature and extent of injuries or conditions is prompt and treatment minimizes immediate threat to life
Monitor compliance with legislative requirements	Basic working knowledge of the relevant IMO conventions and other relevant international instruments concerning safety of life at sea and protection of the marine environment Basic working knowledge of relevant international instruments concerning the responsible conservation, fishing management, responsible fisheries and development of living aquatic resources as well as key international instruments related to the fight against illegal, unreported and unregulated (IUU) fishing Understanding of the requirements which crews shall comply with Understanding the importance of sustainable development of the fishing industry	Assessment of evidence obtained from examination or approved training	Legislative requirements relating to safety of life at sea and protection of the marine environment are correctly identified

Section A-II/6
Mandatory minimum requirements for certification of GMDSS radio operators on board fishing vessels

Application

(No provisions)

Standard of competence

1 The minimum knowledge, understanding and proficiency required for certification of GMDSS radio operators shall be sufficient for radio operators to carry out their radio duties. The knowledge required for obtaining each type of certificate defined in the Radio Regulations shall be in accordance with those regulations. In addition, every candidate for certification of competency shall be required to demonstrate abilities to undertake the tasks, duties and responsibilities listed in column 1 of table A-II/6.

2 The knowledge, understanding and proficiency for endorsement under the Convention of certificates issued under the provisions of the Radio Regulations are listed in column 2 of table A-II/6.

3 The level of knowledge of the subjects listed in column 2 of table A-II/6 shall be sufficient for the candidate to carry out his or her duties.

4 Every candidate shall provide evidence of having achieved the required standard of competence through:

.1 demonstration of competence to perform the tasks and duties and to assume responsibilities listed in column 1 of table A-II/6, in accordance with the methods for demonstrating competence and the criteria for evaluating competence tabulated in columns 3 and 4 of that table; and

.2 examination or continuous assessment as part of an approved course of training based on the material set out in column 2 of table A-II/6.

Table A-II/6

Specification of minimum standard of competence for GMDSS radio operators

Function: Radiocommunication at the operational level

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Transmit and receive information using GMDSS subsystems and equipment and fulfilling the functional requirements of GMDSS	In addition to the requirements of the Radio Regulations, a knowledge of: .1 search and rescue radiocommunications, including procedures in the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual .2 the means to prevent the transmission of false distress alerts and the procedures to mitigate the effects of such alerts .3 ship reporting systems .4 radio medical services .5 use of the International Code of Signals and the IMO Standard Marine Communication Phrases .6 the English language, both written and spoken, for the communication of information relevant to safety of life at sea Note: this requirement may be reduced in the case of the Restricted	Examination or assessment of evidence obtained from practical demonstration of operational procedures using: .1 approved equipment .2 GMDSS communication simulator, where appropriate .3 radiocommunications laboratory equipment	Transmission and reception of communications complies with international regulations and procedures, and are carried out efficiently and effectively English language messages relevant to the safety of the vessel and persons on board, and protection of the marine environment are correctly handled

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	Radio Operator's Certificate		
Provide radio services in emergencies	The provision of radio services in emergencies such as: .1 abandon ship .2 fire on board vessel .3 partial or full breakdown of radio installations Preventive measures for the safety of vessel and personnel in connection with hazards related to radio equipment, including electrical and non-ionizing radiation hazards	Examination or assessment of evidence obtained from practical demonstration of operational procedures using: .1 approved equipment .2 GMDSS communication simulator, where appropriate .3 radiocommunication laboratory equipment	Response is carried out efficiently and effectively

Section A-II/7
Revalidation of certificates for skippers and officers

Professional competence

1 Continued professional competence as required under regulation II/7, shall be established by:

.1 approved seagoing service, performing functions appropriate to the certificate held, for a period of at least:

.1 twelve months in total during the preceding five years; or

.2 three months in total during the preceding six months immediately prior to revalidating; or

.2 having performed functions considered to be equivalent to the seagoing service required in paragraph 1.1; or

.3 passing an approved test; or

.4 successfully completing an approved training course or courses; or

.5 having completed approved seagoing service, performing functions appropriate to the certificate held, for a period of not less than three months in a supernumerary capacity, or in a lower officer rank than that for which the certificate held is valid immediately prior to taking up the rank for which it is valid.

2 The refresher and updating courses required by regulation II/7 shall be approved and include changes in relevant national and international regulations concerning the safety of life at sea and the protection of the marine environment and take account of any updating of the standard of competence concerned.

Section A-II/8
Revalidation of certificates for GMDSS radio operators

Professional competence

1 Continued professional competence, as required under regulation II/8, shall be established by:

.1 approved seagoing service, performing functions appropriate to the certificate held for a period of at least:

.1 twelve months in total during the preceding five years; or

.2 three months in total during the preceding six months immediately prior to revalidating; or

.2 having performed functions considered to be equivalent to the seagoing service required in paragraph 1.1; or

.3 passing an approved test; or

.4 successfully completing an approved training course or courses; or

.5 having completed approved seagoing service performing functions appropriate to the certificate held for a period of not less than three months in a supernumerary capacity, or in a lower officer rank than that for which the certificate held is valid immediately prior to taking up the rank for which it is valid.

2 The refresher and updating courses required by regulation II/8 shall be approved and include changes in relevant national and international regulations concerning the safety of life at sea and the protection of the marine environment and take account of any updating of the standard of competence concerned.

Chapter III
Standards regarding basic training and onboard safety familiarization for all fishing vessel personnel

Section A-III/1
Mandatory minimum requirements for basic training and onboard safety familiarization for all fishing vessel personnel

Basic training[3]

1 Fishing vessel personnel shall, before being assigned to any shipboard duties:

.1 receive appropriate approved basic training or instruction in:

.1 personal survival techniques as set out in table A-III/1-1;

.2 fire prevention and fire fighting as set out in table A-III/1-2;

.3 elementary first aid as set out in table A-III/1-3; and

.4 personal safety and social responsibilities as set out in table A-III/1-4;

.2 be required to provide evidence of having achieved the required standard of competence to undertake the tasks, duties and responsibilities listed in column 1 of tables A-III/1-1, A-III/1-2, A-III/1-3 and A-III/1-4 through:

.1 demonstration of competence, in accordance with the methods and the criteria for evaluating competence tabulated in columns 3 and 4 of those tables; and

.2 examination or continuous assessment as part of an approved training programme in the subjects listed in column 2 of those tables.

2 Fishing vessel personnel qualified in accordance with paragraph 1 in basic training shall be required, every five years, to provide evidence of having maintained the required standard of competence, to undertake the tasks, duties and responsibilities listed in column 1 of tables A-III/1-1 and A-III/1-2.

3 Parties may accept onboard training and experience for maintaining the required standard of competence in the following areas:

.1 personal survival techniques as set out in table A-III/1-1:

.1 don a lifejacket;

.2 board a survival craft from the vessel, while wearing a lifejacket;

.3 take initial actions on boarding a lifeboat to enhance chance of survival;

[3] The relevant IMO model course(s) may assist in the preparation of training material.

.4 stream a lifeboat drogue or sea anchor;

.5 operate survival craft equipment; and

.6 operate locating devices, including radio equipment;

.2 fire prevention and fire fighting as set out in table A-III/1-2:

.1 use self-contained breathing apparatus; and

.2 effect a rescue in a smoke-filled space, using an approved smoke-generating device aboard, while wearing a breathing apparatus.

Onboard safety familiarization training

4 Before being assigned to shipboard duties, all persons employed or engaged on a seagoing fishing vessel, shall receive onboard safety familiarization training or receive sufficient information and instruction, taking into account guidance given in part B, to be able to:

.1 communicate with other persons on board on elementary safety matters and understand safety information symbols, signs and alarm signals;

.2 know what to do if:

.1 a person falls overboard;

.2 fire or smoke is detected; or

.3 the fire or abandon ship alarm is sounded;

.3 identify muster and embarkation stations and emergency escape routes;

.4 locate and don lifejackets;

.5 raise the alarm and have basic knowledge of the use of portable fire extinguishers;

.6 take immediate action upon encountering an accident or other medical emergency before seeking further medical assistance on board; and

.7 close and open the fire, weathertight and watertight doors fitted in the particular fishing vessel other than those for hull opening.

Exemptions

5 The Administration may, in respect of fishing vessels of less than 24 metres in length and/or operating solely in its limited waters, if it considers that a fishing vessel'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 to that extent the fishing vessel personnel on such a fishing vessel or class of fishing vessel from some of the requirements, bearing in mind the safety of people on board, the fishing vessel and property and the protection of the marine environment.

Table A-III/1-1

Specification of minimum standard of competence in personal survival techniques

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Survive at sea in the event of ship abandonment	Types of emergency situations which may occur, such as collision, fire, foundering Types of life-saving appliances normally carried on board fishing vessels Equipment in survival craft Location of personal life-saving appliances Principles concerning survival, including: .1 value of training and drills .2 personal protective clothing and equipment .3 need to be ready for any emergency .4 actions to be taken when called to survival craft stations .5 actions to be taken when required to abandon ship .6 actions to be taken when in the water .7 actions to be taken when aboard a survival craft	Assessment of evidence obtained from approved instruction or during attendance at an approved course or approved in-service experience and examination, including practical demonstration of competence to: .1 don a lifejacket .2 don and use an immersion suit .3 safely jump from a height into the water .4 right an inverted liferaft while wearing a lifejacket .5 swim while wearing a lifejacket .6 keep afloat without a lifejacket .7 board a survival craft from the vessel and water while wearing a lifejacket .8 take initial actions on boarding survival craft to enhance chance of survival .9 stream a drogue or sea anchor	Action taken on identifying muster signals is appropriate to the indicated emergency and complies with established procedures The timing and sequence of individual actions are appropriate to the prevailing circumstance and conditions and minimize potential dangers and threats to survival Method of boarding survival craft is appropriate and avoids dangers to other survivors Initial actions after leaving the vessel and procedures and actions in water minimize threats to survival Description of how to assist others to board a survival craft Initial action after identifying a man overboard situation

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	.8 assistance to others to board a survival craft .9 main dangers to survivors Basic knowledge of man overboard procedures and for rescuing persons from the sea	.10 operate survival craft equipment .11 operate locating devices, including radio equipment	

Table A-III/1-2

Specification of minimum standard of competence in fire prevention and fire fighting

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Minimize the risk of fire and maintain a state of readiness to respond to emergency situations involving fire	Shipboard fire-fighting organization Location of fire-fighting appliances and emergency escape routes The elements of fire and explosion (the fire triangle) Types and sources of ignition Flammable materials, fire hazards and spread of fire including but not limited to: .1 radiation .2 convection .3 conduction with emphasis on dangers associated with freezing equipment The need for constant vigilance Actions to be taken on board vessel Fire and smoke detection and automatic alarm systems Classification of fire and applicable extinguishing agents	Assessment of evidence obtained from approved instruction or attendance at an approved course	Initial actions on becoming aware of an emergency conform with accepted practices and procedures Action taken on identifying muster signals is appropriate to the indicated emergency and complies with established procedures

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Fight and extinguish fires	Fire-fighting equipment and its location on board Instruction in: .1 fixed installations .2 fire-fighter's outfits .3 personal equipment .4 fire-fighting appliances and equipment .5 fire-fighting methods .6 fire-fighting agents .7 fire-fighting procedures .8 use of breathing apparatus for fighting fires and effecting rescues .9 the effect of the use of the wrong agent	Assessment of evidence obtained from approved instruction or during attendance at an approved course, including practical demonstration in spaces which provide truly realistic training conditions (e.g. simulated shipboard conditions) and, whenever possible and practical, in darkness, of the ability to: .1 use various types of portable fire extinguishers .2 use self-contained breathing apparatus .3 extinguish smaller fires, e.g. electrical fires, oil fires, propane fires .4 extinguish extensive fires with water, using jet and spray nozzles .5 extinguish fires with foam, powder or any other suitable chemical agent .6 fight fire in smoke-filled enclosed spaces wearing self-contained breathing apparatus .7 extinguish fire with water fog or any other suitable fire-fighting agent in an	Clothing and equipment are appropriate to the nature of the fire-fighting operations The timing and sequence of individual actions are appropriate to the prevailing circumstances and conditions Extinguishment of fire is achieved using appropriate procedures, techniques and fire-fighting agents Breathing apparatus procedures and techniques comply with accepted practices and procedures Explanation of the effect of using the wrong extinguishing agent is appropriate

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
		accommodation room or simulated engine-room with fire and heavy smoke .8 extinguish oil fire with fog applicator and spray nozzles, dry chemical powder or foam applicators .9 effect a rescue in a smoke-filled space wearing breathing apparatus	

Table A-III/1-3

Specification of minimum standard of competence in elementary first aid

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Take immediate action upon encountering as accident or other medical emergency	Assessment of needs of casualties and threats to own safety Appreciation of body structure and functions Understanding of immediate measures to be taken in cases of emergency, including the ability to: .1 position casualty .2 apply resuscitation techniques .3 control bleeding .4 apply appropriate measures of basic shock management .5 apply appropriate measures in event of burns and scalds, including accidents caused by electric current .6 rescue and transport a casualty .7 improvise bandages and use materials in the emergency kit	Assessment of evidence obtained from approved instruction or during attendance at an approved course	The manner and timing of raising the alarm is appropriate to the circumstances of the accident or medical emergency The identification of probable cause, nature and extent of injuries is prompt and complete, and the priority and sequence of actions is proportional to any potential threat to life Risk of further harm to self and casualty is minimized at all times

Table A-III/1-4

Specification of minimum standard of competence in personal safety and social responsibilities

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Comply with emergency procedures	Types of emergency which may occur, such as collision, fire, foundering Knowledge of shipboard contingency plans for response to emergencies Emergency signals and specific duties allocated to crew members in the muster list; muster stations; correct use of personal safety equipment Identification of, and action to take on discovering, potential emergencies on board fishing vessels, including fire, collision, foundering and ingress of water into the fishing vessel Action to take on hearing emergency alarm signals Value of training and drills Knowledge of escape routes and internal communication and alarm systems	Assessment of evidence obtained from approved instruction or during attendance at an approved course	Initial action on becoming aware of an emergency conforms to established emergency response procedures Information given on raising alarm is prompt, accurate, complete and clear

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Take precautions to prevent pollution of the marine environment	Basic knowledge of the impact of fishing on the marine environment and the effects of operational or accidental pollution on it Basic knowledge of environmental protection procedures Basic knowledge of marine ecology and understanding of the complexity and diversity of the marine environment Basic knowledge of the responsibilities of fishing vessel personnel under the MARPOL Convention with regard to pollution response equipment Recognition and measures to be taken to prevent pollution by Abandoned, Lost or otherwise Discarded Fishing Gear (ALDFG) and fish packing material Basic knowledge of correct disposal of fishing gear and fish packing material Knowledge of the impacts of plastic waste on the marine environment Understanding the scale of the marine plastic litter problem	Assessment of evidence obtained from approved instruction or during attendance at an approved course	Organizational procedures designed to safeguard the marine environment are observed at all times Legislative requirements relating to the protection of the marine environment are correctly identified

Column 1 Competence	Column 2 Knowledge, understanding and proficiency	Column 3 Methods for demonstrating competence	Column 4 Criteria for evaluating competence
	and the way the maritime sector contributes to the problem, including the issue of ALDFG		
Observe safe working practices	Importance of adhering to safe working practices at all times Safety and protective devices available to protect against potential hazards aboard vessel Precautions to be taken prior to entering enclosed spaces Familiarization with international measures concerning accident prevention and occupational health[4] Understanding of the legal requirements that control safety in the fishing industry Understanding of health and safety hazards Awareness of risks on board fishing vessel specifically during fishing operation Basic knowledge of fishing equipment on board fishing vessels and its safe use Understand what is a:	Assessment of evidence obtained from approved instruction or during attendance at an approved course	Safe working practices are observed, and appropriate safety and protective equipment is correctly used at all times Correct identification of "hazards" likely to be found on a fishing vessel and methods to remove or reduce "risk"

[4] The ILO Code of Practice on accident prevention on board ship at sea and in port may be of assistance in the preparation of courses.

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	.1 hazard .2 risk Basic knowledge of a risk assessment process and methods to reduce risk		
Contribute to effective communications on board vessel	Understand the principles of, and barriers to, effective communication between individuals and teams within the vessel Ability to establish and maintain effective communications	Assessment of evidence obtained from approved instruction or during attendance at an approved course	Communications are clear and effective at all times
Contribute to effective human relationships on board vessel	Importance of maintaining good human and working relationships aboard vessel Basic teamworking principles and practice, including conflict resolution Social responsibilities; conditions for employment or engagement on board; and individual rights and obligations, and applicable legislation Understanding the dangers of drug and alcohol abuse	Assessment of evidence obtained from approved instruction or during attendance at an approved course	Expected standards of work and behaviour are observed at all times
Understand and take necessary actions to control fatigue	Importance of obtaining the necessary rest Effects of sleep, schedules and the circadian rhythm on fatigue	Assessment of evidence obtained from approved instruction or during attendance at an approved course	Fatigue management practices are observed and appropriate actions are used at all times

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	Effects of physical stressors on fishing vessel personnel Effects of environmental stressors in and outside the vessel and their impact on fishing vessel personnel Effects of schedule changes on fishing vessel personnel fatigue		

Chapter IV
Standards regarding watchkeeping

Section A-IV/1
Fitness for duty

(No provisions)

Section A-IV/2
Basic watchkeeping principles to be observed on board fishing vessels

Part 1 Navigational watch

Part 1-1 En route to or from fishing grounds

Arrangements of the navigational watch

1 The composition of the watch shall at all times be adequate and appropriate to the prevailing circumstances and conditions, and shall take into account the need for maintaining a proper lookout.

2 When deciding the composition of the watch the following factors, inter alia, shall be taken into account:

.1 at no time shall the wheelhouse be left unattended;

.2 weather conditions, visibility and whether there is daylight or darkness;

.3 proximity of navigational hazards which may make it necessary for the officer in charge of the watch to carry out additional navigational duties;

.4 use and operational condition of navigational aids such as radar or electronic position-indicating devices and of any other equipment affecting the safe navigation of the vessel;

.5 whether the vessel is fitted with automatic steering; and

.6 any unusual demands on the navigational watch that may arise as a result of special operational circumstances.

Navigation

3 The intended voyage shall, as far as practicable, be planned in advance taking into consideration all pertinent information, and any course laid down shall be checked before the voyage commences.

4 During the watch the course steered, position and speed shall be checked at sufficiently frequent intervals, using any available navigational aids necessary, to ensure that the vessel follows the planned course.

5 The officer in charge of the watch shall have full knowledge of the location and operation of all safety and navigational equipment on board the vessel, and shall be aware and take account of the operating limitations of such equipment.

6 The officer in charge of a navigational watch shall not be assigned or undertake any duties which would interfere with the safe navigation of the vessel.

Navigational equipment

7 The officers in charge of the watch shall make the most effective use of all navigational equipment at their disposal.

8 When using radar the officer in charge of the watch shall bear in mind the necessity to comply at all times with the provisions on the use of radar contained in the applicable regulations for preventing collisions at sea.

9 In cases of need the officer of the watch shall not hesitate to use the helm, engines, and sound and light signalling apparatus.

Navigational duties and responsibilities

10 The officer in charge of the watch shall:

.1 keep watch in the wheelhouse;

.2 in no circumstances leave the wheelhouse until properly relieved;

.3 continue to be responsible for the safe navigation of the vessel despite the presence of the skipper in the wheelhouse until informed specifically that the skipper has assumed that responsibility and this is mutually understood;

.4 notify the skipper when in any doubt as to what action to take in the interest of safety; and

.5 not hand over the watch to a relieving officer if there is reason to believe that the latter is not capable of carrying out the watchkeeping duties effectively, in which case the skipper shall be notified.

11 On taking over the watch the relieving officer shall confirm and be satisfied as to the vessel's estimated or true position and confirm its intended track, course and speed, and shall note any dangers to navigation expected to be encountered during the watch.

12 Whenever practicable a proper record shall be kept of the movements and activities during the watch relating to the navigation of the vessel.

Lookout

13 Proper lookout shall be maintained in compliance with rule 5 of the International Regulations for Preventing Collisions at Sea, 1972. It shall serve the purpose of:

.1 maintaining a continuous state of vigilance by sight and hearing as well as by all other available means, with regard to any significant changes in the operating environment;

.2 fully appraising the situation and the risk of collision, stranding and other dangers to navigation; and

.3 detecting vessels or aircraft in distress, shipwrecked persons, wrecks and debris.

14 In determining that the composition of the navigational watch is adequate to ensure that a proper lookout can continuously be maintained, the skipper shall take into account all relevant factors, including those described under paragraph 4.1 of this regulation, as well as the following factors:

.1 visibility, state of weather and sea;

.2 traffic density, and other activities occurring in the area in which the vessel is navigating;

.3 the attention necessary when navigating in or near traffic separation schemes and other routeing measures;

.4 the additional workload caused by the nature of the vessel's functions, immediate operating requirements and anticipated manoeuvres;

.5 rudder and propeller control and vessel manoeuvring characteristics;

.6 the fitness for duty of any crew members on call who may be assigned as members of the watch;

.7 knowledge of and confidence in the professional competence of the vessel's officers and crew;

.8 the experience of the officer of the navigational watch and the familiarity of that officer with the vessel's equipment, procedures, and manoeuvring capability;

.9 activities taking place on board the vessel at any particular time, and the availability of assistance to be summoned immediately to the wheelhouse when necessary;

.10 the operational status of instrumentation in the wheelhouse and controls, including alarm systems;

.11 the size of the vessel and the field of vision available from the conning position;

.12 the configuration of the wheelhouse, to the extent such configuration might inhibit a member of the watch from detecting by sight or hearing any external developments; and

.13 any relevant standards, procedures and guidelines relating to watchkeeping arrangements and fitness for duty which have been adopted by the Organization.

Protection of the marine environment

15 The skipper and the officer in charge of the watch shall be aware of the serious effects of operational or accidental pollution of the marine environment, and shall take all possible precautions to prevent such pollution, particularly within the framework of relevant international and port regulations.

Weather conditions

16 The officer in charge of the watch shall take relevant measures and notify the skipper when adverse changes in weather could affect the safety of the vessel, including conditions leading to ice accretion.

Part 1-2 Navigation with pilot embarked

17 The presence of a pilot on board does not relieve the skipper or officer in charge of the watch from their duties and obligations for the safety of the vessel. The skipper and the pilot shall exchange information regarding navigation procedures, local conditions and the vessel's characteristics. The skipper and the officer in charge of the watch shall cooperate closely with the pilot and maintain an accurate check of the vessel's position and movement.

Part 1-3 Vessels engaged in fishing or searching for fish

18 In addition to the principles enumerated in paragraph 4, the following factors shall be considered and properly acted upon by the officer in charge of the watch:

.1 other vessels engaged in fishing and their gear, own vessel's manoeuvring characteristics, particularly its stopping distance and the diameter of turning circle at sailing speed and with the fishing gear overboard;

.2 safety of the crew on deck;

.3 stability and freeboard caused by exceptional forces resulting from fishing operations, catch handling and stowage, and unusual sea and weather conditions;

.4 the proximity of offshore structures, with special regard to the safety zones; and

.5 wrecks and other underwater obstacles which could be hazardous for fishing gear.

19 When stowing the catch, attention shall be given to the essential requirements for adequate freeboard, adequate stability and watertight integrity at all times during the voyage to the landing port, taking into consideration consumption of fuel and stores, risk of adverse weather conditions and, especially in winter, risk of ice accretion on or above exposed decks in areas where ice accretion is likely to occur.

Part 1-4 Anchor watch

20 The skipper shall ensure, with a view to the safety of the vessel and the crew, that a proper watch is maintained at all times from the wheelhouse or deck on fishing vessels at anchor.

Part 2 Engineering watch

Part 2-1 Principles to be observed in keeping an engineering watch

Duties associated with taking/handing over and accepting a watch

21 The officer in charge of the engineering watch shall not hand over the watch to the relieving officer if there is reason to believe that the latter is obviously not capable of carrying out the watchkeeping duties effectively, in which case the chief engineer officer shall be notified.

22 The relieving officer of the engineering watch shall ensure that the members of the relieving engineering watch are apparently fully capable of performing their duties effectively.

23 Prior to taking over the engineering watch, relieving officers shall satisfy themselves regarding general and specific conditions relating to the safe operation of engine-room systems.

24 Before going off duty, the officer in charge of the engineering watch shall ensure that all events related to the main and auxiliary machinery which have occurred during the engineering watch are suitably recorded.

Routine duties to be undertaken during a watch

25 The officer in charge of the engineering watch shall continue to be responsible for machinery space operations, despite the presence of the chief engineer officer in the machinery spaces, until specifically informed that the chief engineer officer has assumed such responsibility, and this is mutually understood.

26 The officer in charge of the engineering watch shall be familiar with the assigned watchkeeping duties.

27 The officer in charge of the engineering watch shall be responsible for the isolation, bypassing and adjustment of all machinery under the responsibility of the engineering watch that is to be worked on, and shall record all work carried out.

Maintenance of machinery space logs and the importance of the readings taken

28 Detailed repair maintenance involving repairs to electrical, mechanical, hydraulic, pneumatic or applicable electronic equipment throughout the vessel shall be performed under the awareness of the officer in charge of the engineering watch and chief engineer officer. These repairs shall be recorded.

Part 2-2 Safety and emergency procedures; changeover of remote/automatic to local control of all systems

29 Officers in charge of the engineering watch shall:

.1 in emergencies, raise the alarm when in their opinion the situation so demands, and take all possible measures to prevent damage to the vessel and persons on board;

.2 be aware of the deck officer's needs relating to the equipment required in the loading or unloading of fish catches and the additional requirements of the ballast and other vessel stability control systems;

.3 make frequent rounds of inspection to determine possible equipment malfunction or failure, and take immediate remedial action to ensure the safety of the vessel and the environment;

.4 ensure that the necessary precautions are taken, within their area of responsibility, to prevent accidents or damage to the various electrical, electronic, hydraulic, pneumatic, mechanical and refrigeration systems of the vessel including appropriate changeover of remote/automatic to local control of all systems;

.5 ensure that all important events affecting the operation, adjustment or repair of the vessel's machinery are appropriately recorded; and

.6 pay attention to the techniques, methods and procedures necessary to prevent violation of pollution regulations of the local authorities.

Part 2-3 Safety precautions to be observed during a watch and immediate actions to be taken in the event of fire or accident, with particular reference to oil systems

30 The officer in charge of the engineering watch shall take action necessary to contain the effects of damage resulting from equipment breakdown, fire, flooding, rupture, collision, stranding, oil pollution or other cause.

31 The officer in charge of the engineering watch shall bear in mind that changes in speed, resulting from machinery malfunction, or any loss of steering, may endanger the safety of the vessel and life at sea. The bridge shall be immediately notified, in the event of fire, and of any impending action in machinery spaces that may cause reduction in the vessel's speed, imminent steering failure, stoppage of the vessel's propulsion system or any alteration in the generation of electric power or similar threat to safety. This notification, where possible, shall be accomplished before changes are made, in order to afford the bridge the maximum available time to take whatever action is possible to avoid a potential marine casualty.

32 The officer in charge of the engineering watch shall notify the chief engineer officer without delay:

.1 when engine damage or a malfunction that may endanger the safe operation of the vessel occurs;

.2 when any malfunction that may cause damage or breakdown of propulsion machinery, auxiliary machinery or monitoring and governing systems occurs; and

.3 in any emergency or if in any doubt as to what decision or measures to take.

Part 3 Radio watchkeeping

33 The skipper shall ensure that an adequate radio watch is maintained while the vessel is at sea, on appropriate frequencies, taking into account the requirements of the Radio Regulations.

ANNEX 2

STANDARDS OF TRAINING, CERTIFICATION AND WATCHKEEPING FOR FISHING VESSEL PERSONNEL CODE (STCW-F CODE)

Part B
Recommended guidance regarding provisions of the annex to the 1995 STCW-F Convention

Introduction

1 This part of the STCW-F Code contains recommended guidance intended to assist Parties to the 1995 STCW-F Convention and those involved in implementing, applying or enforcing its measures to give the Convention full and complete effect in a uniform manner.

2 The measures suggested are not mandatory, and the examples given are only intended to illustrate how certain Convention requirements may be complied with. However, the recommendations in general represent an approach to the matters concerned which has been harmonized through discussion within IMO involving, where appropriate, consultation with the International Labour Organization, the International Telecommunication Union and the World Health Organization.

3 Observance of the recommendations contained in this part will assist the Organization in achieving its goal of maintaining the highest practicable standards of competence in respect of fishing vessel personnel of all nationalities and fishing vessels of all flags.

4 Guidance is provided in this part in respect of certain regulations in the annex to the Convention. The numbering of the sections of this part, therefore, corresponds with that of the regulations of the Convention. As in part A, the text of each section may be divided into numbered parts and paragraphs, but such numbering is unique to that text alone.

Chapter I
Guidance regarding general provisions

Section B-I/1

(No provisions)

Section B-I/2

(No provisions)

Section B-I/3

(No provisions)

Section B-I/4

(No provisions)

Section B-I/5-1

(No provisions)

Section B-I/5-2

(No provisions)

Section B-I/6

(No provisions)

Section B-I/7

(No provisions)

Section B-I/8

(No provisions)

Section B-I/9

(No provisions)

Section B-I/10

(No provisions)

Section B-I/11

(No provisions)

Section B-I/12
Guidance regarding medical standards

Medical examination and certification

1 Parties, in establishing fishing vessel personnel medical fitness standards and provisions, should take into account the minimum physical abilities set out in table B-I/12 and the guidance given within this section, bearing in mind the different duties of fishing vessel personnel.

2 Parties, in establishing fishing vessel personnel medical fitness standards and provisions, should follow the guidance contained in the *Guidelines on the medical examination of fishing vessel personnel*, including any subsequent versions, and any other applicable international guidelines published by the International Labour Organization, the International Maritime Organization or the World Health Organization.

3 Appropriate qualifications and experience for medical practitioners conducting medical fitness examinations of fishing vessel personnel may include occupational health or maritime health qualifications, experience of working as a fishing vessel's doctor or a fishing company doctor or working under the supervision of someone with the aforementioned qualifications or experience.

4 The premises where medical fitness examinations are carried out should have the facilities and equipment required to carry out medical fitness examinations of fishing vessel personnel.

5 Administrations should ensure that recognized medical practitioners enjoy full professional independence in exercising their medical judgement when undertaking medical examination procedures.

6 Persons applying for a medical certificate should present to the recognized medical practitioner appropriate identity documentation to establish their identity. They should also surrender their previous medical certificate.

7 Each Administration has the discretionary authority to grant a variance or waiver of any of the standards set out in table B-I/12 hereunder, based on an assessment of a medical evaluation and any other relevant information concerning an individual's adjustment to the condition and proven ability to satisfactorily perform assigned shipboard functions.

8 The medical fitness standards should, so far as possible, define objective criteria with regard to fitness for sea service, taking into account access to medical facilities and medical expertise on board fishing vessels. They should, in particular, specify the conditions under which fishing vessel personnel suffering from potentially life-threatening medical conditions that are controlled by medication may be allowed to continue to serve at sea.

9 The medical standards should also identify particular medical conditions, such as colour blindness, which might preclude fishing vessel personnel from holding particular positions on board fishing vessels.

10 The minimum in-service eyesight standards in each eye for unaided distance vision should be at least 0.1.[5]

[5] Value given in Snellen decimal notation.

11 Persons requiring the use of spectacles or contact lenses to perform duties should have a spare pair or pairs, as required, conveniently available on board the fishing vessel. Any need to wear visual aids to meet the required standards should be recorded on the medical fitness certificate issued.

12 Colour vision testing should be in accordance with the International Recommendations for Colour Vision Requirements for Transport, published by the Commission Internationale de l'Eclairage (CIE 143-2001, including any subsequent versions) or equivalent test methods.

Table B-I/12
Assessment of minimum entry level and in-service physical abilities for fishing vessel personnel [3]

Shipboard task, function, event or condition[3]	**Related physical ability**	**Medical examiner should be satisfied that the candidate:**[4]
Routine movement around vessel: - on moving deck - between levels - between compartments *Note 1 applies to this row*	Maintain balance and move with agility Climb up and down vertical ladders and stairways Step over coamings Open and close watertight doors	Has no disturbance in sense of balance, does not have any impairment or disease that prevents relevant movements and physical activities Is, without assistance,[5] able to: - climb vertical ladders and stairways - step over high sills - manipulate door closing systems
Routine tasks on board: - use of hand tools - movement of vessel's stores - overhead work - valve operation - standing a four-hour watch - working in confined spaces - responding to alarms, warnings and instructions - verbal communication *Note 1 applies to this row*	Strength, dexterity and stamina to manipulate mechanical devices Lift, pull and carry a load (e.g. 18 kg) Reach upwards Stand, walk and remain alert for an extended period Work in constricted spaces and move through restricted openings Visually distinguish objects, shapes and signals Hear warnings and instructions Give a clear spoken description	Does not have a defined impairment or diagnosed medical condition that reduces ability to perform routine duties essential to the safe operation of the vessel Has ability to: - work with arms raised - stand and walk for an extended period - enter confined space - fulfil eyesight standards (table A-I/12) - fulfil hearing standards set by competent authority or take - account of international guidelines - hold normal conversation
Emergency duties[6] on board: - escape - fire fighting - evacuation *Note 2 applies to this row*	Don a lifejacket or immersion suit Escape from smoke-filled spaces Take part in fire-fighting duties, including use of breathing apparatus Take part in vessel evacuation procedures	Does not have a defined impairment or diagnosed medical condition that reduces ability to perform emergency duties essential to the safe operation of the vessel Has ability to: - don lifejacket or immersion suit - crawl - feel for differences in temperature

Shipboard task, function, event or condition[3]	**Related physical ability**	**Medical examiner should be satisfied that the candidate:**[4]
		- handle fire-fighting equipment - wear breathing apparatus (where required as part of duties)

Notes:

1 Rows 1 and 2 of the above table describe: (a) ordinary shipboard tasks, functions, events and conditions; (b) the corresponding physical abilities which may be considered necessary for the safety of a fishing vessel personnel, other crew members and the fishing vessel; and (c) high-level criteria for use by medical practitioners assessing medical fitness, bearing in mind the different duties of fishing vessel personnel and the nature of shipboard work for which they will be employed.

2 Row 3 of the above table describes: (a) emergency shipboard tasks, functions, events and conditions; (b) the corresponding physical abilities which should be considered necessary for the safety of a fishing vessel personnel, other crew members and the fishing vessel; and (c) high-level criteria for use by medical practitioners assessing medical fitness, bearing in mind the different duties of fishing vessel personnel and the nature of shipboard work for which they will be employed.

3 This table is not intended to address all possible shipboard conditions or potentially disqualifying medical conditions. Parties should specify physical abilities applicable to the category of fishing vessel personnel (such as "deck officer" and "engine rating"). The special circumstances of individuals and for those who have specialized or limited duties should receive due consideration.

4 If in doubt, the medical practitioner should quantify the degree or severity of any relevant impairment by means of objective tests, whenever appropriate tests are available, or by referring the candidate for further assessment.

5 The term "assistance" means the use of another person to accomplish the task.

6 The term "emergency duties" is used to cover all standard emergency response situations such as abandon ship or fire fighting as well as the procedures to be followed by each fishing vessel personnel to secure personal survival.

Chapter II
Guidance regarding certification of skippers, officers in charge of a navigational watch, engineer officers and radio operators

Section B-II/1

(No provisions)

Section B-II/2

Guidance regarding the certification of officers in charge of a navigational watch on fishing vessels of 24 metres in length and over operating in unlimited water

1 The training regarding sustainable fisheries required in section A-II/2 should include the following theoretical and practical knowledge:

.1 recognize economic aspects of sustainable fishing, including:

.1 knowledge of economic aspects of fishing, including all costs and benefits associated with operating a fishing vessel;

.2 understanding the position of fishing vessel personnel in the supply chain (the way in which fish travel from vessel to consumers); and

.3 be able to identify ways to make fishing more economically sustainable.

.2 apply fishing management and conservation principles, including understanding:

.1 the need for fishing management for the sustainable development of the fishing industry and the international instruments to prevent, deter and eliminate illegal, unreported and unregulated (IUU) fishing;

.2 the roles of scientists and governments in fisheries management; and

.3 the goals of different elements of fishing management, including responsible harvesting practices and responsible fishing gear/selectivity; and

.3 apply fishing management and conservation principles, including understanding:

.1 the need for sustainable management and development of the fishing industry;

.2 the international instruments on fisheries conservation and management and to prevent, deter and eliminate illegal, unreported and unregulated (IUU) fishing;

.3 the roles of scientists, Governments and competent fisheries management authorities[6] in fisheries management; and

[6] Including regional fisheries management organizations (RFMOs) of which they are members.

.4 the goals of different elements of fishing management, including responsible harvesting practices and responsible fishing gear/selectivity; and

.4 recognize the social aspects of sustainable fisheries, including:

.1 understanding that care for the human element (social equity) and interaction with society (societal acceptance) are part of a sustainable fishing industry;

.2 understanding the elements of fair treatment of fishing vessel personnel, including but not limited to fair wages, safe working conditions and humane treatment; and

.3 basic knowledge of relevant ILO conventions and national legislation concerning safe and humane working conditions.

Section B-II/3

(No provisions)

Section B-II/4
Guidance regarding the certification of officers in charge of a navigational watch on fishing vessels of 24 metres in length and over operating in limited water

1 The training regarding sustainable fisheries required in section A-II/4 should include the following theoretical and practical knowledge:

.1 recognize economic aspects of sustainable fishing, including:

.1 knowledge of economic aspects of fishing, including all costs and benefits associated with operating a fishing vessel;

.2 understanding the position of fishing vessel personnel in the supply chain (the way in which fish travel from vessel to consumers); and

.3 be able to identify ways to make fishing more economically sustainable.

.2 apply fishing management and conservation principles, including understanding:

.1 the need for fishing management for the sustainable development of the fishing industry and the international instruments to prevent, deter and eliminate illegal, unreported and unregulated (IUU) fishing;

.2 the roles of scientists and governments in fisheries management; and

.3 the goals of different elements of fishing management, including responsible harvesting practices and responsible fishing gear/selectivity; and

.3 apply fishing management and conservation principles, including understanding:

.1 the need for sustainable management and development of the fishing industry;

.2 the international instruments on fisheries conservation and management and to prevent, deter and eliminate illegal, unreported and unregulated (IUU) fishing;

.3 the roles of scientists, Governments and competent fisheries management authorities[7] in fisheries management; and

.4 the goals of different elements of fishing management, including responsible harvesting practices and responsible fishing gear/selectivity; and

.4 recognize the social aspects of sustainable fisheries, including:

.1 understanding that care for the human element (social equity) and interaction with society (societal acceptance) are part of a sustainable fishing industry;

.2 understanding the elements of fair treatment of fishing vessel personnel, including but not limited to fair wages, safe working conditions and humane treatment; and

.3 basic knowledge of relevant ILO conventions and national legislation concerning safe and humane working conditions.

Section B-II/5-1-1

(No provisions)

Section B-II/5-1-2

(No provisions)

Section B-II/5-2
Guidance regarding the certification of officers in charge of an engineering watch in a manned engine-room or designated duty engineers in a periodically unmanned engine-room of fishing vessels powered by main propulsion machinery of 750 kW propulsion power or more

1 The training regarding sustainable fisheries required in section A-II/5-2 should include the following theoretical and practical knowledge:

.1 recognize economic aspects of sustainable fishing, including:

.1 knowledge of economic aspects of fishing, including all costs and benefits associated with operating a fishing vessel;

.2 understanding the position of fishing vessel personnel in the supply chain (the way in which fish travel from vessel to consumers); and

[7] Including regional fisheries management organizations (RFMOs) of which they are members.

.3 be able to identify ways to make fishing more economically sustainable.

.2 apply fishing management and conservation principles, including understanding:

.1 the need for fishing management for the sustainable development of the fishing industry and the international instruments to prevent, deter and eliminate illegal, unreported and unregulated (IUU) fishing;

.2 the roles of scientists and governments in fisheries management; and

.3 the goals of different elements of fishing management, including responsible harvesting practices and responsible fishing gear/selectivity; and

.3 apply fishing management and conservation principles, including understanding:

.1 the need for sustainable management and development of the fishing industry;

.2 the international instruments on fisheries conservation and management and to prevent, deter and eliminate illegal, unreported and unregulated (IUU) fishing;

.3 the roles of scientists, Governments and competent fisheries management authorities[8] in fisheries management; and

.4 the goals of different elements of fishing management, including responsible harvesting practices and responsible fishing gear/selectivity; and

.4 recognize the social aspects of sustainable fisheries, including:

.1 understanding that care for the human element (social equity) and interaction with society (societal acceptance) are part of a sustainable fishing industry;

.2 understanding the elements of fair treatment of fishing vessel personnel, including but not limited to fair wages, safe working conditions and humane treatment; and

.3 basic knowledge of relevant ILO conventions and national legislation concerning safe and humane working conditions.

[8] Including regional fisheries management organizations (RFMOs) of which they are members.

Section B-II/6
Guidance regarding training and certification of GMDSS radio operators on board fishing vessels

Training related to the First-class Radioelectronic Certificate

General

1 The requirements of medical fitness, especially as to hearing, eyesight and speech, should be met by the candidate before training is commenced.

2 The training should be relevant to the provisions of the 1995 STCW-F Convention, the Radio Regulations and the 2012 Cape Town Agreement, with particular attention given to the provisions of chapter IX therein. In developing training requirements, account should be taken of at least the knowledge and training given in paragraphs 3 to 14 below.

Theory

3 Knowledge of the general principles and basic factors necessary for safe and efficient use of all subsystems and equipment required in the GMDSS, sufficient to support the practical training provisions given in paragraph 13.

4 Knowledge of the use, operation and service areas of GMDSS subsystems, including satellite system characteristics, navigational and meteorological warning systems and selection of appropriate communication circuits.

5 Knowledge of the principles of electricity and the theory of radio and electronics sufficient to meet the provisions given in paragraphs 6 to 10 below.

6 Theoretical knowledge of GMDSS radiocommunication equipment, including narrow-band direct-printing telegraphy and radio-telephone transmitters and receivers, digital selective calling equipment, ship earth stations, emergency position-indicating radio beacons (EPIRBs), marine antenna systems, radio equipment for survival craft together with all auxiliary items, including power supplies, as well as general knowledge of the principles of other equipment generally used for radionavigation, with particular reference to maintaining the equipment in service.

7 Knowledge of factors that affect system reliability, availability, maintenance procedures and proper use of test equipment.

8 Knowledge of microprocessors and fault diagnosis in systems using microprocessors.

9 Knowledge of control systems in the GMDSS radio equipment, including testing and analysis.

10 Knowledge of the use of computer software for the GMDSS radio equipment and methods for correcting faults caused by loss of software control of the equipment.

Regulations and documentation

11 Knowledge of:

.1 the 2012 Cape Town Agreement and the Radio Regulations, with particular emphasis on:

.1 distress, urgency and safety radiocommunications;

.2 avoiding harmful interference, particularly with distress and safety traffic; and

.3 prevention of unauthorized transmissions;

.2 other documents relating to operational and communication procedures for distress, urgency, safety and general radiocommunications, including charges, navigational warnings, and weather broadcasts in the Maritime Mobile Service and the Maritime Mobile Satellite Service; and

.3 use of the International Code of Signals and the IMO Standard Marine Communication Phrases.

Watchkeeping and procedures

12 Knowledge of and training in:

.1 communication procedures and discipline to prevent harmful interference in GMDSS subsystems;

.2 procedures for using propagation-prediction information to establish optimum frequencies for communications;

.3 radiocommunication watchkeeping relevant to all GMDSS subsystems, exchange of radiocommunication traffic, particularly concerning distress, urgency and safety procedures, and radio records;

.4 use of the international phonetic alphabet;

.5 monitoring a distress frequency while simultaneously monitoring or working on at least one other frequency;

.6 ship reporting systems and procedures;

.7 radiocommunication procedures of the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual;

.8 radio medical systems and procedures; and

.9 causes of false distress alerts and means to avoid them.[9]

Practical

13 Practical training, supported by appropriate laboratory work, should be given in:

.1 correct and efficient operation of all GMDSS subsystems and equipment under normal propagation conditions and under typical interference conditions;

.2 safe operation of all the GMDSS communication equipment and ancillary devices, including safety precautions;

[9] See resolution MSC.514(105) – *Guidelines for the avoidance of false distress alerts*.

.3 adequate and accurate keyboard skills for the satisfactory exchange of communications;

.4 operational techniques for:

.1 receiver and transmitter adjustment for the appropriate mode of operation, including digital selective calling and direct-printing telegraphy;

.2 antenna adjustment and realignment, as appropriate;

.3 use of radio life-saving appliances; and

.4 use of emergency position-indicating radio beacons (EPIRBs);

.5 antenna rigging, repair and maintenance, as appropriate;

.6 reading and understanding pictorial, logic and circuit diagrams;

.7 use and care of those tools and test instruments necessary to carry out at-sea electronic maintenance;

.8 manual soldering and desoldering techniques, including those involving semiconductor devices and modern circuits, and the ability to distinguish whether the circuit is suitable to be manually soldered or desoldered;

.9 tracing and repair of faults to component level, where practicable, and to board/module level in other cases;

.10 recognition and correction of conditions contributing to the fault occurring;

.11 maintenance procedures, both preventive and corrective, for all GMDSS communication equipment and radionavigation equipment; and

.12 methods of alleviating electrical and electromagnetic interference such as bonding, shielding and bypassing.

Miscellaneous

14 Knowledge of and/or training in:

.1 the English language, both written and spoken, for the satisfactory exchange of communications relevant to the safety of life at sea;

.2 world geography, especially the principal shipping routes, services of rescue coordination centres (RCCs) and related communication routes;

.3 survival at sea, the operation of lifeboats, rescue boats, liferafts, buoyant apparatus and their equipment, with special reference to radio life-saving appliances;

.4 fire prevention and fire fighting, with particular reference to the radio installation;

.5 preventive measures for the safety of vessel and personnel in connection with hazards related to radio equipment, including electrical, radiation, chemical and mechanical hazards;

.6 first aid, including heart-respiration revival techniques; and

.7 Coordinated Universal Time (UTC), global time zones and the international date line.

Training related to the Second-class Radioelectronic Certificate

General

15 The requirements of medical fitness, especially as to hearing, eyesight and speech, should be met by the candidate before training is commenced.

16 The training should be relevant to the provisions of the 1995 STCW-F Convention, the Radio Regulations and the 2012 Cape Town Agreement, with particular attention given to the provisions of chapter IX therein. In developing training requirements, account should be taken of at least the knowledge and training given in paragraphs 17 to 28 below.[10]

Theory

17 Knowledge of the general principles and basic factors necessary for safe and efficient use of all subsystems and equipment required in the GMDSS, sufficient to support the practical training provisions given in paragraph 27 below.

18 Knowledge of the use, operation and service areas of GMDSS subsystems, including satellite system characteristics, navigational and meteorological warning systems and selection of appropriate communication circuits.

19 Knowledge of the principles of electricity and the theory of radio and electronics sufficient to meet the provisions given in paragraphs 20 to 24 below.

20 General theoretical knowledge of GMDSS radiocommunication equipment, including narrow-band direct-printing telegraphy and radio-telephone transmitters and receivers, digital selective calling equipment, ship earth stations, emergency position-indicating radio beacons (EPIRBs), marine antenna systems, radio equipment for survival craft together with all auxiliary items, including power supplies, as well as general knowledge of other equipment generally used for radionavigation, with particular reference to maintaining the equipment in service.

21 General knowledge of factors that affect system reliability, availability, maintenance procedures and proper use of test equipment.

22 General knowledge of microprocessors and fault diagnosis in systems using microprocessors.

23 General knowledge of control systems in the GMDSS radio equipment, including testing and analysis.

24 Knowledge of the use of computer software for the GMDSS radio equipment and methods for correcting faults caused by loss of software control of the equipment.

[10] The relevant IMO model course(s) may be of assistance in the preparation of courses.

Regulations and documentation

25 Knowledge of:

.1 the 2012 Cape Town Agreement and the Radio Regulations, with particular emphasis on:

.1 distress, urgency and safety radiocommunications;

.2 avoiding harmful interference, particularly with distress and safety traffic; and

.3 the prevention of unauthorized transmissions;

.2 other documents relating to operational and communication procedures for distress, urgency, safety and general radiocommunications, including charges, navigational warnings, and weather broadcasts in the Maritime Mobile Service and the Maritime Mobile Satellite Service; and

.3 the use of the International Code of Signals and the IMO Standard Marine Communication Phrases.

Watchkeeping and procedures

26 Training should be given in:

.1 communication procedures and discipline to prevent harmful interference in GMDSS subsystems;

.2 procedures for using propagation-prediction information to establish optimum frequencies for communications;

.3 radiocommunication watchkeeping relevant to all GMDSS subsystems, exchange of radiocommunication traffic, particularly concerning distress, urgency and safety procedures, and radio records;

.4 use of the international phonetic alphabet;

.5 monitoring a distress frequency while simultaneously monitoring or working on at least one other frequency;

.6 ship reporting systems and procedures;

.7 radiocommunication procedures of the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual;

.8 radio medical systems and procedures; and

.9 causes of false distress alerts and means to avoid them.[11]

[11] See resolution MSC.514(105) – *Guidelines for the avoidance of false distress alerts*.

Practical

27 Practical training, supported by appropriate laboratory work, should be given in:

.1 correct and efficient operation of all GMDSS subsystems and equipment under normal propagation conditions and under typical interference conditions;

.2 safe operation of all the GMDSS communication equipment and ancillary devices, including safety precautions;

.3 adequate and accurate keyboard skills for the satisfactory exchange of communications;

.4 operational techniques for:

.1 receiver and transmitter adjustment for the appropriate mode of operation, including digital selective calling and direct-printing telegraphy;

.2 antenna adjustment and realignment, as appropriate;

.3 use of radio life-saving appliances; and

.4 use of emergency position-indicating radio beacons (EPIRBs);

.5 antenna rigging, repair and maintenance, as appropriate;

.6 reading and understanding pictorial, logic and module interconnection diagrams;

.7 use and care of those tools and test instruments necessary to carry out at-sea electronic maintenance at the level of replacement of a unit or module;

.8 basic manual soldering and desoldering techniques and their limitations;

.9 tracing and repair of faults to board/module level;

.10 recognition and correction of conditions contributing to the fault occurring;

.11 basic maintenance procedures, both preventive and corrective, for all the GMDSS communication equipment and radionavigation equipment; and

.12 methods of alleviating electrical and electromagnetic interference, such as bonding, shielding and bypassing.

Miscellaneous

28 Knowledge of, and/or training in:

.1 the English language, both written and spoken, for the satisfactory exchange of communications relevant to the safety of life at sea;

.2 world geography, especially the principal shipping routes, services of rescue coordination centres (RCCs) and related communication routes;

.3 survival at sea, the operation of lifeboats, rescue boats, liferafts, buoyant apparatus and their equipment, with special reference to radio life-saving appliances;

.4 fire prevention and fire fighting, with particular reference to the radio installation;

.5 preventive measures for the safety of vessel and personnel in connection with hazards related to radio equipment, including electrical, radiation, chemical and mechanical hazards;

.6 first aid, including heart-respiration revival techniques; and

.7 Coordinated Universal Time (UTC), global time zones and the international date line.

Training related to the General Operator's Certificate

General

29 The requirements of medical fitness, especially as to hearing, eyesight and speech, should be met by the candidate before training is commenced.

30 The training should be relevant to the provisions of the 1995 STCW-F Convention, the Radio Regulations and the 2012 Cape Town Agreement, with particular attention given to the provisions of chapter IX therein. In developing training requirements, account should be taken of at least the knowledge and training given in paragraphs 31 to 36 below.[12]

Theory

31 Knowledge of the general principles and basic factors necessary for safe and efficient use of all subsystems and equipment required in the GMDSS sufficient to support the practical training provisions given in paragraph 35 below.

32 Knowledge of the use, operation and service areas of GMDSS subsystems, including satellite system characteristics, navigational and meteorological warning systems and selection of appropriate communication circuits.

Regulations and documentation

33 Knowledge of:

.1 the 2012 Cape Town Agreement and the Radio Regulations, with particular emphasis on:

.1 distress, urgency and safety radiocommunications;

.2 avoiding harmful interference, particularly with distress and safety traffic; and

.3 prevention of unauthorized transmissions;

[12] The relevant IMO model course(s) may be of assistance in the preparation of courses.

.2 other documents relating to operational and communication procedures for distress, urgency, safety and general radiocommunications, including charges, navigational warnings, and weather broadcasts in the Maritime Mobile Service and the Maritime Mobile Satellite Service; and

.3 use of the International Code of Signals and the IMO Standard Marine Communication Phrases.

Watchkeeping and procedures

34 Training should be given in:

.1 communication procedures and discipline to prevent harmful interference in GMDSS subsystems;

.2 procedures for using propagation-prediction information to establish optimum frequencies for communications;

.3 radiocommunication watchkeeping relevant to all GMDSS subsystems, exchange of radiocommunication traffic, particularly concerning distress, urgency and safety procedures, and radio records;

.4 use of the international phonetic alphabet;

.5 monitoring a distress frequency while simultaneously monitoring or working on at least one other frequency;

.6 ship reporting systems and procedures;

.7 radiocommunication procedures of the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual;

.8 radio medical systems and procedures; and

.9 causes of false distress alerts and means to avoid them.[13]

Practical

35 Practical training should be given in:

.1 correct and efficient operation of all GMDSS subsystems and equipment under normal propagation conditions and under typical interference conditions;

.2 safe operation of all the GMDSS communications equipment and ancillary devices, including safety precautions;

.3 accurate and adequate keyboard skills for the satisfactory exchange of communications; and

[13] See resolution MSC.514(105) on *Guidelines for the avoidance of false distress alerts*.

.4 operational techniques for:

.1 receiver and transmitter adjustment for the appropriate mode of operation, including digital selective calling and direct-printing telegraphy;

.2 antenna adjustment and realignment as appropriate;

.3 use of radio life-saving appliances; and

.4 use of emergency position-indicating radio beacons (EPIRBs).

Miscellaneous

36 Knowledge of, and/or training in:

.1 the English language, both written and spoken, for the satisfactory exchange of communications relevant to the safety of life at sea;

.2 world geography, especially the principal shipping routes, services of rescue coordination centres (RCCs) and related communication routes;

.3 survival at sea, the operation of lifeboats, rescue boats, liferafts, buoyant apparatus and their equipment, with special reference to radio life-saving appliances;

.4 fire prevention and fire fighting, with particular reference to the radio installation;

.5 preventive measures for the safety of vessel and personnel in connection with hazards related to radio equipment, including electrical, radiation, chemical and mechanical hazards;

.6 first aid, including heart-respiration revival techniques; and

.7 Coordinated Universal Time (UTC), global time zones and the international date line.

Training related to the Restricted Operator's Certificate

General

37 The requirements of medical fitness, especially as to hearing, eyesight and speech, should be met by the candidate before training is commenced.

38 The training should be relevant to the provisions of the 1995 STCW-F Convention, the Radio Regulations and the 2012 Cape Town Agreement, with particular attention given to the provisions of chapter IX therein. In developing training guidance, account should be taken of at least the knowledge and training given in paragraphs 39 to 44 below.[14]

[14] The relevant IMO model course(s) may be of assistance in the preparation of courses.

Theory

39 Knowledge of the general principles and basic factors, including VHF range limitation and antenna height effect necessary for safe and efficient use of all subsystems and equipment required in GMDSS sea area A1, sufficient to support the training given in paragraph 43 below.

40 Knowledge of the use, operation and service areas of GMDSS sea area A1 subsystems, e.g. navigational and meteorological warning systems and the appropriate communication circuits.

Regulations and documentation

41 Knowledge of:

.1 those parts of the 2012 Cape Town Agreement and the Radio Regulations relevant to sea area A1, with particular emphasis on:

.1 distress, urgency and safety radiocommunications;

.2 avoiding harmful interference, particularly with distress and safety traffic; and

.3 prevention of unauthorized transmissions;

.2 other documents relating to operational and communication procedures for distress, urgency, safety and general radiocommunications, including charges, navigational warnings and weather broadcasts in the Maritime Mobile Service in sea area A1; and

.3 use of the International Code of Signals and the IMO Standard Marine Communication Phrases.

Watchkeeping and procedures

42 Training should be given in:

.1 communication procedures and discipline to prevent harmful interference in GMDSS subsystems used in sea area A1;

.2 VHF communication procedures for:

.1 radiocommunication watchkeeping, exchange of radiocommunication traffic, particularly concerning distress, urgency and safety procedures, and radio records;

.2 monitoring a distress frequency while simultaneously monitoring or working on at least one other frequency; and

.3 the digital selective calling system;

.3 use of the international phonetic alphabet;

.4 ship reporting systems and procedures;

.5 VHF radiocommunication procedures of the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual;

.6 radio medical systems and procedures; and

.7 causes of false distress alerts and means to avoid them.[15]

Practical

43 Practical training should be given in:

.1 correct and efficient operation of the GMDSS subsystems and equipment prescribed for vessels operating in sea area A1 under normal propagation conditions and under typical interference conditions;

.2 safe operation of relevant GMDSS communication equipment and ancillary devices, including safety precautions; and

.3 operational techniques for use of:

.1 VHF, including channel, squelch, and mode adjustment, as appropriate;

.2 radio life-saving appliances;

.3 emergency position-indicating radio beacons (EPIRBs); and

.4 receivers capable of receiving maritime safety information and search and rescue related information (e.g. NAVTEX).

Miscellaneous

44 Knowledge of, and/or training in:

.1 the English language, both written and spoken, for the satisfactory exchange of communications relevant to the safety of life at sea;

.2 services of rescue coordination centres (RCCs) and related communication routes;

.3 survival at sea, the operation of lifeboats, rescue boats, liferafts, buoyant apparatus and their equipment, with special reference to radio life-saving appliances;

.4 fire prevention and fire fighting, with particular reference to the radio installation;

.5 preventive measures for the safety of vessel and personnel in connection with hazards related to radio equipment, including electrical, radiation, chemical and mechanical hazards; and

.6 first aid, including heart-respiration revival techniques.

[15] See resolution MSC.514(105) on *Guidelines for the avoidance of false distress alerts*.

Training related to maintenance of GMDSS installations on board vessels

General

45 The person designated to perform functions for at-sea electronic maintenance should either hold an appropriate certificate as specified by the Radio Regulations, as required, or have equivalent at-sea electronic maintenance qualifications, as may be approved by the Administration, taking into account the recommendations of the Organization on the training of such personnel.

46 The following guidance on equivalent electronic maintenance qualifications is provided for use by Administrations as appropriate.

47 Training as recommended below does not qualify any person to be an operator of GMDSS radio equipment who does not hold an appropriate Radio Operator's Certificate.

Maintenance training equivalent to the First-Class Radioelectronic Certificate

48 In determining training equivalent to the elements of the listed First-Class Radioelectronic Certificate:

.1 the theory content should cover at least the subjects given in paragraphs 3 to 10;

.2 the practical content should cover at least the subjects given in paragraph 13; and

.3 the miscellaneous knowledge included should cover at least the subjects given in paragraph 14.

Maintenance training equivalent to the Second-Class Radioelectronic Certificate

49 In determining training equivalent to the maintenance elements of the Second-Class Radioelectronic Certificate:

.1 the theory content should cover at least the subjects given in paragraphs 17 to 24;

.2 the practical content should cover at least the subjects given in paragraph 27; and

.3 the miscellaneous knowledge included should cover at least the subjects given in paragraph 28.

Section B-II/7

(No provisions)

Section B-II/8

(No provisions)

Section B-II/a[16]
Guidance on training of deckhand fishing working on fishing vessels of 24 metres in length and over

Definition

1 *Deckhand fishing* means a member of the vessel's crew other than the skipper or an officer.

Safety familiarization for deckhand fishing

2 Before being assigned to shipboard duties, deckhand fishing should be familiar with the following:

.1 marine terms and orders commonly used in fishing vessels;

.2 the dangers associated with fishing operations such as shooting the fishing gear into the water, hauling the fishing gear and landing the catch on board; and

.3 construction, application and purpose of each piece of deck equipment associated with a particular type of fishing gear, including, but not limited to:

.1 trawl gallows;

.2 gantries;

.3 bollards;

.4 power blocks;

.5 pursing blocks;

.6 winches and booms;

.7 derricks;

.8 net drums and side rollers; and

.9 line and trap haulers; and

.4 the dangers associated with the movement of equipment not fixed.

Training for deckhand fishing

3 Deckhand fishing should, before being assigned to any shipboard duties, receive appropriate training cover competences given below.

[16] There are no corresponding regulations in the Convention or sections in part A of the Code for sections B-II/a and B-II/b.

COMPETENCES

Contribute to safe operation

4 Understanding of dangers caused by the vessel's motions and accelerations.

5 Understanding of dangers caused by slippery surfaces on board.

6 Understanding of good onboard conduct, particularly to minimize fire hazards.

7 Knowledge of the use of personal protection equipment.

Contribute to maintain stability and seaworthiness

8 Understanding of the watertight and weathertight integrity of common types of fishing vessels.

9 Understanding of the operation of closing devices for doors and other openings relevant to the watertight and weathertight integrity of the fishing vessel.

10 Knowledge of stowage of the catch, fishing gear.
11 Knowledge of the function of freeing ports.

Contribute to berthing, anchoring, catch handling and other mooring operations

12 Knowledge of the handling and maintenance of deck appliances and equipment such as winches, derricks, booms, stoppers, chains, wire rope and ropes.

13 Knowledge and safe working practice of making splices and eye splices in wire ropes and ropes.

14 General knowledge of mooring operations and the handling and safe working practice of mooring ropes, including springs, bow, stern and breast ropes.

15 Knowledge of helm orders, commands for mooring, anchoring and towing.

16 Knowledge of possible hazards and risks on mooring, anchoring and towing.

Section B-II/b[17]
Guidance on training of advanced deckhand fishing working on fishing vessels of 24 metres in length and over

Definition

1 *Advanced deckhand fishing* means a qualified deckhand participating in the safe operation of the fishing vessel, preparation for and carrying out fishing operations, handling, safe stowage and, where appropriate, processing the catch and repairing the fishing gear.

Training for advanced deckhand fishing

2 Advanced deckhand fishing should, before being assigned to any shipboard duties, receive appropriate training cover competences given below.

[17] There are no corresponding regulations in the Convention or sections in part A of the Code for sections B-II/a and B-II/b.

COMPETENCES

Function: Navigation at the support level

Contribute to enhance communication for safety navigation

3 Knowledge of common nautical terms which apply to the work and navigation of a fishing vessel.

Contribute to hazard identification

4 Working knowledge of margins of safety and prepare the fishing vessel to go to sea, including:

.1 the procedure for keeping a proper lookout in order to maintain a margin of safety between own vessel and other traffic;

.2 the safe distances between boats and land; and

.3 the risk of collision.

Contribute to safe navigation using guidance equipment

5 Knowledge about the principles of a visual lookout.

6 Knowledge of GPS operations that describe the dangers of operating GPS equipment without proper training.

Contribute to safe anchor operation

7 Knowledge of anchors, including weighing and dragging.

8 Knowledge of common nautical terms which apply to anchoring.

Contribute to safe mooring operation

9 Knowledge of mooring operation and equipment including mooring ropes.

Contribute to safe towing operation

10 Knowledge of towing operation.

Contribute to safe navigational watch

11 Ability to steer the fishing vessel on a compass course and maintain a course satisfactory.

12 Understanding the method of handing over the wheel and lookout duty when vessel is under way in order to ensure its continuity.

13 Knowledge of watchkeeping, including:

.1 engine checks;

.2 safe watchkeeping practices; and

.3 International Collision Prevention Regulations.

14 Knowledge of use of magnetic and gyro-compass.

Function: Catch handling and stowage at the support level

Contribute to safe catch handling and stowage

15 Knowledge of the effects upon a fishing vessel of catch handling and stowage factors.

16 Knowledge of the related principles and guidelines for responsible fisheries.

17 Understanding of responsible harvesting, including:

.1 effects of discards and by-catch;

.2 causes of habitat damage through fishing operations; and

.3 proper disposal of unserviceable fishing gear.

18 Understanding of responsible fishing gear selectivity including its importance and factors that affects size and species selectivity.

19 Knowledge of the relevant national Administrations and their fisheries responsibilities.

Function: Controlling the operation of the vessel and care for persons on board at the support level

Apply occupational health and safety precautions

20 Understanding parts of the fishing vessel, including:

.1 functions of fishing vessel equipment and gear;

.2 main components of fishing gear including trawl net, purse seine net, set net, cast net, long line, dredge and fish pot; and

.3 fish aggregating devices (FADs) and main types of fishing gear, including: surrounding nets (e.g. purse seine nets), seine nets, trawls, dredges, lift nets, falling gear (e.g. cast nets), gillnets and entangling nets, traps (e.g. pots), hooks and lines (e.g. longlines).

Ability to make and use knots and splices

21 Ability to tie and use various types of knots.

22 Ability to make splices and whipping.

23 Ability to apply rope and chain stoppers depending on the situation.

Ability to use purchases

24 Ability to use various types of purchases for rigging.

25 Understanding of the purpose of tackles.

Function: Maintenance and repair at the support level

Contribute to safe operation and maintenance of the deck equipment

26 Knowledge and understanding of the construction, application and purpose of deck equipment on fishing vessels.

27 Understanding of the procedures for safe operation and maintenance of deck equipment.

28 Knowledge of fibre ropes, wire ropes and chains for use and maintenance, including precautions to take.

29 Understanding watertight and weathertight integrity of common types of fishing vessels.

Chapter III
Guidance regarding basic training for all fishing vessel personnel

Section B-III/1
Guidance regarding basic training and onboard safety familiarization for all fishing vessel personnel

Personal survival techniques

1 The training in personal survival techniques required by section A-III/1 should include the following theoretical and practical knowledge:

.1 actions to be taken at rescue operations by a helicopter; and

.2 getting the survival craft quickly away of the fishing vessel and fishing gear.

Fire prevention and fire fighting

2 The training in fire prevention and fire fighting required by section A-III/1 should include the following theoretical and practical knowledge:

.1 re-entry procedure; and

.2 fire prevention measures such as:

.1 prohibition of smoking;

.2 location of heat sources to prevent contact with combustible materials;

.3 control of use of blowlamps, cutting or welding equipment;

.4 risk assessment and purchase control of articles and substances in order to avoid the introduction of fire hazards, where possible;

.5 risk assessment and control of the use of articles and substances that pose fire hazards in order to avoid the introduction of fire risks;

.6 adequate cleanliness of working areas; and

.7 adequate supervision of cooking facilities.

Elementary first aid

3 The training in elementary first aid required by section A-III/1 should include the following theoretical and practical knowledge:

.1 use of telemedical assistance service;[18] and

.2 means to obtain medical advice by radio.

[18] See annex 1 to MSC/Circ.960 on *Medical assistance at sea and importance of the role of telemedical assistance services*.

Personal safety and social responsibilities

4 The training in personal safety and social responsibilities required by section A-III/1 should include the following theoretical and practical knowledge:

.1 consequences of panic;

.2 immediate and correct action to assist a craft in distress;

.3 risk assessment by:

.1 identification of hazards;

.2 identification of associated risk for health and safety;

.3 decision on appropriate control measures;

.4 prediction of potential outcomes; and

.5 determination of level of risk;

.4 risk mitigation methods, including:

.1 elimination;

.2 guarding of hazards and persons;

.3 procedure and training;

.4 personal protective equipment (PPE);

.5 signage; and

.6 maintenance;

.5 near misses, incidents and accidents, including:

.1 identification of root causes;

.2 recognition of contributing factors;

.3 evaluation of relevant outcomes;

.4 determination of the difference between a near miss, an incident and an accident;

.5 prevention of further development of near misses, incidents and accidents including the safe isolation of equipment, machinery and systems and the future occurrence of near misses, incidents and accidents; and

.6 reporting of a near miss, incident or accident according to legislative requirements, internal safety procedures and confidentiality requirements; and

.6 communication phrases and handling of signals during fishing operations such as:

.1 shooting and hauling of the fishing gear;

.2 transferring the catch;

.3 working with deck and fishing gear; and

.4 lifting.

5 The training in personal safety and social responsibilities required by section A-III/1 should include awareness training in the following elements:

.1 methods for safety management appropriate to fishing vessels, including:

.1 policy statement;

.2 crew introduction;

.3 onboard training;

.4 working procedures;

.5 maintenance schedules;

.6 fishing vessel design;

.7 checklists;

.8 health surveillance; and

.9 agreed common language;

.2 participation in continued monitoring of improvement of safety by:

.1 understanding the reasons for revising existing safety methods including preventive and corrective actions;

.2 understanding of guidance to support revision processes including existing methods, legislation, and accident, incident and near miss reports;

.3 evaluating at least the following options necessary for the successful implementation of changes:

.1 feasibility of proposed changes;

.2 effectiveness of the implementation of changes; and

.3 current behaviour/culture on board;

.3 recognition of a near miss, an incident and an accident;

.4 risks on board fishing vessels during fishing operations such as:

.1 shooting and hauling of the fishing gear; and

.2 transferring the catch;

.5 risks on board fishing vessels with regard to:

.1 falls;

.2 crushing;

.3 fluctuation and loose load; and

.4 cable breaks; and

.6 risks, hazards and safe working procedures for operational safety during:

.1 mooring;

.2 unmooring;

.3 working at height;

.4 hot work; and

.5 working with hazardous substances.

Section B-III/a[19]
Guidance on basic sustainable fisheries training for all fishing vessel personnel

1 Fishing vessel personnel should, before being assigned to any shipboard duties, receive appropriate approved basic sustainable fisheries training in:

.1 sustainable fisheries;

.2 prevention of pollution of the marine environment; and

.3 efficient use of energy and reduction of air pollution.

Above trainings should cover competences given below.

COMPETENCES

Define sustainable fisheries

2 Understand that sustainable development requires a balance of social responsibility (People), care for the environment (Planet) and economic prosperity (Profit).

3 Be able to apply the principles of sustainable development to the fishing industry.

[19] There is no corresponding regulation in the Convention or section in part A of the Code for section B-III/a.

Recognize the ocean as a diverse and valuable environment

4 Understand the importance of healthy oceans for the fishing industry.

Prevent plastic pollution to the (marine) environment

5 Be able to properly handle garbage, as defined in MARPOL Annex V, on board vessel and the correct disposal in ports.

Contribute to the efficient use of energy and reduction of air pollution

6 Have knowledge of the impacts of air pollution on the environment.

7 Understand the urgency of climate change and the way the maritime sector contributes to the problem.

8 Be able to contribute to the efficient use of energy and the reduction of air pollution.

Ensure a positive reputation of the fishing industry

9 Understand the importance of interaction with society, transparency and accountability to ensure a good reputation and a "licence to operate".

Chapter IV
Guidance regarding watchkeeping

Section B-IV/1

(No provisions)

Section B-IV/2

(No provisions)

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ANNEX 15

RESOLUTION MSC.563(108)
(adopted on 23 May 2024)

AMENDMENTS TO THE REVISED RECOMMENDATION ON TESTING OF LIFE-SAVING APPLIANCES (RESOLUTION MSC.81(70))

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING ALSO that the Assembly, when adopting resolution A.689(17) on *Testing of life-saving appliances*, authorized the Committee to keep the annexed Recommendation on testing of life-saving appliances under review and to adopt, when appropriate, amendments thereto,

RECALLING FURTHER that, since the adoption of resolution A.689(17), the Committee has amended the Recommendation annexed thereto by resolutions MSC.54(66) and MSC.81(70), and by circulars MSC/Circ.596, MSC/Circ.615 and MSC/Circ.809,

RECOGNIZING the need to ensure that the references in the *Revised recommendation on testing of life-saving appliances* (resolution MSC.81(70)) are kept up to date,

1 ADOPTS the *Amendments to the Revised recommendation on testing of life-saving appliances* (MSC.81(70)), set out in the annex to the present resolution;

2 RECOMMENDS that Governments apply the amendments when testing life-saving appliances, as set out in the annex to the present resolution;

3 INVITES Contracting Governments to the SOLAS Convention to bring the above amendments to the attention of all parties concerned.

ANNEX

AMENDMENTS TO THE REVISED RECOMMENDATION ON TESTING OF LIFE-SAVING APPLIANCES (RESOLUTION MSC.81(70))

PART 1 - PROTOTYPE TEST FOR LIFE-SAVING APPLIANCES

2.8 Water performance tests

Test subjects

1 The following new paragraph 2.8.2.1 is added after existing paragraph 2.8.2:

"2.8.2.1 If a "no turn" is recorded for a test subject wearing the RTD during the righting tests in 2.8.5, the test subject may be replaced with one additional test subject from the same height and weight category and in accordance with 2.7.2."

Assessment

2 Paragraph 2.8.7.1 is replaced by the following:

"2.8.7 After the water tests described in 2.8.5 and .6 above:

.1 *Turning time:* The average turn time for all subjects in the candidate lifejacket should not exceed the average time in the RTD plus 1 s, and at the end of each righting test, each test subject should attain a face-up position where the nose and mouth are clear of the water;

.2 *Freeboard*: The average freeboard of all the subjects should not be less than the average for the RTD minus 10 mm;

.3 *Torso angles*: The average of all subjects' torso angles should be not less than the average for the RTD minus 10°;

.4 *Faceplane (head) angles*: The average of all subjects' faceplane angles should be not less than the average for the RTD minus 10°; and

.5 *Lifejacket light location*: The position of the lifejacket light should permit it to be visible over as great a segment of the upper hemisphere as is practicable."

PART 2 - PRODUCTION AND INSTALLATION TESTS

6.1 Launching appliances using falls and winches

Installation tests

Loaded test

3 Paragraph 6.1.2 is replaced by the following:

"6.1.2 The survival craft or rescue boat, loaded with its normal equipment or an equivalent mass and a distributed mass equivalent to that of the number of persons, each weighing 75 kg or 82.5 kg, as applicable, it is permitted to accommodate, should be released by operation of the launching control on deck. The speed at which the survival craft or rescue boat is lowered into the water should be not less than that obtained from the formula:

$S = 0.4 + 0.02H$, *or* 1.0, *whichever is less*

where: S = speed of lowering (m/s)
H = height from davit head to the waterline at the lightest seagoing condition (m).

The maximum lowering speed should be 1.3 m/s or as decided by the Administration in accordance with paragraph 6.1.2.10 of the LSA Code."

Loaded lowering test (brake test only)

4 Paragraph 6.1.5 is replaced by the following:

"6.1.5 The survival craft or rescue boat loaded with its normal equipment or an equivalent mass and a distributed mass equal to that of the number of persons, each weighing 75 kg or 82.5 kg, it is permitted to accommodate +10% of the working load, should be released by the operation of the launching controls on deck. When the craft has reached its maximum lowering speed, the brake should be abruptly applied to demonstrate that the attachments of the davits and winches to the ship's structure are satisfactory. The maximum lowering speed should be 1.3 m/s or as decided by the Administration in accordance with paragraph 6.1.2.10 of the LSA Code."

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ANNEX 16

REVISED ROAD MAP FOR DEVELOPING A GOAL-BASED CODE FOR MARITIME AUTONOMOUS SURFACE SHIPS (MASS)

SESSIONS OF MSC	WORK PLAN
MASS-ISWG 3 (9 – 13 Sep 2024)	- Further consideration of the draft MASS Code, in particular part 3
MSC 109 (2 – 6 Dec 2024)	- Consideration of the outcome of the MASS-ISWG 3 - Further develop the non-mandatory MASS Code - Identify matters for consideration by the appropriate sub-committees* and liaison with other international organizations such as ILO, ISO, IHO, IALA and IMSO - Update this road map
MSC 110 (May 2025)	- Finalization and adoption of the new non-mandatory MASS Code - Consideration of the outcome of the MASS-ISCG, established at MSC 108 - Involve relevant sub-committees to develop guidance on the non-mandatory Code - Update this road map
MSC 111 (1st half 2026)	- Develop a framework for an Experience-building phase (EBP) post adoption of non-mandatory MASS Code
MSC 1XX (2028)	- Commence development of the mandatory MASS Code, based on the non-mandatory Code, and consider amendments to SOLAS (new chapter) for the Code's adoption
MSC 1XX	- Adoption of the mandatory Code (latest 1 July 2030 for entry into force on 1 Jan 2032)

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* Tasks for the sub-committees will be included in this road map when agreed by the Committee.

ANNEX 17

RESOLUTION MSC.564(108)
(adopted on 23 May 2024)

SECURITY SITUATION IN THE RED SEA AND GULF OF ADEN RESULTING FROM HOUTHI ATTACKS ON COMMERCIAL SHIPS AND SEAFARERS

THE MARITIME SAFETY COMMITTEE,

RECALLING the purposes of the International Maritime Organization (IMO) as set forth in Article 1 of the Convention, and the mission in the Strategic Plan of IMO to promote safe, secure, environmentally sound, efficient, and sustainable shipping through cooperation,

REAFFIRMING its commitment to the principles enshrined in the United Nations Charter, the United Nations Convention on the Law of the Sea (UNCLOS), and all relevant international conventions and agreements related to maritime safety, security and environmental protection,

RECALLING that United Nations Security Council resolution 2722 underscores support for the navigational rights and freedoms of vessels in the Red Sea, condemns Houthi attacks on commercial ships, demands the Houthis immediately cease such attacks and release the **M/V Galaxy Leader** and its crew that were seized by the Houthis on 19 November 2023,

RECALLING ALSO the statement of the IMO Secretary-General on 11 January 2024 supporting United Nations Security Council resolution 2722 affirming that the exercise of navigational rights and freedom by merchant vessels, in accordance with international law, must be respected,

NOTING that the illegal and unjustifiable attacks by the Houthis on ships transiting the Red Sea and the Gulf of Aden have killed innocent seafarers and continue to jeopardize the lives and safety of seafarers,

NOTING ALSO that, despite repeated warnings from the international community, the Houthis have carried out around 50 dangerous and destabilizing maritime attacks since 19 November 2023,

HIGHLIGHTING that the Houthis' reckless actions are putting innocent lives at risk, disrupting the delivery of urgently needed humanitarian aid to those who need it most, increasing the cost of this humanitarian assistance, and destabilizing the region,

HIGHLIGHTING ALSO that the Houthis' reckless actions pose a direct threat to the freedom of navigation in one of the world's most critical waterways, are causing major disruptions to regional and global trade, and are impeding the movement of critical food, fuel, humanitarian assistance, and other essential goods throughout the world,

NOTING that the 25 seafarers who make up the crew of the **M/V Galaxy Leader** who have been held captive by the Houthis since 19 November 2023 are innocent victims of the ongoing aggression against world shipping, and their plight is a major concern as the merchant shipping community continues to come under attack,

RECALLING the statement of international industry bodies on 19 February 2024 calling on the Houthis to release the crew of the **M/V Galaxy Leader**,

RECALLING ALSO the statements of the IMO Secretary-General on numerous occasions, urging for the immediate release of the **M/V Galaxy Leader** and its crew,

NOTING the inevitable increased air emissions from ships as they reroute around Africa or transit the Red Sea and Gulf of Aden at increased speed,

RECALLING that the missile attack by the Houthis on the **M/V Rubymar** on 18 February 2024 resulted in the vessel sinking, causing pollution to the marine environment and consequential effects on the livelihoods of local communities,

RECALLING ALSO the shipping industry best practice guidance promulgated through IMO's website and the industry security website,*

RECOGNIZING the IMO Secretary-General's commitment that IMO will continue to contribute to enhancing the safety of seafarers and transit of vessels of all States through the Red Sea and Gulf of Aden, and will closely monitor the situation, in collaboration with Member States and partners from the industry,

1 EXTENDS its deepest condolences to the families of those seafarers that lost their lives during the attack by the Houthis on the **M/V True Confidence** on 6 March 2024;

2 DEPLORES AND CONDEMNS in the strongest possible terms the illegal and unjustifiable attacks by the Houthis against commercial vessels transiting the Red Sea and the Gulf of Aden which threaten the safety and welfare of seafarers and the marine environment;

3 DEMANDS the Houthis immediately cease attacking commercial ships to ensure the safety and welfare of seafarers and the security of international shipping;

4 DEPLORES the Houthis' illegal seizure of the **M/V Galaxy Leader** and URGES the immediate and unconditional release of the **M/V Galaxy Leader** and its crew;

5 EMPHASIZES that all Member States should adhere to their obligations under the targeted UN arms embargo and take the necessary measures to prevent the direct or indirect supply of arms and related materiel of all types to the Houthis, as called for in United Nations Security Council resolution 2216;

6 UNDERSCORES the paramount importance of preserving the safety and welfare of seafarers and URGES Member States and observer organizations to provide maximum assistance to seafarers affected by the Houthis' reckless actions;

7 ALSO UNDERSCORES the need to preserve the security of international shipping, the marine environment, the maritime community, and the supply chains that sustain other nations;

8 STRESSES the critical importance of maintaining the freedom of navigation of commercial ships;

9 CALLS UPON all parties to seek to resolve the crisis through peaceful dialogue and diplomatic channels and ENCOURAGES any party that may have influence with the Houthis to use that influence to seek an end to Houthi attacks on commercial ships and seafarers;

* www.maritimeglobalsecurity.org

10 ENCOURAGES operators and vessels to carefully assess the nature and unpredictability of recent events, as well as the potential of continued Houthi attacks, when considering their current and imminent transit plans, based on vessel profile, business need and risk tolerance;

11 ENCOURAGES all parties to provide relevant information to IMO as appropriate;

12 DETERMINES to keep this matter under review and take such further action as may be necessary in light of developments, and INVITES other relevant Committees to do likewise as appropriate;

13 ACKNOWLEDGES the IMO Secretary-General's commitment that IMO will continue to contribute to enhancing the safety of seafarers and transit of vessels of all States through the Red Sea and the Gulf of Aden and REQUESTS the Secretary-General to closely monitor the situation, in collaboration with Member States and international industry bodies.

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ANNEX 18

RESOLUTION MSC.530(106)/REV.1
(adopted on 24 May 2024)

PERFORMANCE STANDARDS FOR
ELECTRONIC CHART DISPLAY AND INFORMATION SYSTEMS (ECDIS)

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING ALSO resolution A.886(21), by which the Assembly resolved that the function of adopting performance standards and technical specifications, as well as amendments thereto, shall be performed by the Maritime Safety Committee and/or the Marine Environment Protection Committee, as appropriate, on behalf of the Organization,

RECALLING FURTHER regulations V/19 and V/27 of the International Convention for the Safety of Life at Sea (SOLAS), 1974, which require all ships to carry adequate and up-to-date charts, sailing directions, lists of lights, notices to mariners, tide tables and all other nautical publications necessary for the intended voyage,

RECALLING resolutions A.817(19), as amended, and MSC.232(82), which have provided performance standards for electronic chart display and information systems (ECDIS),

NOTING that the up-to-date charts required by SOLAS regulations V/19 and V/27 can be provided and displayed electronically on board ships by ECDIS, and that the other nautical publications required by regulation V/27 may also be so provided and displayed,

NOTING ALSO the recent developments and enhancement of ECDIS, including new electronic navigational chart transfer functionality in the performance standards, are the necessary step towards the implementation of the e-navigation concept of harmonized Maritime Services,

RECALLING that, recognizing the need to improve the revised performance standards for ECDIS, previously adopted by resolution MSC.232(82), in order to ensure the operational reliability of such equipment and, taking into account the technological progress and experience gained, it had adopted resolution MSC.530(106), which introduced the next technical generation of IHO standards of S-100 series,

RECOGNIZING the benefit in further enhancing the performance standards, by facilitating a standardized digital exchange of ships' route plans,

RECALLING that operational guidance on the ship-shore and shore-ship exchange of static and dynamic voyage information in the context of shipboard automatic identification systems (AIS) has been adopted by the Organization,

HAVING CONSIDERED the recommendation made by the Sub-Committee on Navigation, Communications and Search and Rescue, at its tenth session,

1 ADOPTS the revised Performance standards for electronic chart display and information systems (ECDIS), set out in the annex to the present resolution;

2 RECOMMENDS Governments to ensure that ECDIS equipment:

(a) if installed on or after 1 January 2029, conforms to performance standards not inferior to those specified in the annex to the present resolution;

(b) if installed on or after 1 January 2026 but before 1 January 2029, conforms either to performance standards not inferior to those specified in the annex to the present resolution or to performance standards not inferior to those specified in the annex to resolution MSC.232(82);

(c) if installed on or after 1 January 2009 but before 1 January 2026, conforms to performance standards not inferior to those specified in the annex to resolution MSC.232(82); and

(d) if installed on or after 1 January 1996 but before 1 January 2009, conforms to performance standards not inferior to those specified in the annex to resolution A.817(19), as amended by resolutions MSC.64(67) and MSC.86(70);

3 AGREES that, for the purpose of this resolution, the expression *installed on or after 1 January 2029* means:

(a) for ships for which the building contract is placed on or after 1 January 2029, or in the absence of the contract, constructed on or after 1 January 2029, any installation date on the ship; or

(b) for ships other than those prescribed in (a) above, a contractual delivery date for the equipment or, in the absence of a contractual delivery date, the actual delivery date of the equipment to the ship on or after 1 January 2029;

4 AFFIRMS the need to keep the use of route exchange under review and to develop appropriate operational guidance to be adopted by the Organization;

5 URGES Contracting Governments to remind all stakeholders in safety of navigation and efficiency of maritime traffic:

(a) to consider routes exchanged between ship-shore and shore-ship as a basic indication of intent only; and

(b) that the master's discretion must always be respected, in accordance with SOLAS regulations V/34 and V/34-1; and

6 REVOKES resolution MSC.530(106).

ANNEX

PERFORMANCE STANDARDS FOR ELECTRONIC CHART DISPLAY AND INFORMATION SYSTEMS (ECDIS)

1 SCOPE OF ECDIS

1.1 The primary function of ECDIS is to contribute to safe navigation.

1.2 ECDIS with adequate backup arrangements may be accepted as complying with the up-to-date charts and nautical publications required by regulations V/19 and V/27 of the 1974 SOLAS Convention. For the purpose of this document, the definition of electronic navigational data service (ENDS) encompasses the nautical charts and nautical publications as defined in SOLAS chapter V and IHO standards in force.

1.3 ECDIS should be capable of displaying all nautical information necessary for safe and efficient navigation, originated and distributed by or on the authority of a government, authorized hydrographic office or other relevant government institution, as required by SOLAS regulations V/19 and V/27.

1.4 ECDIS should facilitate simple and reliable updating of the ENDS.

1.5 ECDIS should reduce the navigational workload compared to using the paper chart and paper nautical publications. It should enable the mariner to execute in a convenient and timely manner all route planning, route monitoring and positioning. It should be capable of continuously indicating, monitoring and recording the ship's position.

1.6 The ECDIS display may also be used for the display of radar, radar tracked target information, AIS and other appropriate data layers to assist in route monitoring.

1.7 ECDIS should provide appropriate alerts or indications with respect to the information displayed or malfunction of the equipment (see appendix 5). ECDIS should meet the requirements of the *Performance standards for bridge alert management* (resolution MSC.302(87)).

1.8 When the relevant chart information is not available in the appropriate form (see section 4), some ECDIS equipment may operate in the raster chart display system (RCDS) mode as defined in appendix 7. RCDS mode of operation should conform to performance standards not inferior to those set out in appendix 7.

2 APPLICATION OF THESE STANDARDS

2.1 These performance standards should apply to all ECDIS equipment carried on all ships, as follows:

.1 dedicated stand-alone workstation; and

.2 a multifunction workstation as part of an INS.

2.2 These performance standards apply to ECDIS mode of operation, ECDIS in RCDS mode of operation as specified in appendix 7 and ECDIS backup arrangements as specified in appendix 6.

2.3 Requirements for structure, format, encryption presentation of the ENDS are within the scope of relevant IHO standards, including those listed in appendix 1.

2.4 In addition to the general requirements set out in resolution A.694(17)[1] and the presentation requirements set out in resolution MSC.191(79), as amended, ECDIS equipment should meet the requirements of these standards and follow the relevant guidelines on ergonomic principles adopted by the Organization.[2]

3 DEFINITIONS

For the purpose of these performance standards:

3.1 *Electronic chart display and information system (ECDIS)* means a navigation information system which with adequate backup arrangements can be accepted as complying with the up-to-date nautical chart and nautical publications required by SOLAS regulations V/19 and V/27, by displaying selected information from a system database with positional information from navigation sensors to assist the mariner in route planning and route monitoring and, if required, display additional navigation-related information.

3.2 *Electronic navigational chart (ENC)* means the database, standardized as to content, structure and format, issued for use with ECDIS by or on the authority of a government, authorized hydrographic office or other relevant government institution, and conforming to IHO standards. The ENC contains all the nautical chart information necessary for safe navigation.

3.3 *Electronic navigational data service (ENDS)* means a special-purpose database compiled from nautical chart and nautical publication data, standardized as to content, structure and format, issued for use with ECDIS by or on the authority of a government, authorized hydrographic office or other relevant government institution, and conforming to IHO standards; and which is designed to meet the requirement of marine navigation and the nautical charts and nautical publications carriage requirements in SOLAS regulations V/19 and V/27. The navigational base layer of ENDS is the electronic navigational chart (ENC).

3.4 *System database* means a database, in the manufacturer's internal ECDIS format, resulting from the lossless transformation of the ENDS contents and its updates. It is this database that is accessed by ECDIS for the display generation and other navigational functions, and is equivalent to up-to-date ENDS.

3.5 *Standard display* is the display mode intended to be used as a minimum during route planning and route monitoring. The chart content is listed in appendix 2.

3.6 *Display base* means the chart content as listed in appendix 2 and which cannot be removed from the display. It is not intended to be sufficient for safe navigation.

3.7 Further information on ECDIS definitions may be found in IHO Hydrographic Dictionary Publication S-32 (see appendix 1).

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1 MSC/Circ.982 on *Guidelines on ergonomic criteria for bridge equipment and layout.*

2 Refer to Publication IEC 60945.

MODULE A – DATABASE

4 PROVISION AND UPDATING

4.1 The ENDS information to be used in ECDIS should be issued by or on the authority of a government, government-authorized hydrographic office or other relevant government institution, and conform to IHO standards as listed in appendix 1.

4.2 The contents of the system database should be adequate and up to date for the intended voyage to comply with SOLAS regulations V/19 and V/27.

4.3 It should not be possible to alter the contents of the ENDS or system database information transformed from the ENDS. The display of the content of ENDS should be compliant with IHO standards including rules set for interoperability.

4.4 ECDIS should be capable of accepting official updates to the ENDS provided in conformity with IHO standards. These updates should be automatically applied to the system database. By whatever means updates are received, the implementation procedure should not interfere with the display in use.

4.5 ECDIS should also be capable of accepting updates to the ENDS data entered manually with simple means for verification prior to the final acceptance of the data. They should be distinguishable on the display from ENDS information and its official updates and not affect display legibility.

4.6 ECDIS should keep and display on demand a record of updates including time of application to the system database. This record should include updates for each ENDS until it is superseded by a new edition.

4.7 ECDIS should allow the mariner to display updates in order to review their contents and to ascertain that they have been included in the system database.

4.8 ECDIS should be capable of accepting ENDS in accordance with the IHO Data Protection Scheme.[3]

MODULE B – OPERATIONAL AND FUNCTIONAL REQUIREMENTS

5 DISPLAY OF SYSTEM DATABASE INFORMATION

5.1 An ECDIS should be capable of accepting and converting an ENDS and their updates into a system database. ECDIS should be capable of displaying and processing all system database information as specified by IHO. The ECDIS may also be capable of accepting a system database resulting from conversion ashore, in accordance with IHO resolutions.[4]

5.2 System database information available for display during route planning and route monitoring should be subdivided into the following three categories: display base, standard display and all other information (see appendix 2).

5.3 ECDIS should present the standard display at any time by a single operator action.

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[3] IHO Publication S-63 – Data Protection Scheme (for S-57 ENCs) and S-100, Part 15 – Data Protection Scheme (for S-100 products) (see appendix 1).

[4] IHO Publication M-3 – Resolutions of the IHO.

5.4 When an ECDIS is switched on following a switch off or power failure, it should return to the most recent manually selected settings for display.

5.5 It should be easy to add or remove information from the ECDIS display. It should not be possible to remove information contained in the display base.

5.6 For any operator-identified geographical position (e.g. by cursor picking), ECDIS should display on demand the information about the chart objects associated with such a position.

5.7 It should be possible to change the display scale by appropriate steps, e.g. by means of either chart scale values or ranges in nautical miles.

5.8 It should be possible for the mariner to select a safety contour from the information provided by the system database. ECDIS should emphasize the safety contour over other contours on the display. However:

.1 if the mariner does not specify a safety contour, this should default to 30 m. If the safety contour specified by the mariner or the default 30 m contour is not in the displayed system database, the safety contour shown should default to the next deeper contour;

.2 if the safety contour in use becomes unavailable owing to a change in source data, the safety contour should default to the next deeper contour;

.3 in each of the above cases, an indication should be provided; and

.4 the mariner should be able to select a permanent display of safety contour and safety depth settings.

5.9 It should be possible for the mariner to select a safety depth. ECDIS should emphasize soundings equal to or less than the safety depth whenever spot soundings are selected for display.

5.10 It should be possible to use dynamic water level adjustment and an indication should be provided.

5.11 The ENDS and all updates to it should be displayed without any degradation of their information content.

5.12 ECDIS should provide a means to ensure that the ENDS and all updates to it have been correctly loaded into the system database.

5.13 The ENDS data and updates to it should be clearly distinguishable from other displayed information, including those listed in appendix 3.

6 SCALE

6.1 ECDIS should provide an indication if:

.1 the information is displayed at a larger scale than that contained in the ENC;

.2 own ship's position is covered by an ENC at a larger scale than that provided by the display; or

.3 information at own ship's position is not displayed because of applying scale minimum for display.

7 DISPLAY OF OTHER NAVIGATIONAL INFORMATION

7.1 Radar information and/or AIS information may be transferred from systems compliant with the relevant standards of the Organization. Other navigational information may be added to the ECDIS display. However, it should not degrade the displayed system database information and it should be clearly distinguishable from the system database information.

7.2 It should be possible to remove the radar information, AIS information and other navigational information by single operator action.

7.3 ECDIS and added navigational information should use a common reference system. If this is not the case, an indication should be provided.

7.4 Radar

7.4.1 Transferred radar information may contain a radar image and/or tracked target information.

7.4.2 If the radar image is added to the ECDIS display, the chart and the radar image should match in scale, projection and orientation.

7.4.3 The radar image and the position from the position sensor should both be adjusted automatically for antenna offset from the conning position.

8 DISPLAY MODE AND GENERATION OF THE NEIGHBOURING AREA

8.1 It should always be possible to display the system database information in a "north-up" orientation. Other orientations are permitted. When such orientations are displayed, the orientation should be altered in steps large enough to avoid unstable display of the chart information.

8.2 ECDIS should provide for true-motion mode. Other modes are permitted.

8.3 When true-motion mode is in use, reset and generation of the chart display of the neighbouring area should take place automatically at own ship's distance from the edge of the display as determined by the mariner.

8.4 It should be possible to manually change the displayed chart area and the position of own ship relative to the edge of the display.

8.5 If the area covered by the ECDIS display includes waters for which no ENC at a scale appropriate for navigation is available, the areas representing those waters should carry an indication (see appendix 5) to the mariner to refer to the paper chart or to the RCDS mode of operation (see appendix 7).

9 COLOURS AND SYMBOLS

9.1 IHO-recommended colours and symbols should be used to represent system database information.[5]

[5] IHO Publication S-52 - Specifications for Chart Content and Display Aspects of ECDIS and S-101 – Portrayal Catalogue (see appendix 1) and S-98.

9.2 The colours and symbols other than those mentioned in 9.1 should comply with the applicable requirements contained in the IMO standards for navigational symbols.[6]

9.3 ECDIS should allow the mariner to select whether own ship is displayed in true scale or as a symbol.

10 DISPLAY REQUIREMENTS

10.1 ECDIS should be capable of displaying information for:

.1 route planning and supplementary navigation tasks; and

.2 route monitoring.

10.2 The effective size of the chart presentation for route monitoring should be at least 270 mm x 270 mm.

10.3 The display should be capable of meeting the colour and resolution recommendations of IHO.[7]

10.4 The method of presentation should ensure that the displayed information is clearly visible to more than one observer in the conditions of light normally experienced on the bridge of the ship by day and by night.

10.5 If information categories included in the standard display (see appendix 2) are removed to customize the display, this should be permanently indicated. Identification of categories which are removed from the standard display should be shown on demand.

11 ROUTE PLANNING, EXCHANGE, MONITORING AND VOYAGE RECORDING

11.1 It should be possible to carry out route planning, route monitoring and exchanging of route plans in a simple and reliable manner.

11.2 The largest scale data available in the system database for the area given should always be used by the ECDIS for all alerts or indications of crossing the ship's safety contour and of entering a prohibited area, and for alerts and indications according to appendix 5.

11.3 Route planning and exchange

11.3.1 It should be possible to carry out route planning including both straight, curved segments and schedule.

11.3.2 It should be possible to adjust a planned route alphanumerically and graphically including:

.1 adding waypoints to a route;

.2 deleting waypoints from a route; and

.3 changing the position of a waypoint.

6 SN.1/Circ.243/Rev.2 on *Guidelines for the presentation of navigational-related symbols, terms and abbreviations*.

7 IHO Publication S-52 - Specifications for Chart Content and Display Aspects of ECDIS and S-101 – Portrayal Catalogue (see appendix 1) and S-98.

11.3.3 It should be possible to plan one or more alternative routes in addition to the selected route. The selected route should be clearly distinguishable from the other routes.

11.3.4 It should be possible to exchange, send and receive both selected and alternative route plans with shore-based Maritime Service providers. The exchange should be in accordance with standard formats for route plan exchange[8] and should use standard service interfaces including information security protection[9] to allow for secure machine-machine communication. Received route plans should be considered as a basic indication of preferred intention and should be indicated by ECDIS as for voyage planning purposes only. The use of the received route plans should be controlled by the master, in accordance with SOLAS regulations V/34 and V/34-1, respecting the master's professional judgement and discretion.

11.3.5 The exchanged route plan should include a route schedule including estimated time of departure and estimated time of arrival as soon as they can be determined with reasonable accuracy.

11.3.6 A graphical indication is required if the mariner plans a route closer than a user-specified distance from own ship's safety contour.

11.3.7 A graphical indication should be given if the mariner plans a route closer than a user-specified distance from the boundary of a user-selectable category of prohibited area or geographic area for which special conditions exist (see appendix 4). A graphical indication should also be given if the mariner plans a route closer than a user-specified distance from a user-selectable category of point objects, such as a fixed or floating aid to navigation or isolated danger. The user-selectable categories should be the same as the user selections for the display of objects and be based on IHO standards. There should be a permanent indication when any user-selectable categories are deselected. Details of the deselection should be available on demand.

11.3.8 It should be possible for the mariner to select that the indications of 11.3.6 and 11.3.7 take into account accuracy information of relevant hydrographic information, as defined by IHO standards.

11.3.9 It should also be possible to perform a complete route check to support the appraisal and planning process according to the applicable parts of resolution A.893(21). Detected objects should be available for review in graphical form and, on demand, in textual form.

11.3.10 It should be possible for the mariner to specify a cross track limit of deviation from the planned route at which an automatic off-track alarm should be activated.

11.4 Route monitoring

11.4.1 For route monitoring the selected route and own ship's position should appear whenever the display covers that area.

11.4.2 It should be possible to display a sea area that does not have the ship on the display (e.g. for look ahead, route planning), while route monitoring. If this is done on the display used for route monitoring, the automatic route monitoring functions (e.g. updating ship's position, and providing alerts and indications) should be continuous. It should be possible to return to the route monitoring display covering own ship's position immediately by single operator action.

8 IEC 61174/IEC 63173-1.

9 IEC 63173-2.

11.4.3 It should be possible to select that ECDIS gives an alarm and related graphical indication if, within a specified time or distance set by the mariner, own ship will pass closer than a user-selected distance from the safety contour. There should be a permanent indication when the safety contour alarm is deselected.

11.4.4 ECDIS should give a warning or caution, or indication, as selected by the mariner, and related graphical indication if, within a specified time or distance set by the mariner, own ship will pass closer than a user-selected distance from the boundary of a user-selectable category of prohibited area or of a geographical area for which special conditions exist (see appendix 4). The user-selectable categories should be the same as user selections for the display of objects and be based on IHO standards. There should be a permanent indication when any user-selectable categories are deselected. Details of the deselection should be available on demand.

11.4.5 An alarm should be given when the specified cross track limit for deviation from the selected route, if defined by the mariner when route planning, is exceeded.

11.4.6 ECDIS should give a warning or caution or indication as selected by the mariner and related graphical indication if, continuing on its present course and speed, over a specified time or distance set by the mariner, own ship will pass closer than a user-specified distance from a user-selectable category of danger (e.g. obstruction, wreck, rock) that is shallower than the mariner's safety contour or a user-selectable category of aid to navigation. The user-selectable categories should be the same as user selections for the display of objects and be based on IHO standards. There should be a permanent indication when any of the user-selectable categories are deselected. Details of the deselection should be available on demand.

11.4.7 A graphical indication should be given if the current or the next leg of the selected route passes closer than a user-specified distance from the safety contour.

11.4.8 A graphical indication should be given if the current or the next leg of the selected route goes closer than a user-specified distance from the boundary of a user-selectable category of prohibited area or a geographic area for which special conditions exist (see appendix 4). A graphical indication should also be given if the selected route goes closer than a user-specified distance from a user-selectable category of point objects, such as a fixed or floating aid to navigation or isolated danger. The user-selectable categories should be the same as user selections for the display of objects and be based on IHO standards.

11.4.9 It should be possible for the mariner to select that the indications of 11.4.3, 11.4.4, 11.4.6, 11.4.7 and 11.4.8 take into account accuracy information of relevant hydrographic information, as defined by IHO standards.

11.4.10 The ship's position should be derived from a continuous positioning system of an accuracy consistent with the requirements of safe navigation. Whenever possible, a second independent positioning source, preferably of a different type, should be provided. In such cases, ECDIS should be capable of identifying discrepancies between the two sources.

11.4.11 ECDIS should provide a warning when the input from position, heading or speed sources is lost. ECDIS should also repeat, but only as an indication, any alerts or indication passed to it from position, heading or speed sources.

11.4.12 A warning should be given by ECDIS when the ship reaches a specified time or distance, set by the mariner, in advance of a critical point on the planned route.

11.4.13 The positioning system and the system database should be on the same geodetic datum. ECDIS should give a warning if this is not the case.

11.4.14 It should be possible to display alternative routes in addition to the selected route. The selected route should be clearly distinguishable from the other routes. During the voyage, it should be possible for the mariner to modify the selected route or change to an alternative route.

11.4.15 If the selected route is changed during the voyage, it should be possible to send the updated route plan to shore-based Maritime Service providers. A route plan received from shore-based Maritime Service providers should only be selected for monitoring after confirmation by the master.

11.4.16 It should be possible to display:

.1 time labels along a ship's track manually on demand and automatically at intervals selected between 1 and 120 minutes; and

.2 an adequate number of points, free movable electronic bearing lines, variable and fixed range markers and other symbols required for navigation purposes and specified in appendix 3.

11.4.17 It should be possible to enter the geographical coordinates of any position and then display that position on demand. Also, it should be possible to select any point (features, symbol or position) on the display and read its geographical coordinates on demand.

11.4.18 It should be possible to adjust the displayed geographic position of the ship manually. This manual adjustment should be indicated alphanumerically on the screen, maintained until altered by the mariner and automatically recorded.

11.4.19 ECDIS should provide the capability to enter and plot manually obtained bearing and distance lines of position (LOP), and calculate the resulting position of own ship. It should be possible to use the resulting position as an origin for dead reckoning.

11.4.20 ECDIS should indicate discrepancies between the positions obtained by continuous positioning systems and positions obtained by manual observations.

11.5 Voyage recording

11.5.1 ECDIS should store and be able to reproduce certain minimum elements required to reconstruct the navigation and verify the official database used during the previous 12 hours. The following data should be recorded at one-minute intervals:

.1 to ensure a record of own ship's past track: time, position, heading, and speed;

.2 to ensure a record of official data used: ENC source, edition, date, cell and update history; and

.3 any changes in safety contour, look ahead and route monitoring alert settings.

11.5.2 ECDIS should output the information listed in 11.5.1.2 and 11.5.1.3 to a voyage data recorder.

11.5.3 In addition, ECDIS should record the complete track for the entire voyage, with time marks at intervals not exceeding 4 hours.

11.5.4 It should not be possible to manipulate or change the recorded information.

11.5.5 ECDIS should have a capability to preserve the record of the previous 12 hours and the voyage track.

12 CALCULATIONS AND ACCURACY

12.1 The accuracy of all calculations performed by ECDIS should be independent of the characteristics of the output device and should be consistent with the system database accuracy.

12.2 Bearings and distances drawn on the display or those measured between features already drawn on the display should have accuracy no less than that afforded by the resolution of the display.

12.3 The system should be capable of performing and presenting the results of at least the following calculations:

.1 true distance and azimuth between two geographical positions;

.2 geographic position from known position and distance/azimuth; and

.3 geodetic calculations such as spheroidal distance, rhumb line and great circle.

13 PERFORMANCE TESTS, MALFUNCTIONS ALERTS AND INDICATIONS

13.1 ECDIS should be provided with means for either automatically or manually carrying out onboard tests of major functions. In case of a failure, the test should display information to indicate which module is at fault.

13.2 ECDIS should provide a suitable warning or indication of system malfunction.

14 BACKUP ARRANGEMENTS

Adequate backup arrangements should be provided to ensure safe navigation in case of an ECDIS failure; see appendix 6.

.1 Facilities enabling a safe takeover of the ECDIS functions should be provided in order to ensure that an ECDIS failure does not develop into a critical situation.

.2 A backup arrangement should provide means of safe navigation for the remaining part of a voyage in the case of an ECDIS failure.

MODULE C – INTERFACING AND INTEGRATION

15 CONNECTIONS WITH OTHER EQUIPMENT[10]

15.1 ECDIS should not degrade the performance of any equipment providing sensor inputs. Nor should the connection of optional equipment degrade the performance of ECDIS below this standard.

15.2 ECDIS should be connected to the ship's position-fixing system, to the gyro-compass and the speed and distance measuring device. For ships not fitted with a gyro-compass, ECDIS should be connected to a marine transmitting heading device.

15.3 ECDIS may provide a means to supply system database information to external equipment.

16 POWER SUPPLY

16.1 It should be possible to operate ECDIS and all equipment necessary for its normal functioning when supplied by an emergency source of electrical power in accordance with the appropriate requirements of SOLAS chapter II-1.

16.2 Changing from one source of power supply to another or any interruption of the supply for a period of up to 45 seconds should not require the equipment to be manually re-initialized.

[10] Publication IEC 61162.

APPENDIX 1

REFERENCE DOCUMENTS

The following international organizations have developed technical standards and specifications, as listed below, for use in conjunction with this standard. The latest edition of these documents should be obtained from the organization concerned:

INTERNATIONAL MARITIME ORGANIZATION (IMO)

Address: International Maritime Organization
4 Albert Embankment
London SE1 7SR
United Kingdom

Phone: +44 207 735 76 11
Fax: +44 207 587 32 10
Email: info@imo.org
Web: http://www.imo.org

Publications

Resolution MSC.191(79), as amended by resolution MSC.466(101), on *Performance standards for the presentation of navigation-related information on shipborne navigational displays*

Resolution A.694(17) on *Recommendations on general requirements for shipborne radio equipment forming part of the Global Maritime Distress and Safety System (GMDSS) and for electronic navigational aids*

Resolution MSC.302(87) on *Performance standards for bridge alert management*

MSC.1/Circ.1503/Rev.2 on *ECDIS – Guidance for good practice*

SN.1/Circ.243/Rev.2 on *Guidelines for the presentation of navigation-related symbols, terms and abbreviations*

MSC/Circ.982 on *Guidelines on ergonomic criteria for bridge equipment and layout*

INTERNATIONAL HYDROGRAPHIC ORGANIZATION (IHO)

Address: Directing Committee
International Hydrographic Organization
BP 445
MC 98011 Monaco Cedex
Principality of Monaco

Phone: +377 93 10 81 00
Fax: +377 93 10 81 40
Email: info@iho.int
Web: http://www.iho.int

Publications

IHO Publication S-52, Specifications for Chart Content and Display Aspects of ECDIS

IHO Publication S-52 appendix 1, Guidance on Updating the Electronic Navigational Chart

IHO Publication S-52 appendix 2, Colour and Symbol Specifications for ECDIS

IHO Publication S-32, Hydrographic Dictionary

IHO Publication S-57, IHO Transfer Standard for Digital Hydrographic Data

IHO Publication S-100, IHO Universal Hydrographic Data Model

IHO Publication S-101 – ENC Product Specification

IHO Publication S-98 – Data Product Interoperability in S-100 Navigation Systems

IHO Publication S-61, IHO Product specification for Raster Navigational Charts (RNC)

IHO Publication S-63, IHO Data Protection Scheme

IHO Publication M-3, Resolutions of the IHO

https://iho.int/en/standards-in-force

INTERNATIONAL ELECTROTECHNICAL COMMISSION (IEC)

Address: IEC Central Office
3 rue de Varembe
PO Box 131
CH-1211 Geneva 20
Switzerland

Phone: +41 22 919 02 11
Email: info@iec.ch
Web: www.iec.ch

Publications

IEC Publication 61174, Electronic Chart Display and Information Systems (ECDIS) – Operational and Performance Requirements, Method of Testing and Required Test Results.

IEC Publication 60945, General Requirements for Shipborne Radio Equipment Forming Part of the Global Maritime Distress and Safety System and Marine Navigational Equipment.

IEC Publication 61162, *Digital Interfaces – Navigation and Radiocommunication Equipment On board Ship*.

IEC Publication 62288, Maritime Navigation and Radiocommunication Equipment and Systems – Presentation of navigation-related information – General requirements, methods of test and required test results.

IEC Publication 63173-1, Maritime Navigation and Radiocommunication Equipment and Systems – Data Interface – Part 1: S-421 Route Plan Based on S-100

IEC Publication 63173-2, Maritime Navigation and Radiocommunication Equipment and Systems – Data Interface – Part 2: Secure Communication Between Ship and Shore

APPENDIX 2

SYSTEM DATABASE INFORMATION AVAILABLE FOR DISPLAY DURING ROUTE PLANNING AND ROUTE MONITORING

1 Display base to be permanently shown on the ECDIS display, consisting of:

.1 coastline (high water);

.2 own ship's safety contour;

.3 isolated underwater dangers of depths less than the safety contour which lie within the safe waters defined by the safety contour;

.4 isolated dangers which lie within the safe water defined by the safety contour, such as fixed structures, overhead wires, etc.;

.5 scale, range and north arrow;

.6 units of depth and height; and

.7 display mode.

2 Standard display consisting of:

.1 display base;

.2 drying line;

.3 buoys, beacons, other aids to navigation and fixed structures;

.4 boundaries of fairways, channels, etc.;

.5 visual and radar conspicuous features;

.6 prohibited and restricted areas;

.7 chart scale boundaries;

.8 indication of cautionary notes;

.9 ships' routeing systems and ferry routes; and

.10 archipelagic sea lanes.

3 All other information, to be displayed individually on demand, for example:

.1 spot soundings;

.2 submarine cables and pipelines;

.3 details of all isolated dangers;

.4 details of aids to navigation;

.5 contents of cautionary notes;

.6 ENC edition date;

.7 most recent chart update number;

.8 magnetic variation;

.9 graticule; and

.10 place names.

APPENDIX 3

NAVIGATIONAL ELEMENTS AND PARAMETERS

1 Own ship

.1 Past track with time marks for primary track.

.2 Past track with time marks for secondary track.

2 Vector for course and speed made good.

3 Variable range marker and/or electronic bearing line.

4 Cursor.

5 Event.

.1 Dead reckoning position and time (DR).

.2 Estimated position and time (EP).

6 Fix and time.

7 Position line and time.

8 Transferred position line and time.

9 Tidal data

.1 Predicted tidal stream or current vector with effective time and strength.

.2 Calculated tidal stream or current vector with effective time and strength.

10 Danger highlight.

11 Clearing line.

12 Planned course and speed to make good.

13 Waypoint.

14 Distance to run.

15 Planned position with date and time.

16 Position and time of "wheel over".

APPENDIX 4

AREAS FOR WHICH SPECIAL CONDITIONS EXIST

The following are the areas which ECDIS should detect and provide an alert or indication under sections 11.3.9 and 11.4.4:

Traffic separation zone

Inshore traffic zone

Restricted area

Caution area

Offshore production area

Areas to be avoided

User-defined areas to be avoided

Military practice area

Seaplane landing area

Submarine transit lane

Anchorage area

Marine farm/aquaculture

Particularly sensitive sea area (PSSA)

APPENDIX 5

ALERTS AND INDICATORS

Section	Requirements	Information
11.4.3	Alarm	Pass closer than set distance from the safety contour
11.4.4	Warning or Caution, or Indication	Pass closer than set distance from an area with special conditions
11.4.5	Alarm	Deviation from route
11.4.6	Warning or Caution, or Indication	Pass closer than set distance from a danger in route monitoring mode
11.4.11	Warning	Positioning system failure
11.4.12	Warning	Approach to critical point
11.4.13	Warning	Different geodetic datum
13.2	Warning or Indication	Malfunction of ECDIS
5.8.3	Indication	Default safety contour
6.1.1	Indication	Information overscale
6.1.2	Indication	Larger scale ENC available
6.1.3	Indication	Information not displayed owing to scale minimum
7.3	Indication	Different reference system
8.5	Indication	No ENC available
10.5	Indication	Customized display
11.3 6	Indication	Route planning closer than set distance from the safety contour
11.3.7	Indication	Route planning closer than set distance specified area
11.4.7	Indication	Monitored route pass closer than set distance from the safety contour
11.4.8	Indication	Monitored route pass closer than set distance from a specified area or danger
13.1	Indication	System test failure

In this Performance Standard the definitions of Indicators and Alerts provided in resolution A.1021(26) *Code on Alerts and Indicators, 2009* and resolution MSC.302(87) *Performance standards for bridge alert management* apply.

Alert: Audible and/or visual announcement of a condition requiring attention. Priorities of alert are alarm, warning and caution.

Indication: Visual indication giving information about the condition of a system or equipment.

APPENDIX 6

BACKUP REQUIREMENTS

1 INTRODUCTION

As prescribed in section 14 of this performance standard, adequate independent backup arrangements should be provided to ensure safe navigation in case of ECDIS failure. Such arrangements include:

.1 facilities enabling a safe takeover of the ECDIS functions in order to ensure that an ECDIS failure does not result in a critical situation; and

.2 a means to provide for safe navigation for the remaining part of the voyage in case of ECDIS failure.

2 PURPOSE

The purpose of an ECDIS backup system is to ensure that safe navigation is not compromised in the event of ECDIS failure. This should include a timely transfer to the backup system during critical navigation situations. The backup system should allow ships to be navigated safely until the termination of the voyage.

3 FUNCTIONAL REQUIREMENTS

3.1 Required functions and their availability

3.1.1 Presentation of chart information

The backup system should display in graphical (chart) form the relevant information of the hydrographic and geographic environment which are necessary for safe navigation.

3.1.2 Route planning

The backup system should be capable of performing the route planning functions, including:

.1 taking over of the route plan originally performed on the ECDIS; and

.2 adjusting a planned route manually or by transfer from a route planning device.

3.1.3 Route monitoring

The backup system should enable a takeover of the route monitoring originally performed by the ECDIS, and provide at least the following functions:

.1 plotting own ship's position automatically, or manually on a chart;

.2 taking courses, distances and bearings from the chart;

.3 displaying the planned route;

.4 displaying time labels along ship's track; and

.5 plotting an adequate number of points, bearing lines, range markers, etc. on the chart.

3.1.4 Display information

If the backup is an electronic device, it should be capable of displaying at least the information equivalent to the standard display as defined in this performance standard.

3.1.5 Provision of chart information

.1 The chart information to be used in the backup arrangement should be the latest edition, as corrected by official updates, of that issued by or on the authority of a government, authorized hydrographic office or other relevant government institution, and conform to IHO standards.

.2 It should not be possible to alter the contents of the electronic chart information.

.3 The chart or chart data edition and issuing date should be indicated.

3.1.6 Updating

The information displayed by the ECDIS backup arrangements should be up to date for the entire voyage.

3.1.7 Scale

If an electronic device is used, it should provide an indication:

.1 if the information is displayed at a larger scale than that contained in the database; and

.2 if own ship's position is covered by a chart at a larger scale than that provided by the system.

3.1.8 If radar and other navigational information are added to an electronic backup display, all the corresponding requirements for radar information and other navigation information of this performance standard should be met.

3.1.9 If an electronic device is used, the display mode and generation of the neighbouring area should be in accordance with section 8 of this performance standard.

3.1.10 Voyage recording

The backup arrangements should be able to keep a record of the ship's actual track, including positions and corresponding times.

3.2 Reliability and accuracy

3.2.1 Reliability

The backup arrangements should provide reliable operation under prevailing environmental and normal operating conditions.

3.2.2 Accuracy

Accuracy should be in accordance with section 12 of this performance standard.

3.3 Malfunctions, alerts and indications

If an electronic device is used, it should provide a suitable warning or indication of system malfunction.

4 OPERATIONAL REQUIREMENTS

4.1 Ergonomics

If an electronic device is used, it should be designed in accordance with the ergonomic principles of ECDIS.

4.2 Presentation of information

If an electronic device is used:

.1 colours and symbols should be in accordance with the colours and symbols requirements of ECDIS; and

.2 the effective size of the chart presentation should be not less than 270 mm x 270 mm or 270 mm diameter.

5 POWER SUPPLY

If an electronic device is used:

.1 the backup power supply should be separate from the ECDIS; and

.2 it should conform to the requirements in this ECDIS performance standard.

6 CONNECTIONS WITH OTHER EQUIPMENT

6.1 If an electronic device is used, it should:

.1 be connected to the ship's position-fixing system, to the gyro-compass and to the speed and distance measuring device. For ships not fitted with a gyro-compass, ECDIS should be connected to a marine transmitting heading device; and

.2 not degrade the performance of any equipment providing sensor input.

6.2 If radar with selected parts of the ENC chart information overlay is used as an element of the backup, the radar should comply with resolution MSC.192(79).

APPENDIX 7

RCDS MODE OF OPERATION

Whenever in this appendix reference is made to any provisions of the annex related to ECDIS, the term ECDIS should be substituted by the term RCDS, system database by SRNC and ENC by RNC, as appropriate.

This appendix refers to each paragraph of the performance standards for ECDIS (i.e. the annex to which this part is appendix 7) and specifies which paragraphs of the annex either:

.1 apply to RCDS; or

.2 do not apply to RCDS; or

.3 are modified or replaced as shown in order to apply to RCDS.

Any additional requirements applicable to RCDS are also described.

1 SCOPE

1.1 Paragraph applies to RCDS.

1.2 When operating in RCDS mode, an appropriate portfolio of up-to-date paper charts (APC) should be carried on board and be readily available to the mariner.

1.3 - 1.6 Paragraphs apply to RCDS.

1.7 RCDS should provide appropriate alerts or indications with respect to the information displayed or malfunction of the equipment (see table 1 of this appendix).

1.8 Refers to appendix 7 and applies to RCDS.

2 APPLICATION OF THESE STANDARDS

2.1 - 2.4 Paragraphs apply to RCDS.

3 DEFINITIONS

3.1 *Raster chart display system* (RCDS) means a navigation information system displaying RNCs with positional information from navigation sensors to assist the mariner in route planning and route monitoring, and if required, display additional navigation-related information.

3.2 *Raster navigational chart* (RNC) means a facsimile of a paper chart originated by, or distributed on the authority of, a government-authorized hydrographic office. RNC is used in these standards to mean either a single chart or a collection of charts.

3.3 Paragraph does not apply to RCDS.

3.4 *System raster navigational chart database* (SRNC) means a database resulting from the transformation of the RNC by the RCDS to include updates to the RNC by appropriate means.

3.5 - 3.6 Paragraphs do not apply to RCDS.

3.7 Paragraph applies to RCDS.

3.8 Appropriate portfolio of up-to-date paper charts (APC) means a suite of paper charts of a scale to show sufficient detail of topography, depths, navigational hazards, aids to navigation, charted routes and routeing measures to provide the mariner with information on the overall navigational environment. The APC should provide adequate look ahead capability. Coastal States will provide details of the charts which meet the requirement of this portfolio, and these details are included in a worldwide database maintained by the IHO. Consideration should be given to the details contained in this database when determining the content of the APC.

MODULE A – DATABASE

4 PROVISION AND UPDATING OF CHART INFORMATION

4.1 The RNC used in RCDS should be the latest edition of that originated by, or distributed on the authority of, a government-authorized hydrographic office and conform to IHO standards. RNCs not on WGS 84 or PE-90 should carry metadata (i.e. additional data) to allow georeferenced positional data to be displayed in the correct relationship to SRNC data.

4.2 The contents of the SRNC should be adequate and up to date for that part of the intended voyage not covered by ENC.

4.3 It should not be possible to alter the contents of the RNC.

4.4 - 4.7 All paragraphs apply to RCDS.

4.8 Paragraph does not apply to RCDS.

MODULE B – OPERATIONAL AND FUNCTIONAL REQUIREMENTS

5 DISPLAY OF SRNC INFORMATION

5.1 RCDS should be capable of displaying all SRNC information.

5.2 SRNC information available for display during route planning and route monitoring should be subdivided into two categories:

.1 the RCDS standard display consisting of RNC and its updates, including its scale, the scale at which it is displayed, its horizontal datum, and its units of depths and heights; and

.2 any other information such as mariner's notes.

5.3 - 5.4 Paragraphs apply to RCDS.

5.5 It should be easy to add to, or remove from, the RCDS display any information additional to the RNC data, such as mariner's notes. It should not be possible to remove any information from the RNC.

5.6 - 5.10 Paragraphs do not apply to RCDS.

5.11 Paragraph applies to RCDS.

5.12 RCDS should provide a means to ensure that the RNC and all updates to it have been correctly loaded into the system RNC.

5.13 The RNC and all updates to it should be clearly distinguishable from other displayed information, including those listed in appendix 3.

5.14 There should always be an indication if the ECDIS equipment is operating in RCDS mode.

6 SCALE

This section applies to RCDS.

7 DISPLAY OF OTHER NAVIGATIONAL INFORMATION

7.1- 7.4 All paragraphs apply to RCDS.

8 DISPLAY MODE AND GENERATION OF THE NEIGHBOURING AREA

8.1 It should always be possible to display the SRNC in "chart-up" orientation. Other orientations are permitted.

8.2 - 8.4 All paragraphs apply to RCDS.

8.5 Paragraph refers to RCDS mode of operation.

9 COLOURS AND SYMBOLS

9.1 IHO-recommended colours and symbols should be used to represent SRNC information.

9.2 Paragraph applies to RCDS.

9.3 Paragraph applies to RCDS.

10 DISPLAY REQUIREMENTS

10.1 - 10.2 Paragraphs apply to RCDS.

10.3 Paragraph does not apply to RCDS.

10.4 Paragraph applies to RCDS.

10.5 Paragraph does not apply to RCDS.

10.6 RCDS should be capable of displaying, simply and quickly, chart notes which are not located on the portion of the chart currently being displayed.

11 ROUTE PLANNING, EXCHANGE, MONITORING AND VOYAGE RECORDING

11.1 Paragraphs apply to RCDS.

11.2 Paragraph does not apply to RCDS.

11.3 Route planning

11.3.1-11.3.5 Paragraphs apply to RCDS.

11.3.6-11.3.9 Paragraphs do not apply to RCDS.

11.3.10 Paragraph applies to RCDS.

11.4 Route monitoring

11.4.1 Paragraph applies to RCDS.

11.4.2 It should be possible to display a sea area that does not have the ship on the display (e.g. for look ahead, route planning), while route monitoring. If this is done on the display used for route monitoring, the automatic route monitoring functions in 11.4.11 and 11.4.12 should be continuous. It should be possible to return to the route monitoring display covering own ship's position immediately by single operator action.

11.4.3-11.4.4 Paragraphs do not apply to RCDS.

11.4.5 Paragraph applies to RCDS.

11.4.6-11.4.9 Paragraphs do not apply to RCDS.

11.4.10-11.4.12 Paragraphs apply to RCDS.

11.4.13 The RCDS should only accept positional data referenced to the WGS 84 or PE-90 geodetic datum. RCDS should give a warning if the positional data is not referenced to one of these datum. If the displayed RNC cannot be referenced to the WGS 84 or PE-90 datum then a continuous indication should be provided.

11.4.14-11.4.18 Paragraphs apply to RCDS.

11.4.19 RCDS should allow the user to manually align the SRNC with positional data. This can be necessary, for example, to compensate for local charting errors.

11.4.20 It should be possible to activate an automatic warning when the ship crosses a point or line, or is within the boundary of a mariner entered feature within a specified time or distance.

11.5 Voyage recording

11.5.1-11.5.4 All paragraphs apply to RCDS.

12 CALCULATIONS AND ACCURACY

12.1-12.3 All paragraphs apply to RCDS.

12.4 RCDS should be capable of performing transformations between a local datum and WGS 84 datum.

13 PERFORMANCE TESTS, MALFUNCTION ALARMS AND INDICATIONS

13.1-13.2 All paragraphs apply to RCDS.

14 BACKUP ARRANGEMENTS

All paragraphs apply to RCDS.

MODULE C – INTERFACING AND INTEGRATION

15 CONNECTIONS WITH OTHER EQUIPMENT

15.1-15.3 All paragraphs apply to RCDS.

16 POWER SUPPLY

16.1-16.2 All paragraphs apply to RCDS

Table 1

ALERTS AND INDICATORS IN THE RCDS MODE OF OPERATION

Paragraph	Requirement	Information
11.4.5	Alarm	Deviation from route
11.4.20	Warning	Approach to mariner entered feature, e.g. area, line
11.4.11	Warning	Position system failure
11.4.12	Warning	Approach to critical point
11.4.13	Warning or indication	Different geodetic datum
13.2	Warning or indication	Malfunction of RCDS mode
5.13	Indication	ECDIS operating in the raster mode
6.1	Indication	Larger scale information available, or overscale
6.1.2	Indication	Larger scale RNC available for the area of the ship

Note: The definitions of alerts and indicators are given in appendix 5.

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ANNEX 19[7]

DRAFT AMENDMENTS TO THE IGF CODE

PART A

2 General

2.2 Definitions

1 The following new paragraph 2.2.44 is added after existing paragraph 2.2.43:

"2.2.44 *Ship constructed on or after 1 January 2028* means:

.1 for which the building contract is placed on or after 1 January 2028; or

.2 in the absence of a building contract, the keels of which are laid or which are at a similar stage of construction on or after 1 July 2028; or

.3 the delivery of which is on or after 1 January 2032."

PART A-1
SPECIFIC REQUIREMENTS FOR SHIPS USING NATURAL GAS AS FUEL

5 Ship design and arrangement

5.3 Regulations – General

2 The following new paragraph is inserted after paragraph 5.3.3.5 and before paragraph 5.3.3.6:

"5.3.3.5.1 For vessels with suction wells installed in fuel tanks, the bottom of the suction well may protrude into the vertical extent of the minimum distance specified in 5.3.3.5, provided that such wells are as small as practicable and the protrusion below the inner bottom plating does not exceed 25% of the depth of the double bottom or 350 mm, whichever is less."

3 In sub-paragraph 5.3.4.2, the definition of "*H*" is replaced by the following:

"*H* is the distance from baseline, in metres, to the lowermost boundary of the fuel tank excluding the pump well, if installed;"

[1] Tracked changes are created using "strikeout" for deleted text and "grey shading" to highlight all modifications and new insertions, including deleted text, based on resolution MSC.391(95).

7 Material and general pipe design

7.3 Regulations for general pipe design

4 The following new paragraph is inserted after paragraph 7.3.1.3 and the subsequent paragraphs 7.3.1.4 and 7.3.1.5 are renumbered as 7.3.1.5 and 7.3.1.6 accordingly:

"7.3.1.4 For ships constructed on or after 1 January 2028, pressure relief valves discharging liquid or gas from the piping system shall discharge into the fuel tanks whenever the tank MARVS pressure is lower than the setting of the pressure relief valves in accordance with the arrangements in 9.4.2, and shall be designed to ensure that the required discharge capacity is met. Alternatively, they may discharge to the vent mast, if means are provided to detect and dispose of any liquid that may flow into the vent system."

9 Fuel supply to consumers

9.4 Regulations on safety functions of gas supply system

5 The following new paragraph is inserted after paragraph 9.4.1 and the subsequent paragraphs 9.4.2 to 9.4.10 are renumbered as 9.4.3 to 9.4.11 accordingly:

"9.4.2 For ships constructed on or after 1 January 2028, fuel tank inlets from safety relief valve discharge lines, protecting the piping system according to 7.3.1.4, shall be provided with non-return valves in lieu of valves that are automatically operated when the safety system required in 15.2.2 is activated. Safe means for tank isolation during maintenance shall be available according to 18.3 without affecting proper operation of safety relief valves."

11 Fire safety

11.3 Regulations for fire protection

6 In paragraph 11.3.2, after the last sentence ending with "considered a class 2.1 package.", the following new text is added:

"For ships constructed on or after 1 January 2028, any boundary facing the fuel tank on the open deck which is separated by a minimum distance, as determined to the satisfaction of the Administration through a heat analysis to provide protection equivalent to an A-60 class division, shall be considered acceptable. Intermediate structures providing heat protection to the above spaces may also be considered acceptable."

7 In paragraph 11.3.2, the following new sub-paragraphs are added:

".1 For oil tankers and chemical tankers constructed on or after 1 January 2028, A-60 insulation, required by SOLAS regulation II-2/9.2.4.2.5, shall be considered to meet the requirements of 11.3.2 provided that the fuel tank is located in the cargo area forward of accommodation spaces, service spaces, control stations, escape routes and machinery spaces. Consideration for the protection of accommodation block sides may be necessary.

.2 Fuel tanks shall be segregated from cargo in accordance with the requirements of the International Maritime Dangerous Goods (IMDG) Code where fuel tanks are regarded as bulk packaging. For the purposes of stowage and segregation requirements of the IMDG Code, a fuel tank on the open deck shall be considered as a class 2.1 package.

.3 For ships constructed on or after 1 January 2028 and notwithstanding the requirements of 11.3.2, where no source of gas release from the fuel containment system is considered possible, e.g. a type C tank in which tank connections are in a tank connection space, A-60 class shielding is not required."

8 Paragraph 11.3.3.1 is replaced by the following:

"11.3.3.1 Notwithstanding the last sentence in paragraph 11.3.3, for ships constructed on or after 1 January 2028 ~~4~~, the fuel storage hold space may be considered as a cofferdam provided that:

.1 the type C tank is not located directly above machinery spaces of category A or other rooms with high fire risk; and

.2 the minimum distance to the A-60 boundary from the outer ~~shell~~ surface of the insulation system of ~~the~~ a type C tank or the boundary of the tank connection space, if any, is not less than 900 mm. For the vacuum insulated type C tank, outer surface of the insulation system means outer surface of the outer shell."

12 Explosion prevention

12.5 Hazardous area zones

12.5.2 Hazardous area zone 1

9 Sub-paragraph 12.5.2.3 is replaced by the following:

"12.5.2.3 For ships constructed on or after 1 January 2028, areas on open deck, or semi-enclosed spaces on deck, within 3 m of any fuel tank outlet, gas or vapour outlet,* bunker manifold valve, other fuel valve, fuel pipe flange, ~~fuel preparation room~~ ventilation outlets from zone 1 spaces and fuel tank openings for pressure release provided to permit the flow of small volumes of gas or vapour mixtures caused by thermal variation;

* Such areas are, for example, all areas within 3 m of fuel tank hatches, ullage openings or sounding pipes for fuel tanks located on open deck and gas vapour outlets."

10 The following new sub-paragraph is inserted after sub-paragraph 12.5.2.3 and the subsequent sub-paragraphs 12.5.2.4 to 12.5.2.9 are renumbered as 12.5.2.5 to 12.5.2.10 accordingly.

".4 for ships constructed on or after 1 January 2028, areas on open deck, or semi-enclosed spaces on open deck above and in the vicinity of fuel tank vent mast outlet within a vertical cylinder of unlimited height and 6 m radius centred upon the centre of the outlet, and within a hemisphere of 6 m radius below the outlet. Where due to the size and layout of the vessel it is not possible to maintain the above distances, a reduced zone can be accepted based on a dispersion analysis, based on 50% LEL criteria. The zone dimensions shall never be less than those given in 12.5.2.3, and shall include a surrounding zone 2 hazardous area meeting the dimensions given in 12.5.3.1."

12.5.3 Hazardous area zone 2

11 The following new paragraph is added after paragraph 12.5.3.2:

12.5.3.3 In lieu of 12.5.3.1, for ships constructed on or after 1 January 2028, this zone includes spaces 4 m beyond the cylinder and 4 m beyond the hemisphere defined in 12.5.2.4".

13 Ventilation

13.3 Regulations – General

12 Paragraph 13.3.5 is replaced by the following:

"13.3.5 For ships constructed on or after 1 January 2028, ~~A~~air inlets for hazardous enclosed spaces shall be taken from areas that, ~~in the absence of the considered~~ except for the inlets, would be non-hazardous. ~~Air inlets for non-hazardous enclosed spaces shall be taken from non-hazardous areas at least 1.5 m away from the boundaries of any hazardous area. Where the inlet duct passes through a more hazardous space, the duct shall be gas-tight and have over-pressure relative to this space.~~ Air inlets for non-hazardous enclosed spaces shall be taken from non-hazardous areas at least 1.5 m away from the boundaries of any hazardous area."

13 The following new paragraph is inserted after paragraph 13.3.7 and the subsequent paragraphs 13.3.8 to 13.3.10 are renumbered as 13.3.9 to 13.3.11:

"13.3.8 For ships constructed on or after 1 January 2028:

.1 where the ventilation ducts serving non-hazardous spaces pass through a hazardous space, the ducts shall be gastight and have overpressure relative to that hazardous space; and

.2 where the ventilation ducts serving hazardous spaces pass through less hazardous spaces, the ducts shall be gastight and have underpressure relative to less hazardous or non-hazardous spaces. Ventilation pipes serving hazardous spaces that pass through non-hazardous spaces, and that are fully welded and designed in accordance with chapter 7, are acceptable without the need for underpressure."

APPENDIX

CHECK/MONITORING SHEET FOR THE PROCESS OF AMENDING THE CONVENTION AND RELATED MANDATORY INSTRUMENTS (PROPOSAL/DEVELOPMENT)

Part III – Process monitoring to be completed during the work process at the Sub- Committee and checked as part of the final approval process by the Committee (refer to paragraph 3.2.1.3)

1	The Sub-Committee, at an initial engagement, has allocated sufficient time for technical research and discussion before the target completion date, especially on issues needing to be addressed by more than one Sub-Committee and for which the timing of relevant Sub-Committee meetings and exchanges of the result of consideration needed to be carefully examined.	Yes
2	The scope of application agreed at the proposal stage was not changed without the approval of the Committee.	Yes
3	The technical base document/draft amendment addresses the proposal's issue(s) through the suggested instrument(s); where it does not, the Sub-Committee offers the Committee an alternative method of addressing the problem raised by the proposal.	Yes
4	Due attention is to be paid to the *Interim Guidelines for the systematic application of the grandfather clause* (MSC/Circ.765).	Yes
5	All references have been examined against the text that will be valid if the proposed amendment enters into force.	Yes
6	The location of the insertion or modified text is correct for the text that will be valid when the proposed text enters into force on a four-year cycle of entry into force, as other relevant amendments adopted might enter into force on the same date.	Yes
7	There are no inconsistencies in respect of scope of application between the technical regulation and the application statement contained in regulation 1 or 2 of the relevant chapter, and application is specifically addressed for existing and/or new ships, as necessary.	Yes
8	Where a new term has been introduced into a regulation and a clear definition is necessary, the definition is given in the article of the Convention or at the beginning of the chapter.	Yes
9	Where any of the terms "fitted", "provided", "installed" or "installation" are used, consideration has been given to clarifying the intended meaning of the term.	Yes
10	All necessary related and consequential amendments to other existing instruments, including non-mandatory instruments, in particular to the forms of certificates and records of equipment required in the instrument being amended, have been examined and included as part of the proposed amendment(s).	Yes
11	The forms of certificates and records of equipment have been harmonized, where appropriate, between the Convention and its Protocols.	N/A

12	It is confirmed that the amendment is being made to a currently valid text and that no other bodies are concurrently proposing changes to the same text.	Yes
13	All entry-into-force criteria (building contract, keel laying and delivery) have been considered and addressed.	Yes
14	Other impacts of the implementation of the proposed/approved amendment have been fully analysed, including consequential amendments to the "application" and "definition" regulations of the chapter.	Yes
15	The amendments presented for adoption clearly indicate changes made with respect to the original text, so as to facilitate their consideration.	Yes
16	For amendments to mandatory instruments, the relationship between the Convention and the related instrument has been observed and addressed, as appropriate.	Yes
17	The related record format has been completed or updated, as appropriate.	Yes

RECORD FORMAT

The following records should be created and kept updated for each regulatory development.

The records can be completed by providing references to paragraphs of related documents containing the relevant information, proposals, discussions and decisions.

1 Title (number and title of regulation(s))
IGF Code chapters 2, 5, 7, 9, 11, 12 and 13
2 Origin of the requirement (original proposal document)
It's a continuous agenda item and see section 5 (history of discussion) for more information.
3 Main reason for the development (extract from the proposal document)
"Amendments to the IGF Code and development of guidelines for alternative fuels and related technologies" is a continuous agenda item and those draft amendments could not be completed at CCC 8, were finalized at CCC 9. The amendments include a variety of issues, including pump suction wells, safety relief valve discharge, fuel preparation rooms, structural fire protection and hazardous zones.
4 Related output
Amendments to the IGF Code and development of guidelines for alternative fuels and related technologies (2.3)

5	**History of the discussion (approval of work programmes, sessions of sub-committees, including CG/DG/WG arrangements)**
CCC 6 endorsed the new work plan for the next phase of the development of the IGF Code, and endorsed the change of status of the existing output on "Amendments to the IGF Code and development of guidelines for low-flashpoint fuels to be "continuous" to avoid requesting constant extensions. **CCC 8** developed amendments, which were approved at MSC 107 for adoption at MSC 108. **CCC 9** developed additional amendments, which had not been agreed upon at CCC 8, with a view to entry into force on 1 January 2028.	
6	**Impact on other instruments (codes, performance standards, guidance circulars, certificates/records format, etc.)**
Not applicable	
7	**Technical background**
7.1	***Scope and objective (to cross-check with items 4 and 5 in part II of the checklist)***
The amendments include a variety of issues, including pump suction wells, safety relief valve discharge, fuel preparation rooms, structural fire protection and hazardous zones.	
7.2	***Technical/operational background and rationale (e.g. summary of FSA study, if available, or engineering challenge posed)***
Not applicable	
7.3	***Source/derivation of requirement (non-mandatory instrument, industry standard, national/regional requirement)***
Not applicable	
7.4	***Short summary of requirement (what is the new requirement – in short and lay terms)***
The amendments will enhance safety by regulating a variety of issues, including pump suction wells, safety relief valve discharge, fuel preparation rooms, structural fire protection and hazardous zones.	
7.5	***Points of discussions (controversial points and conclusion)***
Not applicable	

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ANNEX 20

RESOLUTION MSC.565(108)
(adopted on 24 May 2024)

REVISED INTERIM RECOMMENDATIONS FOR CARRIAGE OF LIQUEFIED HYDROGEN IN BULK

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

NOTING that the International Convention for the Safety of Life at Sea ("the Convention"), 1974 and the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk ("the IGC Code") currently do not specifically provide requirements for carriage of liquefied hydrogen in bulk by sea,

NOTING ALSO that paragraph 5 of Preamble of the IGC Code states that requirements for new products and their conditions of carriage will be circulated as recommendations, on an interim basis, prior to the entry into force of the appropriate amendments,

RECOGNIZING a need for the development of the Revised interim recommendations for carriage of liquefied hydrogen in bulk,

ACKNOWLEDGING that, in the interim, there is an urgent need to provide recommendations to the Administrations on safe carriage of liquefied hydrogen in bulk,

ACKNOWLEDGING ALSO that the Revised Interim Recommendations are intended to facilitate establishment of a tripartite agreement for a pilot ship, which will be developed for the research and demonstration of safe long-distance overseas carriage of liquefied hydrogen in bulk,

HAVING CONSIDERED the Revised Interim Recommendations prepared by the Sub-Committee on Carriage of Cargoes and Containers at its ninth session,

1 ADOPTS the Revised interim recommendations for carriage of liquefied hydrogen in bulk, the text of which is set out in the annex to the present resolution;

2 INVITES Member States to apply the Revised Interim Recommendations to the pilot ship carrying liquefied hydrogen in bulk taking the explanatory notes into consideration;

3 AGREES to acquire information on safe carriage of liquefied hydrogen in bulk prior to amendment to the IGC Code for the inclusion of liquefied hydrogen;

4 ALSO AGREES that these Revised Interim Recommendations may need to be reviewed if they are to be applied to ships other than the pilot ship; and

5 URGES Member States and the industry to submit information, observations, comments and recommendations based on the practical experience gained through the application of the Revised Interim Recommendations and submit relevant safety analysis on ships carrying liquefied hydrogen in bulk.

6 REVOKES resolution MSC.420(97).

ANNEX

REVISED INTERIM RECOMMENDATIONS FOR CARRIAGE OF LIQUEFIED HYDROGEN IN BULK

1 INTRODUCTION

1.1 For the carriage of liquefied gases in bulk by ships, the ships should comply with the relevant requirements in the IGC Code, as amended ("the Code"). The scope of the Code provided in paragraph 1.1.1 is:

> "The Code applies to ships regardless of their size, including those of less than 500 gross tonnage, engaged in the carriage of liquefied gases having a vapour pressure exceeding 0.28 MPa absolute at a temperature of 37.8°C, and other products, as shown in chapter 19, when carried in bulk".

1.2 A ship carrying liquefied hydrogen in bulk (hereinafter called "liquefied hydrogen carrier") should comply with the Code.

1.3 The Code requires that a gas carrier should comply with the minimum requirements for the cargo listed in chapter 19. However, the requirements for liquefied hydrogen are not specified in the Code.

1.4 This annex provides the Revised Interim Recommendations, as referred to in paragraph 5 of the preamble of the Code, for the carriage of liquefied hydrogen in bulk, which are intended to provide the basis for the future minimum requirements for the carriage of this cargo. The Revised Interim Recommendations are intended to facilitate the establishment of a tripartite agreement among the relevant Administrations for the carriage of liquefied hydrogen in bulk. However, they are not intended to prohibit the adoption of designs and arrangements other than those specified in the Code or in these Recommendations, at the discretion of the Administrations.

1.5 These recommendations have been developed under the assumption that a liquefied hydrogen carrier does not carry liquefied gases other than liquefied hydrogen. These recommendations, therefore, are not applicable to liquefied hydrogen carriers carrying gases other than liquefied hydrogen.

1.6 In the Code, reference is made to paragraph 5 of the Preamble; paragraph 1.1.6.1; and Note No.8 on completion of certificate in "model form of international certificate of fitness for the carriage of liquefied gases in bulk" in appendix 2 to the Code.

1.7 These Revised Interim Recommendations consist of the following parts. Part A is applicable to ships with any type of cargo containment system. Part B and subsequent part(s) prescribe additional special requirements for cargo containment systems of specific types.

Part A: General (applicable to ships with any type of cargo containment system);

Part B: Cargo containment systems of independent cargo tanks using vacuum insulation; and

Part C: Cargo containment systems of independent cargo tanks using insulation materials and hydrogen gas in the inner insulation spaces.

1.8 Part A of this document was developed based on the design of parts B and C. If subsequent part(s) are added, the special requirements prescribed in part A may be reviewed.

Part A
General
(Applicable to ships with any type of cargo containment system)

2 GENERAL

2.1 Definition

2.1.1 The following definition should apply for the purpose of these Revised Interim Recommendations.

Permeation is flow of a fluid through another material by diffusion without a defect or opening of the latter.[8]

2.2 Requirements for carriage of liquefied hydrogen in bulk

2.2.1 The requirements for the carriage of liquefied hydrogen in bulk have been developed based on the results of a comparison study of similar cargoes listed in chapter 19 of the Code, e.g. liquefied natural gas.

2.2.2 Chapter 19 of the Code governs the application of general requirements for respective cargoes. Selections of the general requirements for respective cargoes are expressed in columns 'c' to 'g'. In addition to general requirements, special requirements may apply to specific cargoes depending on the properties/hazards of the cargoes.

2.2.3 Tables 1 and 2 specify the proposed selection of the general requirements and the special requirements, respectively, for liquefied hydrogen. In addition to table 2, special requirements for cargo containment systems of specific types are prescribed in part B or subsequent part(s).

[1] See paragraph 3.79 of ISO/TR 15916:2015.

Table 1: Requirements for carriage of liquefied hydrogen in bulk

a	*b*	*c*	*d*	*e*	*f*	*g*	*h*	*i*
Product name		***Ship type***	***Independent tank type C required***	***Control of vapour space within cargo tanks***	***Vapour detection***	***Gauging***		***Special requirements***
Hydrogen		2G	-	-	F	C		See table 2 and, either corresponding table 4 or table 5, as appropriate for the type of cargo containment systems

Table 2: Special requirements for carriage of liquefied hydrogen in bulk

No.	Special requirement	Related hazard
A-1	Requirements for materials whose design temperature is lower than -165°C should be agreed with the Administration, paying attention to appropriate standards. Where minimum design temperature is lower than -196°C, property testing for insulation materials should be carried out with the appropriate medium, over a range of temperatures expected in service.	Low temperature (see 4.2.1)
A-2	Materials of construction and ancillary equipment such as insulation should be resistant to the effects of high oxygen concentrations caused by condensation and enrichment at the low temperatures attained in parts of the cargo system (refer to the requirement for nitrogen). This special requirement is applied to all locations where contact with condensed oxygen is anticipated under normal conditions and foreseeable single failure scenarios.	Low temperature (see 4.2.2)
A-3	For cargo pipes containing liquid hydrogen and cold hydrogen vapour, measures should be taken to prevent the exposed surfaces from reaching -183°C. For places where preventive measures against low temperature are not sufficiently effective, such as cargo manifolds, other appropriate measures such as ventilation which avoids the formation of highly enriched oxygen and the installation of trays recovering liquid air may be permitted in lieu of the preventive measures. Insulation on liquid hydrogen piping systems exposing to air should be of non-combustible material and should be designed to have a seal in the outer covering to prevent the condensation of air and subsequent oxygen enrichment within the insulation.	Low temperature (see 4.2.2)
A-4	Appropriate means, e.g. filtering, should be provided in cargo piping systems to remove impure substances condensed at low temperature.	Low temperature (see 4.2.3)

No.	Special requirement	Related hazard
A-5	Pressure relief systems should be suitably designed and constructed to prevent blockage due to formation of water or ice.	Low temperature (see 4.2.4)
A-6	At places where contact with hydrogen is anticipated, suitable materials should be used to prevent any structural deterioration owing to hydrogen embrittlement and degradation of strength and fatigue properties due to continual exposure to hydrogen, as necessary.	Hydrogen embrittlement (see 4.3)
A-7	Double tube structures ensuring no leakage, or fixed hydrogen detectors being capable of detecting a hydrogen leak, should be provided for confined places where leakage of hydrogen may occur, such as cargo valves, flanges and seals.	Susceptibility to leakage (see 4.4.2)
A-8	Helium or a mixture of 5% hydrogen and 95% nitrogen should be used as the tightness test medium for cargo tank and cargo piping.	Susceptibility to leakage (see 4.4.3)
A-9	The amount of carbon dioxide carried for a carbon dioxide fire-extinguishing system should be sufficient to provide a quantity of free gas equal to 75% or more of the gross volume of the cargo compressor and pump rooms in all cases.	Fire by Hydrogen (see 4.7.3) Wide range of flammability limits (see 4.10)
A-10	When deterioration of insulation capability by single damage is possible, appropriate safety measures should be adopted taking into account the deterioration.	High pressure (see 4.8)
A-11	Appropriate measures should be provided to prevent vents becoming blocked by accumulations of ice formed from moisture in the air.	Low temperature (see 4.2.2)
A-12	Due consideration should be given to means for handling boil-off gas.	High pressure (see 4.8)
A-13	Due consideration should be given to static electricity associated with rotating or reciprocating machinery including the installation of conductive machinery belts and precautionary measures incorporated in operating and maintenance procedures, in addition to the bonding of tanks, piping and equipment required by paragraph 5.7.4 of the Code. Anti-static clothing and footwear, and a portable hydrogen detector should be provided for each crew member working in the cargo area.	Static electricity (see 4.9.2)
A-14	The cargo operation manuals required in paragraph 18.2 of the Code should include limitations of various operations in relation to environmental conditions.	Wide range of flammability limits (see 4.10)

No.	Special requirement	Related hazard
A-15	An appropriate procedure should be established for warm-up, inert gas purge, gas-free, hydrogen purge and pre-cooling. The procedure should include: .1 selection of inert gas in relation to temperature limit; .2 measurement of gas concentration; .3 measurement of temperature; .4 rates of supply of gases; .5 conditions for commencement, suspension, resuming and termination of each operation; .6 treatment of return gases; and .7 discharge of gases.	Prevention of dangerous purging operation (see 4.11)
A-16	Only almost pure para-hydrogen (i.e. more than 95%) should be loaded in order to avoid excessive heating by ortho- to para-hydrogen conversion.	General (see 4.1)
A-17	Fire detectors for detecting hydrogen fire should be selected, taking into account the features of hydrogen fire, to the satisfaction of the Administration.	Features of hydrogen fire and fire hazard (see 4.7.4)
A-18	At the design stage, dispersion of hydrogen from vent outlets should be analysed in order to minimize risk of ingress of flammable gas into accommodation spaces, service spaces, machinery spaces and control stations. Extension of hazardous areas should be considered based on the results of the analysis.	Low density and high diffusivity (see 4.5)
A-19	Due consideration should be given to appropriate safety measures to prevent formation of explosive mixture in the case of a leakage and permeation of hydrogen, including: .1 installation of hydrogen detectors in order to detect a possible ground-level travel of low temperature hydrogen gas, and at high points in spaces where warm hydrogen gas can be trapped; and .2 application of "best practice" for land-based liquid hydrogen storage taking into account appropriate guidance such as "Cryogenics Safety Manual – Fourth Edition (1998)"[8)].	General (see 4.1)
A-20	In the case that fusible elements are used as a means of fire detection required by paragraph 18.10.3.2 of the Code, flame detectors suitable for hydrogen flames should be provided in addition at the same locations. Appropriate means should be adopted to prevent the activation of ESD system owing to false alarm of flame detectors, e.g. avoiding activation of ESD system by single sensor (voting method).	Fire hazard (see 4.7.4)

No.	Special requirement	Related hazard
A-21	Consideration should be given to enhance the ventilation capacity of the enclosed spaces subject to liquefied hydrogen leakage and permeation, taking into account the latent heat of vaporization, specific heat and the volume of hydrogen gas in relation to temperature and heat capacity of adjacent spaces.	Low density and high diffusivity (see 4.5)
A-22	Liquid and gas hydrogen pipes should not pass through enclosed spaces in addition to other than those referred to in paragraph 5.2.2.1.2 of the Code, unless: .1.1 the spaces are equipped with gas detection systems which activate the alarm at not more than 20% LFL and shut down the isolation valves, as appropriate, at not more than 40% LFL (see sections 16.4.2 and 16.4.8 of the Code); and .1.2 the spaces are adequately ventilated; or .2 the spaces are maintained in an inert condition.	Susceptibility to leakage (see 4.4)
A-23	A risk assessment should be conducted to ensure that risks arising from liquefied hydrogen cargo affecting persons on board, the environment, the structural strength or the integrity of the ship are addressed. Consideration should be given to the hazards associated with properties of liquefied hydrogen and hydrogen gas, physical layout, operation and maintenance, following any reasonably foreseeable failure. For the risk assessment, appropriate methods, e.g. HAZID, HAZOP, FMEA/FMECA, what-if analysis, etc., should be adopted taking into account IEC/ISO 31010:2019 "Risk management – Risk assessment techniques"[7)] and SAE ARP 5580-2001 "Recommended failure modes and effects analysis (FMEA) practices for non-automobile applications"[9)].	General (see 4.1)
A-24	Relief valve sizing should be undertaken for the most onerous scenario. The evaluation should include the fire scenario and should consider the resulting magnitude of the heat flux on the cargo containment system.	High pressure hazard (see 4.8)
A-25	A filling limit exceeding 98% at reference temperature should not be permitted.	High pressure hazard (see 4.8)
A-26	Bolted flange connections of hydrogen piping should be avoided where welded connections are feasible.	Susceptibility to leakage (see 4.4.2)
A-27	Due consideration should be given to the invisible nature of hydrogen fire from the viewpoint of safety of ships and especially personnel in case of fire.	Fire hazard (see 4.7.1)

3 EXPLANATION ON GENERAL REQUIREMENTS

3.1 Properties of liquefied hydrogen

The application of general requirements in the Code for liquefied hydrogen has been considered based on a comparison study on the physical properties of liquefied hydrogen and LNG. LNG and liquefied hydrogen are cryogenic liquids, non-toxic, and generate flammable high pressure gas. For reference, table 3 shows the comparison of physical properties of hydrogen and methane, the major component of LNG.

Table 3: Comparison of physical properties of Hydrogen and Methane

	Hydrogen	Methane	References
Boiling temperature (K)*	20.3	111.6	ISO[1)], Annex A, Table A.3
Liquid density (kg/m^3)*	70.8	422.5	ISO[1)], Annex A, Table A.3
Gas density (kg/m^3)** (Air: 1.198)	0.084	0.668	NIST RefProp[10)]
Viscosity (g/cm•s x 10^{-6}) Gas Liquid	 8.8 13.49	 10.91 116.79	 NIST RefProp[10)] NIST RefProp[10)]
Flame temperature in air (°C)	2396	2230	Calculated using Cantera and GRI 3.0 mechanism
Maximum burning velocity (m/s)	3.15	0.385	Calculated using Cantera and GRI 3.0 mechanism
Heat of vaporization (J/g)*	454.6	510.4	ISO[1)], Annex A, Table A.3
Lower flammability limit (% vol. fraction)***	4	5.3	ISO[1)], Annex B, Table B.2
Upper flammability limit (% vol. fraction)***	77	17.0	ISO[1)], Annex B, Table B.2
Minimum ignition energy (mJ)***	0.017	0.274	ISO[1)], Annex B, Table B.2
Auto-ignition temperature***	858	810	ISO[1)], Annex B, Table B.2
Toxicity	Non	Non	Orange book[5)]
Temperature at critical point (K)	33.19****	190.55	Hydrogen: ISO[1)], Annex A, Table A.1 Methane: The Japan Society of Mechanical Engineers, Data Book, Thermophysical Properties of Fluids (1983)
Pressure at critical point (kPaA)	1315****	4595	Hydrogen: ISO[1)], Annex A, Table A.1 Methane: The Japan Society of Mechanical Engineers, Data Book, Thermophysical Properties of Fluids (1983)

Remarks:
* At their normal boiling points for comparison purpose.
** At normal temperature and pressure.
*** Ignition and combustion properties for air mixtures at 25°C and 101.3 kPaA.
**** Normal Hydrogen.

3.2 Explanation on respective requirements

3.2.1 Ship type (column 'c')

As the hazard associated with hydrogen cargo is flammability but not toxicity, the ship type is considered 2G.

3.2.2 Independent tank type C required (column 'd')

Independent tank type C is allocated only to dangerous goods of class 2.3 whose vapour density is heavier than air. Independent tank type C is considered not to be required for liquefied hydrogen.

3.2.3 Control of vapour space within cargo tank (column 'e')

Special environment controls such as drying and inerting are generally required for liquid chemical products in consideration of the reactivity of cargo vapour and air. As is the case for LNG, it is considered not to be necessary to apply such requirements for liquefied hydrogen.

3.2.4 Vapour detection (column 'f')

Because hydrogen is flammable and non-toxic, it is appropriate to require Flammable (F) as vapour detection for liquefied hydrogen.

3.2.5 Gauging (column 'g')

On the grounds that Closed (C) gauging is required, in principle, for flammable or toxic cargoes, such as methane, it is considered to be appropriate to require Closed (C) gauging for hydrogen, taking into account that hydrogen has high ignitability and a wide flammable range in air and that closed gauging is effective to prevent leakage of gases into air.

4 SPECIAL REQUIREMENTS AGAINST HAZARDS OF LIQUEFIED HYDROGEN

4.1 Hazards of liquefied hydrogen to be considered

4.1.1 The hazards related to liquefied hydrogen are low ignition energy, a wide range of flammability limits, low visibility of flames in case of fire, high flame velocity which may lead to the detonation with shockwave, low temperature and liquefaction/solidification of inert gas and constituents of air which may result in an oxygen-enriched atmosphere, high permeation, low viscosity, and hydrogen embrittlement including weld metals. Where vacuum insulation is adopted, due consideration should be given to the possibility of untimely deterioration of insulation properties at the envisaged carriage temperatures of liquid hydrogen. The vacuum insulation evaluation should be specified for the normal range or upper limit of cold vacuum pressure (CVP), and loss of vacuum should be defined with respect to this value. Accordingly, effect of vacuum pressure should be taken into account at the time of design and testing of piping with vacuum insulation. Supporting structure and adjacent hull structure should be designed taking into account the cooling owing to loss of vacuum insulation.

4.1.2 Hydrogen is essentially a mixture of ortho- and para-hydrogen, with an equilibrium concentration of 75% ortho-hydrogen and 25% para-hydrogen at ambient temperature. When liquefied at 20K, there is a slow but continuous transformation of ortho-hydrogen to para-hydrogen. The exothermic conversion of the nuclear spin isomers of hydrogen (ortho- to para-hydrogen) may take place and the effect of the conversion may have an impact on the cooling capacity and relief valve capacity of the vessel's equipment.

4.1.3 Trace amounts of air will condense or solidify in an environment with liquid hydrogen possibly resulting in an unstable and explosive mixture. Precautions should be taken to assure that the possibility of condensed air is accounted within properly secured hazard areas.

4.2 Low temperature hazard

4.2.1 Selection of appropriate material

4.2.1.1 Tables 6.3 and 6.4 in the Code prescribe material selection for piping or cargo tanks whose design temperature is -165°C or higher. According to Note 2 of table 6.3 and Note 3 of table 6.4 of the Code, the requirements for materials whose design temperatures are lower than -165°C should be specially agreed with the Administration. In this regard, the publication by AIAA[2)] introduces some appropriate materials corresponding to the design temperature and the Administration should take into account such references for the material selection.

4.2.1.2 Although paragraph 4.19.3 in the Code requires testing of materials used for thermal insulation for various properties adequate for the intended service temperature, the minimum test temperature is -196°C. The requirements in the Code do not refer to the normal boiling point of hydrogen, being -253°C. In case of carriage of liquefied hydrogen, special requirements should be provided to consider the lower design temperature.

4.2.2 Measures for condensed air

4.2.2.1 In the case of nitrogen whose normal boiling point is -196°C, for which air condensation and oxygen enrichment are concerns, the following special requirement has already been included in paragraph 17.17 in the Code:

> "Material of construction and ancillary equipment such as insulation shall be resistant to the effect of high oxygen concentrations caused by condensation and enrichment at the low temperatures attained in parts of the cargo system. Due consideration shall be given to ventilation in such areas where condensation might occur to avoid the stratification of oxygen-enriched atmosphere."

A similar special requirement is applicable to hydrogen.

4.2.2.2 A vent may be blocked by accumulation of ice formed from moisture in the air, which may result in excessive pressure leading to rupture of the vent and relevant piping (see paragraph 4.2.4).

4.2.3 Removal of impure substances condensed

The removal of impure substances, such as those contained in condensate in pipes, should be separately considered. Installation of filters can be an appropriate measure and should be stipulated as a special requirement.

4.2.4 Prevention of blockage due to formation of water or ice

Pressure relief systems may become blocked due to formation of water or ice, depending on the temperature and humidity of air, resulting from the low temperature of the cargo and its vapour (see paragraph 4.2.2). Appropriate means should be provided to prevent such phenomena.

4.3 Hydrogen embrittlement

4.3.1 Selection of appropriate materials should be required to prevent failures owing to hydrogen embrittlement. The publication by AIAA[2)] introduces some appropriate materials resistant to hydrogen embrittlement, and concludes that aluminium is the material least affected.

4.3.2 International or national standards should be followed for the selection of materials for the design of liquefied and gaseous hydrogen installations in a marine environment.

4.4 Susceptibility to leakage

4.4.1 Prevention of leakage from pipes

To mitigate undetected accumulation of hydrogen in a confined space, effective measures should be employed to reduce the possibility of leakage of hydrogen, taking its leakage characteristics into account. Effective measures can be double tube structures, or fixed hydrogen leak detectors in areas assessed as being highly hazardous with regard to hydrogen leakage. Hydrogen leakage through welds, joints and seals is an important consideration for the design of hydrogen systems and an important operational issue.

4.4.2 Implementation of effective tightness test

4.4.2.1 Tightness tests for cargo tanks and cargo pipes/valves are required by paragraphs 4.20.3.2, 5.13.1 and 5.13.2.3 in the Code respectively. Helium or a mixture of 5% hydrogen and 95% nitrogen should be used as the medium for tightness tests, instead of air, because hydrogen is highly susceptible to leakage.

4.4.2.2 For a hydrogen installation, the pipework should be pressure-tested at its design pressure. Consideration should be given to using oxygen-free nitrogen with a small molecule tracer gas, such as helium as the test medium and an electronic leak detector for identifying leaks.

4.4.3 Confirmation of appropriate operating procedure

Instructions/manuals containing the operating procedures for the prevention of leakage during transport, methods for early detection in case of leakage, and appropriate measures after such events, should be provided. For this, paragraph 18.3 of the Code requires that the information shall be on board and available to all concerned, giving the necessary data for the safe carriage of cargo. In detail, the Code requires such information on action to be taken in the event of spills or leak, countermeasures against accidental personal contact, procedures for cargo transfer, and emergency procedures to be on board. With regard to the manuals on procedures for liquefied hydrogen during carriage and transfer operations, the requirements in the Code are applicable and no special requirement is necessary.

4.5 Low density and high diffusivity

Though low density and high diffusivity of hydrogen may reduce the possibility of formation of a flammable atmosphere in open spaces, adequate ventilation is necessary for enclosed spaces in cargo areas where formation of hydrogen-oxygen/air mixture may occur. Paragraph 12.2 of the Code requires fixed ventilation systems or portable mechanical ventilation for such enclosed spaces. These requirements in the Code are applicable to liquefied hydrogen carriers and no special requirement is necessary in this regard.

4.6 Ignitability

4.6.1 The Code requires electrical bonds of the piping and the cargo tanks in paragraph 5.7.4, exclusion of all sources of ignition in paragraph 11.1.2, electrical installations to minimize the risk of fire and explosion from flammable products in paragraph 10.2.1 and so on, in order to prevent ignition of flammable cargoes.

4.6.2 The Code requires compliance with the relevant standards issued by the International Electrotechnical Commission (IEC) and the IEC standards specify the details of such safety measures depending on the respective properties of flammable gases including hydrogen. No special requirement is necessary with regard to ignitability of hydrogen.*

4.7 Fire hazard

4.7.1 Safety of personnel in case of fire

To avoid the effects of flame and UV radiation produced by a hydrogen fire, it is effective to use fire-fighter's outfits and protective equipment. The Code already requires fire-fighter's outfits for ships carrying flammable products in paragraph 11.6.1 and safety equipment in paragraph 14.3. This issue should be considered as the matter of cargo information required by paragraph 18.3 of the Code. Due consideration should be given to the invisible nature of hydrogen fire.

4.7.2 Compatibility of fire-extinguishing systems

Dry chemical powder fire-extinguishing or carbon dioxide fire-extinguishing systems are considered to be effective in case of hydrogen fire and such fire-extinguishing systems are already required by paragraphs 11.4 and 11.5 of the Code. Special requirements for installation of other types of fire-extinguishing systems are considered unnecessary, except with regard to the increased of amount of carbon dioxide required, as mentioned in the next paragraph in this document.

4.7.3 Increase of the amount of gas for carbon dioxide fire-extinguishing systems

4.7.3.1 Paragraph 11.5.1 of the Code requires as follows:

> "Enclosed spaces meeting the criteria of cargo machinery spaces in 1.2.10, and the cargo motor room within the cargo area of any ship, shall be provided with a fixed fire-extinguishing system complying with the provisions of the FSS Code and taking into account the necessary concentrations/application rate required for extinguishing gas fires."

4.7.3.2 Chapter 5 of the FSS Code, i.e. Fixed gas fire-extinguishing systems, requires that the quantity of carbon dioxide for cargo spaces, unless otherwise provided, shall be sufficient to give a minimum volume of free gas equal to 30% of the gross volume of the largest cargo space to be protected in the ship, in paragraph 2.2.1.1.

4.7.3.3 On the other hand, NFPA 12[3)] requires that the design quantity of carbon dioxide for hydrogen fire should be 75% or more of the gross volume of the protected space. The special requirement for an increased amount of carbon dioxide should be provided for carbon dioxide fire-extinguishing systems.

4.7.4 Features of hydrogen fire

Hydrogen burns at high temperature, but generally gives off less radiant heat than propane or other hydrocarbons (e.g. only about 10% of that radiated by an equal-sized propane flame). Although the heat radiated by a hydrogen flame is also relatively low compared to hydrocarbons, it is important to take into account the differences in heats of combustion,

* Electrical equipment used in hydrogen/air mixture should be, at least, the type of "II-C" and "T-1" as the group based on the maximum experimental safe gap for flameproof enclosures and the temperature class based on maximum surface temperature, respectively, according to ISO/IEC 80079-20-1[4)].

burning rate and flame size. Hydrogen flames are colourless or nearly colourless. Both of these characteristics make it more difficult to detect a hydrogen fire. Even relatively small hydrogen fires are very difficult to extinguish. The only reliable approach to extinguish a fire is to shut off the source of hydrogen supply.

4.8 High pressure hazard

4.8.1 High pressure is a hazard common to hydrogen and other flammable gases listed in the Code. To prevent overpressure, the Code requires various measures such as pressure control and pressure design. Specifically, paragraph 8.2, in regard to the provision of pressure control of cargo tanks, requires fittings of pressure relief valves to the cargo tanks. Furthermore, paragraph 7.1.1 requires temperature control by the use of mechanical refrigeration and/or design to withstand possible increases of temperature and pressure. In addition, paragraph 15.2 specifies the filling limit of cargo tanks taking into account cargo volume increase by its thermal expansion. These requirements are applicable for hydrogen and no special requirement is considered necessary in this regard.

4.8.2 Boil-off may be a more significant issue for hydrogen than for LNG in particular when insulation properties have deteriorated. Means of handling boil-off gas should be carefully considered taking into account the following issues:

.1 Re-liquefaction of hydrogen involves very specific and costly equipment. Cargo cooling in order to avoid boil-off shows the same kind of issues; and

.2 Notwithstanding the provision in paragraph 7.4.1 of the Code, thermal oxidation of hydrogen may be permitted in accordance with paragraph 1.3 of the Code.

4.8.3 The special requirements in these aspects are considered necessary.

4.9 Health hazard

4.9.1 Human safety concern under low temperature

With regard to the influences of cold hydrogen on persons' bodies, suitable protective equipment is effective. In this aspect, paragraph 14.1 of the Code requires suitable protective equipment taking into account the character of the products, therefore, no special requirement is considered necessary.

4.9.2 Static electricity

Hydrogen ignition energy is very low and hydrogen can be easily ignitable by static electricity and due consideration should be given to this issue, in accordance with the requirement in the Code on suitable protective equipment.

4.9.3 Oxygen depletion and asphyxiation

Leakage of hydrogen may cause low level of oxygen and associated asphyxiation.

4.10 Wide range of flammable limits

4.10.1 Extinguishing hydrogen fire

4.10.1.1 As mentioned in paragraph 4.6, for flammable products the Code already requires elimination of sources of ignition, including use of electrical installations of appropriate types in order to minimize the risk of fire and explosion. No special requirement is considered necessary with regard to ignitability of hydrogen.

4.10.1.2 Furthermore, with regard to the wide range of flammable limits of hydrogen, the increased quantities of carbon dioxide as a fire-extinguishing medium should be specified as mentioned in paragraph 4.7. No additional special requirement is considered to be necessary with regard to the wide range of flammable limits of hydrogen.

4.10.2 Disposal of cold hydrogen gas

The wide flammability range makes disposal of cold hydrogen gas a major hazard. Cold plumes of released hydrogen may impede adequate dilution of hydrogen down to below 4% and may lead to flash-back to the vent from distant ignition sources outside safety-controlled areas. The low ignition energy and wide flammable range may present significant challenges.

4.11 Prevention of dangerous purging operation

4.11.1 During cargo operations for maintenance, pipes and tanks should be purged with an inert gas or inert gases as illustrated in the figure below. For safety, due consideration should be given to temperature and boiling points of the inert gases. Residual pockets of hydrogen or the purge gas will remain in the enclosure if the purging rate, duration, or extent of mixing is too low. Therefore, reliable gas concentration measurements should be obtained at a number of different locations within the system for suitable purges. Temperature should also be measured at a number of locations. Oxidizing agents may exist in a hydrogen containing equipment, specifically: air, cold box atmospheres containing air diluted with nitrogen, or oxygen-enriched air that can be condensed on process pipe work within the cold box in special circumstances.

4.11.2 There are special measures that may need to be put in place in order to mitigate the hazards, e.g. air should be eliminated by nitrogen purge prior to introduction of hydrogen into cargo piping or processing equipment. Nitrogen should then be eliminated by hydrogen purge, where there is a possibility of its solidification in the subsequent process.

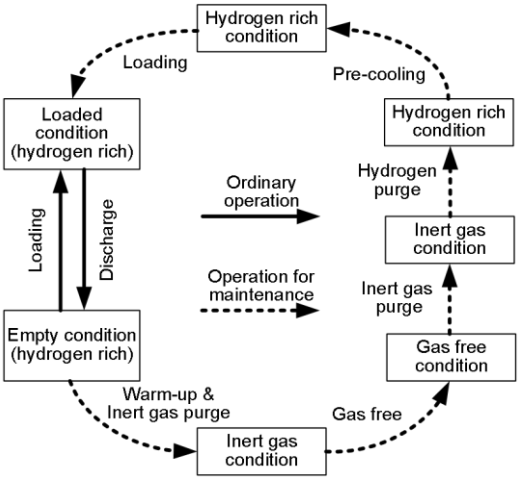

Figure 1

References in part A

1 ISO/TR 15916:2015, Basic consideration for the safety of hydrogen systems (ISO)

2 American Institute of Aeronautics and Astronautics, "Safety Standard for Hydrogen and Hydrogen Systems (Guide to Safety of Hydrogen and Hydrogen Systems)", 2005 (AIAA)

3 NFPA 12: Standard on Carbon Dioxide Extinguishing Systems 2020 Edition (NFPA)

4 ISO/IEC 80079-20-1:2017 Explosive atmospheres – Part 20-1: Material characteristics for gas and vapour classification – Test methods and data

5 UN Recommendations on the Transport of Dangerous Goods – Model Regulations, twenty-second revised edition

6 NFPA 2: Hydrogen Technologies Code 2016 Edition (NFPA)

7 IEC/ISO 31010: 2019 Risk management – Risk assessment techniques

8 Cryogenics Safety Manual – Fourth Edition (1998)

9 SAE ARP 5580-2001 "Recommended failure modes and effects analysis (FMEA) practices for non-automobile applications"

10 National Institute of Standards and Technology (NIST) RefProp database

Part B
Cargo containment systems of independent cargo tanks using vacuum insulation

5 Additional requirements

5.1 Additional special requirements for cargo containment systems of independent cargo tanks using vacuum insulation are prescribed in table 4 and these special requirements should apply in addition to the requirements in table 2.

Table 4: Special requirements for cargo containment systems of independent cargo tanks using vacuum insulation

No.	Special requirement	Related hazard
B-1	The insulation performance of vacuum insulation of cargo containment system should be evaluated to the satisfaction of the Administration based on experiments, as necessary.	General (see 4.1 and 6.1)
B-2	Notwithstanding special requirement A-22, liquid and gas hydrogen pipes may pass through spaces constituting a part of a cargo containment system using vacuum insulation where the degree of vacuum is monitored.	Susceptibility to leakage (see 4.4)
B-3	When selecting the most onerous scenario stipulated in special requirement A-24, the evaluation should include fire or loss of vacuum from the overall insulation system and should also consider the resulting magnitude of the heat flux in case of a single failure on the cargo containment system in each case.	High pressure hazard (see 4.8 and 6.2)

6 Additional special requirements to mitigate hazards of liquefied hydrogen

6.1 Hazards of liquefied hydrogen to be considered

6.1.1 In addition to 4.1.1, due consideration should be given to the possibility of untimely deterioration of insulation properties at the envisaged carriage temperatures of liquid hydrogen. The vacuum insulation evaluation should be specified for the normal range or upper limit of cold vacuum pressure (CVP), and loss of vacuum should be defined with respect to this value. Accordingly, effect of vacuum pressure should be taken into account at the time of design and

testing of cargo containment systems. Supporting structure and adjacent hull structure should be designed taking into account the cooling owing to loss of vacuum insulation.

6.1.2 For consideration on the special requirements for this part, bibliographic studies were conducted using the references at the end of this document, in particular, ISO/TR 15916[1)], "High Pressure Gas Safety Act" (Japanese law), "Safety standard for hydrogen and hydrogen system" by AIAA[2)] and NFPA 2 "Hydrogen Technologies Code"[3)]. The majority of special requirements for liquefied hydrogen carriers are provided based on ISO/TR 15916. This standard refers to liquefied hydrogen tank storage facilities on shore, tank trucks and so on, and includes basic viewpoints when discussing the properties of liquefied hydrogen.

6.2 High pressure hazard

In addition to 4.8, vacuum insulation systems are likely to be used for liquefied hydrogen containment systems and the insulation capability of such systems may be adversely affected by damage to the system, depending on the design of the system. If a rapid deterioration of the insulation system took place, rapid increase of temperature in the cargo tank would occur and/or the rate of vaporization of liquefied hydrogen might exceed the capacity of pressure relief valves. To prevent such dangerous deterioration of insulation, appropriate safety measures should be taken.

References in part B

1 ISO/TR 15916:2015, Basic consideration for the safety of hydrogen systems (ISO)

2 American Institute of Aeronautics and Astronautics, "Safety Standard for Hydrogen and Hydrogen Systems (Guide to Safety of Hydrogen and Hydrogen Systems)", 2005 (AIAA)

3 NFPA 2: Hydrogen Technologies Code 2016 Edition (NFPA)

Part C
Cargo containment systems of independent cargo tanks using insulation materials and hydrogen gas in the inner insulation spaces

7 Application of the requirements in this part

7.1 Design of cargo containment systems

The safety measures set out in this part should apply to cargo containment systems of independent cargo tanks using insulation materials and hydrogen gas in the inner insulation spaces as described below.

Figure 2 illustrates a cargo containment system of independent cargo tanks using insulation materials and hydrogen gas in the inner insulation spaces. In this cargo containment system, an inner shell corresponds to a cargo tank. An insulation structure is installed outside of the inner shell. The insulation structure consists of an inner insulation space, an outer shell and an outer insulation layer from the inside. The inner insulation layer, which is located outside the inner shell, is a part of the inner insulation space. The inner insulation space needs to be filled with the appropriate gas to prevent condensation and/or solidification of a large amount of gas caused by the low temperature of the inner shell surface, which will be almost equal to the boiling point of hydrogen. Thus, the inner insulation space is filled with hydrogen gas and no liquid.

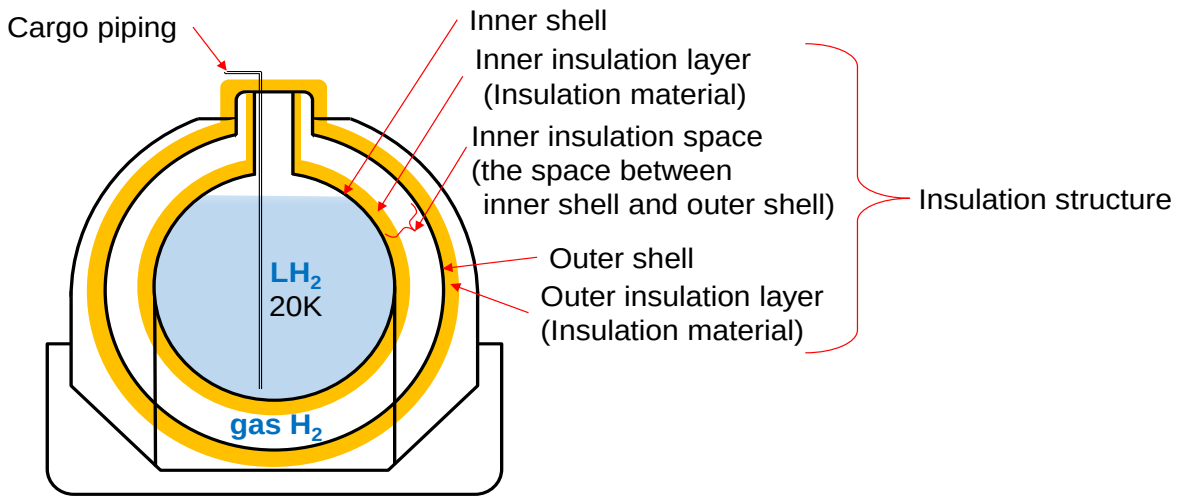

Figure 2 Illustration of cargo containment system

7.2 Conditions for the application of the requirements in this part

The safety requirements set out in this part should apply under the following conditions of use:

.1 the inner shell satisfies the requirements of the Code for a cargo tank; and

Note: This part focuses on the safety measures for the inner insulation space and the outer shell, as a part of the insulation structure for which no specific requirements are specified in the Code.

.2 appropriate measures are adopted to prevent leakage of gas from the inner insulation space to ensure the reliability of the insulation structure, taking into account that the space is filled with flammable gas.

8 Additional requirements

Special requirements for the cargo containment systems are prescribed in table 5 and these special requirements should apply in addition to the requirements in table 2.

Table 5: Special requirements for cargo containment systems of independent cargo tanks using insulation materials and hydrogen gas in the inner insulation spaces

No.	Special requirement	Explanation
C-1	The outer shell of the cargo containment system should be located at the distance from the ship's outer shell, as required in paragraphs 2.4.1 and 2.4.2 of the Code for cargo tanks of type 2G ship.	
C-2	Strength of the outer shell should be determined by analyses and tests considering safety principles, all applicable design conditions, materials used, and construction processes in reference to chapter 4 of the Code, and should be approved by the Administration.	
C-3	Notwithstanding special requirement C-2, the temperature of the outer shell should be determined by a temperature calculation, under the assumption that the inner shell is at the cargo temperature.	

No.	Special requirement	Explanation
C-4	The following special requirements should be applied to the outer shell: .1 All joints of the outer shell should be welded and of full penetration type. All joints of the outer shell should be of in-plane butt weld, as far as practicable. Tee welds of full penetration type may be used depending on the results of the test carried out at the approval of the welding procedure where the in-plane butt weld is not practicable due to the construction process and structure of the outer shell. .2 If a manhole is sealed by welding using backing rings, backing rings may be left after welding without removal, provided that they do not cause any significant harmful effects.	see 9.1
C-5	The outer shell should be subjected to pneumatic pressure testing to check its strength.	see 9.2
C-6	Appropriate thermal insulation should be provided to keep the temperature of the outer shell and outer insulation layer above the boiling point of oxygen. The insulation performance should be evaluated to the satisfaction of the Administration based on experiments, as necessary. When applying paragraph 4.19.1.1.5 of the Code, the degradation of insulation performance caused by hydrogen atmosphere should be considered. Means should be provided for monitoring the condition of the insulation for detection of failures.	
C-7	The pressure of the inner insulation space should be monitored taking into account the requirement for a cargo tank in paragraph 13.4 of the Code.	see 9.3
C-8	Under normal conditions, appropriate measures should be taken to maintain the pressure of the inner insulation space within the design limits.	see 9.3
C-9	Pressure and vacuum relief valves should be provided for inner insulation space which may be subject to pressures beyond their design capabilities, taking into account the requirements for pressure relief systems of cargo tanks in paragraphs 8.2 and 8.3 of the Code. The appropriate capacity of vacuum relief valves should be provided taking into account the expected rate of pressure drop in the inner insulation space of the cargo tanks of the ship under normal cargo operations, which replaces the requirements of paragraph 8.3.1.2 of the Code. When applying 8.3.2 of the Code, the vacuum relief valves should not admit air to the inner insulation space. In the event that the pressure relief valve for the inner insulation space is activated, the hydrogen gas release should be vented to a safe location.	see 9.3

No.	Special requirement	Explanation
C-10	The requirements in chapter 5 other than 5.3 and 5.10 of the Code, i.e. the requirements for cargo piping outside the cargo areas, should be applied for piping handling hydrogen for the inner insulation space.	
C-11	Appropriate measures should be taken for atmosphere control of the inner insulation space, e.g. inerting, gas freeing, aerating and purging, etc. (see also A-15).	
C-12	The special requirement A-8 should be applied to the tightness test of outer shell.	
C-13	The special requirements A-3 and A-4 should be applied to piping handling hydrogen for the inner insulation space.	
C-14	The special requirements A-8 and A-26 should be applied to exposed parts of piping handling hydrogen for the inner insulation space.	
C-15	Special requirement A-7 need not be applied to piping handling hydrogen for the inner insulation space, other than piping penetrating the inner shell, located inside the inner insulation space.	see 9.4
C-16	Notwithstanding special requirement A-22, piping handling hydrogen for an inner insulation space may pass through other inner insulation spaces.	
C-17	The requirements for type C independent tank should be applied to the inner shell.	
C-18	Manholes for access from or to the inner insulation space through the inner shell should not be permitted.	
C-19	Cargo piping connected to the inside of the inner shell should be led directly from the weather deck. No pipe should penetrate the inner shell from or to the inner insulation space.	

9 Explanation of special requirements

9.1 Welding of the outer shell

9.1.1 As mentioned in 7.2, the outer shell is a part of the insulation structure that has the function to contain hydrogen gas in the inner insulation space, but not to contain liquefied hydrogen.

9.1.2 Due to the high leakage of hydrogen, which is filled in inner insulation space, it is essential to ensure the reliability of tightness of the outer shell. This reliability is subject to evaluation and approval by the Administration. To ensure the tightness of the outer shell, equivalent welding requirements for the inner shell, i.e. cargo tank, should be applied to the outer shell as far as practicable. Therefore, all joints of the outer shell should be of the in-plane butt weld full penetration type, referring to paragraph 4.20.1 of the Code. On the other hand, it may not be practicable to use in-plane butt weld for the outer shell due to the construction procedure and structure. Considering that only gas is filled in the inner insulation space, no liquid pressure is applied on the outer shell. Therefore, using tee welds of the full penetration type is deemed acceptable for those areas, depending on the results of the test carried out at the approval of the welding procedure.

9.1.3 A manhole, when installed on the outer shell, can be sealed by gaskets or by welding. Welding is deemed to be a more reliable method to prevent hydrogen leakage, and removal of the backing rings is typically not possible due to the construction procedure. Considering

that no liquid pressure is applied on manholes and backing rings, there is no significant concern from strength point of view. Therefore, not removing backing rings is deemed acceptable, unless any conceivable harmful effects, such as fatigue strength, are identified.

9.2 Testing of outer shell

While pressure testing is to be conducted on the outer shell to check for strength, filling the inner insulation space with water is unrealistic because the insulation materials are installed in the inner insulation space. In addition, it is assumed that only gas is stored in the inner insulation space, therefore, a pneumatic pressure test is sufficient to reproduce the operational condition of the outer shell. This special requirement is related to paragraphs 4.20.3.1 and 4.23.6.7 of the Code.

9.3 Pressure of the inner insulation space

Keeping an appropriate pressure of the inner insulation space is essential for preventing the inner and the outer shell from rupturing and buckling.

9.4 Leak detection for piping handling hydrogen for the inner insulation space located inside the inner insulation space

The purpose of special requirement A-7 is to avoid forming flammable atmosphere. Because the inner insulation space is filled with hydrogen, no additional risk is created by leakage of hydrogen from the places, located inside the inner insulation space, where leakage of hydrogen may occur such as valves, flanges and seals of piping handling hydrogen for the inner insulation space. Thus, special requirement A-7 does not contribute to improve safety for such piping, which is different from the piping for cargo handling. Provision C-15 is necessary to enable the design for control to change atmosphere or for maintenance.

References in part C

1 ISO/TR 15916:2015, Basic consideration for the safety of hydrogen systems (ISO)

2 American Institute of Aeronautics and Astronautics, "Safety Standard for Hydrogen and Hydrogen Systems (Guide to Safety of Hydrogen and Hydrogen Systems)", 2005 (AIAA)

3 NFPA 2: Hydrogen Technologies Code 2016 Edition (NFPA)

ANNEX 21

DRAFT AMENDMENTS TO THE IGC CODE

CHAPTER 16
USE OF CARGO AS FUEL

1 Paragraph 16.9 is amended as follows:

16.9 Alternative fuels and technologies

16.9.1 If acceptable to the Administration, other cargo gases may be used as fuel, providing that the same level of safety as natural gas in this Code is ensured.

16.9.2 The use of cargoes ~~identified as toxic products~~ requiring carriage in type 1G ships, as identified in column "c" in the table of chapter 19, shall not be permitted.

16.9.3 If acceptable to the Administration, the use of cargoes identified as toxic products in column "f" which are required to be carried in type 2G/2PG ships in column "c" in the table of chapter 19 may be used as fuel, provided that the same level of safety as natural gas (methane) is ensured in accordance with the relevant provisions of this Code, including those in 1.3, and taking into account the guidelines developed by the Organization,* after special consideration has been given by the Administration.

16.9.~~3~~4 For cargoes other than LNG, the fuel supply system shall comply with the requirements of 16.4.1, 16.4.2, 16.4.3 and 16.5, as applicable, and shall include means for preventing condensation of vapour in the system.

16.9.~~4~~5 Liquefied gas fuel supply systems shall comply with 16.4.5.

16.9.~~5~~6 In addition to the requirements of 16.4.3.2, both ventilation inlet and outlet shall be located outside the machinery space. The inlet shall be in a non-hazardous area and the outlet shall be in a safe location.

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* Refer to the guidelines to be developed by the Organization.

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ANNEX 22

DRAFT AMENDMENTS TO THE COMMITTEE'S METHOD OF WORK

1 DRAFT AMENDMENTS TO ANNEX 1 OF MSC-MEPC.1/CIRC.5/REV.5 (see MSC 108/20, paragraph 17.5)

…

4 **Analysis of implications:** Provide an analysis of the implications of the proposal, addressing the cost to the maritime industry as well as the relevant legislative and administrative burdens (including the proposed method(s) of fulfilling any resulting administrative requirement), including capacity-building implications.

…

2 DRAFT AMENDMENTS TO ANNEX 2 OF MSC-MEPC.1/CIRC.5/REV.5 (see MSC 108/20, paragraph 17.7)

…

1.1 These procedures are intended to assist in the identification and assessment of capacity-building implications in the following cases:

.1 When a Member State submits a new output proposal.

.~~1~~2 when a Committee approve~~d~~s or adopts a new instrument/amendments to existing instruments;

.~~2~~3 during implementation of new instruments or amended instruments; and

.~~3~~4 during the scheduling of capacity-building measures or activities.

…

4 PROCEDURE

4.1 A Member State submitting a new output proposal should include an initial assessment of capacity-building implications.

4.2 A sub-committee or a working group of a committee should review the initial assessment of capacity-building implication when they finalized a draft text, together with preparation of the check/monitoring sheet (MSC.1/Circ.1500/Rev.2, annex 2).

4.3 If necessary, the sub-committee or working group should, in consultation with the industry and non-governmental organizations, conduct an assessment on implementing new measures that may be required or expected of the shipping industry for the implementation of the instrument.

4.4 ~~The Committees should conduct~~ Aan assessment of capacity-building implications should be ~~followed~~ conducted by following the procedure in the checklist ~~flow chart~~ in appendix 1 of these procedures.

~~4.5 Assessments of capacity-building implications should be initiated after the approval of a new instrument/amendment to existing instruments.~~

Assessment of capacity-building implications

4.5 In order to facilitate the assessment of capacity-building implications, the Committee should, if necessary, at the adoption stage of the new instruments or amended instruments, instruct the Drafting Group on Amendments to Mandatory Instruments to undertake a review of an assessment of capacity-building implications, ~~using the checklist for assessing the need for capacity-building contained in appendix 1 of these procedures~~ which has been prepared by the sub-committee or by the working group of a committee.

4.6 The Drafting Group should consider comments and any further submissions thereto and, if appropriate, conduct further assessment and present its report and recommendations to the Committee. The outcome of the review of the ~~preliminary~~ assessment should be submitted to the Committee concerned for consideration. This should confirm ~~contain the Drafting Group's appraisal of~~ whether there are or will be capacity-building implications or need for technical assistance; a list of possible implications; and recommendations on the way forward.

4.7 The Drafting Group may refer a matter through the Committee for further consideration by another organ.

~~Post-a~~Assessment of capacity-building implications for implementation of new measures

4.8 ~~When new measures have been approved~~ Prior to the final adoption, the Committee may request the Drafting Group to:

.1 ~~conduct~~ review the ~~a post~~ assessment exercise using the criteria and mechanism contained in appendix 2 of these procedures which have been prepared by the relevant sub-committee or a working group of a committee, to identify issues that require special focus when implementing technical cooperation and assistance activities; and

.2 prepare, for the Committee's consideration, a draft circular describing the possible capacity-building implications and recommendations for a course of action, for consideration by the Organization, the membership and/or industry.

5 TERMS OF REFERENCE OF THE DRAFTING GROUP

In ~~conducting its~~ reviewing an assessment of capacity-building, the Drafting Group should be guided by the following terms of reference:

.1 ~~consider~~ review an ~~preliminary~~ assessment of capacity-building and technical assistance actions undertaken by a sub-committee or a working group of a committee;

.2 ~~conduct~~ ensure an assessment is undertaken and, when new measures have been ~~approved~~ adopted, an ~~post-~~assessment~~,~~ of the capacity-building actions ~~that~~ may be included in the technical assistance or technical cooperation required by Administrations for the implementation of the instrument; and

~~.3 in consultation with the industry and non-governmental organizations, conduct an assessment and, on implementing new measures, a post-assessment, of the capacity-building actions that may be required or expected of the shipping industry for the implementation of the instrument; and~~

.~~4~~3 advise the Committee concerned of the implications for capacity-building relating to a new instrument or a proposed amendment to an existing instrument, whichever is being considered.

…

3 DRAFT AMENDMENTS TO CIRCULAR MSC-MEPC.1/CIRC.5/REV.5 (see MSC 108/20, paragraph 17.9)

…

1.4 The document will be kept under review and will be updated as necessary in the light of experience gained in its application, taking into account the document on Application of the Strategic Plan of the Organization (resolution A.11~~11~~74(3~~0~~)).

…

4.5 The overview of the Organization's overall planning hierarchy and its links to related processes, and of the Organization's strategic planning process and its related planning and reporting flows during the course of a biennium are shown in diagrams 1 and 2 contained in annex 1 to the document on Application of the Strategic Plan of the Organization (resolution A.11~~11~~74(3~~0~~)).

…

4.40 Accordingly, the Chairs, Vice-Chairs and secretaries of the Committees and their subsidiary bodies have a specific responsibility for effective management of the planning and reporting cycle and for consistent and rigorous application of this document and the document on Application of the Strategic Plan of the Organization (resolution A.11~~11~~74(3~~0~~)).

…

ANNEX 7

1 The purpose of these Guidelines is to assist the committees in considering and reviewing the outcomes (i.e. risk control options (RCOs) or other recommendations) of FSA studies. These Guidelines provide a bridge between the FSA Guidelines (MSC-MEPC.2/Circ.12/Rev.2) and the document on Application of the Strategic Plan of the Organization (resolution A.11~~11~~74(3~~0~~)).

…

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ANNEX 23

BIENNIAL STATUS REPORTS* OF THE SUB-COMMITTEES

2024-2025 BIENNIUM

SUB-COMMITTEE ON CARRIAGE OF CARGOES AND CONTAINERS (CCC)									
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**	**Year 2**	**References**
1. Improve implementation	1.17	Review of IGC Code	2024	MSC	CCC		Extended		MSC 103/21, para. 18.2; MSC 104/18, para. 15.16; MSC 105/20, para. 18.50; CCC 9/14, section 4; MSC 108/20, para. 14.20 and section 18
2. Integrate new 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	Ongoing		MSC 94/21, paras. 18.5 and 18.6; MSC 96/25, paras. 10.1 to 10.3; MSC 97/22, para. 19.2; PPR 6/20, para. 3.39; MSC 102/24, para. 21.4; MSC 106/19, para. 16.42; MSC 108/20, sections 3 and 14
2. Integrate new and advancing technologies in the regulatory framework	2.25	Revision of the Interim recommendations for carriage of liquefied hydrogen in bulk	2026	MSC	CCC		Extended		MSC 105/20, para. 18.28; CCC 8/18, section 14; CCC 9/14, section 7; MSC 108/20, section 14
Notes:	MSC 108 extended the target completion year to 2026.								
3. Respond to climate change	3.8 (New)	Development of a safety regulatory framework to	Continuous	MSC	MEPC / III / HTW /	MSC	No work requested		MSC 108/20, section 5

* For details, refer to Organizational Planning module of GISIS.

		support the reduction of GHG emissions from ships using new technologies and alternative fuels			CCC / SDC / SSE				
6. Address the human element	6.1	Role of the human element	Continuous	MSC / MEPC	III / PPR / CCC / SDC / SSE / NCSR	HTW	No work requested		MSC 89/25, paras. 10.10, 10.16 and 22.39 and annex 21; MEPC 78/17, paras. 10.4 and 13
6. Address the human element	6.2	Validated model training courses	Continuous	MSC / MEPC	III / PPR / CCC / SDC / SSE / NCSR	HTW	No work requested		MSC 100/20, paras. 10.3 to 10.6 and 17.28; MSC 105/20, section 16, MSC 108/20 PPR 9/21, section 12; MEPC 79/15, paras. 9.1, 9.14 to 9.15; MEPC 81/16, para. 10.1
6. Address the human element	6.15	Revision of resolution A.1050(27) to ensure the safety of personnel entering enclosed spaces on board ships	2024	MSC	III / HTW / PPR / SDC / SSE	CCC	Ongoing		MSC 101/24, para. 21.48; MSC 104/18, para. 15.16; MSC 106/19, para. 16.31; CCC 9/14, section 8; MSC 108/20, para. 14.15
7. Ensure regulatory effectiveness	7.1	Unified interpretation of provisions of IMO safety, security, environment, facilitation, liability and compensation-related conventions	Continuous	MSC / MEPC / FAL / LEG	III / PPR / CCC / SDC / SSE / NCSR		Ongoing		MSC 76/23, para. 20.3; MSC 78/26, para .22.12; MSC 108/20, para.18.13, section 19, MSC.1/Circ.1456/Rev.1, MSC.1/Circ.1572/Rev.2, MSC.1/Circ.1509/Rev.1, MSC.1/Circ.1511/Rev.1, MSC.1/Circ.1680; MEPC 78/17, section 4, and paras. 5.6 and 5.7; MEPC 79/15, paras. 4.8, 4.26, 4.27, 6.26 to 6.29; MEPC 80/17, paras. 4.11 and 5.24

7. Ensure regulatory effectiveness	7.10	Amendments to the IMDG Code and supplements	Continuous	MSC	CCC		Ongoing		MSC 105/20, paras. 3.59 and 14.4; CCC 9/14, section 6; MSC 108/20, sections 3 and 14
7. Ensure regulatory effectiveness	7.13	Amendments to the IMSBC Code and supplements	Continuous	MSC	CCC		Ongoing		MSC 105/20, paras. 14.4 and 3.57; MSC 107/20, paras. 17.10 and 17.12; CCC 9/14, section 5
7. Ensure regulatory effectiveness	7.15	Development of amendments to SOLAS chapter II-2 and the FSS Code concerning detection and control of fires in cargo holds and on the cargo deck of container ships	2025	MSC	CCC	SSE	No work requested		MSC 103/21, para. 18.8; SSE 8/20, section 10; MSC 106/19, section 9; SSE 9/20, section 10; SSE 10/20, section 10
7. Ensure regulatory effectiveness	7.20 (New)	Develop measures to prevent the loss of containers at sea	2025	MSC	III / HTW / SDC / NCSR	CCC	In progress		MSC 108/20, paras. 3.9 to 3.12 and 3.70,
7. Ensure regulatory effectiveness	7.28	Consideration of reports of incidents involving dangerous goods or marine pollutants in packaged form on board ships or in port areas	Annual	MSC / MEPC	III	CCC	In progress		CCC 7/15, section 9; CCC 8/18, section 9; CCC 9/14, section 9 CCC 8/18, section 9; CCC 9/14, section 9
7. Ensure regulatory effectiveness	7.40 (New)	Revision of the Revised guidelines for the preparation of the cargo securing manual (MSC.1/Circ.1353/Rev.2) to include a harmonized performance standard for lashing software to permit lashing software as a supplement to the Cargo Securing Manual	2025	MSC	CCC		In progress		MSC 108/20, para. 18.18
Notes:	MSC 108 transferred from its post-biennial agenda to 2024-2025 biennial agenda of the CCC Sub-Committee.								

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**	**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, para. 21.48; MEPC 75/18, paras. 11.10 and 11.11; MSC 104, para. 13.7.1; MSC 108/20, 13.7.1 MEPC 78/17, paras. 7.73 and 9.8; MEPC 79/156, paras. 9.5 and 9.6; MEPC 81/16, para. 10.9.1
1. Improve implementation	1.26	Revision of MARPOL Annex IV and associated guidelines	2025	MEPC	III / HTW	PPR	No work requested		MEPC 71/17, paras. 14.8 and 14.9; MEPC 72/17, para. 15.10; MEPC 73/19, para. 15.19; PPR 6/20, section 14; and MEPC 74/18, para. 14.5; MEPC 78/17, para. 14.11 PPR 9/21, section 14; MEPC 78/17, paras. 14.7 to 14.11; MEPC 80/17, para. 9.19; MEPC 81/16, section 5
Notes:	MEPC 74 agreed to expand the scope of the existing output 1.26 and amend the title of the output from "Amendments to the 2012 Guidelines on implementation of effluent standards and performance tests for sewage treatment plants (resolution MEPC.227(64)) to address inconsistencies in their application" to read "Revision of MARPOL Annex IV and associated guidelines to introduce provisions for record-keeping and measures to confirm the lifetime performance of sewage treatment plants".								
2. Integrate new 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, paras. 18.5 and 18.6; MSC 96/25, paras. 10.1 to 10.3; MSC 97/22, para. 19.2; PPR 6/20, para. 3.39; MSC 102/24, para. 21.4; MSC 106/19, para. 16.42, MSC 108/20, sections 3 and 14.
3. Respond to climate change	3.8 (New)	Development of a safety regulatory framework to	Continuous	MSC	MEPC / III / HTW /	MSC	Ongoing		MSC 108/20, section 5 MSC 108/20, para. 5.4

		support the reduction of GHG emissions from ships using new technologies and alternative fuels			CCC / SDC / SSE				
4. Engage in ocean governance	4.3	Follow-up work emanating from the Action Plan to address marine plastic litter from ships	2025	MEPC	III / HTW / PPR		No work requested		MEPC 78/17, section 8; MEPC 79/15, section 8; MEPC 80/17, section 8
6. Address the human element	6.1	Role of the human element	Continuous	MSC / MEPC	III / PPR / CCC / SDC / SSE / NCSR	HTW	Completed		MSC 89/25, paras. 10.10, 10.16 and 22.39 and annex 21; MEPC 78/17, paras. 10.4 and 13. 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	Completed		MSC 100/20, paras. 10.3 to 10.6 and 17.28; MSC 105/20, section 16, MSC 108/20 PPR 9/21, section 12; MEPC 79/15, paras. 9.1, 9.14 to 9.15; MEPC 81/16, para. 10.1 HTW 10/10, section 3
6. Address the human element	6.3	Reports on unlawful practices associated with certificates of competency	Annual	MSC	HTW		Completed		MSC 83/28, para. 12.2; HTW 10/10, section 5
6. Address the human element	6.15	Revision of resolution A.1050(27) to ensure the safety of personnel entering enclosed spaces on board ships	2024	MSC	III / HTW / PPR / SDC / SSE	CCC	No work requested		MSC 101/24, para. 21.48; MSC 104/18, para. 15.16; MSC 106/19, para. 16.31; MSC 108/20, para. 14.15
6. Address the human element	6.17	Comprehensive review of the 1978 STCW Convention and Code	2026	MSC	HTW		In progress		MSC 105/20, para. 18.13; MSC 107/20, para. 17.71; MSC 108/20, para. 16.5 HTW 10/10, section 6
7. Ensure regulatory effectiveness	7.20 (New)	Develop measures to prevent the loss of containers at sea	2025	MSC	III / HTW / SDC / NCSR	CCC	No work requested		MSC 108/20, paras. 3.9 to 3.12 and 3.70

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	2025	MSC	HTW / SSE	SDC	No work requested		MSC 108/20, para. 15.23.3; MSC 105/20, paras. 15.24.2 and 18.54; MSC 103/21, para. 18.31.
Notes:	MSC 108 extended target completion year to 2025.								

SUB-COMMITTEE ON IMPLEMENTATION OF IMO INSTRUMENTS (III)									
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**	**Year 2**	**References**
1. Improve implementation	1.4	Analysis of consolidated audit summary reports	Annual	Assembly	MSC / MEPC / LEG / TCC / III	Council	In progress		MEPC 61/24, para. 11.14.1; MSC 88/26, para. 10.8; C 120/D, paras. 7.1 and 7.2; MSC 105, para. 13.10; MSC 106, paras. 14.11 and 16.37; MSC 108/20, paras. 13.8 and 13.9 MEPC 78/17, paras. 10.7 to 10.11; MEPC 79/16, para. 9.3; MEPC 81/16, para. 10.7 III 8/19, section 8; III 9/19, section 8
1. Improve implementation	1.5	Non-exhaustive list of obligations under instruments relevant to the IMO Instruments Implementation Code (III Code)	Annual	MSC / MEPC	III		In progress		MSC 91/22, para. 10.30; MSC 108, para. 13.7.3 MEPC 77/16, paras. 10.8 and 10.9; MEPC 79/16, para. 9.13; MEPC 81/16, para. 10.9.3 III 8/19, section 11; III 9/19, section 11
1. Improve implementation	1.11	Measures to harmonize port State control (PSC) activities and procedures worldwide	Continuous	MSC / MEPC	HTW / PPR / NCSR	III	Ongoing		MSC 101/24, para. 21.48; MEPC 75/18, paras. 11.10 and 11.11; MSC 104, para. 13.7.1; MSC 108/20, 13.7.1 MEPC 78/17, paras. 7.73 and 9.8; MEPC 79/156, paras. 9.5 and 9.6; MEPC 81/16, para.10.9.1 III 8/19, section 5; III 9/19, section 5
1. Improve implementation	1.14	Development of guidance in relation to Mandatory IMO Member State Audit Scheme (IMSAS) to assist in the	2024	MSC / MEPC	III		Completed		MSC 103/21, para. 18.38; MSC 106/19, paras. 14.23 and 14.24; MSC 108/20, paras. 13.10 to 13.13

		implementation of the III Code by Member States							MEPC 76/15, paras. 10.2 and 12.5; MEPC 79/15, para. 9.3; MEPC 81/16, para. 10.8 III 8/19, section 9; III 9/19, section 9
1. Improve implementation	1.18	Development of guidance on assessment and applications of remote surveys, ISM Code audits and ISPS Code verifications	2024	MSC / MEPC	III		In progress		MSC 104/18, para. 15.5; MSC 106/19, para. 14.16; MSC 105/20, para. 18.52; MSC 108/20, para. 13.13 MEPC 79/15, para. 9.13; MEPC 81/16, para. 10.1 III 8/19, section 12; III 9/19, section 12
1. Improve implementation	1.26	Revision of MARPOL Annex IV and associated guidelines	2025	MEPC	III / HTW	PPR	In progress		MEPC 71/17, paras. 14.8 and 14.9; MEPC 72/17, para. 15.10; MEPC 73/19, para. 15.19; PPR 6/20, section 14; and MEPC 74/18, para. 14.5; MEPC 78/17, para. 14.11 PPR 9/21, section 14; MEPC 78/17, paras. 14.7 to 14.11; MEPC 80/17, para. 9.19; MEPC 81/16, section 5 III 9/19, sections 5 and 10
Notes:	MEPC 74 agreed to expand the scope of the existing output 1.26 and amend the title of the output from "Amendments to the 2012 Guidelines on implementation of effluent standards and performance tests for sewage treatment plants (resolution MEPC.227(64)) to address inconsistencies in their application" to read "Revision of MARPOL Annex IV and associated guidelines to introduce provisions for record-keeping and measures to confirm the lifetime performance of sewage treatment plants".								
3. Respond to climate change	3.8 (New)	Development of a safety regulatory framework to support the reduction of GHG emissions from ships using new technologies and alternative fuels	Continuous	MSC	MEPC / III / HTW / CCC / SDC / SSE	MSC	No work requested		MSC 108/20, section 5

4. Engage in ocean governance	4.3	Follow-up work emanating from the Action Plan to address marine plastic litter from ships	2025	MEPC	III / HTW / PPR		In progress		MEPC 78/17, section 8; MEPC 79/15, section 8; MEPC 80/17, section 8 III 8/19, section 14; III 9/19, section 14
6. Address the human element	6.1	Role of the human element	Continuous	MSC / MEPC	III / PPR / CCC / SDC / SSE / NCSR	HTW	No work requested		MSC 89/25, paras. 10.10, 10.16 and 22.39 and annex 21; MEPC 78/17, paras. 10.4 and 13. III 9/19, section 6
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, paras. 10.3 to 10.6 and 17.28; MSC 105/20, section 16, MSC 108/20 PPR 9/21, section 12; MEPC 79/15, paras. 9.1, 9.14 to 9.15; MEPC 81/16, para.10.1 III 6/15, section 4; III 8/19, paras. 5.20 to 5.29; III 9/19, section 6
6. Address the human element	6.10	Development of an entrant training manual for PSC personnel	2025	MSC / MEPC	III		Postponed		MSC 103/21, para. 18.36; MSC 106, para. 16.46 MEPC 76/15, paras. 10.1, 10.2 and 12.5; MEPC 79/15, para. 9.3; III 9/19, section 6
Notes:	It will be developed after the finalization of the IMO Model Course 3.09 on port State control, which is expected to be validated by III 10.								
6. Address the human element	6.15	Revision of resolution A.1050(27) to ensure the safety of personnel entering enclosed spaces on board ships	2024	MSC	III / HTW / PPR / SDC / SSE	CCC	No work requested		MSC 101/24, para. 21.48; MSC 104/18, para. 15.16; MSC 106/19, para. 16.31; MSC 108/20, para. 14.15
7. Ensure regulatory effectiveness	7.1	Unified interpretation of provisions of IMO safety, security, environment, facilitation, liability and compensation-related conventions	Continuous	MSC / MEPC / FAL / LEG	III / PPR / CCC / SDC / SSE / NCSR		Ongoing		MSC 76/23, para. 20.3; MSC 78/26, para. 22.12; MSC 108/20, para. 18.13, section 19, MSC.1/Circ.1456/Rev.1,

									MSC.1/Circ.1572/Rev.2, MSC.1/Circ.1509/Rev.1, MSC.1/Circ.1511/Rev.1, MSC.1/Circ.1680; MEPC 78/17, section 4, and paras. 5.6 and 5.7; MEPC 79/15, paras. 4.8, 4.26, 4.27, 6.26 to 6.29; MEPC 80/17, paras. 4.11 and 5.24; III 8/19, section 13; III 9/19, section 13
7. Ensure regulatory effectiveness	7.4	Lessons learned and safety issues identified from the analysis of marine safety investigation reports	Annual	MSC / MEPC	III		In progress		MSC 92/26, para. 22.29; MSC 106/19, paras. 14.2 to 14.6; MSC 108/20, paras. 13.3 to 13.6 III 7/17, section 4; III 8/19, section 4; MEPC 79/15, para. 9.3; MEPC 81/16, para. 10.6 III 8/19, section 4; III 9/19, section 4
7. Ensure regulatory effectiveness	7.5	Identified issues relating to the implementation of IMO instruments from the analysis of data	Annual	MSC / MEPC	III		In progress		MSC 96/25, paras. 23.13 ; MSC 106/19, paras. 14.12 and 16. MSC 108/20, para. 13.4 MEPC 79/15, paras. 12.13 and 12.14; MEPC 81, para. 10.3 III 8/19, section 7; III 9/19, section 7
7. Ensure regulatory effectiveness	7.7	Consideration and analysis of reports on alleged inadequacy of port reception facilities	Annual	MEPC	III		In progress		MEPC 69/21, para. 19.11; MEPC 73/19, paras. 8.3 and 8.11; MEPC 74/18, paras. 4.33, 4.34 and 8.22 MEPC 79/15, paras. 9.3 and 9.4; MEPC 81/16, para. 10.2 III 8/19, section 3; III 9/19, section 3

7. Ensure regulatory effectiveness	7.20 (New)	Develop measures to prevent the loss of containers at sea	2025	MSC	III / HTW / SDC / NCSR	CCC	No work requested		MSC 108/20, paras. 3.9 to 3.12 and 3.70,
7. Ensure regulatory effectiveness	7.27	Updated Survey Guidelines under the Harmonized System of Survey and Certification (HSSC)	Annual	MSC / MEPC	III		In progress		MSC 79/23, paras. 9.19 and 9.20; MSC 104, para. 13.7.2; MSC 106/19, paras. 14.13 to 14; MSC 108/20, para. 13.7.2 MEPC 68/21, paras. 14.5 and 14.6; MEPC 72/17, paras. 7.4 and 4.24 to 4.33; MEPC 77/16, para. 10.7; MEPC 79/15, paras. 9.7 to 9.9; MEPC 81/16, para. 10.9.2 III 8/19, section 10; III 9/19, section 10
7. Ensure regulatory effectiveness	7.28	Consideration of reports of incidents involving dangerous goods or marine pollutants in packaged form on board ships or in port areas	Annual	MSC / MEPC	III	CCC	No work requested		CCC 7/15, section 9; CCC 8/18, section 9; CCC 9/14, section 9
7. Ensure regulatory effectiveness	7.31	Finalization of a non-mandatory instrument on regulations for non-convention ships	2025	MSC	III		No work requested		MSC 96/25, para. 9.4; MSC 101/24, para. 21.38; MSC 104, section 5; MSC 105, section 4; MSC 107/20, paras. 17.83, 19.9 and 19.10, MSC 108/20, section 10.
Notes:	MSC 102, having considered that MSC 101 had included an item on "measures to improve domestic ferry safety", agreed that the III Sub-Committee should not proceed with the development of a model course (as instructed by MSC 96), pending further instructions from the MSC taking into account the outcome of the work on measures to improve domestic ferry safety (MSC 102/24, para. 14.10); MSC 107 extended completion year to 2025, and considered the outcome of TCC 72 (para. 2.19.3 of TCC 72/16), in particular in the context of "Measures to improve domestic ferry safety", the need for development of an explanatory manual for the model regulations on domestic ferry safety and related online training material, and placed the item “Domestic ferry safety” in the provisional agenda of MSC 108.								

7. Ensure regulatory effectiveness	7.45	Development of guidance to assist competent authorities in the implementation of the Cape Town Agreement of 2012	2024	MSC	III		In progress		MSC 106/19, paras. 16.17 and 16.46; MSC 108/20, para. 13.14; III 9/19, section 15

SUB-COMMITTEE ON NAVIGATION, COMMUNICATIONS AND SEARCH AND RESCUE (NCSR)									
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**	**Year 2**	**References**
1. Improve implementation	1.3	Revision of the criteria for the provision of mobile satellite communication services in the Global Maritime Distress and Safety System (GMDSS) (resolution A.1001(25))	2024	MSC	NCSR		Ongoing		MSC 101/24, para. 21.33; MSC 107/20, para. 17.77.2, MSC 108/20, section 12 NCSR 9/24, section 11; NCSR 10/22, section 11
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, para. 21.48; MEPC 75/18, paras. 11.10 and 11.11; MSC 104, para. 13.7.1; MSC 108/20, 13.7.1 MEPC 78/17, paras.7.73 and 9.8; MEPC 79/156, paras. 9.5 and 9.6; MEPC 81/16, para. 10.9.1
1. Improve implementation	1.34	Development of global maritime SAR services, including harmonization of maritime and aeronautical procedures and amendments to the IAMSAR Manual	Continuous	MSC	NCSR		Ongoing		MSC 108/20, section 12.
1. Improve implementation	1.35 (New)	Review of the appropriateness and effectiveness of SOLAS regulation IV/5 (Provision of radiocommunication services)	2025	MSC	NCSR		In progress		MSC 106/19, para. 16.37; MSC 107/20, para. 17.78.3; MSC 108/20, section 12

2. Integrate new and advancing technologies in the regulatory framework	2.1	Response to matters related to the ITU-R Study Groups and ITU World Radiocommunication Conference	Continuous	MSC	NCSR		Ongoing		
2. Integrate new and advancing technologies in the regulatory framework	2.27	Development of performance standards for a digital navigational data system (NAVDAT)	2024	MSC	NCSR		Ongoing		MSC 103/21, para. 18.18; MSC 106/19, para. 16.47.1.2, MSC 108/20, para. 12.19 NCSR 10/22, section 8, MSC 108/20, para. 12.19
2. Integrate new and advancing technologies in the regulatory framework	2.28	Development of amendments to SOLAS chapters IV and V and performance standards and guidelines to introduce VHF Data Exchange System (VDES)	2024	MSC	NCSR		Ongoing		MSC 103/21, para. 18.12; MSC 106/19, para. 16.47.1.1; NCSR 10/22, section 6
4. Engage in ocean governance	4.1	Identification and protection of Special Areas, Emission Control Areas and PSSAs and associated protective measures	Continuous	MEPC	NCSR		No work requested		MEPC 79/15, para. 10.10 MEPC 78/17, section 11; MEPC 79/15, section 10; MEPC 80/17, section 11
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, paras. 10.10, 10.16 and 22.39 and annex 21; MEPC 78/17, paras. 10.4 and 13.
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, paras.10.3 to 10.6 and 17.28; MSC 105/20, section 16, MSC 108/20 PPR 9/21, section 12;

									MEPC 79/15, paras. 9.1, 9.14 to 9.15; MEPC 81/16, para. 10.1
7. Ensure regulatory effectiveness	7.1	Unified interpretation of provisions of IMO safety, security, environment, facilitation, liability and compensation-related conventions	Continuous	MSC / MEPC / FAL / LEG	III / PPR / CCC / SDC / SSE / NCSR		Ongoing		MSC 76/23, para. 20.3; MSC 78/26, para. 22.12; MSC 108/20, para. 1 8.13, section 19, MSC.1/Circ.1456/Rev.1, MSC.1/Circ.1572/Rev.2, MSC.1/Circ.1509/Rev.1, MSC.1/Circ.1511/Rev.1, MSC.1/Circ.1680; MEPC 78/17, section 4, and paras. 5.6 and 5.7; MEPC 79/15, paras. 4.8, 4.26, 4.27, 6.26 to 6.29; MEPC 80/17, paras. 4.11 and 5.24
7. Ensure regulatory effectiveness	7.2	Developments in GMDSS services, including guidelines on maritime safety information (MSI)	Continuous	MSC	NCSR		Ongoing		MSC 108/20, section 12, MSC.1/Circ.1310/Rev.2,
7. Ensure regulatory effectiveness	7.20 (New)	Develop measures to prevent the loss of containers at sea	2025	MSC	III / HTW / SDC / NCSR	CCC	No work requested		MSC 108/20, paras. 3.9 to 3.12 and 3.70,
7. Ensure regulatory effectiveness	7.22	Routeing measures and ship reporting systems	Continuous	MSC	NCSR		Ongoing		MSC 108/20, para. 12.4, SN.1/Circ.343
7. Ensure regulatory effectiveness	7.23	Updates to the LRIT system	Continuous	MSC	NCSR		Ongoing		
7. Ensure regulatory effectiveness	7.44	Revision of SOLAS regulation V/23 and associated instruments to improve the safety of pilot transfer arrangements	2024	MSC	NCSR		Ongoing		MSC 106/19, paras. 16.12 to .14

7. Ensure regulatory effectiveness	7.49 (New)	Development of guidelines for the use of electronic nautical publications (ENP)	2025	MSC	NCSR		In progress		MSC 104/15/4, MSC 105/20, para. 18.11
7. Ensure regulatory effectiveness	7.50 (New)	Identification of measures to improve the security and integrity aspects of AIS	2025	MSC	NCSR		In progress		MSC 107/20, para. 17.77;
7. Ensure regulatory effectiveness	7.[...] (New)	Review of the 2009 Code on Alerts and Indicators	2026	MSC	SSE, NCSR	SDC	No work requested		SDC 10/17, section 14, MSC 108/20, para. 15.23.2
Note:	MSC 108 transferred this output from the post-biennial agenda to the biennial agenda of the SDC Sub-Committee for 2024-2025.								

SUB-COMMITTEE ON SHIP DESIGN AND CONSTRUCTION (SDC)									
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**	**Year 2**	**References**
1. Improve implementation	1.16	Review of the 2014 Guidelines for the reduction of underwater noise from commercial shipping to address adverse impacts on marine life (MEPC.1/Circ.833) (2014 Guidelines) and identification of next steps	2024	MEPC	SDC		Completed		MSC 108/18.24; MSC 107/20, para. 12.24 and MSC 105/20, para. 15.23; MEPC 81/16, paras. 10.11-10.16 and MEPC 78/17 para. 10.3 SDC 10/17, para. 5.21; SDC 9/16, section 5; SDC 8/18, section 14 and annex 11;
Notes:	SDC 10 completed the work on the output.								
2. Integrate new 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, paras. 18.5 and 18.6; MSC 96/25, paras. 10.1 to 10.3; MSC 97/22, para. 19.2; PPR 6/20, para. 3.39; MSC 102/24, para. 21.4; MSC 106/19, para. 16.42, MSC 108/20, sections 3 and 14.
2. Integrate new and advancing technologies in the regulatory framework	2.4	Further development of the IP Code and associated guidance	2025	MSC	SDC		In progress		MSC 104/18, para. 11.5; MSC 105/20, section 15, MSC 106/19, section 3; resolutions MSC.521(106) & MSC.527(106), MSC 108/20, section 15.
2. Integrate new and advancing technologies in the regulatory framework	2.5	Safety objectives and functional requirements of the Guidelines on alternative design and arrangements for SOLAS chapter II-1	2024	MSC	SSE	SDC	Completed		MSC 82/24, para. 3.92; MSC 98/23, annex 38; MSC 102/24, para. 19.16. MSC 105/20, paras. 15.13 and 18.54, MSC 108/20, para. 15.8, MSC.1/Circ.1212/Rev.2 SDC 10/17, para. 7.11

2. Integrate new and advancing technologies in the regulatory framework	2.6 (New)	Guidelines for use of Fibre-Reinforced Plastics (FRP) within ship structures	2025	MSC	SDC		In progress		MSC 98/23, para. 10.22; MSC 107/20, para. 17.89
2. Integrate new and advancing technologies in the regulatory framework	2.9 (New)	Revision of SOLAS chapters II-1 (part C) and V, and related instruments regarding steering and propulsion requirements, to address both traditional and non-traditional propulsion and steering systems	2025	MSC	SSE	SDC	In progress		MSC 105/20, para. 18.23; MSC 107/20, para. 12.4
2. Integrate new and advancing technologies in the regulatory framework	2.20	Development of Guidelines for emergency towing arrangements for ships other than tanker	2025	MSC	SDC		In progress		MSC 107/20, para. 12.12, MSC 108/20, paras. 15.2 to .4 SDC 8/18, section 12; SDC 9/16, paras. 9.15 and 9.16
Notes:	MSC 108 expanded this output to absorb post-biennial output 214 on the "Revision of appendices A and B of the Revised guidance on shipboard towing and mooring equipment (MSC.1/Circ.1175/Rev.1)".								
3. Respond to climate change	3.8 (New)	Development of a safety regulatory framework to support the reduction of GHG emissions from ships using new technologies and alternative fuels	Continuous	MSC	MEPC / III / HTW / CCC / SDC / SSE	MSC	No work requested		MSC 108/20, section 5
6. Address the human element	6.1	Role of the human element	Continuous	MSC / MEPC	III / PPR / CCC / SDC / SSE / NCSR	HTW	Completed		MSC 89/25, paras. 10.10, 10.16 and 22.39 and annex 21; MEPC 78/17, paras. 10.4 and 13.

6. Address the human element	6.2	Validated model training courses	Continuous	MSC / MEPC	III / PPR / CCC / SDC / SSE / NCSR	HTW	No work requested		MSC 100/20, paras. 10.3 to 10.6 and 17.28; MSC 105/20, section 16, MSC 108/20 PPR 9/21, section 12; MEPC 79/15, paras. 9.1, 9.14 to 9.15; MEPC 81/16, para. 10.1
6. Address the human element	6.15	Revision of resolution A.1050(27) to ensure the safety of personnel entering enclosed spaces on board ships	2024	MSC	III / HTW / PPR / SDC / SSE	CCC	No work requested		MSC 101/24, para. 21.48; MSC 104/18, para. 15.16; MSC 106/19, para. 16.31; MSC 108/20, para. 14.15
7. Ensure regulatory effectiveness	7.1	Unified interpretation of provisions of IMO safety, security, environment, facilitation, liability and compensation-related conventions	Continuous	MSC / MEPC / FAL / LEG	III / PPR / CCC / SDC / SSE / NCSR		Ongoing		MSC 76/23, para. 20.3; MSC 78/26, para. 22.12; MSC 108/20, para. 18.13, section 19, MSC.1/Circ.1456/Rev.1, MSC.1/Circ.1572/Rev.2, MSC.1/Circ.1509/Rev.1, MSC.1/Circ.1511/Rev.1, MSC.1/Circ.1680; MEPC 78/17, section 4, and paras. 5.6 and 5.7; MEPC 79/15, paras. 4.8, 4.26, 4.27, 6.26 to 6.29; MEPC 80/17, paras. 4.11 and 5.24
7. Ensure regulatory effectiveness	7.20 (New)	Develop measures to prevent the loss of containers at sea	2025	MSC	III / HTW / SDC / NCSR	CCC	No work requested		MSC 108/20, paras. 3.9 to 3.12 and 3.70,
7. Ensure regulatory effectiveness	7.21	Amendments to the 2011 ESP Code	Continuous	MSC	SDC		Ongoing		MSC 92/26, para. 13.31; MSC 107/20, para. 12.2; MSC 108/20, section 3 and para. 15.5, MSC.553(108)
Notes:	Regular updates to the 2011 ESP Code agreed by MSC 92 (MSC 92/26, para.13.31).								

7. Ensure regulatory effectiveness	7.25 (New)	Amendment to regulation 25 of the of the 1988 Load Line Protocol regarding the requirement for setting of guard rails on the deck structure	2025	MSC	SDC		Extended		MSC 108/20, para. 15.23.1
Notes:	MSC 108 extended target completion year to 2025.								
7. Ensure regulatory effectiveness	7.35 (New)	Amendments to the Guidelines for construction, installation, maintenance and inspection/survey of means of embarkation and disembarkation (MSC.1/Circ.1331) concerning the rigging of safety netting on accommodation ladders and gangways	2025	MSC	SSE	SDC	Extended		MSC 106/19, para. 16.28; MSC 108/20, para. 15.23.1
Notes:	MSC 108 extended target completion year to 2025.								
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	2025	MSC	HTW / SSE	SDC	Extended		MSC 108/20, para. 15.23.3; MSC 105/20, paras. 15.24.2 and 18.54; MSC 103/21, para. 18.31.
Notes:	MSC 105 agreed to the request of SDC 8 to transfer this output from the post-biennial agenda to the biennial agenda of SDC and the provisional agenda of SDC 9 (MSC 105/20, par. 15.24.2); MSC 108 extended target completion year to 2025.								
7. Ensure regulatory effectiveness	7.[...] (New)	Review of the 2009 Code on Alerts and Indicators	2026	MSC	SSE, NCSR	SDC	No work requested		SDC 10/17, section 14, MSC 108/20, para. 15.23.2
Note:	MSC 108 transferred this output from the post-biennial agenda to the biennial agenda of the SDC Sub-Committee for 2024-2025.								

SUB-COMMITTEE ON SHIP SYSTEMS AND EQUIPMENT (SSE)[1]									
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**	**Year 2**	**References**
2. Integrate new 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, paras. 18.5 and 18.6; MSC 96/25, paras. 10.1 to 10.3; MSC 97/22, para.19.2; PPR 6/20, para. 3.39; MSC 102/24, para. 21.4; MSC 106/19, para. 16.42, MSC 108/20, sections 3 and 14.
2. Integrate new and advancing technologies in the regulatory framework	2.5	Safety objectives and functional requirements of the Guidelines on alternative design and arrangements for SOLAS chapter II-1	2024	MSC	SSE	SDC	No work requested		MSC 82/24, para. 3.92; MSC 98/23, annex 38; MSC 102/24, para. 19.16. MSC 105/20, paras. 15.13 and 18.54, MSC 108/20, para. 5.8, MSC.1/Circ.1212/Rev.2
2. Integrate new and advancing technologies in the regulatory framework	2.9 (New)	Revision of SOLAS chapters II-1 (part C) and V, and related instruments regarding steering and propulsion requirements, to address both traditional and non-traditional propulsion and steering systems	2025	MSC	SSE	SDC	No work requested		MSC 105/20, para. 18.23; MSC 107/20, para. 12.4
2. Integrate new and advancing	2.16	Revision of SOLAS chapter III and the	2027	MSC	SSE		Extended		MSC 108/20, para. 18.25 SSE 7/21, section 5; SSE 8/20, section 5;

[1] SSE 10 reports to MSC 109. However, for the purpose of listing all sub-committees' status reports, the SSE Sub-Committee's biennial agenda, as prepared by SSE 10 is reproduced (SSE 10/20, annex 9).

technologies in the regulatory framework		International Life-Saving Appliance (LSA) Code							SSE 9/20, section 5; SSE 10/20, section 5
Notes:	To remove gaps, inconsistencies and ambiguities based on the safety objectives, functional requirements and expected performance for SOLAS chapter III. MSC 108 extended target completion year to 2027.								
3. Respond to climate change	3.8 (New)	Development of a safety regulatory framework to support the reduction of GHG emissions from ships using new technologies and alternative fuels	Continuous	MSC	MEPC / III / HTW / CCC / SDC / SSE	MSC	No work requested		MSC 108/20, section 5
6. Address the human element	6.1	Role of the human element	Continuous	MSC / MEPC	III / PPR / CCC / SDC / SSE / NCSR	HTW	Completed		MSC 89/25, paras. 10.10, 10.16 and 22.39 and annex 21; MEPC 78/17, paras. 10.4 and 13.
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, paras. 10.3 to 10.6 and 17.28; MSC 105/20, section 16, MSC 108/20 PPR 9/21, section 12; MEPC 79/15, paras. 9.1, 9.14 to 9.15; MEPC 81/16, para. 10.1
6. Address the human element	6.15	Revision of resolution A.1050(27) to ensure the safety of personnel entering enclosed spaces on board ships	2024	MSC	III / HTW / PPR / SDC / SSE	CCC	No work requested		MSC 101/24, para. 21.48; MSC 104/18, para. 15.16; MSC 106/19, para. 16.31; MSC 108/20, para. 14.15
7. Ensure regulatory effectiveness	7.1	Unified interpretation of provisions of IMO safety, security, environment, facilitation, liability and compensation-related conventions	Continuous	MSC / MEPC / FAL / LEG	III / PPR / CCC / SDC / SSE / NCSR		Ongoing		MSC 76/23, para. 20.3; MSC 78/26, para. 22.12; MSC 108/20, para. 18.13, section 19, MSC.1/Circ.1456/Rev.1, MSC.1/Circ.1572/Rev.2, MSC.1/Circ.1509/Rev.1,

									MSC.1/Circ.1511/Rev.1, MSC.1/Circ.1680; MEPC 78/17, section 4, and paras. 5.6 and 5.7; MEPC 79/15, paras. 4.8, 4.26, 4.27, 6.26 to 6.29; MEPC 80/17, paras. 4.11 and 5.24; SSE 10/20, section 12
7. Ensure regulatory effectiveness	7.14	Revision of the provisions for helicopter facilities in SOLAS and the MODU Code	2024	MSC	SSE		Completed		
Notes:	MSC 86/26, para. 23.39; SSE 9/20, section 9; SSE 10/20, section 9. SSE 10 invited MSC 109 to decide that the item had been completed.								
7. Ensure regulatory effectiveness	7.15	Development of amendments to SOLAS chapter II-2 and the FSS Code concerning detection and control of fires in cargo holds and on the cargo deck of container ships	2025	MSC	CCC	SSE	In progress		MSC 103/21, para. 18.8; SSE 8/20, section 10; MSC 106/19, section 9; SSE 9/20, section 10; SSE 10/20, section 10
7. Ensure regulatory effectiveness	7.19 (New)	Amendments to the LSA Code for thermal performance of immersion suits	2025	MSC	SSE		Extended		MSC 92/26, para. 13.34; SSE 9/20, section 7; SSE 10/20, section 15; MSC 108/20, para. 18.25
Notes:	MSC 108 approved, in principle, the request of SSE 10 to extend target completion year to 2025.								
7. Ensure regulatory effectiveness	7.29 (New)	Comprehensive review of the Requirements for maintenance, thorough examination, operational testing, overhaul and repair of lifeboats and rescue boats, launching appliances and release gear (resolution	2025	MSC	SSE		In progress		SSE 10/20, section 14

		MSC.402(96)) to address challenges with their implementation							
7. Ensure regulatory effectiveness	7.30 (New)	Amendments to SOLAS chapter III and chapter IV of the LSA Code to require the carriage of self-righting or canopied reversible liferafts for new ships	2025	MSC / SSE	SSE		In progress		SSE 10/20, section 6
7. Ensure regulatory effectiveness	7.32 (New)	Development of amendments to paragraph 8.3.5 and annex 1 of the 1994 and 2000 HSC Codes	2024	MSC	SSE		Completed		SSE 10/20, section 7
7. Ensure regulatory effectiveness	7.33 (New)	Development of design and prototype test requirements for the arrangements used in the operational testing of free-fall lifeboat release systems without launching the lifeboat	2025	MSC	SSE		In progress		SSE 10/20, section 4
7. Ensure regulatory effectiveness	7.34 (New)	Revision of the 2010 FTP Code to allow for new fire protection systems and materials	2026	MSC	SSE		Ongoing		SSE 10/20, section 8
7. Ensure regulatory effectiveness	7.35 (New)	Amendments to the Guidelines for construction, installation, maintenance and inspection/survey of means of embarkation and disembarkation (MSC.1/Circ.1331) concerning the rigging of	2024	MSC	SSE	SDC	No work requested		MSC 106/19, para. 16.28; MSC 108/20, para. 15.23.1

		safety netting on accommodation ladders and gangways							
Notes:	MSC 108 extended target completion year to 2025.								
7. Ensure regulatory effectiveness	7.36	New requirements for ventilation of survival craft	2025	MSC	SSE		Extended		MSC 97/22, para. 19.22; SSE 8/20, section 3; MSC 106/19, section 11; MSC 107/20, section 14; SSE 10/20, section 3; MSC 108/20, para. 18.25.
Notes:	MSC 107 extended the target completion year to 2024 in order for SSE 10 to consider compelling need for ventilation requirements for partially enclosed lifeboats and liferafts. SSE 10 requested extension of the target completion year to 2025 for further discussion on the compelling need.								
7. Ensure regulatory effectiveness	7.37 (New)	Evaluation of adequacy of fire protection, detection and extinction arrangements in vehicle, special category and ro-ro spaces in order to reduce the fire risk of ships carrying new energy vehicles	2027	MSC	SSE		In progress		SSE 10/20, section 16
7. Ensure regulatory effectiveness	7.41	Development of provisions to consider prohibiting the use of fire-fighting foams containing fluorinated substances, in addition to PFOS for fire-fighting on board ships	2025	MSC	SSE		In progress		MSC 101/24, para. 21.27; MSC 102/24, paras. 19.31 and 21.19; SSE 8/20, section 12; MSC 106/19, section 11; SSE 9/20, section 15; MSC 107/20, section 14; SSE 10/20, section 13
Notes:	MSC 107 changed scope and title to "Development of provisions to consider prohibiting the use of fire-fighting foams containing fluorinated substances, in addition to PFOS, for fire-fighting on board ships".								

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	2024	MSC	HTW / SSE	SDC	No work requested		MSC 108/20, para. 15.23.3; MSC 105/20, paras. 15.24.2 and 18.54; MSC 103/21, para. 18.31.
Notes:	MSC 105 agreed to the request of SDC 8 to lift this output from the Committee's post-biennial agenda to the biennial agenda of SDC and the provisional agenda of SDC 9 (MSC 105/20, par. 15.24.2); MSC 108 extended target completion year to 2025.								
7. Ensure regulatory effectiveness	7.[...] (New)	Review of the 2009 Code on Alerts and Indicators	2026	MSC	SSE, NCSR	SDC	No work requested		SDC 10/17, section 14, MSC 108/20, para. 15.23.2
Note:	MSC 108 transferred this output from the post-biennial agenda to the biennial agenda of the SDC Sub-Committee for 2024-2025.								

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ANNEX 24

PROVISIONAL AGENDAS FOR THE FORTHCOMING SESSIONS OF THE SUB-COMMITTEES

PROVISIONAL AGENDA FOR CCC 10

Opening of the session

1 Adoption of the agenda

2 Decisions of other IMO bodies

3 Amendments to the IGF Code and development of guidelines for alternative fuels and related technologies (2.3)

4 Review of the IGC Code (1.17)

5 Amendments to the IMSBC Code and supplements (7.13)

6 Amendments to the IMDG Code and supplements (7.10)

7 Revision of the *Revised guidelines for the preparation of the Cargo Securing Manual* (MSC.1/Circ.1353/Rev.2) to include a harmonized performance standard for lashing software to permit lashing software as a supplement to the Cargo Securing Manual

8 Revision of the *Revised recommendations for entering enclosed spaces aboard ships* (resolution A.1050(27)) (6.15)

9 Consideration of reports of incidents involving dangerous goods or marine pollutants in packaged form on board ships or in port areas (7.28)

10 Unified interpretation of provisions of IMO safety, security, and environment-related conventions (7.1)

11 Development of measures to prevent the loss of containers at sea

12 Biennial status report and provisional agenda for CCC 11

13 Election of Chair and Vice-Chair for 2025

14 Revision of the Interim recommendations for carriage of liquefied hydrogen in bulk (2.25)

15 Any other business

16 Report to the Committees

PROVISIONAL AGENDA FOR HTW 11

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 Biennial status report and provisional agenda for HTW 12

9 Election of Chair and Vice-Chair for 2026

10 Any other business

11 Report to the Maritime Safety Committee

PROVISIONAL AGENDA FOR III 10

Opening of the session

1 Adoption of the agenda

2 Decisions of other IMO bodies

3 Consideration and analysis of reports on alleged inadequacy of port reception facilities (7.7)

4 Lessons learned and safety issues identified from the analysis of marine safety investigation reports (7.4)

5 Measures to harmonize port State control (PSC) activities and procedures worldwide (1.11)

6 Validated model training courses (6.2)

7 Identified issues relating to the implementation of IMO instruments from the analysis of data (7.5)

8 Analysis of consolidated audit summary reports (1.4)

9 Updated Survey Guidelines under the Harmonized System of Survey and Certification (HSSC) (7.27)

10 Non-exhaustive list of obligations under instruments relevant to the IMO Instruments Implementation Code (III Code) (1.5)

11 Development of guidance on assessments and applications of remote surveys, ISM Code audits and ISPS Code verifications (1.18)

12 Unified interpretation of provisions of IMO safety, security and environment-related conventions (7.1)

13 Follow-up work emanating from the Action Plan to Address Marine Plastic Litter from Ships (4.3)

14 Development of guidance to assist competent authorities in the implementation of the Cape Town Agreement of 2012 (7.45)

15 Biennial agenda and provisional agenda for III 11

16 Election of Chair and Vice-Chair for 2025

17 Any other business

18 Report to the Committees

PROVISIONAL AGENDA FOR NCSR 11

Opening of the session

1 Adoption of the agenda

2 Decisions of other IMO bodies

3 Routeing measures and ship reporting systems (7.22)

4 Updates to the LRIT system (7.23)

5 Developments in GMDSS services, including guidelines on maritime safety information (MSI) (7.2)

6 Response to matters related to the ITU-R Study Groups and ITU World Radiocommunication Conference (2.1)

7 Development of global maritime SAR services, including harmonization of maritime and aeronautical procedures and amendments to the IAMSAR Manual (1.34)

8 Development of performance standards for a digital navigational data system (NAVDAT) (2.27)

9 Development of amendments to SOLAS chapters IV and V and performance standards and guidelines to introduce VHF Data Exchange System (VDES) (2.28)

10 Review of the appropriateness and effectiveness of SOLAS regulation IV/5 (Provision of radiocommunication services) (1.35)

11 Revision of the *Criteria for the provision of mobile satellite communication services in the Global Maritime Distress and Safety System (GMDSS)* (resolution A.1001(25)) (1.3)

12 Development of guidelines for the use of electronic nautical publications (ENP) (7.49)

13 Revision of SOLAS regulation V/23 and associated instruments to improve the safety of pilot transfer arrangements (7.44)

14 Identification of measures to improve the security and integrity aspects of AIS (7.50)

15 Unified interpretation of provisions of IMO safety, security, environment, facilitation, liability and compensation-related conventions (7.1)

16 Biennial status report and provisional agenda for NCSR 12

17 Election of Chair and Vice-Chair for 2025

18 Any other business

19 Report to the Maritime Safety Committee

PROVISIONAL AGENDA FOR SDC 11

Opening of the session

1 Adoption of the agenda

2 Decisions of other IMO bodies

3 Development of guidelines for emergency towing arrangements for ships other than tankers (2.20)

4 Further development of the IP Code and associated guidance (2.4)

5 Revision of the *Interim explanatory notes for the assessment of passenger ship systems' capabilities after a fire or flooding casualty* (MSC.1/Circ.1369) and related circulars (7.42)

6 Amendments to the 2011 ESP Code (6.22)

7 Amendments to the *Guidelines for construction, installation, maintenance and inspection/survey of means of embarkation and disembarkation* (MSC.1/Circ.1331) concerning the rigging of safety netting on accommodation ladders and gangways (7.35)

8 Revision of SOLAS chapters II-1 (part C) and V, and related instruments regarding steering and propulsion requirements, to address both traditional and non-traditional propulsion and steering systems (2.9)

9 Amendment to regulation 25 of the 1988 Load Line Protocol regarding the requirement for setting of guard rails on the deck structure (7.25)

10 Unified interpretation of provisions of IMO safety, security, environment, facilitation, liability and compensation-related conventions (7.1)

11 Guidelines for use of fibre-reinforced plastics (FRP) within ship structures (2.6)

12 Review of the 2009 Code on Alerts and Indicators

13 Biennial status report and provisional agenda for SDC 12

14 Election of Chair and Vice-Chair for 2026

15 Any other business

16 Report to the Maritime Safety Committee

PROVISIONAL AGENDA FOR SSE 11[1]

Opening of the session

1 Adoption of the agenda

2 Decisions of other IMO bodies

3 New requirements for ventilation of survival craft (7.36)

4 Development of design and prototype test requirements for the arrangements used in the operational testing of free-fall lifeboat release systems without launching the lifeboat (7.33)

5 Revision of SOLAS chapter III and the LSA Code (2.16)

6 Amendments to SOLAS chapter III and chapter IV of the LSA Code to require the carriage of self-righting or canopied reversible liferafts for new ships (7.30)

7 Review and update of the *Code of practice for atmospheric oil mist detectors* (MSC.1/Circ.1086)

8 Revision of the 2010 FTP Code to allow for new fire protection systems and materials (7.34)

9 Review and update SOLAS regulation II-2/9 on containment of fire to incorporate existing guidance and clarify requirements

10 Unified interpretation of provisions of IMO safety, security, environment, facilitation, liability and compensation-related conventions (7.1)

11 Validated model training courses (6.2)

12 Development of amendments to SOLAS chapter II-2 and the FSS Code concerning detection and control of fires in cargo holds and on the cargo deck of containerships (7.15)

13 Development of provisions to consider prohibiting the use of fire-fighting foams containing fluorinated substances, in addition to PFOS, for fire-fighting on board ships (7.41)

14 Comprehensive review of the *Requirements for maintenance, thorough examination, operational testing, overhaul and repair of lifeboats and rescue boats, launching appliances and release gear* (resolution MSC.402(96)) to address challenges with their implementation (7.29)

15 Amendments to the LSA Code for thermal performance of immersion suits (OW 14)

[1] SSE 10 formally reports to MSC 109; however, for the purpose of this annex, MSC 108 approved the provisional agenda for SSE 11.

16 Evaluation of adequacy of fire protection, detection and extinction arrangements in vehicle, special category and ro-ro spaces in order to reduce the fire risk of ships carrying new energy vehicles (7.37)

17 Biennial status report and provisional agenda for SSE 12

18 Election of Chair and Vice-Chair for 2026

19 Any other business

20 Report to the Maritime Safety Committee

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ANNEX 25

BIENNIAL STATUS REPORT* OF THE MARITIME SAFETY COMMITTEE

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	Year 2	References
1. Improve implementa-tion	1.2	Input on identifying emerging needs of developing countries, in particular SIDS and LDCs to be included in the ITCP	Continuous	TCC	MSC / MEPC / FAL / LEG		No work requested		MEPC 78/17, section 12; MEPC 79/15, section 7; MEPC 80/17, section 12
1. Improve implementa-tion	1.3	Revision of the criteria for the provision of mobile satellite communication services in the Global Maritime Distress and Safety System (GMDSS) (resolution A.1001(25))	2024	MSC	NCSR		In progress		MSC 101/24, para. 21.33; MSC 107/20, para. 17.77.2, MSC 108/20, section 12
1. Improve implementa-tion	1.4	Analysis of consolidated audit summary reports	Annual	Assembly	MSC / MEPC / LEG / TCC / III	Council	Ongoing		MEPC 61/24, para. 11.14.1; MSC 88/26, para. 10.8; C 120/D, paras. 7.1 and 7.2; MSC 105, para. 13.10; MSC 106, paras. 14.11 and 16.37; MSC 108/20, paras.13.8 and 13.9 MEPC 78/17, paras. 10.7 to 10.11; MEPC 79/16, para. 9.3; MEPC 81/16, para. 10.7 MSC 105, para. 13.10; MSC 106, paras. 14.11 and 16.37; MSC 108/20, paras. 13.8 and 13.9

* For details, refer to Organizational Planning module of GISIS.

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	Year 2	References
1. Improve implementation	1.5	Non-exhaustive list of obligations under instruments relevant to the IMO Instruments Implementation Code (III Code)	Annual	MSC / MEPC	III		Ongoing		MSC 91/22, para. 10.30; MSC 108, para. 13.7.3 MEPC 77/16, paras. 10.8 and 10.9; MEPC 79/16, para. 9.13; MEPC 81/16, para. 10.9.3
1. Improve implementation	1.7	Identify thematic priorities within the area of maritime safety and security, marine environmental protection, facilitation of maritime traffic and maritime legislation	Annual	TCC	MSC / MEPC / FAL / LEG		Completed		MEPC 78/17, section 12; MEPC 80/17, section 12, MSC 108/20, paras.19.18 to 19.20. MSC 108/20, paras.19.18 to 19.20
1. Improve implementation	1.11	Measures to harmonize port State control (PSC) activities and procedures worldwide	Continuous	MSC / MEPC	HTW / PPR / NCSR	III	Ongoing		MSC 101/24, para. 21.48; MEPC 75/18, paras. 11.10 and 11.11; MSC 104, para. 13.7.1; MSC 108/20, para. 13.7.1 MEPC 78/17, paras.7.73 and 9.8; MEPC 79/156, paras. 9.5 and 9.6; MEPC 81/16, para. 10.9.1
1. Improve implementation	1.14	Development of guidance in relation to Mandatory IMO Member State Audit Scheme (IMSAS) to assist in the implementation of the III Code by Member States	2024	MSC / MEPC	III		Completed		MSC 103/21, para. 18.38; MSC 106/19, paras. 14.23 and 14.24; MSC 108/20, paras. 13.10 to 13.13 MEPC 76/15, paras. 10.2 and 12.5; MEPC 79/15, para. 9.3; MEPC 81/16, para. 10.8
1. Improve implementation	1.17	Review of IGC Code	2024	MSC	CCC		Extended		MSC 103/21, para. 18.2; MSC 104/18, para. 15.16; MSC 105/20, para. 18.50; MSC 108/20, para. 14.20 and section 18

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	Year 2	References
1. Improve implementa-tion	1.18	Development of guidance on assessment and applications of remote surveys, ISM Code audits and ISPS Code verifications	2024	MSC / MEPC	III		In progress		MSC 104/18, para. 15.5; MSC 106/19, para. 14.16; MSC 105/20, para. 18.52; MSC 108/20, para. 13.13 MEPC 79/15, para. 9.13; MEPC 81/16, para. 10.1
1. Improve implementa-tion	1.34	Development of global maritime SAR services, including harmonization of maritime and aeronautical procedures and amendments to the IAMSAR Manual	Continuous	MSC	NCSR		Ongoing		MSC 108/20, section 12.
1. Improve implementa-tion	1.35 (New)	Review of the appropriateness and effectiveness of SOLAS regulation IV/5 (Provision of radiocommunication services)	2025	MSC	NCSR		In progress		MSC 106/19, para. 16.37; MSC 107/20, para. 17.78.3; MSC 108/20, section 12
2. Integrate new and advancing technologies in the regulatory framework	2.1	Response to matters related to the ITU-R Study Groups and ITU World Radiocommunication Conference	Continuous	MSC	NCSR		Ongoing		
2. Integrate new 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	Ongoing		MSC 94/21, paras. 18.5 and 18.6; MSC 96/25, paras. 10.1 to 10.3; MSC 97/22, para. 19.2; PPR 6/20, para. 3.39; MSC 102/24, para. 21.4; MSC 106/19, para. 16.42, MSC 108/20, sections 3 and 14.

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	Year 2	References
2. Integrate new and advancing technologies in the regulatory framework	2.4	Further development of the IP Code and associated guidance	2025	MSC	SDC		In progress		MSC 104/18, para. 11.5; MSC 105/20, section 15, MSC 106/19, section 3; resolutions MSC.521(106) & MSC.527(106), MSC 108/20, section 15.
2. Integrate new and advancing technologies in the regulatory framework	2.5	Safety objectives and functional requirements of the Guidelines on alternative design and arrangements for SOLAS chapter II-1	2024	MSC	SSE	SDC	Completed		MSC 82/24, para. 3.92; MSC 98/23, annex 38; MSC 102/24, para. 19.16. MSC 105/20, paras. 15.13 and 18.54, MSC 108/20, para. 15.8, MSC.1/Circ.1212/Rev.2
2. Integrate new and advancing technologies in the regulatory framework	2.6 (New)	Guidelines for use of Fibre-Reinforced Plastics (FRP) within ship structures	2025	MSC	SDC		In progress		MSC 98/23, para. 10.22; MSC 107/20, para. 17.89
2. Integrate new and advancing technologies in the regulatory framework	2.7	Development of joint FAL-LEG-MEPC-MSC guidelines on electronic certificates	2026	FAL	MSC				FAL 48/20, paragraph 2.12 MSC 108/20, paragraph 2.8.2

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	Year 2	References
2. Integrate new and advancing technologies in the regulatory framework	2.8 (New)	Revision of the Guidelines on Maritime Cyber Risk Management (MSC-FAL.1/Circ.3/Rev.2) and identification of next steps to enhance maritime cybersecurity	2025	MSC	FAL	MSC	Completed		MSC-FAL.1/Circ.3/Rev.3, subject to FAL's concurrent approval
Notes:	FAL 48 extended the target completion year to 2025; FAL 48/20, para.17.13, MSC 108/20, section 6.								
2. Integrate new and advancing technologies in the regulatory framework	2.9 (New)	Revision of SOLAS chapters II-1 (part C) and V, and related instruments regarding steering and propulsion requirements, to address both traditional and non-traditional propulsion and steering systems	2025	MSC	SSE	SDC	In progress		MSC 105/20, para. 18.23; MSC 107/20, para. 12.4
2. Integrate new and advancing technologies in the regulatory framework	2.16	Revision of SOLAS chapter III and the International Life-Saving Appliance (LSA) Code	2027	MSC	SSE		Extended		MSC 108/20, para. 18.25
Notes:	To remove gaps, inconsistencies and ambiguities based on the safety objectives, functional requirements and expected performance for SOLAS chapter III. MSC 108, in principle, extended target completion year to 2027.								
2. Integrate new and advancing technologies in the regulatory framework	2.20	Development of Guidelines for emergency towing arrangements for ships other than tanker	2025	MSC	SDC		In progress		MSC 107/20, para. 12.12, MSC 108/20, paras. 15.2 to 15.4
Notes:	MSC 108 expanded this output to absorb post-biennial output 214 on the "Revision of appendices A and B of the Revised guidance on shipboard towing and mooring equipment (MSC.1/Circ.1175/Rev.1)".								

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	Year 2	References
2. Integrate new and advancing technologies in the regulatory framework	2.21	Review of Formal Safety Assessment (FSA) studies by the FSA Experts' Group	Continuous	MSC			Ongoing		MSC 105/20, section 11; MSC 106/19, section 9; MSC 107/20, section 10, MSC 108/20, section 11
2. Integrate new and advancing technologies in the regulatory framework	2.23	Development of a goal-based instrument for maritime autonomous surface ships (MASS)	2025	MSC			In progress		MSC 104/18, para. 15.9.2; MSC 105/20, section 7; MSC 106/19, section 5; MSC 107/20, section 5, MSC 108/20, section 4
2. Integrate new and advancing technologies in the regulatory framework	2.25	Revision of the Interim recommendations for carriage of liquefied hydrogen in bulk	2026	MSC	CCC		Extended		MSC 105/20, para. 18.28; MSC 108/20, section 14
Notes:	MSC 108 extended the target completion year to 2026.								
2. Integrate new and advancing technologies in the regulatory framework	2.27	Development of performance standards for a digital navigational data system (NAVDAT)	2024	MSC	NCSR		In progress		MSC 103/21, para. 18.18; MSC 106/19, para. 16.47.1.2, MSC 108/20, para. 12.19

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	Year 2	References
2. Integrate new and advancing technologies in the regulatory framework	2.28	Development of amendments to SOLAS chapters IV and V and performance standards and guidelines to introduce VHF Data Exchange System (VDES)	2024	MSC	NCSR		In progress		MSC 103/21, para. 18.12; MSC 106/19, para. 16.47.1.1
3. Respond to climate change	3.8 (New)	Development of a safety regulatory framework to support the reduction of GHG emissions from ships using new technologies and alternative fuels	Continuous	MSC	MEPC / III / HTW / CCC / SDC / SSE	MSC	Ongoing		MSC 108/20, section 5
4. Engage in ocean governance	4.2	Input to the ITCP on emerging issues relating to sustainable development and achievement of the SDGs	Continuous	TCC	MSC / MEPC / FAL / LEG		No work requested		MEPC 72/17, section 12; MEPC 73/19, section 13; MEPC 74/18, section 12 MEPC 78/17, section 12; MEPC 80/17, section 12
5. Enhance global facilitation and security of international trade	5.2	Guidelines and guidance on the implementation and interpretation of SOLAS chapter XI-2 and the ISPS Code	Annual	MSC			Completed		
5. Enhance global facilitation and security of international trade	5.3	Consideration and analysis of reports on piracy and armed robbery against ships	Annual	MSC			Completed		MSC 105/20, para. 9.1; MSC 106/19, section 7; MSC 107/20, section 7, MSC 108/20, section 8

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	Year 2	References
5. Enhance global facilitation and security of international trade	5.4	Revised guidance relating to the prevention of piracy and armed robbery to reflect emerging trends and behaviour patterns	Annual	MSC	LEG		Completed		MSC 105/20, para. 9.1; MSC 106/19. para. 7.7; MSC 107/20, section 7; MSC 108/20, section 8
5. Enhance global facilitation and security of international trade	5.9	Development of amendments to the Revised guidelines for the prevention and suppression of the smuggling of drugs, psychotropic substances and precursor chemicals on ships engaged in international maritime traffic" (resolutions FAL.9(34) and MSC.228(82))	2027	FAL	MSC				FAL 48/20, paragraph 17.7 MSC 108/20, paragraph 2.16
5. Enhance global facilitation and security of international trade	5.13	IMO's contribution to addressing unsafe mixed migration by sea	2025	MSC / FAL / LEG			In progress		FAL 41/17, para. 7.15; MSC 98/23, para. 16.14; FAL 43/20, para. 10.7; MSC 101/24, para. 19.8; MSC 104/18, para. 9.5; MSC 105/20, section 10; FAL 46/24, para. 11.4, MSC106/19, section 8; resolution MSC.528(106); MSC 107/20, section 9, MSC 108/20, section 9
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, paras. 10.10, 10.16 and 22.39 and annex 21; MEPC 78/17, paras. 10.4 and 13.

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	Year 2	References
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, paras. 10.3 to 10.6 and 17.28; MSC 105/20, section 16, MSC 108/20 PPR 9/21, section 12; MEPC 79/15, paras. 9.1, 9.14 to 9.15; MEPC 81/16, para. 10.1
6. Address the human element	6.3	Reports on unlawful practices associated with certificates of competency	Annual	MSC	HTW		Completed		MSC 83/28, para. 12.2;
6. Address the human element	6.10	Development of an entrant training manual for PSC personnel	2025	MSC / MEPC	III		Postponed		MSC 103/21, para. 18.36; MSC 106, para. 16.46 MEPC 76/15, paras. 10.1, 10.2 and 12.5; MEPC 79/15, para. 9.3
Notes:	It will be developed after the finalization of IMO Model Course 3.09 on port State control, which is expected to be validated by III 10.								
6. Address the human element	6.15	Revision of resolution A.1050(27) to ensure the safety of personnel entering enclosed spaces on board ships	2024	MSC	III / HTW / PPR / SDC / SSE	CCC	In progress		MSC 101/24, para. 21.48; MSC 104/18, para. 15.16; MSC 106/19, para. 16.31; MSC 108/20, para. 14.15
6. Address the human element	6.17	Comprehensive review of the 1978 STCW Convention and Code	2026	MSC	HTW		In progress		MSC 105/20, para. 18.13; MSC 107/20, para. 17.71; MSC 108/20, para. 16.5
7. Ensure regulatory effectiveness	7.1	Unified interpretation of provisions of IMO safety, security, environment, facilitation, liability and compensation-related conventions	Continuous	MSC / MEPC / FAL / LEG	III / PPR / CCC / SDC / SSE / NCSR		Ongoing		MSC 76/23, para. 20.3; MSC 78/26, para. 22.12; MSC 108/20, para. 18.13, section 19, MSC.1/Circ.1456/Rev.1, MSC.1/Circ.1572/Rev.2, MSC.1/Circ.1509/Rev.1, MSC.1/Circ.1511/Rev.1, MSC.1/Circ.1680; MEPC 78/17, section 4, and

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	Year 2	References
									paras. 5.6 and 5.7; MEPC 79/15, paras. 4.8, 4.26, 4.27, 6.26 to 6.29; MEPC 80/17, paras. 4.11 and 5.24
7. Ensure regulatory effectiveness	7.2	Developments in GMDSS services, including guidelines on maritime safety information (MSI)	Continuous	MSC	NCSR		Ongoing		MSC 108/20, section 12, MSC.1/Circ.1310/Rev.2,
7. Ensure regulatory effectiveness	7.4	Lessons learned and safety issues identified from the analysis of marine safety investigation reports	Annual	MSC / MEPC	III		in progress		MSC 92/26, para. 22.29; MSC 106/19, paras. 14.2 to 14.6; MSC 108/20, paras. 13.3 to 13.6; III 7/17, section 4; III 8/19, section 4; MEPC 79/15, para. 9.3; MEPC 81/16, para. 10.6
7. Ensure regulatory effectiveness	7.5	Identified issues relating to the implementation of IMO instruments from the analysis of data	Annual	MSC / MEPC	III		In progress		MSC 96/25, para. 23.13; MSC 106/19, paras. 14.12 and 16. MSC 108/20, para. 13.4 MEPC 79/15, paras. 12.13 and 12.14; MEPC 81/16, para. 10.3
7. Ensure regulatory effectiveness	7.6	Consideration and analysis of reports and information on persons rescued at sea and stowaways	Annual	MSC / FAL			Postponed		
7. Ensure regulatory effectiveness	7.10	Amendments to the IMDG Code and supplements	Continuous	MSC	CCC		Ongoing		MSC 105/20, paras. 3.59 and 14.4; MSC 108/20, sections 3 and 14
7. Ensure regulatory effectiveness	7.13	Amendments to the IMSBC Code and supplements	Continuous	MSC	CCC		Ongoing		MSC 105/20, paras. 14.4 and 3.57; MSC 107/20, paras. 17.10 and 17.12

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	Year 2	References
7. Ensure regulatory effectiveness	7.14	Revision of the provisions for helicopter facilities in SOLAS and the MODU Code	2024	MSC	SSE		Completed		
Notes:	MSC 86/26, para.23.39; SSE 9/20, section 9; SSE 10/20, section 9. SSE 10 requested MSC 109 to decide that the item has been completed.								
7. Ensure regulatory effectiveness	7.15	Development of amendments to SOLAS chapter II-2 and the FSS Code concerning detection and control of fires in cargo holds and on the cargo deck of container ships	2025	MSC	CCC	SSE	In progress		MSC 103/21, para.18.8; SSE 8/20, section 10; MSC 106/19, section 9; SSE 9/20, section 10; SSE 10/20, section 10
7. Ensure regulatory effectiveness	7.19 (New)	Amendments to the LSA Code for thermal performance of immersion suits	2025	MSC	SSE		Extended		MSC 92/26, para. 13.34; SSE 9/20, section 7; SSE 10/20, section 15; MSC 108/20, para18.25
Notes:	MSC 108 approved, in principle, the request of SSE 10 to extend target completion year to 2025.								
7. Ensure regulatory effectiveness	7.20 (New)	Develop measures to prevent the loss of containers at sea	2025	MSC	III / HTW / SDC / NCSR	CCC	In progress		MSC 108/20, paras. 3.9 to 3.12 and 3.70, MSC.550(108)
7. Ensure regulatory effectiveness	7.21	Amendments to the 2011 ESP Code	Continuous	MSC	SDC		Ongoing		MSC 92/26, para. 13.31; MSC 107/20, para. 12.2; MSC 108/20, section 3 and para. 15.5, MSC.553(108)
Notes:	Regular updates to the 2011 ESP Code agreed by MSC 92 (MSC 92/26, para.13.31).								
7. Ensure regulatory effectiveness	7.22	Routeing measures and ship reporting systems	Continuous	MSC	NCSR		Ongoing		MSC 108/20, para. 12.4, SN.1/Circ.343
7. Ensure regulatory effectiveness	7.23	Updates to the LRIT system	Continuous	MSC	NCSR		Ongoing		

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	Year 2	References
7. Ensure regulatory effectiveness	7.24	Verified goal-based new ship construction standards for tankers and bulk carriers	Continuous	MSC			Postponed		MSC 106/19, section 4; MSC 107/20, section 4
7. Ensure regulatory effectiveness	7.25 (New)	Amendment to regulation 25 of the of the 1988 Load Line Protocol regarding the requirement for setting of guard rails on the deck structure	2025	MSC	SDC		Extended		MSC 108/20, para. 15.23.1
Notes:	MSC 108 extended target completion year to 2025.								
7. Ensure regulatory effectiveness	7.26	Reports to the MSC on information communicated by STCW Parties	Annual	MSC			Completed		MSC.1/Circ.1164/Rev.28
7. Ensure regulatory effectiveness	7.27	Updated Survey Guidelines under the Harmonized System of Survey and Certification (HSSC)	Annual	MSC / MEPC	III		in progress		MSC 79/23, paras. 9.19 and 9.20; MSC 104, para. 13.7.2; MSC 106/19, paras. 14.13 to .14; MSC 108/20, para. 13.7.2 MEPC 68/21, paras. 14.5 and 14.6; MEPC 72/17, paras. 7.4 and 4.24 to 4.33; MEPC 77/16, para. 10.7; MEPC 79/15, paras. 9.7 to 9.9; MEPC 81/16, para. 10.9.2
7. Ensure regulatory effectiveness	7.28	Consideration of reports of incidents involving dangerous goods or marine pollutants in packaged form on board ships or in port areas	Annual	MSC / MEPC	III	CCC	In progress		CCC 7/15, section 9; CCC 8/18, section 9; CCC 9/14, section 9
7. Ensure regulatory effectiveness	7.29 (New)	Comprehensive review of the Requirements for maintenance, thorough examination, operational testing, overhaul and repair of lifeboats and	2025	MSC	SSE		In progress		SSE 10/20, section 14

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	Year 2	References
		rescue boats, launching appliances and release gear (resolution MSC.402(96)) to address challenges with their implementation							
7. Ensure regulatory effectiveness	7.30 (New)	Amendments to SOLAS chapter III and chapter IV of the LSA Code to require the carriage of self-righting or canopied reversible liferafts for new ships	2025	MSC / SSE	SSE		In progress		SSE 10/20, section 6
7. Ensure regulatory effectiveness	7.31	Finalization of a non-mandatory instrument on regulations for non-convention ships	2025	MSC	III		In progress		MSC 96/25, para. 9.4; MSC 101/24, para. 21.38; MSC 104, section 5; MSC 105, section 4; MSC 107/20, paras. 17.83, 19.9 and 19.10, MSC 108/20, section 10.
Notes:	MSC 107 considered the outcome of TCC 72 (para. 2.19.3 of TCC 72/16), in particular in the context of "Measures to improve domestic ferry safety", the need for development of an explanatory manual for the model regulations on domestic ferry safety and related online training material, and extended target completion year and placed the item “Domestic ferry safety” in the provisional agenda of MSC 108.								
7. Ensure regulatory effectiveness	7.32 (New)	Development of amendments to paragraph 8.3.5 and annex 1 of the 1994 and 2000 HSC Codes	2024	MSC	SSE		Completed		SSE 10/20, section 7
7. Ensure regulatory effectiveness	7.33 (New)	Development of design and prototype test requirements for the arrangements used in the operational testing of free-fall lifeboat release systems without launching the lifeboat	2025	MSC	SSE		In progress		SSE 10/20, section 4
7. Ensure regulatory effectiveness	7.34 (New)	Revision of the 2010 FTP Code to allow for new fire protection systems and materials	2026	MSC	SSE		Ongoing		SSE 10/20, section 8

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	Year 2	References
7. Ensure regulatory effectiveness	7.35 (New)	Amendments to the Guidelines for construction, installation, maintenance and inspection/survey of means of embarkation and disembarkation (MSC.1/Circ.1331) concerning the rigging of safety netting on accommodation ladders and gangways	2025	MSC	SSE	SDC	Extended		MSC 106/19, para. 16.28; MSC 108/20, para. 15.23.1
Notes:	MSC 108 extended target completion year to 2025.								
7. Ensure regulatory effectiveness	7.36	New requirements for ventilation of survival craft	2025	MSC	SSE		Extended		MSC 97/22, para. 19.22; SSE 8/20, section 3; MSC 106/19, section 11; MSC 107/20, section 14; SSE 10/20, section 3; MSC 108/20, para. 18.25.
Notes:	MSC 108 extended target completion year to 2025.								
7. Ensure regulatory effectiveness	7.37 (New)	Evaluation of adequacy of fire protection, detection and extinction arrangements in vehicle, special category and ro-ro spaces in order to reduce the fire risk of ships carrying new energy vehicles	2027	MSC	SSE		In progress		SSE 10/20, section 16
7. Ensure regulatory effectiveness	7.40 (New)	Revision of the Revised guidelines for the preparation of the cargo securing manual (MSC.1/Circ.1353/Rev.2) to include a harmonized performance standard for lashing software to permit	2025	MSC	CCC		In progress		MSC 108/20, para. 18.18

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	Year 2	References
		lashing software as a supplement to the Cargo Securing Manual							
Notes:	MSC 108 approved it to be in 2024-2025 biennial agenda, as proposed by CCC 9.								
7. Ensure regulatory effectiveness	7.41	Development of provisions to consider prohibiting the use of fire-fighting foams containing fluorinated substances, in addition to PFOS for fire-fighting on board ships	2025	MSC	SSE		In progress		MSC 101/24, para. 21.27; MSC 102/24, paras. 19.31 and 21.19; SSE 8/20, section 12; MSC 106/19, section 11; SSE 9/20, section 15; MSC 107/20, section 14; SSE 10/20, section 13
Notes:	MSC 107 changed scope and title to "Development of provisions to consider prohibiting the use of fire-fighting foams containing fluorinated substances, in addition to PFOS, for fire-fighting on board ships".								
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	2024	MSC	HTW / SSE	SDC	Extended		MSC 108/20, para. 15.23.3; MSC 105/20, paras. 15.24.2 and 18.54; MSC 103/21, para. 18.31.
Notes:	MSC 105 agreed to the request of SDC 8 to transfer this output from the post-biennial agenda to the biennial agenda of SDC and the provisional agenda of SDC 9 (MSC 105/20, par. 15.24.2); MSC 108 extended target completion year to 2025.								
7. Ensure regulatory effectiveness	7.44	Revision of SOLAS regulation V/23 and associated instruments to improve the safety of pilot transfer arrangements	2024	MSC	NCSR		Extended		MSC 106/19, paras. 16.12 to .14
7. Ensure regulatory effectiveness	7.45	Development of guidance to assist competent authorities in the implementation of the Cape Town Agreement of 2012	2024	MSC	III		In progress		MSC 106/19, paras. 16.17 and 16.46; MSC 108/20, para. 13.14

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	Year 2	References
7. Ensure regulatory effectiveness	7.49 (New)	Development of guidelines for the use of electronic nautical publications (ENP)	2025	MSC	NCSR		In progress		MSC 104/15/4, MSC 105/20, para.18.11
7. Ensure regulatory effectiveness	7.50 (New)	Identification of measures to improve the security and integrity aspects of AIS	2025	MSC	NCSR		In progress		MSC 107/20, para. 17.77;
7. Ensure regulatory effectiveness	7.[...] (New)	Review of the 2009 Code on Alerts and Indicators	2026	MSC	SSE, NCSR	SDC	No work requested		SDC 10/17, section 14, MSC 108/20, para. 15.23.2
Note:	MSC 108 transferred this output from the post-biennial agenda to the biennial agenda of the SDC Sub-Committee for 2024-2025.								
8. Ensure organizational effectiveness	8.1	Endorsed proposals for the development, maintenance and enhancement of information systems and related guidance (GISIS, websites, etc.)	Continuous	Council	MSC / MEPC / FAL / LEG / TCC		Ongoing		MEPC 78/17, para. 4.45; MEPC 79/15, paras. 6.1 to 6.5 and 9.4; MEPC 80/17, paras. 6.11 to 6.13
8. Ensure organizational effectiveness	8.9	Revised documents on organization and method of work, as appropriate	Annual	Council	MSC / MEPC / FAL / LEG / TCC		Postponed		MSC-MEPC.1/Circ.5/Rev.5; MSC 108/20, section 17 and 18; MEPC 78/17, section 13; MEPC 79/15, section 11; MEPC 80/17, section 13 FAL Circ.3/Circ.217/Rev.2, FAL 48/20, para. 16.8.
8. Ensure organizational effectiveness	8.12	Consideration for the enhancement and improvement of multilingualism and the language services at IMO	Continuous	Council	MSC / MEPC / FAL / LEG / TCC		Ongoing		
OW. Other work	OW 3	Endorsed proposals for new outputs for the 2024-2025 biennium as accepted by the Committees	Annual	Council	MSC / MEPC / FAL / LEG / TCC		Postponed		MEPC 78/17, section 14; MEPC 79/15, section 12; MEPC 80/17, section 14

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	Year 2	References
OW. Other work	OW 8	Cooperate with the United Nations on matters of mutual interest, as well as provide relevant input/guidance	Continuous	Assembly	MSC / MEPC / FAL / LEG / TCC	Council	Ongoing		C 120/D, paras.17(a).1-17(a).5 MEPC 78/17, para. 7.6 and section 8; MEPC 79/15, paras. 7.3 to 7.5; MEPC 80/17, paras. 7.2 to 7.4
OW. Other work	OW 9	Cooperate with other international bodies on matters of mutual interest, as well as provide relevant input/guidance	Continuous	Assembly	MSC / MEPC / FAL / LEG / TCC	Council	Ongoing		C 120/D, paras.17(a).1-17(a).5 MEPC 78/17, sections 7 and 8; MEPC 79/15, sections 7 and 8; MEPC 80/17, sections 7 and 8

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ANNEX 26

POST-BIENNIAL AGENDA* OF THE MARITIME SAFETY COMMITTEE

Number	Biennium (when the output was placed)	Reference to Strategic Direction	Description	Parent organ(s)	Associated organs(s)	Coordinating organ(s)	Timescale (sessions)	References
185	2022-2023	1	Development of amendments to chapter 6 of the 2009 MODU Code regarding electrical equipment capable of operation after shutdown	MSC	SSE		1	MSC 105/20, para. 18.3
194	2022-2023	1	Development of measures to ensure the safe operation of elevators on board ships	MSC	SSE		4	MSC 106/19, paras. 16.25 and .26
200	2022-2023	1	Development of amendments to para.2.1.2.5 of chapter 5 of the FSS Code on construction requirement for gaskets	MSC	SSE		1	MSC 107/20, para. 17.16
201	2022-2023	2	Consideration of descriptions of Maritime Services in the context of e-navigation	MSC	FAL / NCSR		1	MSC 107/20, para. 17.77.1. MSC.1/Circ.1610/Rev.1
202	2022-2023	2	Development of generic performance standards for shipborne satellite navigation system receiver equipment	MSC	NCSR		1	MSC 107/20, para. 17.76
203	2022-2023	2	Development of procedures and requirements for the recognition of augmentation systems in the Worldwide Radionavigation System	MSC	NCSR		1	MSC 107/20, para. 17.58.1
204	2022-2023	2	Development of performance standards for dual frequency multi-constellation satellite-based augmentation systems (DFMC SBAS) and advanced receiver autonomous integrity monitoring (ARAIM) in shipborne radionavigation receivers	MSC	NCSR		2	MSC 107/20, para. 17.58.2

* For details, refer to Organizational Planning module of GISIS.

205	2022-2023	2	Development of guidelines for software maintenance of shipboard navigation and communication equipment and systems	MSC	NCSR		2	MSC 107/20, para. 17.33
206	2022-2023	2	Development of guidelines for EPIRB which implement the two-way communication service via the SAR/Galileo Return Link service as a complement to EPIRB performance standards (resolution MSC.471(101))	MSC	NCSR		2	MSC 107/20, para. 17.35
207	2022-2023	2	Revision of the Performance standards for gyro-compasses (resolution A.424(XI)) and Guidance for navigation and communication equipment intended for use on ships operating in polar waters (MSC.1/Circ.1612)	MSC	NCSR		2	MSC 107/20, para. 17.47
208	2022-2023	2	Revision of the Performance Standards for Shipborne BeiDou Satellite Navigation System (BDS) Receiver Equipment (resolution MSC.379(93))	MSC	NCSR		1	MSC 107/20, para. 17.55
191	2022-2023	6	Scoping exercise and enhancement of the effectiveness of provisions on fatigue and seafarers' hours of work and rest	MSC	III	HTW	2	MSC 105/20, para. 18.31
210	2022-2023	6	Development of guidance to address time pressure and related organizational factors	MSC	III	HTW	1	MSC 107/20, para. 17.23
211	2022-2023	6	Revision of the IMO Standard Marine Communication Phrases (resolution A.918(22))	MSC	HTW	NCSR	2	MSC 107/20, para. 17.53
186	2022-2023	7	Development of amendments to chapter 15 of the FSS Code on enclosed spaces containing a nitrogen receiver or a buffer tank of nitrogen generator systems	MSC	SSE		2	MSC 105/20, paras. 18.5 and 18.6
192	2022-2023	7	Revision of the Guidelines for the application of plastic pipes on ships (resolution A.753(18))	MSC	SSE		1	MSC 105/20, para. 18.40
213	2022-2023	7	Development of guidelines for harmonizing the date format of various certificates issued under IMO instruments	MSC / FAL	III		2	MSC 107/20, para. 17.41

214	2022-2023	7	Revision of appendices A and B of the Revised guidance on shipboard towing and mooring equipment (MSC.1/Circ.1175/Rev.1)	MSC	SDC		1	MSC 107/20, para. 17.14
215	2022-2023	7	Revision of the Revised guidelines for the maintenance and inspections of fixed carbon dioxide fire-extinguishing systems (MSC.1/Circ.1318/Rev.1) to clarify the testing and inspection provisions for CO22 cylinders	MSC	SSE		1	MSC 107/20, para. 17.60
216	2022-2023	7	Development of amendments to the LSA Code and resolution MSC.81(70) to address the in-water performance of SOLAS lifejackets	MSC	SSE		2	MSC 101/24, para. 21.6; SSE 9/20, para. 8.19; MSC 101/24, para. 21.9, MSC 107/20, para. 14.24
217	2022-2023	7	Safety measures for non-SOLAS ships operating in polar waters	MSC	SDC		2	MSC 107/12, para. 3, MSC 107/20, para. 117.80 and annex 38

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ANNEX 27

SUBSTANTIVE ITEMS FOR INCLUSION IN THE AGENDAS FOR MSC 109 AND MSC 110

109th session of the Committee (2 to 6 December 2024)

Decisions of other IMO bodies

Amendments to mandatory instruments

Goal-based new ship construction standards

Development of a goal-based instrument for maritime autonomous surface ships (MASS)

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

Revision of the *Guidelines on maritime cyber risk management* (MSC-FAL.1/Circ.3/Rev.2) and identification of next steps to enhance maritime cybersecurity

Measures to enhance maritime security

Piracy and armed robbery against ships

Unsafe mixed migration by sea

Formal safety assessment

Ship systems and equipment (Report of the tenth session of the Sub-Committee)

Navigation, communications and search and rescue (Report of the eleventh session of the Sub-Committee)

Carriage of cargoes and containers (Urgent matters emanating from the tenth session of the Sub-Committee)

Implementation of IMO Instruments (Report of the tenth session of the Sub-Committee)

Pollution prevention and response (Report of the eleventh session of the Sub-Committee)

Domestic ferry safety

Application of the Committee's method of work

Work programme

Election of Chair and Vice-Chair for 2025

Any other business

110th session of the Committee (18 to 27 June 2025)

Decisions of other IMO bodies

Amendments to mandatory instruments

[Goal-based new ship construction standards]

Development of a goal-based instrument for maritime autonomous surface ships (MASS)

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

Measures to enhance maritime security

Piracy and armed robbery against ships

Unsafe mixed migration by sea

[Formal safety assessment]

Ship design and construction (Report of the eleventh session of the Sub-Committee)

Human element, training and watchkeeping (Report of the eleventh session of the Sub-Committee)

Ship systems and equipment (Report of the eleventh session of the Sub-Committee)

Carriage of cargoes and containers (Report of the tenth session of the Sub-Committee)

Navigation, communications and search and rescue (Urgent matters emanating from the twelfth session of the Sub-Committee)

Domestic ferry safety

Application of the Committee's method of work
Work programme

Election of Chair and Vice-Chair for 2026

Any other business

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ANNEX 28

STATEMENTS BY DELEGATIONS AND OBSERVERS*

AGENDA ITEM 2

Statement by the delegation of Belgium

Belgium on behalf of the Member States of the European Union condemns in the strongest possible terms armed aggression of Russia against Ukraine that started in 2014 and took the form of a full-scale invasion of Ukraine on 24 February 2022 and which is a violation of the territorial integrity and the sovereignty of a UN Member State, extending to its territorial waters, and inconsistent with the principles and purposes of IMO, as set forth in Article 1 of the IMO Convention.

To this date, all key bodies of the IMO condemned Russia's illegal actions. Furthermore, the IMO Assembly at its 33rd session equally condemned Russia's aggression in Assembly Resolution A33/Res.1183.

Russia's war of aggression against Ukraine continues to threaten peace and security in Europe and worldwide and has severe global consequences in the form of increased food insecurity and rising energy prices.

Russia, its political leadership, and all those involved in the violations of international law and international humanitarian law in Ukraine should be held accountable. The EU Member States will never recognize the territories temporarily under Russian military control as anything but a part of Ukraine and will continue to support Ukraine's effort to restore its territorial integrity within its internationally recognized borders for as long as necessary.

Russia should also take steps to respect international law, in particular the UN Convention on the Law of the Sea (UNCLOS) and avoid destabilizing actions that threaten freedom of navigation and overflight in the Black and Azov Seas, which endanger shipping, the marine environment and the safety of seafarers as well.

Statement by the delegation of Canada

Canada reiterates its solidarity with Ukraine and continues to strongly condemn Russia's war of aggression against Ukraine. The war has crippled marine infrastructure, taken the lives of seafarers, caused significant damage to the marine environment and violated the fundamental principle of freedom of navigation for merchant vessels transiting in this region. These attacks constitute a clear violation of the UN Charter and the conventions and principles of this organization.

Canada wishes to align with the statements by UK, US and Belgium, asks all Member States to recall Assembly resolution A.1183(33), and calls for the complete, immediate and unconditional withdrawal of all Russian forces from Ukraine's sovereign territory.

* 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).

Statement by the delegation of Estonia

Estonia strongly condemns the aggression by the Russian Federation against Ukraine. We would like to be associated with the statement made by Belgium on behalf of the Member States of the European Union on this agenda point. The invasion severely threatens the safety and security of shipping, protection of the marine environment and safety of seafarers. Furthermore, Russia's actions threaten peace and security in Europa and worldwide with severe consequences globally. We demand Russia for immediate withdraw from internationally recognized borders of Ukraine.

Statement by the delegation of Finland

Thank you Chair. First, we would like to congratulate our neighbor's delegation of Norway for their national day. On the issue at hand, Finland fully aligns itself with the statement made by Belgium on behalf of the member states of the European Union. Finland condemns in the strongest possible terms Russia´s aggression against Ukraine and expresses full solidarity to Ukraine and to the people of Ukraine.

Statement by the delegation of France

La France apporte son entier soutien à la déclaration qui a été faite par le délégué de la Belgique au nom des Etats membres de l'Union Européenne, et par d'autres délégations, en appui aux déclarations du délégué de l'Ukraine.

Cette délégation souhaite exprimer une nouvelle fois sa pleine solidarité avec l'Ukraine et le peuple ukrainien, dont la vie a été affectée par la guerre d'agression de la Russie que nous condamnons avec la plus grande fermeté possible. Cette guerre est conduite en totale violation de la Charte des Nations unies. Elle est contraire aux principes et les buts de l'OMI, tels qu'ils sont énoncés à l'article 1er de la Convention de notre Organisation.

Ces actions illégales ont été condamnées unanimement par tous les organes de l'OMI ainsi que par notre Assemblée par sa résolution 1183. Elles impactent la liberté de navigation, le commerce maritime internationale et les instruments que cette Organisation adopte et contraint leur mise en œuvre.

La France poursuit son aide à l'Ukraine pour résister face à cette agression illégale, au plan militaire comme humanitaire et continuera de le faire aussi longtemps que nécessaire.
Nous souhaitons que cette déclaration soit annexée au rapport de notre comité.

Statement by the delegation of Germany

Germany condemns in the strongest possible terms Russia's armed aggression against Ukraine and their unlawful invasion of the sovereign territory of Ukraine. This. Includes their territorial waters.

We reiterate that our support and solidarity for Ukraine, its people, their territorial integrity and independence remains unwaivered.

We demand that the Russian Federation withdraws its troops and military equipment from Ukraine's internationally recognized borders immediately and unconditionally.
Germany aligns itself with the statement given by Belgium.

Statement by the delegation of Greece

Greece aligns itself with the statement made by the distinguished delegation of Belgium on behalf of the EU member states, and other delegations, with regard the condemnation of the military aggression of Russian Federation against Ukraine.

Statement by the delegation of Ireland

Ireland fully supports and aligns with the statement made by the delegation of Belgium on behalf of the member states of the EU, as supported by other delegations.
Ireland wishes to offer our sincere condolences to Ukraine on the losses they continue to suffer.
We call for the immediate withdrawal of the Russian military from Ukrainian territory. We are unwavering in our solidarity with the people of Ukraine and our support for Ukraine's sovereignty and territorial integrity.

Statement by the delegation of Italy

Italy aligns itself with the statement just made by the distinguished delegation of Belgium, on behalf of the EU Member States.

After more than two years since the Russian Federation armed invasion of Ukraine, the Italian delegation, once again, condemns, in the strongest possible terms, the Russian Federation's unprovoked and unjustified military invasion of Ukraine, a sovereign state of Europe, whose people are unjustly paying for the atrocities of a deliberate military attack.

In addition to this, we would like to remind that all key IMO bodies and the IMO Assembly, at its 33rd session, have already condemned Russia's aggression.

Therefore, Mr. Chair, Italy, as well, demand that the Russian Federation immediately cease its military actions and fully respect the territorial integrity, sovereignty and independence of Ukraine within its internationally recognised borders.

Statement by the delegation of Japan

Japan aligns with many others, and would like to reiterate our firm position on this matter.
Russia's aggression against Ukraine constitutes a clear violation of international law, and the United Nations Charter.

All these actions are absolutely unacceptable, and Japan condemns Russia's actions in the strongest terms.

We further recall that this Organization adopted the Assembly Resolution A.1183(33).
In light of that, Japan urges Russia to cease its ongoing aggression and to withdraw its troops and military equipment immediately, completely and unconditionally.

Statement by the delegation of Lithuania

Regarding the general statement on the IMO Resolution A.1183 Lithuania supports the statement expressed by Belgium delegation on behalf of the Member States of European Union. Like many other states in various IMO bodies, Lithuania has condemned in the strongest possible terms the open large-scale unprovoked and unjustified invasion of Ukraine by armed forces of the Russian Federation on 24 of February 2022.

This unacceptable act of aggression that started in 2014 is a gross violation of territorial integrity and sovereignty of Ukraine and of the international law. Lithuania stands closely with people of Ukraine.

Statement by the delegation of Luxembourg

Pour être bref, nous nous associons à la déclaration faite par la Belgique au nom des États membres de l'Union Européenne.

Statement by the delegation of the Kingdom of the Netherlands

This delegation would like to align itself with the statement made by Belgium (on behalf of the EU Member States). The delegation of the Netherlands wishes to express its full solidarity with Ukraine and the Ukrainian people. We condemn, as we did at multiple other occasions, the Russian invasion of Ukraine in the strongest possible terms.

This unprovoked act of aggression is a serious violation of the UN Charter, which prohibits the threat or use of force against the territorial integrity or political independence of any State.

We have seen the impact of this unprovoked act of aggression on the safety and welfare of seafarers, on the need to preserve worldwide supply chains, and the direct consequences of this situation on daily life for the people of Ukraine.

We call upon the Russian Federation to stop its aggression, withdraw its troops and respect the territorial integrity of Ukraine.

Statement by the delegation of Spain

España apoya en su totalidad la intervención de la delegación de Bélgica en nombre de la Unión Europea, en la que se condena la agresión militar no provocada e injustificada de la Federación de Rusia contra Ucrania.

Aprovechamos esta oportunidad para volver a expresar nuestro compromiso y solidaridad con el pueblo ucraniano ante la agresión de la que está siendo objeto por parte de la Federación de Rusia.

Statement by the delegation of the Russian Federation

Madam Chair, first of all, with regard to the discussed Resolution A.1183(33), adopted at the Assembly, we would like to remind everyone present how this Resolution was adopted at the 33rd session of the Assembly - a roll-call vote on this Resolution was requested (by the delegation of the Russian Federation), the results of which speak for themselves. Of all the Member States of the Organization, only 46 voted in favour of the adoption of this Resolution (mainly western countries), the majority of States abstained from supporting it, and 9 States were against it. Although the Assembly adopted this Resolution in accordance with the Rules of Procedure, it is certainly the weakest Resolution in the history of IMO in terms of support by Member States.

Coming back to the current discussion, Madam Chair, we are once again witnessing the presentation of false information and manipulation of facts. We will not once again bore you with standard answers to standard accusations. You've heard them many times and you know them. We responded to all these accusations more than once. In this regard, we would only like to note that our delegation has also drawn attention many times to the fact that the introduction of a large number of purely political issues that go beyond the mandate of the

Organization into the discussion of the working bodies of the IMO has a detrimental effect on the effectiveness of the work of the Organization itself.

On this background, we would like to recall the discussions on this issue at the last sessions of the FAL and LEG Committees. These discussions demonstrated the extreme level of double standards in this Organization. It is brought forward exclusively by Western countries. Thus, the Western countries refused to condemn the commitment of terrorist acts and any of their manifestations. In this regard, let us remind the US delegation that when the 9/11 terrorist attacks occurred, they were provided with all possible support, including from our side. Western countries, in particular the United States and the United Kingdom, also refused to condemn attacks on civilian nuclear facilities, despite the obvious horrific consequences of such actions. These are two shining examples of double standards here at IMO. In this regard, we invite the Committee to condemn the manifestation of double standards and would request the Chair to ensure that such situations are prevented. This is our first point.

Next, Madam Chair. We repeatedly heard accusations against Russia of deliberate attacks on civilian ships or civilian infrastructure. And yet no evidence was ever presented. Instead of arguments, we were given “the majority that spoke.” This majority, moreover, also could not provide any evidence. For our part, when our delegation, for example, spoke about the Ukrainian attacks on the Kakhovskaya Hydroelectric Power Plant (HPP), we clearly demonstrated that it belonged to Russia, the presence of Russian personnel there and made references to the statements by the Ukrainian high-ranking officials about their actions to bomb(attack) this HPP. We also referred to the discussions and evidence presented by the Russian side at the UN, including at the UN Security Council. Having said that, we invite the Committee to recognize the inadmissibility of any accusations in the IMO without providing evidence and would request the Chair to ensure compliance with this provision during the sessions of the Committee. This is our second point.

Regarding the accusations against our country, we would like to once again separately dwell on accusations of terrorism and statements about the aggressor-state. In this regard, we refer to the decisions of the International Court of Justice of January 31 this year regarding the case of Ukraine against Russia on the basis of the International Convention for the Suppression of the Financing of Terrorism. The International Court of Justice did not follow Kiev’s lead and fundamentally refused to recognize Russia as an “aggressor state.” The court also rejected Ukrainian insinuations that the Donetsk People's Republic and Lugansk People's Republic are allegedly “terrorist organizations.” In addition, the Court rejected Ukraine’s request under the International Convention for the Suppression of the Financing of Terrorism to hold Russia responsible for the crash of Boeing flight MH17. As a result of the proceedings, Ukraine was completely denied all claims for compensation or other forms of satisfaction.

We also would like to emphasize another decision of the International Court of Justice dated February 2 of this year in the case “Ukraine v. Russia: interpretation and application of the Convention on the Prevention and Punishment of the Crime of Genocide.” The case “cooked up” by Ukraine fell apart: all Ukrainian claims that Russia allegedly violated the Genocide Convention were completely rejected by the Court. The Court agreed with Russia's objections that the accusations brought forward by Kiev are not related to the Convention. Moreover, in the end, there was only one question remained before the Court – whether Ukraine itself committed genocide in the Donbass region.

In this regard, we invite the Committee to welcome the mentioned judgements of the International Court of Justice and to be guided by them in the course of any possible discussions in this regard. This is the third point.

Now we would like to draw the attention to any possible decisions of the Committee at the current session and in the future regarding the aspect affecting issues of sovereignty, aggression and territorial integrity. In this regard, we invite the Committee to recognize that these issues are outside the mandate of the Committee. If there is an opinion that these issues, for some reason, fall within our competence, we request the Chair to ensure that specific references to IMO instruments and the IMO Convention are provided in support of this thesis. This is the fourth point.

A similar proposal concerns the aspect of cessation of the use of force and withdrawal of troops. These are the mandates of the UN Security Council, and in no respect the International Maritime Organization (IMO). We invite the Committee to recognize that these issues are outside the mandate of the Committee and decide that the Committee does not have the right to interfere in the activities of other international structures. If there is an opinion that these issues, for some reasons, fall within our competence, we would also request the Chair to ensure that specific references to IMO instruments and the IMO Convention are provided in support of this thesis.

Madam Chair, as you can see, we have raised a number of questions with the Committee to which we would like to receive a clear response. The questions are structured linearly and require short answers from delegations - to accept these proposals or reject them ("YES" or "NO"). In some cases, we also pointed out the need to justify appropriate responses.

Statement by the delegation of Slovenia

Slovenia would like to align itself with the statement made by the delegation of Belgium on behalf of the Member States of the EU and would ask that this be reflected in the report of the Committee.

Slovenia again condemns in the strongest possible terms the aggression against Ukraine's independence, sovereignty and territorial integrity and Russia's blatant violation of the UN Charter and Helsinki Final Act on inviolability of borders in Europe. The acts of the Russian Federation are in direct contradiction of Article 1 of the IMO Convention. We recall the IMO's Assembly resolution 1183 condemning Russia's illegal actions and interference in the navigation in the Black Sea, the Sea of Azov and the Kerch Strait since 2014. Slovenia calls upon the Russian Federation to immediately cease its military actions and unconditionally withdraw all its military forces and equipment from the entire territory of Ukraine, including its territorial waters to ensure the safety and welfare of seafarers and the security of the international shipping and the marine environment and respect its obligations under relevant international treaties and conventions.

Statement by the delegation of Ukraine

In recent decades, the international community has witnessed the Russian Federation's relentless destruction of the established legal order and the spread of chaos in international cooperation.

Since 2014, Russia has posed a direct and escalating threat to the safety and security of navigation in the Black Sea, the Sea of Azov, and the Kerch Strait, beginning with its temporary occupation of Ukraine's Autonomous Republic of Crimea and the city of Sevastopol. This menace has manifested in numerous ways, from the seizure of maritime rescue coordinating centers, NAVTEX coastal stations, and lighthouses to the dissemination of false maritime safety information and the disruption of navigation and hydrographic services.

Since the onset of the full-scale invasion of Ukraine on 24 February 2022, Russia has escalated its aggression to horrifying levels, including attacks on merchant and search and rescue vessels, abductions and torture of Ukrainian maritime personnel, SATNAV jamming, and the destruction of maritime infrastructure. Ukrainian port cities have suffered ruthless attacks. Mariupol lies in ruins, and cities like Odesa, Mykolaiv, and Kherson, to name a few, face constant drone, missile (these days equipped with cluster munitions), or artillery strikes, collecting deadly human toll and leaving many vessels unable to depart due to constant shelling that blocked the free international shipping from/to the latter two ports.

Beyond that, the region's security is further compromised by Russia's illegal actions, including transforming Ukraine's Crimean Peninsula into a hub for regional maritime smuggling. On top of that Russia expands these operations to the temporary occupied ports in the Sea of Azov to transport looted grain and other goods, facilitate arms transfers from Middle Eastern proxies, and facilitate shadow fleet oil shipments.

Madam Chair,
In mid-2022, safe and secure navigation in the north-western Black Sea came to a standstill due to Russian naval disruptions and threats to attack any vessel approaching or leaving Ukrainian ports. In response, Ukraine and the UN worked tirelessly to avert a looming global food crisis and release ships stranded by Russian missile threats, resulting in the signing of the Black Sea Grain Initiative in Istanbul. However, this potential breakthrough was sabotaged by Russia, jeopardizing all progress.

To counter the failed initiative, Ukrainian authorities established a special maritime corridor to facilitate the restoration of the free international shipping. Thanks to our military efforts, including high-speed MASS, we have kept the Russian navy at bay and forced it to relocate major resources to a distant base on Georgia's temporarily occupied territory — another victim of Russian aggression.

Over ten months, this special maritime corridor has allowed Ukraine to increase cargo turnover by one and a half times, enabling the export of over 46 million tonnes of goods via more than 1,600 vessels from the ports of Greater Odesa. Although these figures are still below pre-war levels, they continue to rise.

Nonetheless, persistent threats remain as Russia regularly launches air and land attacks, deploying drones, ballistic and cruise missiles to devastate port infrastructure and target Ukrainian and foreign-flagged vessels. These assaults not only damage facilities but also cause numerous civilian casualties, including among port workers and seafarers.

Just yesterday the barbaric state dropped three guided aviation bombs on Kherson, damaging 25 residential buildings, a hospital, a school, and a kindergarten, injuring dozens of civilians. And, as of now, official data reveals that Russian attacks have killed over 10,000 civilians, including over 500 children, and injured almost 20,000, with tens of thousands forcibly deported to Russia.

Additionally, the aggressor attempts to remotely mine and block navigable routes. In response, Ukraine, with key partners' assistance, conducts mine countermeasure operations to ensure merchant vessels' safe passage.

To sustain and defend critical maritime infrastructure, rebuild what Russia has destroyed, and maintain the round-the-clock operation of the special maritime corridor, international assistance is essential. We expect robust recommendations on this matter from IMO Group of consultants, which now carries out the needs assessment.

Madam Chair,
The devastating consequences of Russia's invasion of Ukraine have been unequivocally recognized by all IMO bodies over recent years.

The 33rd IMO Assembly's resolution A.1183(33), "Impact of the Russian Armed Invasion of Ukraine on International Shipping," clearly outlines the demands Russia must adhere to.
Yet, Russia continues to blatantly disregard these demands, much like it ignores the norms of international treaties and other instruments adopted under the auspices of the UN and the IMO.

Key demands include, inter alia:

- an immediate cessation of hostilities and the withdrawal of all troops and military equipment from Ukraine to ensure the safety and welfare of seafarers and the security of international shipping — demands Russia overtly ignores;

- a cessation of harassing commercial ships, seafarers, and restricting international navigation in the Black Sea, the Sea of Azov, and the Kerch Strait for vessels sailing to or from Ukrainian ports — demands Russia flagrantly disregards;

- a cessation of attacks on critical port infrastructure — demands Russia shamelessly violates.
In light of this defiance, the international community must intensify efforts on diplomatic and economic fronts to suppress Russia’s resolve to carry on its war of aggression against Ukraine, and its ability to fund this campaign, including through the use of the shadow oil fleet, is crippled.

Statement by the delegation of the United Kingdom

The United Kingdom continues to support the Ukrainian government in its defence against Russia’s unprovoked, premeditated, and barbaric attack. We stand united with our international partners against the actions of the Russian government which are an egregious violation of international law and the UN Charter.

Freedom of navigation for commercial shipping in the Black Sea must be upheld. Russia’s attempts to stifle the economy of Ukraine by disrupting the Black Sea Grain Initiative are cynical and cowardly. With world now further away from its goals to eliminate world hunger and malnutrition, Ukraine’s exports through the Black Sea ports are crucial to global food security.

As the war enters third year, we stand united to ensure Ukraine emerges from the war as a strong, sovereign, and free country.

The United Kingdom will continue to denounce and condemn the illegal war of aggression waged by Russia against Ukraine in flagrant violation of international law and to call for the complete, immediate and unconditional withdrawal of Russian armed forces from all Ukrainian territory.

Statement by the delegation of the United Sates

Statement of the United States on Russia’s Invasion of Ukraine International Maritime Organization (IMO) – MSC 108, May 15-24, 2024 The United States condemns in the strongest possible terms the Russian Federation’s unprovoked and illegal war against Ukraine. The Russian Federation's war on Ukraine is a flagrant violation of the sovereignty and territorial integrity of Ukraine as well as the United Nations Charter and is inconsistent with the purposes of the IMO as set out in Article 1 of the IMO Convention. We deplore the Russian Federation’s

attacks that strike ports and commercial vessels, disrupting global market access by sea and threatening the safety and welfare of seafarers, the marine environment, and global food security. We recall Assembly Resolution A.1183(33) in which the IMO Assembly reiterated its support for the sovereignty, independence and territorial integrity of Ukraine within its internationally recognized borders, and condemned Russia's armed aggression against Ukraine. The Assembly endorsed the decisions taken by the Council in numerous sessions, by the Maritime Safety Committee and by other committees regarding Russia's war on Ukraine and its impact on international shipping. We demand that the Russian Federation cease its unlawful invasion and withdraw all its forces from Ukrainian territory, including its territorial waters. We also demand that Russia cease its threats to the safety and welfare of seafarers, the marine environment, the security of international shipping, and freedom of navigation in the Black Sea and Sea of Azov.

AGENDA ITEM 3

Statement by the delegation of China

Thank you, Madam Chair. Thank the Secretariat for submitting the document of MSC 108/3/3. China highly appreciates the efforts of Committee for revising STCW-F Convention and drafting a new STCW-F Code, as well as the continuous efforts for improving the safety level of fishing vessels and their personnel.

China has participated in the relevant discussions on texts of the Convention and put forward some revision suggestions in light of the actual situation, but unfortunately, our suggestions have not been adopted. China has always attached importance to and paid attention to the safety of fishing vessels and their personnel, and has issued relevant domestic laws and regulations to safeguard it. China has noted that the amendments to be adopted accommodate a large number of new provisions, some of which have significant conflicts with the existing domestic laws and regulations of member states, and some of which completely copy the standards for seafarers of merchant ships and do not reflect the characteristics of fishing vessels and their personnel. We could expect that those member states, who are active in considering to join the Convention, will be faced with more difficulties and obstacles.

China hopes that the amendments would, without risking the safety level of fishing vessels and their personnel, considering the characteristics of fishing vessels, take certain equivalent arrangements and flexibility for some terms and requirements, thus to promote the steady improvement of the safety level of fishing vessels.

Statement by the delegation of Spain

España ha participado activamente en el proceso de revisión del convenio de formación para pescadores y apoya en general las enmiendas que se presentan al comité para su adopción. Sin embargo, nos gustaría plantear al comité una propuesta en relación con la aplicación del Convenio, la regla I/2.

La aplicación del Convenio contempla dos equivalencias entre arqueo y eslora y España propuso al Subcomité HTW una tercera equivalencia para la eslora de 12 m, la cual no pudo ser acordada por el Subcomité.

Esta eslora de 12 metros está vinculada con los requisitos del periodo de embarque exigidos a todo aspirante a los títulos de patrón u oficial encargado de la guardia de navegación en buques pesqueros, de ahí su importancia a la hora de aplicar el Convenio.

Actualmente, en la construcción naval de buques pesqueros de pequeño porte se tiende hacia una disminución de la eslora en favor de la manga, lo que dificulta la disponibilidad de buques pesqueros en los que poder cumplir con el periodo de embarque, lo que introduce una barrera en el acceso a los citados títulos.

Para evitar esta situación, España propone que el grupo de redacción de enmiendas incorpore a la regla I/2 del Convenio la conclusión alcanzada en el HTW 8 según la cual las Administraciones deberían poder establecer una equivalencia en arqueo bruto para la eslora de 12 m.

AGENDA ITEM 4

Statement by the delegation of Argentina

La DA agradece a la Secretaría la presentación del documento MSC 108/4/1, y también agradece al Sr. Henrik Tunfors de Suecia por su trabajo.

Señora Presidente, la posición de nuestra delegación en este tema es bien conocida. Reconocemos el interés de varios Miembros en avanzar rápidamente con una normativa para la operación de los MASS.

Sin embargo, nuestra delegación cree que es menester tomar todos los recaudos tanto en la letra de las futuras normas como en términos prácticos, para asegurar la conformidad con la Convención del Mar y, asimismo, con los Convenios de la OMI.

En cuanto a la CONVEMAR, nuestra delegación ha venido reiterando que tiene serias dudas de que la libertad de navegación que dicho instrumento reconoce a los buques tripulados se aplique a los buques con mayor grado de autonomía. Asimismo, la República Argentina duda que conforme el derecho del mar, la responsabilidad del Estado del Pabellón pueda ser derivada a un centro operador en otro país.

En cuanto a los Convenios de la OMI, se debería asegurar que todo buque pueda prestar asistencia a la vida humana en el mar y se pueda abordar un incidente de daño al medio marino, por ejemplo.

Sra. Presidente, los MASS, por su naturaleza, requieren consideraciones específicas en materia de responsabilidad (liability), y la Argentina recomienda analizar una responsabilidad objetiva (strict liability) para los MASS de mayor grado de autonomía.

En todo caso, señora, como en ocasiones anteriores, debemios manifestar que la Argentina se reserva el derecho de regular el ingreso de MASS a sus aguas jurisdiccionales y tiene bajo análisis una legislación nacional al respecto. Mucho le agradeceré que esta declaración obre como anexo al informe de este Comité. Muchas Gracias.

Statement by the delegation of China

We wish to thank the Marshall Islands for submitting document MSC 108/4. China would like to extend our sincere appreciation to the coordinator of the correspondence group, the leads of the splinter groups as well as all participants from the member States and international organizations for their hard work. With the joint efforts of all parties, the non-mandatory MASS CODE is gradually maturing. This delegation is of the view that, in order to ensure the effective implementation of the MASS CODE, some concerns from the port States need to be addressed appropriately. For example, regarding a MASS with no crew onboard, how should compulsory

pilotage as well as port State control inspections be conducted? Regarding the ROC, in addition to checking certificate and documents by the PSCOs, would it be possible for them to carry out detailed inspections of the status of the systems and equipment in the ROC as well as the competencies of the remote operators when necessary? If the answer is yes, how should such inspections be conducted? These issues should be considered from the very beginning of the design and construction of MASS. Therefore, it is suggested that it should be taken into account in further development of MASS CODE, and the relevant Sub- Committees could be instructed to discuss the issues raised if necessary.

AGENDA ITEM 7

Statement by the delegation of Australia

Australia aligns with the views expressed by Bahamas, Japan, Belgium, and others that have already taken the floor.

Australia applauds the Secretary General's leadership in addressing the missile and drone attacks, seizure, and hijacking of shipping in the Red Sea and the Gulf of Aden.

Seafarers have died and are being held because of this violence. Iran's support to the Houthis directly contributes to this.

As well as targeting civilians, the attacks also erode navigational rights and freedoms, damage international trade, and increase broader separate maritime security risks such as piracy.

These actions have also resulted in damage to the marine environment, such as through the attack and subsequent sinking of the **Rubymar**, which resulted in the spilling of large amounts of oil and fertilizer.

Australia once again thanks Bahamas and Japan for raising the plight of the **Galaxy Leader**. Australia shares the concern for the 25-crew kept now for six months in captivity.

Australia draws the attention of member states to Security Council Resolution 2722. Australia remains committed to upholding the rules-based order and the principle of freedom of navigation.

Statement by the delegation of the Bahamas

Chair as we begin the 108th Session of the Maritime Safety Committee, The Bahamas expresses its sympathy and support to the United States and the family of Mr. Jaideep Sirkar, on his recent passing.

The Bahamas also express its sympathy and support to all Member States who have and are suffering from the loss of life and destruction caused by recent flood events:

Beginning with our regional neighbour of Bazil, our Asian neighbour of Indonesia, our East African neighbours of Kenya, Tanzania, Burundi, Rwanda and Somalia extending to Oman, United Arab Emirates and Afghanistan, our prayers are with you.

Chair, while devastating and tragic, the mentioned events along with those in other countries are triggered by natural cycles and to some extent are beyond our control.

However, what we are having to deal with in the Red Sea are exclusively “Man Made” and within the control of those who chose to jeopardise the Safety and Security of International Seafarers and ships transiting the Gulf of Aden, the Bab al- Mandab Strait and the Red Sea causing serious Environmental damage to this Ecological Sensitive Area, as with the sinking of the **Rubymar**.

Chair we thank the Secretary-General for his constant engagement with all Member States and Parties in this area and with the United Nations Security Council and Agencies, to bring a cessation of hostilities involving International Shipping.

The Bahamas also thanks all of those delegations who have committed naval and other assets to assist is restoring safety and security in the Red Sea, Gulf of Aden and Bab al-Mandab Strait.

Chair it is of the utmost importance that Safe Shipping once again return to the Gulf of Aden, the Bab al-Mandab Strait, and the Red Sea as soon as possible.

Many Shipowners and Charterers have begun to avoid the Red Sea due to attacks by the Houthi and the risk this brings. It is estimated that traffic going through the Suez has dropped by some 60%.

The diversion around the Cape of Good Hope adds some $(200-300),000 in fuel cost and 15 extra days along with all of the additional Green House Gases Emitted.
Ironically it is this additional Green House Gases Emitted by having to take the longer route that helps to increase the possibilities of extreme weather around the world.

Chair, on a matter closer to home, The Bahamas reiterates the United Nations Security Council Resolution 2722 (2024), and “Demands that the Houthis cease all such attacks, which impede global commerce and undermine navigational rights and freedoms as well as regional peace and security, and further demands that the Houthis immediately release the **Galaxy Leader** and its Crew.”

Statement by the delegation of the Kingdom of Bahrain

شكرا السيدة الرئيس صباح الخير جميعا حيث أننا نتناول الكلمة ألول مرة خالل هذا االجتماع فنود أن نعبر عن تعازينا لوفد الواليات المتحدة بوفاة الزميل الربان سركار كما نود تعزية الوفد البرازيلي لضحايا الفيضانات والكوارث الطبيعية، ونشكر البيرو على استضافتنا إلحتساء القهوة هذا الصباح. نود أن نشيد بدور ألمين العام على جهوده الملموسة في إطار التعامل مع الخروقات ألمنية في البحر ألحمر وخليج عدن والسعي إلى تعزيز مستوى سالمة المالحة حفاظا على إستدامة استخدام الممرات البحرية الرئيسية التي تربط الشرق بالغرب. إن هذا الوفد يقف جنب لجنب مع جميع الوفود التي حرصت على أهمية الحفاظ على سالمة وأمن السفن والمالحة في البحر ألحمر وخليج عدن وكذلك حماية حياة البحارة ألبرياء على متن تلك السفن وال نغفل ضرورة الحفاظ على البيئة البحرية في تلك المنطقة المهمة. إن مملكة البحرين تعمل مع الدول الحليفة في مراقبة الوضع ألمني في البحر ألحمر عن طريق مراكز التنسيق والقيادة الموجودة على أراضي مملكة البحرين. نرجو إدراج هذا البيان في التقرير الختامي الجتماع اللجنة.

Statement by the delegation of Belgium

Since this is the first time this delegation takes the floor, we would like to extend our sincere condolences to the US Delegation due to the passing of Mr. Sirkar as well as the Brazil Delegation due to the catastrophic incident in Rio Grande do Sul.

We would like to thank Peru for the coffee, tea, and sweets.

We would like also to thank the Secretariat for the submission of the document MSC 108/7/1 regarding the update on the Red Sea.

Belize would like to strongly condemn all attacks perpetrated by the Houthis militia to seafarers and commercial ships disrupting the worldwide trade and an environmental impact by having ships taking longer routes like the Cape of Good Hope or increasing the speed while passing through the Red Sea leading to an increment in the CO2 emissions.

Madam Chair, Belize as directly affected State due to the reckless attack suffered by our registered ship **Rubymar** on 18 February 2024 that still on the same location partly sank and in a vertical position with the bow up representing a risk to the navigation to other ships transiting through the Red Sea as well as a potential damage to the environment due to the fuel and cargo remaining onboard would like to request the immediate release of the **Galaxy Leader** and **MSC Aries** and their seafarers.

It is imperative that the freedom of navigation is resume in the region and that member states stand united to resolve this situation under the guidance of the IMO.

Statement by the delegation of Belize

Since this is the first time this delegation takes the floor, allow me to extend our sincere condolences to the US Delegation due to the passing of Mr. Sirkar as well as the Brazil Delegation due to the catastrophic incident in Rio Grande do Sul.

In addition, we would like to thank Peru for the morning coffee, tea, and sweets.

With the matter on hand, Belize thanks the Secretariat for the submission of the document MSC 108/7/1 regarding the update on the Red Sea.

Belize strongly condemns all attacks perpetrated by the Houthis militia to seafarers and commercial ships disrupting the worldwide trade and creating an environmental impact by having ships taking longer routes like the Cape of Good Hope or increasing their speed while passing through the Red Sea leading to an increment in the CO2 emissions.

Madam Chair, Belize as a directly affected State due to the reckless attack suffered by our registered ship **Rubymar** on 18 February 2024 that still on the same location partly sank and in a vertical position with the bow up representing a risk to the navigation to other ships transiting through the Red Sea as well as a potential damage to the environment due to the fuel and cargo remaining onboard would like to request the immediate and unconditional release of the **Galaxy Leader** and its seafarers from this unlawful captivity.

It is imperative that the freedom of navigation is resume in the region and that member states stand united to resolve this situation under the guidance and leadership of the IMO.

Statement by the delegation of Canada

Thank you Chair. We also wish to thank the secretariat and the Secretary General for their ongoing efforts and updates on the situation in the Red Sea.

The Houthis' attacks on commercial and naval ships pose a direct threat to the freedom of navigation in one of the world's most critical waterways and are causing major disruptions to regional and global trade, are impeding the movement of critical food, fuel, humanitarian assistance and other essential goods throughout the world, are jeopardizing the lives and

safety of seafarers, and are directly destroying the marine environment.

We also underscore that those who supply the Houthis with the weapons to conduct these attacks are violating UN Security Council Resolution 2216 and international law.

The international response to the continuing Houthi attacks demonstrates the shared resolve to uphold navigational rights and freedoms, and to defend the lives of mariners from these illegal and unjustifiable attacks.

Canada aligns with the statement of the US, UK, Belgium, Bahamas and others and condemns the attacks on merchant vessels and repeats its call on the Houthis to cease these attacks immediately, and to release all hostages.

We also call on Iran, as a member of this organization, to stop providing support to the Houthis, which enables these very attacks, and to release the **MSC Aries** and its remaining crew immediately.

Statement by the delegation of Cyprus

The delegation of Cyprus is extremely concerned about the escalation of the situation in the Red Sea and therefore joins with the delegations of Belgium, India, Bahamas and others, in demanding that these attacks cease immediately.

We are appreciative of the efforts and ACTIONS of the Secretary General as outlined in document MSC 108/7.1 to resolve this situation and we fully support his actions. Cyprus is extremely thankful to all nations that maintain naval assets in the area defending the freedom of navigation or take action to uphold the freedom of navigation in the Red Sea.

Cyprus is seriously concerned about the threat that these attacks pose to the safety of life of OUR seafarers, and we are sympathetic to all affected member states and especially to the families of the captive and deceased seafarers.

The navigational rights and freedoms by merchant vessels, in accordance with international law, must be respected in order to safeguard life at sea and avoid negative impact on humanitarian efforts worldwide.

The Republic of Cyprus fully supports UNSC Resolution 2722 and hence we demand that these attacks which impede global commerce and undermine fundamental navigational rights as well as regional peace and security, cease immediately and the detained seafarers are released immediately.

Statement by the delegation of Estonia

Since this is first time, we take the floor then our Condolences go to the US and Brazil.

Now to the agenda point - Estonia supports the statements made by Belgium and other states and strongly condemns the hijacking of the vessels in the Red Sea and that all the crewmembers and vessels should be released at once.

Also, we support statement made by Portugal concerning hijacking of **MSC Aries**. Any kind of attacks towards commercial shipping are unacceptable and in contradiction with international regulations.

Statement by the delegation of Finland

As this is the first time we are taking the floor, we would like to express our deepest condolences to the friends and family of Mr. Jaideep Sirkar. Furthermore, we offer our sincere condolences to all the victims and their families who have been affected by the recent attacks. Finland fully aligns itself with the statement made by Belgium on behalf of the member states of the European Union. Finland strongly condemns Houthis attacks on commercial ships, which are unacceptable violations of international law, present a threat to maritime security and endanger the lives of innocent seafarers. We call for an immediate and unconditional release of the **Galaxy Leader** and its crew. [As one of the co-sponsors of the document MSC 108/7/4, we support the adoption of the draft resolution, and its finalization in the Drafting group. Finland kindly asks this statement to be reflected in the report of this committee. Thank you

Thank you chair. Finland would like to thank UK and ICS for presenting the documents. As a co-sponsor of the document MSC 108/7/4 Finland supports the finalization of the draft resolution in the Drafting group. Finland fully aligns itself with the intervention made by the UK, Belgium, and Japan. Thank you.

Statement by the delegation of France

La France s'associe à la déclaration prononcée par la Belgique, au nom des Etats-membres de l'UE, pour condamner à nouveau, avec la plus grande fermeté, les attaques menées par les Houthis, qui constituent une grave violation du droit international et de la liberté de navigation, ainsi qu'un risque inacceptable pour la sécurité des gens de mer et l'environnement marin.

Elle appelle à nouveau à la libération immédiate de l'équipage du **Galaxy Leader** et de tous les marins toujours détenus à ce jour.

Nous rappelons les résolutions du Conseil de Sécurité visant ces attaques ainsi que l'embargo sur les armes, qui s'imposent à tous. Dans cet esprit, la France poursuit son engagement dans le cadre de l'opération européenne ASPIDES, comme indiqué dans le document MSC 108/3, pour assurer le respect de ces résolutions, en lien avec ses partenaires.

Je vous remercie et souhaite que cette déclaration soit jointe au rapport de ce comité.

Statement by the delegation of Germany

Germany fully aligns itself with the statement given by Belgium on behalf of the EU Member States.

We strongly condemn the attacks by the Houthis against commercial shipping in the Red Sea and the Gulf of Aden as well as the navy ships protecting them.

These attacks are contrary to international law and interfere with the security of international shipping and global trade. They pose a serious threat to freedom of navigation.

My delegation is deeply saddened by the death of crewmembers of the True Confidence and by the consequences for the maritime environment caused by other attacks on commercial ships.

In line with UN Security Council Resolution 2722, Germany reiterates it's support for countries

that excess the right to defend their vessels from attacks, in accordance with international law. Germany reassures the Secretary General its full support for his engagement for regional security. Germany has directly contributed to the mission ASPIDES and we thank all other actors that enhance maritime security.

We further echo the words by the Secretary General as well as those from other delegations and call on the immediate and unconditional release of the crew of the **Galaxy Leader**.

Statement by the delegation of Greece

Greece aligns itself with the statement made by the distinguished delegation of Belgium and other delegations with regard to the condemnation of actions of the Houthis against the commercial ships transiting the Red Sea.

Furthermore, Greece, would like to note that the objective for the whole maritime community is to protect the lives and safety of our seafarers as well as the precious global public goods such as, the freedom of navigation, international trade and maritime security.

Statement by the delegation of Ireland

Ireland would like to support the statement by Belgium and supports the adoption of the draft resolution on the situation in the Red Sea and Gulf of Aden as set out in paper MSC 108/7/4 and agrees to sending it to a drafting group for finalisation.

Ireland aligns itself with the statement made by Belgium on behalf of the member states of the European Union on the condemnation of the attacks by the Houthis against commercial shipping and seafarers in the Red Sea and Gulf of Aden.

Statement by the delegation of Iran

During this session, representatives from a few delegations made unfounded statements regarding the seizure of MSC. It is important to comment based on the facts and avoid making political accusations without evidence.

As before declared, the seizure of this ship was due to technical issues and maintaining maritime safety. This issue is being investigated by the authorities which is still underway. The crew is in good circumstances and in contact with their family members and their national officials. As stated by the Portugal delegation, several seafarers of the crew including seafarers from India, Estonia, and the Philippines are repatriated to their home countries based on minimum safe manning standards and humanitarian grounds.

It is regrettable that, once again, the representative of some delegations including the United States and the United Kingdom has abused the IMO platform to further its political agenda, by disseminating falsehoods and deliberate disinformation, and leveling unfounded accusations against the Islamic Republic of Iran regarding the current situation in the Region.

The Islamic Republic of Iran emphasizes its commitment to maritime security and freedom of navigation. Iran underscores the necessity of providing maritime security in the Red Sea.

The Government established in Yemen and the people of this country act independently based on their interests, discretion, and policies. Their measures attributed to themselves, not to another State. This is a fundamental rule of responsibility of States.

The Islamic Republic of Iran is committed to Resolutions 2140 and 2216 of the Security Council and has never taken any measures in violation thereof, such as sales or transfer of arms. Moreover, my country always endorses a peaceful resolution of the crisis in Yemen through diplomatic channels and highlights its dedication to ensuring and promoting maritime security and freedom of navigation.

The Islamic Republic of Iran always pays attention to its roots in crises. It is clear to all States that the root causes of the current situation in the Red Sea are the ongoing genocide that is being committed by the Israeli regime and fully supported by the U.S. against the innocent Palestinian people in the Gaza Strip and the West Bank.

The purpose of the US and its allies to make such baseless accusations is clear: to divert international attention away from the root causes of the current situation in the Red Sea, namely the ongoing genocide. The United States and its allies cannot deny or cover up the incontestable reality that recent incidents in the Red Sea are directly related to their measures. Iran asks these countries to act more responsibly, and refrain from labeling and making political accusations against other States without reason.

Statement by the delegation of Italy

We would like to take this opportunity to thank the Secretary-General for the important update he has given us on the current difficult situation in the context of the Red Sea and Gulf of Aden and on the actions being undertaken to resolve the many ongoing challenges in the area.

We also thank the IMO Secretariat for the clear and comprehensive overview described in document MSC 108/7/1 regarding the attacks perpetrated by the Houthis.

.In this regard, Italy supports in full the statement delivered by the distinguished delegation of Belgium, on behalf of the Member States of the European Union in condemning, in the strongest possible terms, the Houthis attacks on commercial ships.

Mme. Chair, as stated by many Member States before us, Italy wants to reiterate, once again, its call for the immediate and unconditional release of the **Galaxy Leader** and its crew members.

The violence unleashed by the Houthis - besides violating the international law, as well as the IMO Convention - represents a threat to the maritime security and peace in the region.

Our country raises its voice against these attacks, which have caused the death of seafarers and serious injuries to many more and endanger the lives of so many others, every day.

While recalling the adoption of the United Nations Security Council resolution 2722 condemning the Houthi's attacks on Red Sea shipping, we demand that these attacks, which impede global trade and regional peace and security, cease immediately.

Furthermore, Italy, as co-sponsor of document MSC 108/7/3, as well as being part of the EUNAVFOR ASPIDES operation – currently leading the role of Force Commander - firmly believes in the need to restore maritime security and freedom of navigation and international trade in the region.

Statements by the delegation of Japan

Japan thanks the Secretary-General for expressing your strong commitment, in the opening of this session, to ensure the safety of shipping and seafarers, and Japan supports your statement. Any actions impeding the free and safe navigation of vessels, including the seizure of "**Galaxy Leader**", by the Houthis, are totally unacceptable, and Japan firmly condemns such actions.

Japan support the intervention by [the Bahamas and the others]. We strongly call for early release of "**Galaxy Leader**" and its crews. Besides, we share deep concerns on the attack by the Houthis to "**Rubymar**", which causes serious environmental impacts in addition to the threat to safety of shipping. In addition, regarding the attack on the cargo ship "True Confidence" by the Houthis and the casualties of the crew, Japan expresses our heartfelt condolences to the families of the innocent crews and pray for the speedy recovery of the injured.

The Houthis has been attacking the Red Sea and other areas around the Arabian Peninsula since November last year. Japan firmly condemns the continued attacks on ships navigating the sea.

Japan recalls that the UN Security Council adopted the resolution 2722 on January 10, which condemns the Houthis' attacks on vessels in the Red Sea and demands that the Houthis immediately cease all such attacks and immediately release the "**Galaxy Leader**" and its crew. In this regard, Japan strongly urges all parties to act in a good faith in accordance with the UNSC resolution.

Statements by the delegation of the Kingdom of the Netherlands

This delegation would like to support the intervention made by Belgium (on behalf of the EU member states,) and others in condemning Houthi attacks on commercial ships. These are unacceptable violations of international law and the freedom of navigation and pose a threat to the lives of many innocent seafarers who are merely doing their jobs. It is of utmost importance that our seafarers, who make sure that international maritime trade is carried out every day and all over the world, are able to work in a safe and secure manner.

We therefore call for the immediate and unconditional release of the **Galaxy Leader** and its crew members. Our thoughts are with the crew of the **Galaxy Leader** and their family, and with the families of victims following other recent attacks on commercial ships.

The Kingdom of the Netherlands urges restraint by the Houthi to avoid further escalation in the Red Sea and therefore also recalls the obligation of all states to respect the arms embargo under the UN Security Council resolution 2216.

The Kingdom of the Netherlands also wishes to thank the Secretariat, the Secretary General and all Member States that support and contribute to safeguard the safety and security of commercial ships and their crews in the area. The Kingdom of the Netherlands remains committed to contribute to the safety and security in the area and would like to inform the Committee that we contributed to the EUNAVFOR ASPIDES project with one naval ship and it currently contributes with another naval ship and up to five staff officers.

Our delegation supports all efforts aimed at putting an end to this crisis, and consequently we support the development of a resolution to this effect, as proposed in document MSC 108/7/4. We request that this statement is added to the report.

Statement by the delegation of Kuwait

أولا، نعرب عن تعازينا لممثل الولايات المتحدة الأمريكية، السيد سيركار
خالص تعازينا وحزننا لدولة البرازيل والشعب البرازيلي في فاجعة الفيضانات والانهيارات الأرضية التي أدت إلى مقتل العديد من الأرواح.
كما نشكر دولة بيرو على استضافتنا
تؤكد دولة الكويت استمرار دعمها لحرية السلامة البحرية ودعمها لمبدأ العبور البريء للسفن والذي يتم بما لا يضر بسلام أو نظام أو سلامة الدولة الساحلية وفقا لقواعد القانون الدولي. قانون دولي.
ونشكر المنظمة وجميع أعضائها على جهودهم المتواصلة في دعم السلامة البحرية
ونود أن يتم إدراج هذا البيان في التقرير النهائي

Statement by the delegation of Luxemburg

Comme c'est la première fois qu'on prend la parole, la délégation du Luxembourg voudrait tout d'abord exprimer ses sincères condoléances à la délégation des États-Unis et à la famille de Monsieur Jaideep Sirkar ainsi qu'à la délégation du Brésil suite aux intempéries dans l'État du Rio Grande do Sul.

Pour être bref, nous nous associons à la déclaration faite par la Belgique au nom des États membres de l'Union Européenne.

Nous demandons la libération immédiate et inconditionnelle de tous les gens de mer détenus. Finalement, nous présentons nos sincères condoléances aux familles qui ont perdu des gens de mer dans ce conflit.

Statement by the delegation of Panama

Buenos días a todos los presentes en este plenario, y buenas tardes y noches a quienes nos siguen desde otras latitudes de manera remota.

Nos gustaría iniciar esta declaración agradeciendo al Secretario General y SU EQUIPO POR LAS COMUNICACIONES Y ACTUALIZACIONES enviada el pasado 8 de mayo del presente año, en la cual se detallan los últimos acontecimientos ocurridos en la región del Mar Rojo y áreas aledañas. Apreciamos profundamente el trabajo conjunto realizado entre esta Organización y las Naciones Unidas, y hemos tomado nota de la reciente Resolución adoptada el pasado 10 de enero de 2024 por el Consejo de Seguridad DE LAS NACIONES UNIDAS.

La República de Panamá ha venido manifestándose en la mayoría de las reuniones sobre este asunto. Como Estado de Abanderamiento, nos preocupa sobremanera la violación de los derechos y la libertad de navegación que afectan a los buques mercantes, conforme al derecho internacional. Es esencial garantizar que el transporte marítimo internacional, y en especial nuestra gente de mar, gocen de una navegación segura, libre de ataques e incautaciones, como en el caso reciente del buque **Galaxy Leader** y su tripulación, para quienes reiteramos nuestro sincero apoyo y pedimos su liberación inmediata.

Además, hemos reiterado nuestra petición para que este conflicto pueda cesar de la mejor manera, mediante el diálogo y la negociación pacífica entre las partes involucradas. Es imperativo que estos secuestros y ataques, que también afectan a la cadena de suministro mundial, cesen de inmediato.

Estamos convencidos de que este Comité realizará un gran avance significativo en las

medidas regulatorias, para apaciguar y resolver esta situación en la región del Mar Rojo. Confiamos en que las labores a realizar bajo la esta Agenda 7, "Medidas para incrementar la protección marítima", darán frutos tangibles ante esta situación que nos afecta a todos.
Por último, NOS GUSTARIA QUE EL COMITÉ TOME NOTA DE LO SIGUIENTE QUE VAMOS A MENCIONAR, Sra. Presidente, mi Administración ha seguido de cerca todos los informes presentados por el Secretario General. Específicamente, en el último informe se menciona que Panamá es el tercer Estado de Abanderamiento con más naves afectadas debido a estos ataques, representando un 12% de afectación. Teniendo en cuenta la cantidad de naves y gente afectada, especialmente a través de los constantes ataques con drones, la República de Panamá quisiera que el Comité estudie la posibilidad de elaborar recomendaciones para los capitanes, operadores de buques, entre otros, con relación a las amenazas por ataques de vehículos aéreos no tripulados (VANT). Esto es crucial, considerando la escalada de los conflictos geopolíticos en África, Europa y Oriente Medio que aún no tienen fecha de culminación y desafortunadamente, los buques, el medio ambiente y, lo más importante, la gente de mar siguen viéndose afectados por estos ataques.

Muchas gracias, Sra. Presidente.

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Muchas gracias, Sra. Presidente,

La República de Panamá, agradece a la industria por la presentación del documento MSC 108/7/2 el cual apoyamos, ya que tanto la elaboración de una Resolución MSC, así como también, orientaciones pertinentes para aplicar las mejores prácticas en los buques y la gente de mar que transitan por dicha área cuando la gente de mar enfrenta amenazas por ataques de vehículos aéreos no tripulados, tal como mencionamos en nuestra declaración previa de acuerdo al párrafo 11.2 MSC 108/7/2.

Además, agradecemos a los copatrocinadores del documento 108/7/4 de Estados Unidos y otros, por presentar este proyecto de resolución que aborda la grave situación de la seguridad en el Mar Rojo y el Golfo de Adén, en consecuencia de los ataques contra los buques mercantes y la gente de mar.

La delegación de la República de Panamá desea manifestar su total apoyo a al proyecto de resolución presentado, además nos encontramos de acuerdo que estos documentos puedan ser enviados al grupo de trabajo, para que se ultime y se acepte esta Resolución MSC.

Instamos a que se tomen medidas concretas y efectivas para prevenir y responder a estos actos de violencia, así como para abordar las causas subyacentes que los perpetúan. La paz y la estabilidad en nuestras aguas son fundamentales para el comercio internacional y el desarrollo sostenible de nuestras comunidades costeras.

Para Finalizar, Es fundamental que la comunidad internacional se una en la búsqueda de soluciones efectivas para abordar estos desafíos y garantizar la seguridad de nuestras aguas y de quienes las navegan. Confiamos en que, con la voluntad y colaboración de todos los Estados miembros, lograremos avanzar hacia un futuro marítimo más seguro y próspero para todos.

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Proyecto de declaracion del mar rojo por si se da la oportunidad de mencionarlo.

Muchas gracias, Sra. Presidente,

Buenos días a todos los presentes en este plenario, y buenas tardes y noches a quienes nos siguen desde otras latitudes de manera remota.

Nos gustaría iniciar esta declaración agradeciendo al Secretario General y su equipo por las comunicaciones y actualizaciones enviada el pasado 8 de mayo del presente año, en la cual se detallan los últimos acontecimientos ocurridos en la región del Mar Rojo y áreas aledañas. Apreciamos profundamente el trabajo conjunto realizado entre esta Organización y las Naciones Unidas, y hemos tomado nota de la reciente Resolución 2722 adoptada el pasado 10 de enero de 2024 por el Consejo de Seguridad de las naciones unidas.

La República de Panamá ha venido manifestándose en la mayoría de las reuniones sobre este asunto. Como Estado de Abanderamiento, nos preocupa sobremanera la violación de los derechos y la libertad de navegación que afectan a los buques mercantes, conforme al derecho internacional. Es esencial garantizar que el transporte marítimo internacional, y en especial nuestra gente de mar, gocen de una navegación segura, libre de ataques e incautaciones, como en el caso reciente del buque **Galaxy Leader** y su tripulación, para quienes reiteramos nuestro sincero apoyo y pedimos su liberación inmediata.

Además, hemos reiterado nuestra petición para que este conflicto pueda cesar de la mejor manera, mediante el diálogo y la negociación pacífica entre las partes involucradas. Es imperativo que estos secuestros y ataques, que también afectan a la cadena de suministro mundial, cesen de inmediato.

Estamos convencidos de que este Comité realizará un gran avance significativo en las medidas regulatorias, para apaciguar y resolver esta situación en la región del Mar Rojo. Confiamos en que las labores a realizar bajo la esta Agenda 7, "Medidas para incrementar la protección marítima", darán frutos tangibles ante esta situación que nos afecta a todos.

Por último, nos gustaria que el comité tome nota de lo siguiente que vamos a mencionar, Sra. Presidente, mi Administración ha seguido de cerca todos los informes presentados por el Secretario General. Específicamente, en el último informe se menciona que Panamá es el tercer Estado de Abanderamiento con más naves afectadas debido a estos ataques, representando un 12% de afectación. Teniendo en cuenta la cantidad de naves y gente afectada, especialmente a través de los constantes ataques con drones, **la República de Panamá quisiera que el Comité estudie la posibilidad de elaborar recomendaciones para los capitanes, operadores de buques, entre otros, con relación a las amenazas por ataques de vehículos aéreos no tripulados (VANT). Esto es crucial, considerando la escalada de los conflictos geopolíticos en África, Europa y Oriente Medio que aún no tienen fecha de culminación y desafortunadamente, los buques, el medio ambiente y, lo más importante, la gente de mar sigue viéndose afectados por estos ataques.**
Muchas gracias, Sra. Presidente.

Intervencion conjunta MSC 108/7/2 y MSC 108/7/4

Muchas gracias, Sra. Presidente,

La República de Panamá, agradece a la industria por la presentación del documento MSC 108/7/2 el cual apoyamos, ya que tanto la elaboración de una Resolución MSC, así como también, orientaciones pertinentes para aplicar las mejores prácticas en los buques y la gente de mar que transitan por dicha área **en especial, cuando la gente de mar enfrenta amenazas por ataques de vehículos aéreos no tripulados, tal como mencionamos en nuestra declaración previa de acuerdo con el párrafo 11.2 del documento MSC 108/7/2**.

Además, agradecemos a los copatrocinadores del documento 108/7/4 de Estados Unidos y

otros, por presentar este proyecto de resolución que aborda la grave situación de la seguridad en el Mar Rojo y el Golfo de Adén, en consecuencia, de los ataques contra los buques mercantes y la gente de mar.

La delegación de la República de Panamá desea manifestar su total apoyo a al proyecto de resolución presentado, además nos encontramos de acuerdo que estos documentos puedan ser enviados al grupo de trabajo, para que se ultime y se acepte esta Resolución MSC.

Instamos a que se tomen medidas concretas y efectivas para prevenir y responder a estos actos de violencia, así como para abordar las causas subyacentes que los perpetúan. La paz y la estabilidad en nuestras aguas son fundamentales para el comercio internacional y el desarrollo sostenible de nuestras comunidades costeras.

Para Finalizar, Es fundamental que la comunidad internacional se una en la búsqueda de soluciones efectivas para abordar estos desafíos y garantizar la seguridad de nuestras aguas y de quienes las navegan. Confiamos en que, con la voluntad y colaboración de todos los Estados miembros, lograremos avanzar hacia un futuro marítimo más seguro y próspero para todos.

Statement by the delegation of Philippines

MSC 108/7 (Secretariat) - Update on recent development related to maritime security

We wish to inform you that the Maritime Security Module in GISIS has been regularly reviewed and supplied with updated information by our focal point agency - the Office of Transport Security or OTS- particularly in matters pertaining to port facility security plans. Currently, the mode to transfer information is by electronic transfer, and no technical problem has been encountered so far as the transfer of information is concerned.

Moreover, for the continuous implementation of security measures in port facilities, the OTS conducts compliance monitoring activities to port facilities and ships based on approved security plans in conformance with the requirements of the ISPS Code.

Lastly, may we bring to your attention that we have a new concern on information that GISIS requires about “Security Arrangement Details.” The Philippines (OTS) has not indicated any information to that effect because we have no security arrangement issued/entered into , in consideration of ships and port facilities. But, as observed, the module that requires that information remains in color “RED,” an indication that it is not updated.

In this light, we request that an additional option be made available in the GISIS (Security Arrangement Details) allowing us to indicate the equitable information or the word “not applicable.” Thank you Chair.

Agenda item 7/1 (Secretariat) - Update on the Red Sea

Thank you, Chair and good day to all. We thank the Secretariat for MSC 108/7/1.

We continue to call for the unconditional release of the crew of MV **Galaxy Leader**, where the majority of the crew are Filipinos. Also, following the attack on MV True Confidence resulting in the tragic death of two Filipino seafarers, our Philippine authorities and manning agencies have prohibited the deployment of Filipino seafarers to ships sailing through Red Sea, the Gulf of Aden and other known global hotspots. Together with efforts to bring back our captive seafarers, stricter protocols to ensure the safety of Filipino seafarers navigating in these areas

are being implemented following collective discussions with the relevant tripartite council. While putting responsibilities on crewing agencies to ensure their safety, our seafarers have also been given the option to refuse to sail in warlike and high-risk areas, with provision for repatriation and compensation at company cost in case they opt to join such ships.

We continue to commend the Secretary General, other relevant organizations, and member States for the collective action at the highest level on the ongoing security situation in the Red Sea. In view of the involvement of other ships and the collateral damage to seafarers in other high-risk areas, efforts to ensure the safety, security of shipping and navigation and marine environmental protection in other affected areas and ships are likewise noted and appreciated.

Statement by the delegation of Portugal

Portugal is also deeply concerned regarding the situation in the Red Sea area and reaffirms its condemnation of the unjustified and disruptive attacks by the houthis against commercial ships, which must end immediately. Freedom of navigation and seafarers' safety must always be upheld and respected.

We thank once again the Secretary-General for his efforts and in keeping Member-States informed on this issue.

In closing, Portugal supports the statement delivered by Belgium on behalf of Member States of the European Union and we kindly request that this be noted in the report of this Committee.

Madam Chair,

On a separate matter, the unlawful seizure of the Portuguese flagged cargo vessel, the **MSC Aries**, near the Strait of Hormuz on the 13th of April has been mentioned earlier.

Portugal's position on this has been stated in a previous IMO meeting, at the 111th session of the Legal Committee held in April.

Additionally, the Portuguese Government issued a press release on the 9th of May informing that seven crew members of the ship detained by Iran were released on that day. Portugal timely notified the countries of nationality of these seven seafarers, specifically: five Indian citizens, one Filipino, and one Estonian, who was the sole European Union citizen on board. Currently, the crew on board consists of 17 members (one Indian citizen had left the ship beforehand).

The Portuguese Government welcomes this development, for which it had strongly advocated for. Nonetheless, it reiterates to the Iranian Government that international law requires the immediate release of the remaining crew members and the ship **MSC Aries**.

Portugal will continue to make every effort to ensure that these international obligations are fully met.

Madam Chair,

As this is the first time we are taking the floor this week, allow us also to join others in expressing our deepest condolences to the United States and our full support to Brazil.

We stand in solidarity with the Brazilian people in this moment of enormous difficulty caused by the terrible floods in the state of Rio Grande do Sul.

Thank you

We believe that the IMO should be unequivocal in its denunciation of the ongoing aggression, and that the Committee should establish an appropriate group to explore solutions to the crisis, with proposed issues for consideration to include:

1. The development of an MSC resolution condemning the attacks;
2. Promotion of relevant best practice guidance for ships and seafarers preparing to transit, or transiting the region;
3. identifying if existing international and regional structures could be used to further enhance maritime security in the region; and
4. reviewing information flows and reporting to ensure its accuracy.

In respect of the first proposal, we are grateful to the cosponsors of 108/7/4, for the draft resolution therein, which we would support sending to the group. We would propose two amendments to the document. Firstly, the addition of a preambulatory paragraph recalling industry best practice guidance promulgated through the Organization's website and the industry website maritimeglobalsecurity.org; and secondly, the addition of a new paragraph:

> 10.bis. Encourages all parties to provide relevant information to the Organization as appropriate;

In conclusion, shipping currently faces a security threat unseen in over two generations, and we believe it is essential that the Organization acts robustly in the face of this unacceptable aggression. We commend our paper for the committee's consideration, and request that our statement be appended to the report.

Statement by the delegation of the Russian Federation

Statement Russian Federation MSC108/7/4

Уважаемая г-жа Председатель,

В связи с предложенным проектом резолюции мы понимаем смысл внесения его на рассмотрение на текущую сессию КБМ.

При этом считаем, что предложенный проект весьма сырой и нуждается в доработке как по содержанию, так и по данным используемым в нем.

Прежде всего не видим в проекте ни одного упоминания о ситуации с пиратством, вновь растущим в данном регионе. Очевидно, что рост пиратства является следствием сложившейся обстановки. Кроме того есть серьезные случаи захвата судов и их экипажей, которые необходимо, как минимум, осудить. Имеются отважные действия, например, индийского флота по освобождению судна Ruen, которые стоило бы высоко отметить со стороны Комитета. Понимаем, что это пункт 8 повестки у нас, но полагаем, что эти сюжеты невозможно разделять в рамках заданной темы резолюции.

Также не находим в резолютивной части проекта никаких предложений о защите окружающей среды. Упоминание же ("безопасности") "морской среды" ((security) of marine environment) в контексте, изложенном в п.7, равно как и остальной текст в этом пункте, включая такие определения «the maritime community» является непонятным и откровенно настораживает.

Имеются также несоответствия в предоставленных данных – в тексте упоминается

более 50 случаев нападения, хотя, по данным Генерального Секретаря, их 43. Видимо, нужны пояснения по этому вопросу.

Все упомянутые и иные замечания и предложения будем готовы высказать в рамках рабочей группы, если она будет установлена. Редакционная же группа для данных целей, исходя из ее формата, по нашему мнению, конечно, не подходит.

Уверены, что по данной теме мы не можем ограничиться сырым документом, когда, доработав и дополнив его, можем получить более достойный результат.
Спасибо.

Statement by the delegation of Singapore

Agenda 7 – Measures to enhance maritime security

Thank you Chair,

1 At the outset, we wish to reiterate our deep concerns over the continued and unlawful attacks against commercial shipping in the Red Sea region, which have resulted in the unnecessary loss of innocent lives, disruption to world trade and supply chains, as well as increased risks of environmental damage. As communicated at past IMO meetings, it is imperative that the freedom and safety of navigation of international shipping are upheld, sea lines of communication remain open, and the well-being of seafarers preserved. In this regard, Singapore calls for the urgent cessation of such attacks.

2 Singapore would like to express our appreciation to the Secretary-General and IMO Secretariat for the continued efforts to monitor and address the ongoing situation in the Red Sea. We welcome the actions undertaken thus far to facilitate information exchange among stakeholders, explore possible measures to protect seafarers as well as to de-escalate the conflict. Singapore lends our full support to the Secretary-General in keeping this matter under review, and to provide updates to member States as necessary.

3 In the same vein, Singapore welcomes the possible adoption of a resolution to address the concerning attacks against shipping in the Red Sea and Gulf of Aden and promotion of guidance or best practices for ships and seafarers operating the region, which would be discussed in detail later. Singapore stands ready to work with the rest of the international community to safeguard free and open access to trade routes and shipping lanes in accordance with international law and looks forward to the return of safety and security in the region.

Statement by the delegation of Slovenia

Since this is the first time for this delegation to speak, we would like to convey our sympathy and condolences to the delegation of the Unites States and the family and friends of Mr Sirkar. His contribution to the work of this organisation will undoubtedly be remembered by many. We would also like to convey our condolences to the delegation of Brazil and its people suffering in the aftermath of the natural disaster that hit the country.

Regarding the matter at hand, Slovenia fully aligns itself with the statement made by the delegation of Belgium on behalf of the European Union with regard to the Houthi attacks.

Slovenia is remains deeply concerned with the maritime safety situation in the Red Sea and once again reiterates its demand to Houthis to immediately stop the deplorable attacks on

merchant, commercial vessels in the Red Sea and calls for an immediate release of MV **Galaxy Leader** and its crew.

Slovenia would like to thank the Secretary General for the efforts invested by him and the organisation to address and resolve this situation as soon as possible.

Slovenia once again recalls the Security Council's resolution 2722 underscoring the importance of safeguarding the freedom of navigation and safely of lives at sea. In line with this resolution Slovenia would again appeal to all parties in the region to strengthen their efforts and contribute to international peace and stability in the region by refraining from any action that has negative impact on the security and safety of this crucial waterway. We call to all parties to cease all activities that pose unnecessary threats to human life, disrupt maritime supply chains and have a negative impact on the environment. We condemn in the strongest terms any attacks that undermine international maritime security and safety jeopardize critical flows of food, fuel and humanitarian assistance. Slovenia will continue to invest its efforts also through the Security Council and by providing human assets to the naval operation ASPIDES to resolve this situation to the benefit of the wider maritime and global community, which strives for peace.

Statement by the delegation of Spain

España se suma a las muestras de condena contra los ataques huties a buques mercantes en el mar Rojo manifestadas por la delegación de Bélgica.

En particular, España se une al llamamiento en favor de la liberación inmediata del buque **Galaxy Leader**, al mismo tiempo que mostramos nuestra solidaridad con aquellos que se han visto afectado por los ataques, con especial mención a los sufridos por los buques True Confidence y **Rubymar**.

Nos sumamos también a la codena manifestada por las delegaciones de los Estados Unidos y Reino Unido por el secuestro del buque **MSC Aries** y apoyamos totalmente el llamamiento a la liberación inmediata del buque y su tripulación.

Finalmente, España reconoce el compromiso del secretario general con la protección y bienestar de la gente de mar y agradece la información periódica que viene facilitando en relación con la situación en el Mar Rojo.

Statement by the delegation of Ukraine

As it is the first time that this delegation takes the floor, we would like to offer our sympathies and condolences to the US delegation over the passing of Mr. Jaideep Sirkar, as well as to the delegation of Brazil over the tragic flooding in Rio Grande do Sul.

We also thank the delegation of Peru for hosting coffee break.

Madam Chair,

Upholding free, safe and secure navigation is of paramount importance to the sustainable international shipping, including in the area of the Red Sea.

This delegation appreciates the update provided by the IMO Secretariat on this situation and aligns itself with the statements, delivered by the delegations of The Bahamas, Japan, Belgium, US and others in strongly condemning the attacks against the merchant vessels

carried out by Houthis, in particular tragically damaging the vessels True Confidence and **Rubymar**.

These unlawful actions not only put the innocent lives of seafarers at risk but also threaten the global economy and destabilize regional security. Without the support of Iran, which also engages in modern piracy, these aggressive acts by Houthis could not be successful.

Ukraine, as the country of origin of part of seafarers taken hostage on mv **Galaxy Leader**, add its voice to demanding an immediate release of its crew from the illegal captivity. Respectively, we join the calls for the release of the **MSC Aries** hijacked by the Iranian military in international waters.

Ukraine supports international efforts to safeguard the functioning of this vital maritime route, including the operations led by the US and the EU.

Statement by the delegation of the United States

U.S. Statement on Houthi Maritime Attacks

• The United States thanks the Secretary-General for his leadership and focus on the impact of the Iran-backed Houthis' attacks on seafarers and commercial ships in the Red Sea and Gulf of Aden. The Houthis' reckless attacks jeopardize the safety of seafarers whom this Organization is charged to protect. There is no justification for these attacks on innocent seafarers.

• The United States is deeply saddened by the death of three seafarers who were simply doing their jobs when the Houthis fired an anti-ship ballistic missile at the motor vessel (M/V) True Confidence on March 6.

• We join others in calling on the Houthis to immediately and unconditionally release the M/V **Galaxy Leader** and its crew whom they have held captive since illegally seizing the ship six months ago.

• The Houthi attacks threaten the marine environment and navigational safety. The sunken M/V **Rubymar** poses an ongoing risk to the fragile marine environment in the region as well as navigational safety in this vital waterway.

• Houthi attacks are also preventing critical humanitarian aid and commercial cargo from reaching civilian populations in need across the region, including those in Sudan, Ethiopia, and Yemen itself.

• Houthi attacks threaten regional security, and we are also concerned about an increase in piracy in the region. We recall UN Security Council Resolution 2722, which underscores support for the navigational rights and freedoms of vessels in the Red Sea, condemns these Houthi attacks, and demands that they cease.

• Iran makes no secret of its support to the Houthis. It provides them weapons in violation of the UN arms embargo. Iran has provided the Houthis training to carry out attacks like these. Iran also provides the Houthis extensive financial support. Without Iran's support, the Houthis would struggle to track and strike commercial ships.

• Every IMO Member State – especially those with direct channels to Iran – should urgently press Tehran to stop providing the Houthis weapons and support before more innocent seafarers are killed by their abhorrent actions.

• Likewise, every Member State should adhere to and uphold the targeted arms embargo established under UN Security Council Resolution 2216 - an embargo that Iran has previously been found in non-compliance for its failure to prevent the transfer of Iranian origin ballistic missiles, UAVs and related technologies to Houthi militants.

• Regrettably, Iran continues to act in ways that are fundamentally at odds with the purposes of the IMO. On April 13, the Iranian military boarded the **MSC Aries** in the Gulf of Oman, seizing the ship and its crew. We demand that Iran immediately and unconditionally release the **MSC Aries** and the remainder of its crew. This is not new behavior from Iran. Iran has unlawfully seized a number of commercial vessels in and around the Strait of Hormuz in recent years.

• Iran's continued harassment of vessels and interference with navigational rights and freedoms in the region's vital waterways is a threat to maritime security, regional stability, and the global economy.

• The United States remains committed to restoring stability in the Red Sea and Gulf of Aden, protecting seafarers and commercial ships from Houthi attacks, and upholding the principle of freedom of navigation.

Statement by the delegation of BIMCO

Like so many delegations BIMCO is appalled by the repeated Houthi attacks on shipping and seafarers. BIMCO would like to express our deepest thanks to IMO and member states for all the steps taken to stabilise the situation in the Red Sea, Gulf of Aden, and NW Indian Ocean. A special thanks goes out to the United States, the United Kingdom and the many other countries who have contributed to the protection of merchant ships under operation Prosperity Guardian and operation Aspides. While military actions are no panacea they are currently an important component needed to curb the Houthi threat, and military actions have on several occasions saved ships and seafarers from being hit by missiles or drones, or hijack. BIMCO call for all stakeholders to take all necessary measures under international law, including diplomatic and military actions, to stop the Houthi attacks.

Statement by the delegation of the International Chamber of Shipping (ICS)

Since 19 November 2023, merchant ships have been subjected to unprecedented attack by the Houti forces in Yemen. These intolerable assaults against merchant ships endanger the lives of seafarers on an almost daily basis and have resulted in the sinking of the **Rubymar** and the tragic loss of life onboard the True Confidence. The 25 crewmembers of the **Galaxy Leader**, seized at the start of this crisis, remain captives of the Houthis in Hodeidah.

The cosignatories thank those States deploying military forces and personnel to protect seafarers and freedom of navigation, in particular Operation Prosperity Guardian and Operation Aspides. Without the deterrent presence of these missions, the security situation would unquestionably be worse. Similarly, we are indebted to the Secretary General for his efforts in raising the plight of seafarers in these waters at the highest diplomatic level, and in particular his unstinting commitment to liberating the **Galaxy Leader** crew.

Shipping is a resilient industry. It kept the world fed and warm throughout the pandemic, irrespective of politics. That a major sea route could be as adversely affected as the red Sea has been without a palpable impact on the global economy clearly demonstrates this resilience. However, it remains fundamentally unacceptable that shipping, and the seafarers that serve it, should be attacked in this way.

AGENDA ITEM 8

Statement by the delegation of Japan

For Japan, tackling against piracy and armed robbery against ships in important sea lanes, such as the strait of Malacca and Singapore, is of prominent importance.

In this regard, Japan expresses our gratitude to RECAAP and its Executive Director, Mr Natarajan for his great leadership in continuously addressing this important matter.

Japan is committed to continue close cooperation with RECAAP members and IMO to address the piracy and armed robbery in the region.

Statement by the delegation of Indonesia

MSC 108/8/1
DOMESTIC FERRY SAFETY
Online training material on domestic ferry safety
Submitted by China

Thank you Madam Chair

Indonesia would like thank China for the comprehensive document submitted and presentation yesterday which makes a very useful reference and which also supported.

As an archipelagic state heavily reliant on ferry transportation for inter-island connectivity, Indonesia is fully committed to supporting any measures aimed at improving the safety of domestic ferries.

Given the current circumstances, we believe that enhancing the skills and readiness of maritime personnel will make a substantial contribution towards achieving these objectives.
With this in mind, we propose the Committee to facilitate further discussion on the online training material on domestic ferry attached in this document, which we support in general and to explore the feasibility of developing the standardized training materials.

Statement by the delegation of Panama

La República de Panamá agradece a la Secretaría por el informe presentado relativo a los actos de piratería y robo a mano armada reportados en 2023 y nos preocupa que en 2023 los actos aumentaron en un 15%, lo que sin duda alguna pone en riesgo la vida de la gente de mar y la seguridad en la navegación.

Quisiéramos agradecer también a la Secretaria por los informes mensuales que presentan con relación a los actos de piratería y robo a mano armada reportados por los Estados Miembros.

Mi Administración, Gestiono un taller sobre inspección y búsqueda de pasajeros y equipajes marítimos con esta Organización, la cual fue realizado con éxito en Noviembre 2023. Gracias a esta cooperación técnica, mejoramos las capacidades técnicas del recurso humano con funciones de protección en instalaciones de recepción de cruceros, así como de los oficiales gubernamentales encargados de aplicar las disposiciones, directrices y prescripciones funcionas de normativas internacionales en materia de protección portuaria.

Como Estado Miembro de esta Organización, Mi Administración ha tomado nota de todas las acciones que se le pide al Comité, con respecto a informar sobre los sucesos de piratería, el cuestionario y la cooperación en conformidad con la resolución de Asamblea A.1159(32).

Por otro lado, informamos al Comité que la Autoridad Marítima de Panamá, en febrero del presente año publicó la circular MMN 230 para informar a los buques de bandera panameña sobre las medidas que deben adoptar cuando naveguen por zonas de alto riesgo o zonas con mayor concurrencia de actos de piratería y robo a mano armada con miras a proteger la vida de los tripulantes a bordo.

Statement by the delegation of the Philippines

MSC 108/8 and MSC 108/INF.9
PROPOSED STATEMENT:

The Philippines would like to thank ReCAAP-ISC for the update on the status of maritime security in the Philippines particularly in the Sulu-Celebes Sea. The Philippines is a member of the Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCAAP). The Philippines has no reported abduction of crew for ransom which was also reflected in the ReCAAP reports last 2021, 2022, 2023 and first quarter of 2024. The last known incident of abduction of crew occurred on 17 January 2020 off Lahad Datu, Sabah, Malaysia. No crew is currently held in captivity by the Abu Sayyaf Group (ASG).

The efforts of the Philippine Government in Zamboanga, Sulu and Tawi-Tawi throughout the conduct of continuous military operations led to the subsequent dismantling of the support base and the neutralizing of the ASG in the Sulu archipelago.

Furthermore, the downgrading of the threat level in the Sulu-Celebes Seas' from 'MODERATE' to 'MODERATE LOW', means that 'Incidents are unlikely to occur due to perpetrators' perceived lack of capability to orchestrate any attacks can be attributed to the continuous efforts of the Philippine Coast Guard, Armed Forces of the Philippines, other law enforcement agencies and stakeholders. The establishment of a contact group through the initiative of the United Nations Office on Drugs and Crime between the Philippines, Malaysia and Indonesia and the series of enforcement exercises helped improve the law enforcement operations in the Sulu-Celebes Sea.

The enforcement of Department of Transportation Memorandum Circular on Safety, Security and Environmental Numbering (SSEN) For All Philippine Registered and/or Watercrafts which also covered vessels below 35 GT (including small boats) has helped in the monitoring and profiling of vessels/motorboats used in illegal activities particularly in the Zamboanga, Basilan and Tawi-Tawi area.

In addition, Department of Transportation Memorandum Circular No. 2017-002 has recommended transit corridors at Moro Gulf and Basilan Strait which designated routes for vessels to reduce the risk of collision, provide a measure of traffic separation, and minimize threats such as piracy and armed robbery. The recommended transit corridor could help the PCG and other law enforcement units monitor and deploy necessary assistance to vessels.

Statement by the delegation of Singapore

We thank the IMO Secretariat for providing a comprehensive update on the developments relating to piracy and armed robbery against ships. The threat of piracy and sea robbery

against ships is a constantly evolving one; and the fight against such a threat is a shared responsibility. Singapore takes a serious view on piracy and armed robbery against ships, and remains committed to working with all stakeholders – coastal States, regional authorities, industry, ReCAAP ISC and the IMO – to ensure that vital sea lanes remain safe, secure, and open for international shipping.

With respect to document MSC 108/INF.9, Singapore would like to commend ReCAAP ISC for its efforts to foster regional trust and cooperation to tackle piracy and armed robbery against ships. As highlighted by the ReCAAP ISC, the number of sea robbery incidents in the Straits of Malacca and Singapore has been on the rise in the last few years. Although most of these incidents remain as opportunistic petty thefts, it is incumbent upon us to keep the situation in the Straits of Malacca and Singapore in check. Strong enforcement and coordination between Governments and agencies in the region are key to addressing the matter, and have deterred potential attempts, in some cases, even led to arrests. Singapore continues to commit to, and reinforce the cooperation with Indonesia, Malaysia, fellow ASEAN member States, user States of the Straits of Malacca and Singapore, and the industry, to tackle this threat.

Statement by the delegation of ReCAAP

intervention by the ReCAAP ISC at the 108th MSC on ReCAAP ISC Information Paper,

MSC 108/INF.9: Update on the Progress Report of the Regional Cooperation Agreement on Combating Piracy and Armed Robbery Against Ships in Asia - Information Sharing Centre (ReCAAP-ISC)

Thank you, Madam Chair for giving me the floor. A good day to all delegates.

I would like to provide an update of Piracy and Armed Robbery (PAR) incidents against ships in Asia for the period January- April this year. There is no incident of Piracy on the high seas, however, 34 incidences of armed robbery against ships occurred in coastal States jurisdictions were reported, which is 15% decrease compared to 40 incidents during the same period in 2023. Of these, 14 incidents were reported in Straits of Malacca and Singapore (SOMS), which is 46% decrease, a significant improvement compared to 26 incidents in 2023.

There has been no abduction of crew from ships in the Sulu-Celebes Seas and waters off Eastern Sabah during January to April 2024. The last incident of such nature was reported in January 2020. The ReCAAP ISC commends the coordinated efforts of the littoral States in Sulu-Celebes Seas, namely the Philippines, Malaysia and Indonesia, which largely contributed to the improvement and in ensuring an incident-free passage for seafarers transiting the area.

The ReCAAP ISC, to better serve the maritime community and to keep them abreast of the developing situation, continues to produce useful and relevant publications, such as a poster on Contact Details of MRCC and ReCAAP Focal Points for reporting of incidents in Asia to facilitate reporting to nearest coastal States; a poster on Guidelines & Reporting of Incident by Vessels – SOMS to facilitate direct reporting to the law enforcement agencies of the littoral States; and Guide Book on Identification of Fishing Boats in Asian Waters to assist ship crew in identifying fishing vessels in the area that appear out of norm and take necessary precautionary measures to prevent unauthorised boarding.

The ReCAAP ISC has also launched an interactive dashboard known as Re-VAMP and an enhanced version of the ReCAAP mobile application. The dashboard allows the users to gather key insight and correlation of past and present information on incidents of piracy and armed robbery against ships in Asia, to institute preventive measures prior entering area of concern. While the enhanced mobile application provides a user-friendly one-stop incident

reporting and information sharing platform to facilitate reporting of incidents to nearest coastal State and accessing of products produced by ReCAAP ISC.

Recognising that the PAR against ships is the shared responsibilities of all stakeholders, and requires a concerted effort of the coastal States, shipping community and all maritime stakeholders through what ReCAAP ISC emphasis on the C5I – Communication, Cooperation, Coordination, Collaboration, Commitment and Information Sharing – to ensure safety of seafarers and secure seas for maritime trade and commerce, bringing in the economic prosperity of all nations in Asian region.

AGENDA ITEM 9

Statement by the United Arab Emirates

UAE, being one of the co-sponsors of document MSC 108-9-1, we see the necessity to develop guidance for handling cases of deceased persons found in migrant boats and of death after recovery.

Therefore, this delegation fully supports the DRAFT MSC-FAL CIRCULAR ON GUIDELINES CONCERNING NON-SURVIVORS IN MIGRANT BOATS.

If the draft circular is approved during this session, we would suggest to sending it to FAL Committee

AGENDA ITEM 10

Statement by the delegation of the Kingdom of Bahrain

شكرا السيدة الرئيس
أولا نود أن نعرب عن خالص تعزينا للوفد الإيراني والشعب الإيراني بوفاة فخامة الرئيس والوفد المرافق له.
ثانيا نود أن نشكر الصين على هذه الوثيقة 1-10-108وعرض الامس بخصوص المواد التدريبية المفصلة بشأن العبارات المحلية، أن التدريب على الانترنت سيتيح فرصة كبيرة لنشر الوعي ورفع مستوى ثقافة السلامة بين العاملين على هذا النوع من السفن.

Statement by the delegation of Indonesia

MSC 108/10
DOMESTIC FERRY SAFETY
Activities and initiatives on domestic ferry safety

Thank you Madam Chair

At the outset, Indonesia would like to convey our sincerest condolences to the delegation of the Islamic Republic of Iran for the tragic incident that befell their leaders. Our thoughts and prayers are with the people of Iran.

Turning to the matter at hand, we would like to thank the Secretariat for providing document MSC 108/10.

As an archipelago with more than 17,000 (seventeen thousand) islands, Indonesia fully support the adoption of the Model Regulations on Domestic Ferry Safety (resolution MSC.518(105)) which was adopted on April 2022.

Maritime transport has become one of the backbone for the movement of people and logistics throughout our archipelago. Ferry transport is an important and strategic means of integrating economic, culture, and security in Indonesia.

Indonesia has also engaged and initiated various collaborations to enhance ferry safety with neighbouring countries. Bilaterally with Malaysia, Singapore, Brunei, and the Philippines, and also through regional cooperation with all ASEAN countries.

We are of the view that the initiative for the comprehensive project on enhancing domestic ferry safety will greatly benefit the ongoing and future safety of ferry operations. We have been involved in such projects relating to enhancement of ferry safety in the scope of national awareness, hazard identification, regional/national multi-stakeholder consultations and the use of technological advancement in the use of online training course and VR technology.

In light of these progresses, Indonesia would like to thanked all Member States and related stakeholders who have contributed in the area of enhancing safety of domestic ferry. Indonesia also welcomes the plan for a new project on ferry safety, funded by the European Union, which is soon to be launched.

We are confident that this project will also contribute positively to our ongoing work, particularly on the establishment of special regulations for short-distance ferries without neglecting safety and maritime environmental protection aspects.
Thank you Madam Chair

Statement by the delegation of Democratic People's Republic of Korea

Statement to be made by the Democratic People's Republic of Korea
during discussion of MSC 108/10/1

First of all, the DPRK expresses its deepest condolences to the Islamic Republic of Iran and bereaved families over the sudden demise of President and officials in a tragic accident.

Turning to the matter in hand, we thank China for submission of the document MSC 108/10/1 and the presentation provided yesterday.

The draft online training material on domestic ferry safety covers the comprehensive knowledge useful for the safe operation and management of ferries, considering the different type and size of domestic ferries operated in member states.

The DPRK is of view that the draft online training material is very useful and valuable reference for ferry crew, ferry companies and the relevant authorities as a starting point for enhancing the domestic ferry safety in member states.

Statement by the delegation of Panama

AGENDA 10 – TRANSBORDADORES NACIONALES
MSC 108/10/1– MATERIAL DE CAPACITACION EN LINEA SOBRE LA SEGURIDAD DE LOS TRANSBORDADORES NACIONALES - NOTA PRESENTADA POR CHINA.

La Republica de Panama agradece a la China por la presentación de este material para la formación en línea sobre seguridad de los transbordadores nacionales, no tenemos duda, que poseen una extensa experiencia en temas de transbordadores nacionales, instrucción y formación y gracias por compartir sus experiencias con el resto de los estados miembros y por la presentación de ayer.

La navegación en los transbordadores conlleva ciertos riesgos y responsabilidades, por ende, es esencial contar con una formación adecuada en estos tipos de naves. Esta formación en línea en seguridad de los transbordadores no solo debe ser beneficiosa, sino también obligatoria en algunas jurisdicciones.

Mi Administración apoya el proyecto de material de formación en línea sobre la seguridad de los transbordadores y entendemos como positivo que esto se aplique siendo nuestro registro, un estado potencia para la retoma en el desarrollo de esta industria y el aprovechamiento de las nuevas tecnologías para la buena formación de nuestra gente de mar y partes relacionadas

Statement by the delegation of the Philippines

We wish to thank the Secretariat for MSC 108/10 providing information on the activities and initiatives on domestic ferry safety. As mentioned in paragraph 11 of the document, the Philippines is one of the beneficiaries of these initiatives.

In this regard, the Government of the Philippines wishes to thank the IMO for the unwavering support provided to our country on the conduct and completion of the Formal Safety Assessment for enhancing safety of domestic passenger ships (FSA-P) and a study on improving energy efficiency of domestic passenger ships (ENV-P) in the Philippines co-sponsored by the TC-International Maritime Organization (IMO) and IFC-World Bank Group (WBG).

From the conduct of the Hazard Identification and Scoping Exercise (HAZID) in 2015, until the inception of the Project on December 2021 and completion on December 2023, the study provided various observations and recommendations that brought a clearer picture on where the Philippine-registered domestic passenger ships could further improve in terms of safety as well as the efforts on adopting energy efficient solutions in short-, medium-, and long-term measures.

We would also like to thank the Consultants from the World Maritime University (WMU) and University of Strathclyde (UoS) who were able to analyze the risk of passenger ships based on the limited available data/ information and were able to identify several challenges, opportunities and impact as well as possible/ feasible innovative solutions (control measures) to reduce the risk of domestic ferry hazards and accidents.

The Philippines would like to inform the body on the actions taken as part of our way forward in consideration to the study's final report, particularly to its findings and recommendations:

1. We supported the approval of the Model Regulation for domestic ferry safety, reviewed our existing domestic ship safety policy and came up with the Philippine Ship Safety Rules and Regulations (PSSRR) which may be use in the future as an information material in the development of the explanatory manual of model regulation for domestic ferry safety.

2. A team of MARINA Officials and personnel reviewed the FSA-P and ENV-P Final Report and validated the data and information in the said studies;

3. We identified and incorporated the new programs, activities, and projects of the report

in the Philippine Maritime Industry Development Plan (MIDP) 2028 on the modernization and expansion of domestic shipping industry;

4. An action plan was developed for the applicable suggestions and recommendations from the report incorporating the comments and inputs of our partner agencies including Philippine Coast Guard (PCG) and Philippine Ports Authority (PPA); and,

5. The MARINA coordinated with concerned agencies to ensure the proper dissemination of the final report and the action plan. Last 08 April 2024, a meeting was also presided by the Honorable Transportation Secretary, together with MARINA, PCG, PPA, IMO, World Bank Group (WBG) and World Maritime University (WMU). Our Transportation Secretary welcomed and expressed his desire to adopt the recommendations of the Final Report to ensure the attainment of the goal in ensuring comfortable, accessible, safe, sustainable and affordable maritime transport solutions for the domestic passenger ships.

Statement by the delegation of Singapore

MSC 108/10/1 Online training material on domestic ferry safety

1 Singapore would like to thank China for the submission and express our support for China's submission to enhance domestic ferry safety, through the development of online training material.

2 The online training material aims to improve ferry safety by introducing ferry-related basic concepts, with a focus on important safety-related elements and taking into account accident cases – what we view as a valuable resource for educating ferry crew and enhancing safety management practices.

3 Singapore notes that Chapter 7 of the training materials affirms that the ISM Code is not mandatory for domestic ferries, but it encourages Member States to use and develop safety management codes tailored to each country's national conditions, taking reference from the ISM Code.

4 Singapore is supportive of such approach as it allows for the flexibility and customization of safety management practices locally, while ensuring that safety standards can be effectively upheld, taking into consideration the distinct characteristics of domestic ferry operations in different regions.

AGENDA ITEM 12

Statement by the delegation of Argentina

Gracias Sra Presidente quisiéramos hacer algunos comentarios sobre el apartado: del DOCUMENTO MSC 108/12

En el apartado 7.1. respecto de la difusión de información a través de todos los servicios móviles por satélite reconocidos, consideramos que debe hacerse solamente después de que se haya abordado debidamente la cuestión de las posibles soluciones para la difusión de información, incluida la interoperabilidad, y las repercusiones económicas, como se indica en el apartado 7.1.3.

En el Apartado 7.2. consideramos que debería revisarse la resolución A.707(17) para que, en relación con la compatibilidad con varios servicios móviles por satélite reconocidos, se

analicen las repercusiones económicas para los proveedores de información de seguridad marítima.

En cuanto al Apartado 7.4., consideramos que, antes que definir la obligatoriedad de que los prestadores de ISM difundan la información, será necesario asegurar la interoperabilidad de los sistemas satelitales reconocidos y hasta no disponer con una API adecuada, consideramos la opción 4, que propicia la revisión de la Resolución A. 707(17), como un avance significativo.

En cuanto al apartado 7.5. consideramos que debería tomarse en cuenta el Anexo 7 pág. 1 punto 5.3 del NCSR 10/22/Add.1, considerando que la acción recomendada es que, si los proveedores de información están obligados a difundir información a través de todos los servicios móviles por satélite reconocidos, será solamente después de que se haya abordado debidamente la cuestión de las posibles soluciones para la difusión de información, incluida la interoperabilidad, y las repercusiones económicas.

Por todo lo demás, Sra presidente, podemos acompañar el Informe en general. Y enviaremos a la secretaría nuestras observaciones para que consten en el informe.

Por último, en relación con el documento MSC 108/12/3. Agradecemos a Australia y los demás coautores la presentación del documento.

Si bien en términos generales, coincidimos con las propuestas planteadas en el documento, NO creemos que deba exigirse a ningún país una fecha definitiva para la implementación del sistema IRIDIUM, hasta tanto no se concrete la modificación de las resoluciones A.707(17) y A.1001(25) y se alcance una solución definitiva en la determinación de cuáles serán los costos en que incurrirán los estados al adoptar todos los RMSS. Por ello, no estamos en posición de respaldar este documento en esta instancia.

Statement by the delegation of Finland

Subject: NCSR MSC 108/12/3

Thank you Chair. Thank you Chair. Finland joins with others conveying our condolences to the Iranian people. Finland thanks the submitters for the document MSC 108/12/3. Finland supports the proposal to request the Secretariat to identify the possibility of the use of an existing fund, to address implementation issues, including cost implications. Furthermore, Finland considers that dissemination of maritime safety information (MSI) and search and rescue (SAR) related information should not cause costs to the MSI and SAR information provider and it should never cause any costs to the receiver. Thank you.

Statement by the delegation of France

Statement on agenda item 12, document 108/12:

Concernant la proposition d'établissement par l'Organisation d'un cadre formel pour l'agrément des nouveaux systèmes à infrastructure terrestre dans le cadre du SMDSM, tels que le système NAVDAT, nous souhaitons rappeler que cette disposition prévue à la règle 4-1 de SOLAS chapitre V n'existe à ce jour que pour les services mobiles par satellites pour des raisons qui leur sont spécifiques (les opérateurs sont privés).

Conformément à la règle SOLAS IV/5, la mise en oeuvre de tout système de radiocommunication terrestre est à la discrétion des États contractants, qui en supportent individuellement ou en commun le coût d'installation et/ou de fonctionnement. Ce principe

s'applique à toutes les stations côtières de façon générale, que ce soit pour un service NAVTEX, NAVDAT ou ASN dans les bandes métrique, décamétrique et hectométriques du service mobile depuis la mise en place du SMDSM.

Les stations côtières terrestres, sont ainsi mises en place par les Etats côtiers, conformément aux recommandations de l'IUT et de l'OMI, notamment la résolution MSC 509(105).

Nous considérons donc que le cadre technique existe déjà et plutôt qu'un agrément préalable, nous serions plutôt favorables si cela était jugé nécessaire à un renforcement de l'évaluation de la conformité des infrastructures terrestres en cohérence avec le plan cadre SMDSM, dans le cadre du cycle des audits IMSAS.

Dans le cas du NAVDAT, il nous faut ici rappeler que cette nouvelle technologie, est en fait une évolution numérique du NAVTEX qui s'appuie sur la structure et les fréquences existantes du NAVTEX. Elle a été reconnue dans le cadre du plan de modernisation du SMDSM par ce comité (MSC 103). Il n'est pas prévu actuellement de rendre le NAVDAT obligatoire. Les Administrations peuvent choisir de mettre à disposition le service NAVDAT en plus du service NAVTEX mais elles n'en auront pas l'obligation. L'élaboration par notre Organisation des normes de performance pour garantir l'opérabilité du NAVDAT est à l'ordre du jour du prochain NCSR. Les navires peuvent utiliser le NAVDAT en option pour recevoir les RSM partout où le NAVDAT sera disponible, s'ils disposent d'un équipement de réception approprié, et en cohérence avec les mises à jour futures du plan cadre SMDSM.

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Good morning,

Please find attached a statement for France:

Le comité MSC 105 a décidé du principe pourvoyeurs de renseignements sont tenus de diffuser les renseignements par l'intermédiaire de tous les services mobiles par satellite agréés. La France devrait être en mesure de mettre en oeuvre cette décision avec Irridium sous quelques mois et sous réserve de règlement de quelques problèmes techniques résiduelles. La date du 30 juin 2025 nous semble cependant prématurée et nous sommes sur ce point alignés avec la position du Japon.

Il est de notre point de vue délicat de séparer la question de l'interopérabilité des RMSS de celle des coûts de diffusion des RSM et des renseignements SAR, coûts qui comme nous souhaitons le rappeler sont à la charge de 18 Etats coordonnateurs au profit de l'ensemble de la communauté maritime.

Nous souhaiterions par ailleurs qua mise en œuvre effective de cette décision s'inscrive dans le cadre de la réflexion engagée et qui devrait être conclue sur la prise en charge des coûts de diffusion et le l'acceptabilité de nouveaux prestataires. Avec le doublement des capacités de diffusion satellites, et l'arrivée de nouveaux opérateurs, ces coûts augmentent, sans amélioration réelle du service. Nous sommes favorables à l'utilisation d'un fond, ainsi qu'à une réflexion sur l'accès de futurs opérateurs à ces missions de service public.

Many thanks.

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Le comité MSC 105 a déjà décidé du principe que les pourvoyeurs de renseignements sont tenus de diffuser les renseignements par l'intermédiaire de tous les services mobiles par

satellite agréés. La France devrait être en mesure de mettre en oeuvre cette décision avec sous quelques mois et sous réserve de règlement de quelques problèmes techniques résiduels. La date du 30 juin 2025 nous semble cependant prématurée et nous sommes sur ce point alignés avec la position du Japon.

Il est de notre point de vue délicat de séparer la question de l'interopérabilité des RMSS de celle des coûts de diffusion des RSM et des renseignements SAR, coûts qui comme nous souhaitons le rappeler sont à la charge de 18 Etats coordonnateurs au profit de l'ensemble de la communauté maritime. Nous remercions la Nouvelle Zélande pour sa soumission intéressante qui devrait permettre de limiter les coûts.

Nous souhaiterions cependant que la mise en œuvre effective de cette décision s'inscrive dans le cadre de la réflexion engagée et qui devrait être conclue sur la prise en charge des coûts de diffusion et le l'acceptabilité de nouveaux prestataires. Avec le doublement des capacités de diffusion satellites, et l'arrivée de nouveaux opérateurs, ces coûts augmentent, sans amélioration réelle du service. Nous sommes favorables à l'utilisation d'un fond, ainsi qu'à une réflexion sur l'accès de futurs opérateurs à ces missions de service public en cohérence avec les besoins du SMDSM et de son plan cadre actualisé.

Many thanks.

Statement by the delegation of Japan

Statement for MSC 108/12, para.3.7.1 and MSC 108/12/3 by Japan

Regarding the dissemination of MSI and SAR related information through all operational recognized mobile satellite service, Japan, as the coordinator of both NAVAREA and METAREA, has experienced that introduction of new system required considerable cost, time and effort by the coordinator. Therefore, we prefer the option three "only after the question regarding possible solution has been dully addressed.

In this regard, Japan thanks the co-sponsors of the document MSC 108/12/3, but because of the reason just mentioned, we cannot agree with the specific date for the implementation of the Iridium SafetyCast service proposed by the paragraph 24.1. Japan considers that urging the responsible Member States to complete the implementation of the service as soon as possible should be sufficient.

Thank you.

Statement for MSC 108/12, para.3.4 by Japan

Thank you, Chair,

Regarding the paragraph 3.4 of MSC108/12 on a formal recognition framework for new terrestrial GMDSS service, Japan is of the view that since such terrestrial service normally covers regional and local area and the lack of adequate body for evaluation of terrestrial GMDSS service such as IMSO in satellite GMDSS service, such recognition framework for new terrestrial GMDSS service is not necessarily needed. However, Japan considers that although the contract governments are not required to provide all services in SOLAS Chapter IV according to the footnote of the part B of SOLAS Chapter IV, implementation of such new terrestrial GMDSS service should be considered at NCSR Sub-Committee.

Thank you.

Statement for MSC 108/12/2 by Japan

Thank you, Chair,

Japan thanks Liberia and ICS for the paper MSC108/12/2.

Japan agrees with the proposals made at the paragraph 8.1 and 8.2. However, regarding the paragraph 8.3, as the coordinator of the NCSR Correspondence Group on VDES, Japan would like to point out that the comprehensive analysis on VDES conducted by the Group showed that VDES channels were not protected by the appendix 15, GMDSS, of the ITU Radio Regulations and the channels allocated for satellite VDES were secondary allocation. Therefore, satellite VDES cannot be used for GMDSS functions.

Thank you.

Statement by the delegation of Sweden

MSC 108/12 Action point 3.5 and 108/12/4, 108/12/5

Thank you Chair,

First, we join you chair- offering our condolences to the families affected by the helicopter crash in the Islamic Republic of Iran.

Sweden thanks all the submitters under this agenda item.

In regards to the document MSC 108/12/5 by New Zeeland, Sweden support the document in general and we take note of the support for approving the updated ECDIS performance standard.

Sweden are in line with paragraph 4 of the New Zeeland document and Sweden fully support the adoption of this resolution by this Committee as for the action request in point 3.5 in MSC 108/12.

Regarding the way forward suggested by New Zeeland, Sweden is of the opinion that it would be good to have the matter discussed at NCSR and possible instruct NCSR to create an output for further work also taking the document MSC 108/12/4 by IHO into account.

Chair, this is a highly technical matter and is not well suited for an open ad-hoc discussion. Sweden believes this needs a proper document, to the NCSR Sub-Committee, taking the different approaches into consideration in order to have a good outcome.

Sweden would welcome such a document since this is important for the SHIP to SHORE communication often discussed within this organisation.

If MSC task NCSR, Sweden would also suggest that the committee sends this to FAL for information purposes since they are also dealing with ship to shore communication.

AGENDA ITEM 16

Statement by the delegation of Panama

Muchas gracias Sra. Presidenta.

Distinguidos delegados y observadores

La República de Panamá se une a los demás que nos antecedieron y expresa su condolencias a la distinguida delegación de Irán, a sus amigos y familiares por la perdida de su presidente y las victimas

Primeramente, agradecemos a la Comisión Europea por resaltar esta problemática sobre la certificación fraudulenta la cual, sin lugar a duda, pone en peligro la seguridad de la navegación, la gente de mar competente y la prevención de la contaminación de nuestros océanos, debido a que mantienen un certificado expedido por un Estado Parte sin haber pasado por el debido entrenamiento y VERIFICACION DE competencias que exige el Convenio y Código de Formación. Además agradecemos a Bangladesh por la información provista

Este es un tema que nos preocupa, por lo cual vamos a resaltar ciertos puntos importantes, para que el Comité tome NOTA y a su vez pueda remitirlos al HTW de ser necesarios.

1. Con respecto a los informes que presenta el HTW en todos sus periodos de sesiones, es sumamente importante, que una vez se realice el compilado de esta información, la Secretaria pueda emitir ciertos comentarios o recomendaciones con respecto a la información recibida por los Estados Partes y NO, únicamente reflejarlos en el documento. Sería bueno contar con estas recomendaciones/comentarios en el siguiente reporte para el HTW 11.

2. Además, damos a conocer a este Comité que mi Administración Marítima NO SOLO ha DETECTADO A DICHOS INFRACTORES ANTES DE ENROLARLOS A BORDO DE BUQUES DE BANDERA PANAMEÑA, SI NO QUE TAMBIEN SE HAN REPORTADO A LA OMI Y ADMINISTRACIONES COLEGAS los Certificados de competencia y de suficiencia detectados como fraudulentos, además de estos, estamos reportando Libretas de marino, certificados médicos, Cartas de experiencia entre otra documentación técnica obligatoria que deben presentar los candidatos para obtener certificados o refrendos. Por lo cual Instamos que se amplie el alcance de estos reportes.

Basado en lo anterior, estamos de acuerdo con LA INCLUSION PARA AUMENTAR LA COSNCIENCIASION Y LA DETECCION Y LA PERSECUCION RELATIVOS A LOS TITULOS Y CERTIFICADOS EN LA REVISION EXAUSTIVA DEL CONVENIO Y CODIGO DE FORMACION. ADEMAS APOYAMOS EL RESTO DE LAS PROPUESTAS, la cual parte de ello fue discutido en el HTW 10.

Muchas gracias Sra. Presidente