INTERNATIONAL MARITIME ORGANIZATION

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CONSIDERATION AND ADOPTION OF AMENDMENTS TO MANDATORY INSTRUMENTS

Amendments to MARPOL Annex VI

Note by the Secretariat

SUMMARY	
Executive summary:	The Committee is invited to consider proposed amendments to MARPOL Annex VI on mid-term GHG reduction measures.
Strategic direction, if applicable:	3
Output:	3.2
Action to be taken:	Paragraph 4
Related document:	Circular Letter No.5215

Introduction

1 The Secretary-General received on 29 May 2026 a request from Tuvalu, as Party to MARPOL Annex VI, to circulate, in accordance with article 16(2)(a) of the Convention, proposed amendments to MARPOL Annex VI, with a view to their consideration, in accordance with the provisions of article 16(2)(b), (c) and (d) of the MARPOL Convention, by MEPC 85 and/or the resumed second extraordinary session of MEPC, as appropriate.

2 The proposed amendments to MARPOL Annex VI were circulated by the Secretary-General, in accordance with article 16(2)(a) of the MARPOL Convention, under cover of Circular Letter No.5215 of 29 May 2026.

3 The text of the proposed amendments, together with an associated draft MEPC resolution for adoption, as prepared by the Secretariat, is set out in the annex.

Action requested of the Committee

4 The Committee is invited to consider and take action, as appropriate, on the proposed amendments set out in the annex, in accordance with articles 16(2)(a), (b), (c) and (d) of the MARPOL Convention.

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ANNEX

DRAFT MEPC RESOLUTION

AMENDMENTS TO THE ANNEX OF THE PROTOCOL OF 1997 TO AMEND THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973, AS MODIFIED BY THE PROTOCOL OF 1978 RELATING THERETO

Amendments to MARPOL Annex VI

(Mid-term GHG reduction measures)

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING Article 38(a) of the Convention on the International Maritime Organization concerning the functions of the Marine Environment Protection Committee conferred upon it by international conventions for the prevention and control of marine pollution from ships,

RECALLING ALSO article 16 of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocols of 1978 and 1997 relating thereto (MARPOL), which specifies the amendment procedure and confers upon the appropriate body of the Organization the function of considering amendments thereto for adoption by the Parties,

HAVING CONSIDERED, at its eighty-fifth session, proposed amendments to MARPOL Annex VI concerning mid-term GHG reduction measures, duly circulated in accordance with article 16(2)(a) of MARPOL,

1 ADOPTS, in accordance with article 16(2)(d) of MARPOL, amendments to MARPOL Annex VI, the text of which is set out in the annex to the present resolution;

2 DETERMINES, in accordance with article 16(2)(f)(ii) and (iii) of MARPOL, that the amendments shall be deemed to have been accepted on [1 November 2027] unless prior to that date, not less than one third of the Parties or Parties the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet have communicated to the Organization their objection to the amendments;

3 INVITES the Parties to note that, in accordance with article 16(2)(g)(ii) of MARPOL, the said amendments shall enter into force on [1 May 2028] upon their acceptance in accordance with paragraph 2 above;

4 REQUESTS the Secretary-General, for the purpose of article 16(2)(e) of MARPOL, to transmit certified copies of the present resolution and the text of the amendments contained in the annex to all Parties to MARPOL;

5 ALSO REQUESTS the Secretary-General to transmit copies of the present resolution and its annex to Members of the Organization which are not Parties to MARPOL.

ANNEX

AMENDMENTS TO MARPOL ANNEX VI

(Mid-term GHG reduction measures)

ANNEX VI

REGULATIONS FOR THE PREVENTION OF AIR POLLUTION FROM SHIPS

Regulation 2
Definitions

1 New paragraphs 1.34 to 1.36 are inserted after existing paragraph 1.33, as follows:

"1.34 *Calendar year* means the period from 1 January until 31 December inclusive.

1.35 *Committee* means the Marine Environment Protection Committee of the Organization.

1.36 *Company* means the owner of the ship or any other organization or person such as the manager, or the bareboat charterer, who has assumed the responsibility for operation of the ship from the owner of the ship and who, on assuming such responsibility, has agreed to take over all the duties and responsibilities imposed by the International Management Code for the Safe Operation of Ships and for Pollution Prevention."

2 Paragraphs 2.6 and 2.8 are deleted.

3 A new paragraph 3 is inserted after existing paragraph 2, as follows:

"3 For the purpose of chapter 5:

.1 *Attained annual GHG fuel intensity (attained annual GFI),* expressed in grams of CO_2eq per unit of energy (gCO_2eq/MJ), means the weighted average GHG intensity of all fuels used on board a ship in a given calendar year on a well-to-wake (WtW) basis, taking into account guidelines developed by the Organization in accordance with regulation 33.

.2 *CO_2 equivalent (CO_2eq)* means the metric measure used to aggregate the emissions of CO_2, CH_4 and N_2O on the basis of their 100-year global-warming potential (GWP), by converting the amounts of CH_4 and N_2O to the equivalent amount of CO_2 as given in the IPCC Fifth Assessment Report (AR5).

.3 *Compliance deficit*, expressed in tonnes of CO_2eq, means the amount of under-compliance by a ship with the target annual GFI as determined in accordance with regulation 36.

.4 *Existing ship* means a ship which is not a new ship.

.5 *Fuel* means any energy source or energy carrier used on board a ship for propulsion or for the operation of any equipment on board a ship.

.6 *Fuel Life Cycle Label* (FLL) means the technical tool to collect and convey information relevant for the life cycle GHG intensity assessment (LCA) of a fuel, taking into account the guidelines developed by the Organization.

.7 *GFI compliance balance*, expressed in tonnes of CO_2eq, means the measurement of a ship's GFI compliance status against the target annual GHG fuel intensity in accordance with regulation 36.

.8 *GHG fuel intensity (GFI),* expressed in grams of CO_2eq per unit of energy (gCO_2eq/MJ), refers to the amount of life cycle GHG emissions per unit of energy used on board a ship on a well-to-wake basis, taking into account guidelines developed by the Organization.[1]

.9 *Greenhouse gas (GHG) emissions* means any release of carbon dioxide (CO_2), methane (CH_4) or nitrous oxide (N_2O) into the atmosphere.

.10 *New ship* means a ship the delivery of which is on or after 1 January 2029.

.11 *Remedial unit (RU)*, expressed in tonnes of CO_2eq, is a non-transferable unit acquired by means of GHG emissions pricing contributions to the IMO Net-Zero Fund, for use by the ship to balance its compliance deficit in accordance with regulation 36.

.12 *Reward* means an annual compensation provided by the IMO Net-Zero Fund for used ZNZs in accordance with regulation 39.

.13 *Semi-submersible vessel* is a type of ship that is designed to carry ships, marine facilities and large loads, generally installed with high superstructure or deck room or floating tank at tow or stern, and is able to partially submerge in cargo handling.

.14 *Ship account* means a mandatory account for a ship to which chapter 5 applies within the IMO GFI Registry in accordance with regulation 38.

.15 *Ship account statement* means the annual ship account statement issued by the IMO GFI Registry reflecting the transactions recorded in that account in accordance with regulation 38.

.16 *Sustainable fuel certification scheme (SFCS)* is a scheme, administered by a legal entity, which certifies that a fuel is compliant with the requirements set out in chapter 5 and its associated guidelines.

[1] Refer to the *2024 Guidelines on life cycle GHG intensity of marine fuels* (resolution MEPC.391(81)), as may be amended.

.17 *Target annual GHG fuel intensity (target annual GFI)*, expressed in grams of CO_2eq per unit of energy (gCO_2eq/MJ), consists of the values of the two-tier target annual GFI (base target and direct compliance target) in accordance with regulation 35.

.18 *Zero or near-zero GHG emission technologies and fuels (ZNZs)* means the type of ZNZs that qualify for the annual fuel reward in accordance with regulation 39."

Regulation 3
Exceptions and exemptions

4 The chapeau of paragraph 2 is replaced by the following:

"2 The Administration of a Party may, in cooperation with other Administrations as appropriate, issue an exemption from specific provisions for a ship to conduct trials for the development of ship emission reduction and control technologies and engine design programmes. Such an exemption shall only be provided if the applications of specific provisions of the Annex or the NO_x Technical Code could impede research into the development of such technologies or programmes. A permit issued under this regulation shall not exempt a ship from the reporting requirement under regulation 27 and regulation 37, and shall not alter the type and scope of data required to be reported under regulation 27 and regulation 37. A permit for such an exemption shall only be provided to the minimum number of ships necessary and be subject to the following provisions:"

Regulation 5
Surveys

5 In paragraph 1.5, the word "workmanship" is replaced by "work quality".

6 In paragraph 3.2, the words "revised NO_x Technical Code 2008" are replaced by "NO_x Technical Code".

7 A new paragraph 5 is inserted after paragraph 4, as follows:

"5 Ships to which chapter 5 applies shall also be subject to the survey specified below, taking into account the guidelines adopted by the Organization:[2]

.1 An initial survey carried out before a new ship, as defined in regulation 2.3.10, is put in service and before the International Energy Efficiency Certificate is issued. The survey shall verify that the SEEMP required by regulation 26 is on board.

.2 For existing ships, the Administration shall ensure that the SEEMP complies with regulation 26.4. This shall be done prior to 1 January 2029. Confirmation of compliance shall be provided to, and retained on board, the ship."

[2] Refer to the *2022 Guidelines on survey and certification of the Energy Efficiency Design Index* (resolution MEPC.365(79), as amended by resolution MEPC.374(80), as may be further amended; and the *2022 Guidelines on survey and certification of the attained Energy Efficiency Existing Ship Index (EEXI)* (resolution MEPC.351(78)).

8 The existing paragraphs 5 and 6 are renumbered accordingly as paragraphs 6 and 7.

Regulation 6

9 The heading of regulation 6 is replaced by the following:

"*Issue or endorsement of Certificates and Statements of Compliance related to fuel oil consumption reporting, operational carbon intensity rating, and annual GHG fuel intensity*"

10 A new sub-heading and new paragraphs 9 and 10 are inserted after existing paragraph 8, as follows:

"**Statement of Compliance related to the annual GHG fuel intensity**

9 Upon receipt of reported data pursuant to regulation 37 on attained annual GFI, target annual GFI and GFI compliance balance, the Administration, or any organization duly authorized by it,[3] shall:

.1 verify whether the data has been reported in accordance with regulation 37.1;

.2 verify that the attained annual GFI was calculated in accordance with regulation 33;

.3 verify that the target annual GFI was calculated in accordance with regulation 35;

.4 verify that the GFI compliance balance was determined in accordance with regulation 36;

.5 report the verified data to the IMO GFI Registry in accordance with regulation 37;

.6 verify, upon receipt from the IMO GFI Registry of the annual ship account statement, that the ship complies with chapter 5 and has paid the annual administrative fee to the IMO GFI Registry in accordance with regulation 38;

.7 verify for a ship eligible for rewards the total amount of GHG emissions avoided through the use of ZNZs in accordance with regulation 39; and

.8 issue a Statement of Compliance related to annual GHG fuel intensity to the ship no later than nine months after the beginning of the calendar year, upon verification pursuant to regulations 6.9.1 to 6.9.7. In every case, the Administration assumes full responsibility for this Statement of Compliance.

[3] Refer to the Code for Recognized Organizations (RO Code) (resolutions MSC.349(92) and MEPC.237(65)).

10 Upon receipt of reported data pursuant to regulation 37.7, the Administration or any organization duly authorized by it[4] shall promptly verify and determine whether the data has been reported in accordance with that regulation and, if so, issue a Statement of Compliance to the ship taking into account guidelines developed by the Organization.[5] In every case, the Administration assumes full responsibility for this Statement of Compliance."

Regulation 8

11 The heading of regulation 8 is replaced by the following:

"*Form of Certificates and Statements of Compliance related to fuel oil consumption reporting, operational carbon intensity rating and annual GHG fuel intensity"*

12 A new sub-heading and new paragraph 5 are inserted after existing paragraph 4, as follows:

"**Statement of Compliance related to the annual GHG fuel intensity**

5 The Statement of Compliance issued pursuant to regulations 6.9 and 6.10 shall be drawn up in a form corresponding to the model given in appendix XIII and shall be at least in English, French or Spanish. If an official language of the issuing Party is also used, this shall prevail in case of a dispute or discrepancy."

Regulation 9

13 The heading of regulation 9 is replaced by the following:

"*Duration and validity of Certificates and Statements of Compliance related to fuel oil consumption reporting, operational carbon intensity rating, and the annual GHG fuel intensity*"

14 In paragraph 9.3, the reference to regulation 5.4 is changed to regulation 5.5.

15 A new sub-heading and new paragraph 13 are inserted after existing paragraph 12, as follows:

"**Statement of Compliance related to the annual GHG fuel intensity**

13 The Statement of Compliance issued pursuant to regulation 6.9 shall be valid for the calendar year in which it is issued and for the first nine months of the following calendar year. The Statement of Compliance issued pursuant to regulation 6.10 shall be valid until for the calendar year in which it is issued, for the following calendar year, and for the first nine months of the subsequent calendar year. All Statements of Compliance shall be kept on board for at least five years."

[4] Refer to the Code for Recognized Organizations (RO Code) (resolutions MSC.349(92) and MEPC.237(65)).

[5] Refer to guidelines to be developed by the Organization.

Regulation 10
Port State control on operational requirements

16 Paragraph 5 is replaced by the following:

"5 In relation to chapters 4 and 5, any port State inspection may verify, when appropriate, that there are valid Statements of Compliance related to fuel oil consumption reporting and operational carbon intensity rating and to annual GHG fuel intensity, an International Energy Efficiency Certificate and a Ship Energy Efficiency Management Plan on board, in accordance with article 5 of the present Convention."

Regulation 13
Nitrogen oxides (NO_x)

17 In paragraphs 2.1.2, 7.5, 7.5.1, 8 and 9, the words "revised NO_x Technical Code 2008" are replaced by "NO_x Technical Code".

Regulation 19
Application

18 The chapeau of paragraph 2 is replaced by the following:

"2 Notwithstanding paragraph 1 of this regulation, the provisions of this chapter shall not apply to:"

Regulation 26
Ship Energy Efficiency Management Plan (SEEMP)

19 New paragraphs 4 and 5 are inserted after existing paragraph 3, as follows:

"4 In the case of a ship to which chapter 5 applies:

.1 on or before 1 January 2029, the SEEMP shall include:

.1 a description of the methodology that will be used to collect the data required by regulation 37 to calculate the ship's attained annual GFI, target annual GFI and GFI compliance balance; and

.2 the processes that will be used to report the data required by regulation 37 to the ship's Administration.

5 For ships to which paragraphs 2, 3 and 4 of this regulation apply, the SEEMP shall be subject to verification taking into account guidelines developed by the Organization. In addition, for ships to which paragraph 3 applies, the SEEMP shall be subject to company audits taking into account guidelines developed by the Organization.[6]"

[6] Refer to the *Guidelines for the verification and company audits by the Administration of part III of the Ship Energy Efficiency Management Plan (SEEMP)* (resolution MEPC.347(78)).

New chapter 5

20 A new chapter 5 is inserted after chapter 4, as follows:

"***Chapter 5*** **– Regulations on the IMO Net-Zero Framework**

Regulation 30
Application

1 This chapter shall apply to all ships of 5,000 gross tonnage and above.

2 Notwithstanding paragraph 1 of this regulation, the provisions of this chapter shall not apply to:

.1 ships solely engaged in voyages within waters subject to the sovereignty or jurisdiction of the State the flag of which the ship is entitled to fly; however, each Party should ensure, by the adoption of appropriate measures, that such ships act in a manner consistent with the requirements of chapter 5, so far as is reasonable and practicable;

.2 ships not propelled by mechanical means, and platforms including FPSOs and FSUs and drilling rigs, regardless of their propulsion; and

.3 semi-submersible vessels until further review of the application of this chapter.

Regulation 31
Goal

The goal of this chapter is to reduce greenhouse gas (GHG) emissions from international shipping as soon as possible, delivering on the reduction targets set out in the *2023 IMO Strategy on reduction of GHG emissions from ships,*[7] effectively promoting the energy transition of shipping and providing the world fleet with a needed incentive while contributing to a level playing field and a just and equitable transition.

Regulation 32
Functional requirements

In order to achieve the goal set out in regulation 31, a ship to which this chapter applies shall comply with the following functional requirements:

.1 requirements on the continuous improvement of the ship's GHG fuel intensity in accordance with regulation 35; and

.2 requirements on GHG emissions pricing contributions for excess emissions and on rewards for the uptake of zero or near-zero GHG emission technologies and fuels (ZNZs) in accordance with regulations 36 and 39.

[7] Refer to the *2023 IMO Strategy on reduction of GHG emissions from ships* (resolution MEPC.377(80)).

Regulation 33
Attained annual GHG fuel intensity (attained annual GFI)

1 After the end of calendar year 2029 and after the end of each calendar year thereafter, each ship to which this chapter applies shall calculate the attained annual GFI over a 12-month period from 1 January to 31 December for the preceding calendar year, using the data collected in accordance with regulations 27 and 37 and specified in appendix IX and appendix XII, taking into account the guidelines developed by the Organization.[8]

2 The attained annual GFI of a ship in a given year (denoted as $GFI_{attained}$) shall be calculated as follows, taking into account the guidelines developed by the Organization:[9]

$$GFI_{attained} = \frac{\sum_{j=1}^{J} EI_j \times Energy_j}{Energy_{total}}$$

where:

$GFI_{attained}$ is the attained annual GFI of a ship in a given year;

j is the fuel type;

J is the total number of fuels used during the calendar year, taking into account guidelines developed by the Organization;

EI_j, expressed in gCO_2eq/MJ, is the GHG intensity, expressed on a well-to-wake basis of a fuel type j, calculated taking into account the guidelines developed by the Organization;[10]

$Energy_j$, expressed in MJ, refers to the energy consumption of fuel type j by the ship in the calendar year; and

$Energy_{total}$, expressed in MJ, refers to the total amount of energy used by the ship in the calendar year, including but not limited to fuel oil, electricity delivered from shore power, and zero-emission energy sources, such as wind propulsion and solar power.

Regulation 34
Sustainable fuels certification schemes

1 The GHG intensity of a fuel shall be calculated using GHG emission factors and also taking into account all relevant metrics and indicators for each sustainability theme or aspect of a fuel as documented on the Fuel Life Cycle Label(s) (FLL).

8 Refer to the guidelines to be developed on the calculation of the attained annual greenhouse gas fuel intensity (GFI Calculation Guidelines).

9 Refer to the guidelines to be developed on the calculation of the attained annual greenhouse gas fuel intensity (GFI Calculation Guidelines).

10 Refer to the *2024 Guidelines on life cycle GHG intensity of marine fuels* (resolution MEPC.391(81)), as may be amended.

2 GHG emission factors and sustainability themes or aspects of a fuel as documented on the FLL shall be certified, as appropriate, by a recognized Sustainable Fuels Certification Scheme (SFCS) taking into account guidelines developed by the Organization.[11]

3 The certified information in the FLL may accompany the bunker delivery note referred to in regulation 18, taking into account guidelines developed by the Organization.[12]

4 An SFCS shall be recognized by the Committee taking into account the recognition process(es) and criteria specified in guidelines developed by the Organization.[13] The recognition of an SFCS shall be subject to renewal every five years and periodic review, taking into account guidelines developed by the Organization.[14]

5 No later than 1 August 2028, the Secretary-General of the Organization shall publish a list of recognized SFCSs, and shall update the list periodically thereafter.

6 Within three months after the end of calendar year 2028, and within three months after the end of each following calendar year, the Organization shall ensure that the legal entity administering the recognized SFCS reports data relevant to their activity for that calendar year or portion thereof to ensure transparency, traceability, and environmental integrity in the certification process, taking into account guidelines developed by the Organization. [15] On the basis of the reported data, the Secretary-General of the Organization shall produce an annual report to the Committee.

Regulation 35
Target annual GHG fuel intensity (target annual GFI)

1 The target annual GFI (GFI_T) of a ship shall consist of the following two tiers:

.1 a Base target annual GFI (base target); and

.2 a Direct compliance target annual GFI (direct compliance target).

2 The GFI_T for each ship to which this regulation applies shall be determined/calculated as follows:

$$GFI_T = (1 – Z_T/100) \times GFI_{2008}$$

11 Refer to guidelines to be developed/amend the *2024 Guidelines on life cycle GHG intensity of marine fuels* (resolution MEPC.391(81)) (LCA Guidelines), as appropriate.

12 Refer to guidelines to be developed/amend the *2024 Guidelines on life cycle GHG intensity of marine fuels (*resolution MEPC.391(81)) (LCA Guidelines), as appropriate.

13 Refer to guidelines to be developed/amend the *2024 Guidelines on life cycle GHG intensity of marine fuels* (resolution MEPC.391(81)) (LCA Guidelines), as appropriate.

14 Refer to guidelines to be developed/amend the *2024 Guidelines on life cycle GHG intensity of marine fuels* (resolution MEPC.391(81)) (LCA Guidelines), as appropriate.

15 Refer to guidelines to be developed/amend the *2024 Guidelines on life cycle GHG intensity of marine fuels* (resolution MEPC.391(81)) (LCA Guidelines), as appropriate.

where:

subscript T is the calendar year referred to in table 4;

GFI_{2008} is the GFI reference value equivalent to 93.3 gCO_2eq/MJ (well-to-wake), representing the average GFI of international shipping in year 2008; and

Z_T is the annual GFI reduction factor to ensure continuous improvement of the ship's GHG fuel intensity, consisting of both an annual reduction factor for the base target and for the direct compliance target, the values of which are specified in table 4, as compared to the GFI reference value.

Table 4 – Annual GFI reduction factors (in percentage) for the target annual GFI relative to the GFI reference value

$Year_T$	Z_T for Base target	Z_T for Direct compliance target
2029	6.0	100.0
2030	8.0	100.0
2031	12.4	100.0
2032	16.8	100.0
2033	21.2	100.0
2034	25.6	100.0
2035	30.0	100.0

3 By 1 January 2032, the Committee shall determine the Z-factor (Z_T) for the Base target and Direct compliance target for the years 2036 to 2040. The 2040 Z_T for the Base target shall be set at 65%.

Regulation 36
Annual GFI compliance approaches

1 At the end of each calendar year, each ship shall determine its GFI compliance balance, as follows, taking into account guidelines developed by the Organization:[16]

GFI compliance balance (expressed in tonnes of CO_2eq) =
(Direct compliance target annual GFI – Attained annual GFI) × 10^{-6} × $Energy_{total}$

2 If the GFI compliance balance is equal to or greater than zero, the ship shall be considered in direct compliance.

3 If the GFI compliance balance is less than zero, the ship shall determine its compliance deficit in accordance with paragraph 4 of this regulation and shall achieve compliance by balancing its deficit in accordance with the GFI compliance approaches in paragraphs 5 and/or 6, as applicable, of this regulation.

[16] Refer to the guidelines to be developed on the calculation of the attained annual greenhouse gas fuel intensity (GFI Calculation Guidelines).

Assessment of the compliance deficit

4 A ship's compliance deficit comprises the quantification of emissions in excess of the tier(s) of the target annual GFI and shall be determined as follows, taking into account guidelines developed by the Organization:[17]

.1 for ships whose attained annual GFI is equal to or less than the base target but greater than the direct compliance target:

$$\text{Tier 1 compliance deficit} = (\text{Direct compliance target annual GFI} - \text{Attained annual GFI}) \times 10^{-6} \times \text{Energy}_{\text{total}}$$

or

.2 for ships whose attained annual GFI is greater than the base target:

$$\text{Tier 1 compliance deficit} = (\text{Direct compliance target annual GFI} - \text{Base target annual GFI}) \times 10^{-6} \times \text{Energy}_{\text{total}}$$

and

$$\text{Tier 2 compliance deficit} = (\text{Base target annual GFI} - \text{attained annual GFI}) \times 10^{-6} \times \text{Energy}_{\text{total}}$$

Balance of the compliance deficit

5 A ship shall balance its Tier 1 compliance deficit through remedial units acquired by means of GHG emissions pricing contributions to the IMO Net-Zero Fund, priced at Tier 1 benchmark rates in accordance with paragraph 8 of this regulation, which shall be recorded on the ship account statement issued by the IMO GFI Registry in accordance with regulation 38.

6 A ship shall balance its Tier 2 compliance deficit through, taking into account the guidelines developed by the Organization[18], remedial units acquired by means of GHG emissions pricing contributions to the IMO Net-Zero Fund priced at Tier 2 benchmark rates in accordance with paragraph 9 of this regulation.

7 A ship that has fully balanced its compliance deficit in accordance with paragraphs 5 and/or 6 of this regulation, as applicable, shall be considered as being compliant with its target annual GFI, without prejudice to the ship to recover any costs incurred in the application of this regulation that relate to the operational responsibility of the ship. For the purpose of this regulation, operational responsibility of the ship means determining the fuel used or the cargo carried or the route or the speed of the ship.

Remedial Units

8 For the calendar years 2029 to 2030, the initial price of a Tier 1 remedial unit shall be US$300 per tonne of CO_2eq on a well-to-wake basis.

9 For the calendar years 2029 to 2030, the initial price of a Tier 2 remedial unit shall be US$380 per tonne of CO_2eq on a well-to-wake basis.

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17 Refer to the guidelines to be developed on the calculation of the attained annual greenhouse gas fuel intensity (GFI Calculation Guidelines).

18 Refer to guidelines to be developed by the Organization.

10 By 1 January 2029, the Committee shall determine the mechanism for reviewing and defining the price of a Tier 1 and Tier 2 remedial unit for the calendar years from 2031 and onwards.

Regulation 37
Reporting and verification of the annual GFI

1 Within three months after the end of calendar year 2029 and by 31 March after each calendar year thereafter, the ship shall report to its Administration, or any organization duly authorized by it,[19] the attained annual GFI, the target annual GFI and the GFI compliance balance of the ship for that calendar year or portion thereof, respectively calculated in accordance with regulations 33, 35 and 36, together with the data collected as specified in appendix XII via electronic communication and using the standardized format developed by the Organization[20] for the purpose of verifying the compliance of each ship with this chapter, taking into account guidelines developed by the Organization.[21]

2 In the event of any transfer of a ship from one Administration to another and/or a change from one company to another completed after 1 January 2029, a ship shall, after the end of the calendar year in which the transfer and/or change takes place, comply with paragraph 1 of this regulation for the 12-month period from 1 January to 31 December of the calendar year during which the transfer and/or change took place.

3 Within six months after the end of 2029 and by 30 June after each following calendar year, the Administration, or any organization duly authorized by it,[22] shall verify the reported data pursuant to paragraph 1 of this regulation and transfer the verified data to the IMO GFI Registry, taking into account the guidelines developed by the Organization.[23]

4 Within one month after the ship's verified data has been transferred to the IMO GFI Registry pursuant to paragraph 3 of this regulation or on the 31 July at the latest, the ship shall determine and record in the IMO GFI Registry its selected GFI compliance approach(es) in accordance with regulation 36.

5 By 31 August after each calendar year, the IMO GFI Registry shall issue, for each ship account and calendar year, a ship account statement reflecting the transactions recorded in accordance with regulation 38.4. The ship account statement shall be made available to the ship, its Administration, or any organization duly authorized by it,[24] taking into account guidelines developed by the Organization.[25]

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19 Refer to the Code for Recognized Organizations (RO Code) (resolutions MSC.349(92) and MEPC.237(65)).

20 Refer to the *2024 Guidelines for the development of a ship energy efficiency management plan (SEEMP)* (resolution MEPC.395(82), as amended by resolution MEPC.401(83).

21 Refer to guidelines to be developed by the Organization.

22 Refer to the Code for Recognized Organizations (RO Code) (resolutions MSC.349(92) and MEPC.237(65)).

23 Refer to guidelines to be developed by the Organization.

24 Refer to the Code for Recognized Organizations (RO Code) (resolutions MSC.349(92) and MEPC.237(65)).

25 Refer to guidelines to be developed by the Organization.

6 By 30 September after each calendar year, the Administration, or any organization duly authorized by it,[26] shall on the basis of the reported data and selected GFI compliance approach(es) as recorded on the ship account statement in the IMO GFI Registry issue a Statement of Compliance related to the annual GFI in accordance with regulation 6.9. The Administration, or any organization duly authorized by it,[27] shall submit that Statement of Compliance in the IMO GFI Registry ship account by 31 October after each calendar year.

7 In the event of a transfer of a ship from one Administration to another and/or a change from one company to another as referred to in paragraph 2 of this regulation, the ship shall, on the day of completion of the transfer and/or change or as close as practical thereto, report the data specified in appendix XII for the portion of the calendar year corresponding to that Administration and/or company to the losing Administration, or any organization duly authorized by it,[28] in the case of a transfer of Administration or to its Administration, or any organization duly authorized by it,[29] in the case of a change of company. The Administration or any organization duly authorized by it[30] shall verify the data pursuant to paragraph 1 of this regulation and issue a Statement of Compliance pursuant to regulation 6.10. Within one month following the issuance of the Statement of Compliance, the Administration shall transfer the verified data and submit that Statement of Compliance to the IMO GFI Registry, taking into account guidelines developed by the Organization.[31]

8 From 1 January 2029, if a ship is permanently withdrawn from service during a calendar year, the ship shall report the data in paragraph 1 of this regulation for the portion of the calendar year during which the ship was operational and comply with the requirements of this chapter on the day of completion of the withdrawal or as close as practical thereto, taking into account guidelines developed by the Organization.[32]

Regulation 38
IMO GFI Registry

Establishment

1 The Secretary-General of the Organization shall establish and administer the IMO GFI Registry to facilitate the implementation of regulations 36 and 37, taking into account the guidelines developed by the Organization.[33]

26 Refer to the Code for Recognized Organizations (RO Code) (resolutions MSC.349(92) and MEPC.237(65)).

27 Refer to the Code for Recognized Organizations (RO Code) (resolutions MSC.349(92) and MEPC.237(65)).

28 Refer to the Code for Recognized Organizations (RO Code) (resolutions MSC.349(92) and MEPC.237(65)).

29 Refer to the Code for Recognized Organizations (RO Code) (resolutions MSC.349(92) and MEPC.237(65)).

30 Refer to the Code for Recognized Organizations (RO Code) (resolutions MSC.349(92) and MEPC.237(65)).

31 Refer to guidelines to be developed by the Organization.

32 Refer to guidelines to be developed by the Organization.

33 Refer to guidelines to be developed by the Organization.

Ship specific obligations

2 Each ship to which this chapter applies shall open by 1 October 2028 or its date of delivery, whichever is later, an account with the IMO GFI Registry and shall pay by 30 June 2029, and by 30 June of each year thereafter or its date of delivery, whichever is later, the annual administration fee to the IMO GFI Registry.

3 The Secretary-General of the Organization shall determine the annual administration fee to cover the administrative costs of the IMO GFI Registry, taking into account guidelines developed by the Organization.[34]

Functionalities

4 In accordance with regulation 36, the IMO GFI Registry shall in each ship account credit remedial units to a ship account, equal to the amount and the tier type of remedial units acquired by means of GHG emissions pricing contributions to the IMO Net-Zero Fund, and cancel the remedial unit following proof of payment.

5 By 31 August after the end of each calendar year, the IMO GFI Registry shall issue for each ship account and calendar year a ship account statement reflecting all the transactions recorded in accordance with paragraph 4 of this regulation and the GFI compliance balance.

6 The IMO GFI Registry shall record for each ship account for each calendar year the following information:

.1 the ship account statement;

.2 the verified attained annual GFI;

.3 the energy consumption from each fuel j, and its GHG intensity (EI_j);

.4 the total energy consumption;

.5 the total energy consumption of each ZNZ;

.6 the GHG emissions avoided by the uptake of ZNZs;

.7 the Statement of Compliance related to the annual GHG fuel intensity; and

.8 any other information, taking into account guidelines developed by the Organization.[35]

[34] Refer to guidelines to be developed by the Organization.

[35] Refer to guidelines to be developed by the Organization.

Access to the IMO GFI Registry

7 The Secretary-General of the Organization shall grant access to the Administration of a ship, or any organization duly authorized by that Administration,[36] to all recorded data in the ship's account in order to verify and report the ship's data in accordance with regulation 37 taking into account guidelines developed by the Organization.[37]

8 The Secretary-General of the Organization shall maintain the IMO GFI Registry and grant access to users, taking into account guidelines developed by the Organization.[38]

Reporting to the Marine Environment Protection Committee

9 On the basis of the information maintained in accordance with this regulation, the Secretary-General of the Organization shall produce an annual report to the Committee summarizing the data collected, specifying the ships with an active ship account, transaction patterns in the issuance, transferring, usage and cancellation of remedial units, share of zero or near-zero GHG emission technologies and fuels (ZNZs) used by ships in IMO GFI Registry and other relevant information as may be requested by the Committee.

Regulation 39
Uptake of zero or near-zero GHG emission technologies and fuels (ZNZs)

1 ZNZs shall include technologies, fuels and energy sources and shall be evaluated on a well-to-wake basis, taking into account guidelines developed by the Organization.[39] The GFI threshold for ZNZs shall be set at not greater than 19.0 gCO_2eq/MJ for an initial period until 31 December 2034, and from 1 January 2035 the threshold shall be set at not greater than 14.0 gCO_2eq/MJ taking into account guidelines developed.[40] Notwithstanding, the Committee may approve additional ZNZs taking into account guidelines developed by the Organization.[41]

2 Ships may receive rewards from the IMO Net-Zero Fund for the ZNZs used, taking into account guidelines developed by the Organization.[42]

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36 Refer to the Code for Recognized Organizations (RO Code) (resolutions MSC.349(92) and MEPC.237(65)).

37 Refer to guidelines to be developed by the Organization.

38 Refer to guidelines to be developed by the Organization.

39 Refer to guidelines to be developed by the Organization.

40 Refer to the *2024 Guidelines on life cycle GHG intensity of marine fuels* (resolution MEPC.391(81)) and additional guidelines to be developed by the Organization.

41 Refer to guidelines to be developed by the Organization.

42 Refer to guidelines to be developed by the Organization.

3 No later than 1 March 2027 and every five years thereafter the Committee shall define the reward referred to in paragraph 2 of this regulation, and the methodology to determine such reward, taking into account guidelines developed by the Organization.[43]

4 The Organization shall monitor and publish the share of ZNZs in the total annual energy used on board by ships falling in the scope of this chapter.

Regulation 40
The IMO Net-Zero Fund

1 The Secretary-General of the Organization shall establish the IMO Net-Zero Fund to support the implementation of this chapter and achieve its goal as set out in regulation 31. Any costs associated with the operation of the IMO Net-Zero Fund and its Governing Board shall be borne by the Fund.

2 The IMO Net-Zero Fund shall receive and manage GHG emissions pricing contributions made by ships pursuant to regulation 36, and disburse collected revenue in accordance with regulation 41.

3 The Committee shall adopt the governing provisions for the IMO Net-Zero Fund and appoint a Governing Board to oversee the day-to-day operations of the Fund on its behalf in accordance with the governing provisions.

4 The governing provisions, referred to in paragraph 3 of this regulation, shall include provisions specifying which entities may be eligible to receive funds from the IMO Net-Zero Fund; the types of financing mechanisms by which funds may be disbursed; the operating procedures of the IMO Net-Zero Fund and its Governing Board; which entities and organizations the IMO Net-Zero Fund may cooperate with in the disbursement of revenue; and allocations of revenue to the different purposes set out in regulation 41 including those that promote a just and equitable transition in the context of this measure.

5 The Governing Board shall have a gender and geographically balanced composition, ensuring adequate representation of developing countries, in particular of small island developing States (SIDS) and least developed countries (LDCs).

6 The Governing Board shall produce an annual report to the Committee containing an overview of its operations, including total contributions received, commitments and disbursement of revenue for the different purposes set out in regulation 41, and other relevant information as may be requested by the Committee.

7 On the basis of the Governing Board's annual report referred to in paragraph 6 of this regulation, the Committee shall periodically review the allocation of revenue to the different purposes set out in regulation 41.

8 The Fund shall be subject to audits.

[43] Refer to guidelines to be developed by the Organization.

Regulation 41
Disbursement of revenue

1 The IMO Net-Zero Fund shall disburse collected revenue for the following purposes, as shall be specified in its governing provisions:

.1 rewards for the use of ZNZs, in accordance with regulation 39;

.2 in the context of the implementation of this chapter and, promoting a just and equitable transition in States by facilitating environmental and climate protection, adaptation and resilience building within the boundaries of the energy transition in shipping, paying particular attention to the needs of developing countries, in particular least developed countries (LDCs) and small island developing States (SIDS), allocating sufficient revenue, for:

.1 researching, developing and making globally available and deploying zero and near-zero GHG emission technologies, fuels and/or energy sources, supporting the energy transition of shipping, and developing the necessary maritime, coastal and port-related infrastructure and equipment;

.2 enabling a just transition for seafarers and other maritime workforce;

.3 facilitating information-sharing, technology transfer, capacity-building, training and technical cooperation supporting the implementation of the regulations in this chapter;

.4 supporting the development and implementation of National Action Plans (NAPs),[44] including fleet renewal and upgrade; and

.5 addressing, as appropriate, disproportionately negative impacts on States, including on food security, resulting from the implementation of the regulations in this chapter;[45] and

.3 cover the administration and operational costs of the IMO Net-Zero Fund and its Governing Board.

[44] Refer to resolution MEPC.367(79) on *Encouragement of Member States to develop and submit voluntary national action plans to address GHG emissions from ships*.

[45] Refer to the *2023 IMO Strategy on reduction of GHG emissions from ships* (resolution MEPC.377(80)) and MEPC.1/Circ.885/Rev.1 on the *Revised procedure for assessing impacts on States of candidate measures*.

Regulation 42
Promotion of technical cooperation and transfer of technology relating to the continuous improvement of the ship's GHG fuel intensity

1 Administrations shall, in cooperation with the Organization and other international bodies, promote and provide support, as appropriate, directly or through the Organization to States that request technical assistance, especially developing States.

2 The Administration of a Party shall cooperate actively with other Parties, subject to its national laws, regulations and policies, to promote the development and transfer of technology and exchange of information to States which request technical assistance, particularly developing States, in respect of the implementation of measures to fulfil the requirements of chapter 5.

3 The Organization shall promote information-sharing, technology transfer, capacity-building and technical cooperation to enable the development of the necessary maritime, coastal and port-related infrastructure and equipment to support supply of zero or near-zero GHG emission fuels and/or energy sources in developing States.

Regulation 43
Food security

1 The Committee shall:

.1 address, including avoiding, remedying and mitigating, the disproportionately negative impacts of this chapter on food security, paying particular attention to countries exposed to food insecurity; and

.2 keep the potential impacts of this chapter on food security under continuous review.

Regulation 44
Review of the chapter

1 To ensure the continued achievement of the goal of this chapter, a review shall be completed by the Organization every five years to assess the effectiveness of this chapter in achieving its goal as set out in regulation 31, on the basis of which it shall consider:

.1 amending the annual GFI reduction factor (base target and direct compliance target) in regulation 35;

.2 amending the threshold values for ZNZs as defined in regulation 39; and

.3 the possible application of this chapter to ships of 400 gross tonnage and above."

21 The existing chapter 5 is renumbered as chapter 6 and the heading and text are replaced by the following:

"***Chapter 6 – Verification of compliance with the provisions of this Annex***

Regulation 45
Application

Parties shall use the provisions of the Code for Implementation in the execution of their obligations and responsibilities contained in this Annex.

Regulation 46
Verification of compliance

1 Every Party shall be subject to periodic audits by the Organization in accordance with the audit standard to verify compliance with and implementation of this Annex.

2 The Secretary-General of the Organization shall have responsibility for administering the Audit Scheme, based on the guidelines developed by the Organization.[46]

3 Every Party shall have responsibility for facilitating the conduct of the audit and implementation of a programme of actions to address the findings, based on the guidelines developed by the Organization.[47]

4 The audits of all Parties shall be:

.1 based on an overall schedule developed by the Secretary-General of the Organization, taking into account the guidelines developed by the Organization;[48] and

.2 conducted at periodic intervals, taking into account the guidelines developed by the Organization.[49]"

[46] Refer to the *Framework and procedures for the IMO Member State Audit Scheme* (resolution A.1067(28)).

[47] Refer to the *Framework and procedures for the IMO Member State Audit Scheme* (resolution A.1067(28)).

[48] Refer to the *Framework and procedures for the IMO Member State Audit Scheme* (resolution A.1067(28)).

[49] Refer to the *Framework and procedures for the IMO Member State Audit Scheme* (resolution A.1067(28)).

New appendices

22 New appendices XII and XIII are inserted after appendix XI, as follows:

"Appendix XII

Information to be submitted on the annual GHG fuel intensity (regulations 33 and 37)

Identity of the ship

Name of the ship……..

IMO number[1]……..

Port of registry……..

Company name……

Company contact details……

Period of calendar year for which the data is submitted:

Start date (dd/mm/yyyy) …….

End date (dd/mm/yyyy).…….

Technical characteristics of the ship

Year of delivery……

Gross tonnage (GT)[2] ……

Information related to the annual GHG fuel intensity

$Energy_j$, energy consumption of fuel type *j* by the ship, as referred to in regulation 33 of MARPOL Annex VI, expressed in MJ, consisting of:

- Fuel oil use, by fuel type *j* [3], both in metric tonnes and MJ, and where appropriate by energy converter, and methods used for collecting fuel oil consumption data, taking into account guidelines developed by the Organization.

- Energy from other energy sources, expressed in MJ, and methods used for collecting data, if applicable:

  ☐ Total amount of energy from onshore power (kWh and MJ)……..

1 In accordance with the *IMO Ship Identification Number Scheme* (resolution A.1117(30)).

2 Gross tonnage should be calculated in accordance with the International Convention on Tonnage Measurement of Ships, 1969.

3 Refer to the *2024 Guidelines on life cycle GHG intensity of marine fuels* (resolution MEPC.391(81)), as may be amended.

- ☐ Wind assisted propulsion system …….....
- ☐ Photovoltaic power generation system……
- ☐ Other:……..……

Reference of the Fuel Life Cycle Label (FLL) by fuel type used:……..

EI_j, the GHG intensity, expressed on a well-to-wake basis of each fuel type used, expressed in gCO_2eq/MJ:……..

$Energy_{total}$, total amount of energy used by the ship, expressed in MJ……...

Attained annual GHG fuel intensity

Attained annual greenhouse gas fuel intensity (attained annual GFI), expressed in gCO_2eq/MJ…….....

Target annual GHG fuel intensity

Target annual GHG fuel intensity of the ship for the calendar year, expressed in gCO_2eq/MJ:

Base target annual GFI:……..

Direct compliance target annual GFI:……

GFI compliance balance

GFI compliance balance, expressed in tCO_2eq:…….....

For a ship with a compliance deficit, the compliance deficit expressed in tCO_2eq, as follows:

Tier 1 compliance deficit:…….

Tier 2 compliance deficit:…….

Information related to the uptake of zero or near-zero GHG emission technologies and fuels (ZNZs)
For the different ZNZs used:

- the total amount of GHG emissions avoided, in tCO_2eq:……
- the total amount of energy, in MJ:……..…
- the GHG intensity, in gCO_2eq/MJ:…….....

Appendix XIII

Form of Statement of Compliance – Annual GHG Fuel Intensity (regulation 8.5)

STATEMENT OF COMPLIANCE – Annual GHG Fuel Intensity

Issued under the provisions of the Protocol of 1997 to amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL Annex VI) under the authority of the Government of:

……
(full designation of the country)

by……...
(full designation of the competent person or organization authorized under the provisions of the Convention)

Reporting period:

from (dd/mm/yyyy) to (dd/mm/yyyy)

Particulars of ship

Name of ship……

Distinctive number or letters ……

IMO number[1]……..

Port of registry……

Gross tonnage……

THIS IS TO DECLARE THAT:

1 the ship has submitted to this Administration the data required by regulation 37 of MARPOL Annex VI, covering ship operations from (dd/mm/yy) to (dd/mm/yy);

2 the data was collected and reported to this Administration in accordance with the methodology and the processes set out in the ship's SEEMP that was in effect over the period from (dd/mm/yy) to (dd/mm/yy);

3 the attained annual GHG fuel intensity of the ship for the calendar year was . . . . . gCO$_2$eq/MJ, pursuant to regulation 33 of MARPOL Annex VI[2] ;

4 the GHG fuel intensity compliance balance of the ship for the calendar year was . . . . . tCO$_2$eq, pursuant to regulation 36 of MARPOL Annex VI[2];

[1] In accordance with the *IMO Ship Identification Number Scheme* (resolution A.1117(30)).

[2] In the event of any transfer of a ship from one Administration to another and/or a change from one company to another, these sections should be completed consistent with regulations 37.3 and 37.7 of MARPOL Annex VI.

5 for a ship with a compliance deficit for the calendar years, pursuant to regulation 36 of MARPOL Annex VI[2]:

.1 the compliance deficit comprised:

☐ Tier 1 compliance deficit:……...tCO_2eq; and

☐ Tier 2 compliance deficit:……...tCO_2eq.

.2 the following selected GHG fuel intensity compliance approach(es) was/were recorded by the IMO GFI Register to balance the Tier 2 compliance deficit:

☐ acquire remedial units through making contributions to the IMO Net-Zero Fund:

☐ Tier 2 remedial units:…….. TCO_2eq; and

.3 the following remedial units were acquired through making contributions to the IMO Net-Zero Fund:

☐ Tier 1 remedial units:…….. tCO_2eq.

6 the annual administration fee was paid to the IMO GFI Registry, pursuant to regulation 38 of MARPOL Annex VI[2];

7 for a ship eligible to receive rewards from the IMO Net-Zero Fund, the total amount of GHGs reduced by the uptake of ZNZs was……. in tCO_2eq, pursuant to regulation 39 of MARPOL Annex VI[2]; and

8 the ship is compliant with its target annual GFI, pursuant to regulation 36 of MARPOL Annex VI[2].

This Statement of Compliance is valid until (dd/mm/yyyy) . . . . . .

Issued at . . . . . .
(place of issue of the Statement)

(dd/mm/yyyy) . . . . . .

(dd/mm/yyyy): ....

(date of issue) *(signature of duly authorized official issuing the Statement)*

(seal or stamp of the authority, as appropriate)"