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| INTERSESSIONAL MEETING OF THE WORKING GROUP ON REDUCTION OF GHG EMISSIONS FROM SHIPS10th session Agenda item 5 | ISWG-GHG 10/5/XXX September 2021Original: ENGLISHPre-session public release: ☒ |

**CONSIDERATION OF MID-TERM GHG REDUCTION MEASURES IN THE CONTEXT OF PHASE I OF THE WORKPLAN FOR THE DEVELOPMENT OF MID- AND LONG-TERM MEASURES**

**A levy-based MBM, per tonne of CO2 emissions, to expedite the uptake and deployment of zero-carbon fuels**

**Submitted by ICS and INTERCARGO**

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| **SUMMARY** |
| *Executive summary:* | The co-sponsors respond to the proposal for a market-based measure set out in document MEPC 76/7/12 (Marshall Islands and Solomon Islands). The co-sponsors set out a comprehensive regulatory package to demonstrate how a levy-based MBM, based on mandatory IMO climate contributions by ships, per tonne of CO2 emitted, to an IMO Climate Fund, could be brought into effect quickly to expedite the uptake and deployment of zero-carbon technologies and fuels, via adoption of a new chapter to Annex VI of the MARPOL Convention, while explaining the current preference of the co-sponsors for a levy-based system.  |
| *Strategic direction,**if applicable:* | 3 |
| *Output:* | 3.2 |
| *Action to be taken:* | Paragraph 36 |
| *Related documents:* | Resolution MEPC.304(72); MEPC 76/15, MEPC 76/7/12, MEPC 76/7/7, MEPC 76/7/39, MEPC 76/7/40, MEPC 76/INF.22 |

**INTRODUCTION**

1. MEPC 76 considered document MEPC 76/7/12 (Marshall Islands and the Solomon Islands) containing a proposal for a mandatory levy on GHG emissions from international shipping with a view to encouraging a rapid shift away from fossil fuels. It was agreed that this should be further considered at ISWG-GHG 10, in the context of phase I of the work plan agreed at MEPC 76 for the development of mid- and long term measures.

2 The co-sponsors remain open to consideration of other proposals for mid-term measures including alternative MBMs, but note that no other detailed regulatory proposals have yet been put forward, since the adoption of the Initial Strategy, to explain comprehensively how such alternative proposals might operate on a global basis. The co-sponsors further emphasize that, although shipowners will have a critical role on the demand side, the commercial development of relevant technologies, fuels, propulsion systems and related infrastructure are the responsibility and within the control of other stakeholders rather than shipowners.

3 Further to MEPC 76/7/39 (ICS et al.), the co-sponsors agree with document MEPC 76/7/12 that a global market-based measure (MBM) should be adopted by the Organization to expedite the uptake and deployment of zero-carbon technologies, inter alia, by reducing the price gap between new low- and zero-carbon fuels and conventional fuels. Importantly, the co-sponsors reiterate that any requirement for monetary contributions to be made for ships’ CO2 emissions will need to be mandatory to achieve the Initial Strategy’s policy goals whilst also maintaining the level playing field which will be vital to avoid distortion of international shipping markets.

4 The rapid development of an MBM is now a vital necessity if the Organization is to demonstrate continuing leadership for the decarbonisation of shipping via its global regulatory framework, and to discourage the unilateral application of MBMs to international shipping. A piecemeal approach to the introduction of MBMs will result in barriers to trade and ultimately would most likely fail to achieve the overriding policy objective of reducing global GHG emissions from international shipping, whilst significantly increasing the cost of maritime trade and the negative impacts on the economies of Member States.

5 For the reasons elaborated below, the current preference of the co-sponsors is for a levy-based MBM, based on tonnes of CO2 emitted, to be adopted by the Organization for global application. A levy-based mechanism would be least likely to result in distortion of international shipping markets which would interfere with efficient maritime trade. It would also be the mechanism most likely to be successful with regard to expediting the uptake and deployment of zero-carbon fuels by closing the price gap with conventional fuels. This is because with a levy-based system the quantum of the levy would be stable and fixed, thus minimising uncertainty with respect to long term investment decisions for zero-carbon technologies which will be influenced by the price of carbon.

6 If the Organization is to develop an MBM as soon as possible within the timeline agreed under the Initial Strategy, a levy-based system will be the easiest to establish quickly whilst meeting those principles already agreed by the Organization to assess proposals for MBMs (MEPC 57/21, paragraph 4.73):

 .1 effective in contributing to the reduction of total global greenhouse gas emissions;

 .2 binding and equally applicable to all flag States in order to avoid evasion;

 .3 cost-effective;

 .4 able to limit, or at least, effectively minimize competitive distortion;

 .5 based on sustainable environmental development without penalizing global trade and growth;

 .6 based on a goal-based approach and not prescribe specific methods;

 .7 supportive of promoting and facilitating technical innovation and R&D in the entire shipping sector;

 .8 accommodating to leading technologies in the field of energy efficiency; and

 .9 practical, transparent, fraud free and easy to administer.

7 The IMO Research Fund (IMRF) initiative set out in MEPC 76/7/7 (Denmark et al.) is not an MBM and, as a matter of urgency, needs to be approved at MEPC 77. But as highlighted by the Marshall Islands and the Solomon Islands, the architecture proposed for the IMRF (once adopted by the Organization) can readily be used as the basis for a levy-based MBM. The annexes to this document therefore contain a suggested draft regulatory package to demonstrate comprehensively how a levy-based MBM could be established as soon as possible.

8 It is, however, reiterated that the urgent need to approve the mature IMRB proposal to accelerate R&D of zero-carbon technologies, which is a short-term candidate measure under the Initial Strategy, must not be delayed by combining discussion of funding for R&D with the consideration of MBMs which are a mid-term measure. As recognised by Mission Innovation in June 2021[[1]](#footnote-1), there is widespread agreement that large numbers of zero-carbon ships need to be delivered by 2030 if the current IMO level of ambition for 2050 is to be achieved. Technology Readiness Levels with respect to zero-carbon technologies and fuels suitable for marine application are currently inadequate to achieve this by 2030. If the establishment of the IMRF to accelerate R&D is conflated with the development, adoption and implementation of an IMO MBM, the required acceleration of R&D will occur too late to achieve the goal set by Mission Innovation “*for ships capable of running on zero-emission fuels to make up at least 5% of the global deep-sea fleet by 2030”* thus jeopardising achievement of the level of ambition set by the Organization for 2050.

9 It is emphasized that if the establishment of the IMRF is approved by
MEPC 77, there is no reason whatsoever why this should delay work by the Organization on an MBM and which simply depends on the political will of Member States to be taken forward. Indeed, if the Organization is unable to reach agreement on the IMRF, it is difficult to see how the Organization can realistically ever reach agreement about the far more complicated issue of an MBM. However, the immediate establishment of the IMRF will provide useful and practical experience to inform discussions about the rapid development of an MBM.

**DISCUSSION**

**Comprehensive proposal for a regulatory framework**

10 To underline the industry’s commitment to the introduction of a global MBM to shipping, and to expedite consideration and development of an IMO MBM as soon as possible, the co-sponsors have set out, in the annexes to this document, a comprehensive package of suggested amendments to MARPOL Annex VI, plus accompanying guidelines, for the establishment of a mandatory system of IMO climate contributions to be made to an IMO Climate Fund, calculated per tonne of CO2 emitted from fuel oil consumed by ships of 5,000 gross tonnage and above.

11 The co-sponsors are not aware of any legal reason why MARPOL Annex VI cannot be amended to establish an MBM if the Parties to MARPOL Annex VI wish to do so. This view is supported by MEPC 76/7/40 (Belgium) and MEPC 76/INF.22 (Belgium et al.) It might be the case that the MEPC will conclude that a different regulatory instrument than MARPOL Annex VI could be necessary to establish an MBM. One possibility might be a self-standing Convention similar to the International Oil Pollution Compensation Fund (IOPCF) Conventions. However, if the Organization wishes to maintain leadership with respect to the development of GHG measures for shipping, it needs to establish a global MBM for shipping as soon as possible. Whereas using the tacit amendment procedure under MARPOL could allow an MBM to be established relatively quickly, a self-standing Convention could take many years to negotiate and even longer to enter into force. In the case of the first IOPCF Convention, entry into force occurred seven years after adoption by the Organization, and this was preceded by several years of deliberation prior to the Diplomatic Conference.

12 The regulatory framework for a levy-based system set out in the annexes to this document is intended to be as simple as possible. It utilises the existing Fuel Oil Data Collection System, while minimising the administrative burden on Member States. The proposed IMO Climate Fund would carry out all of the functions necessary to calculate the IMO climate contributions to be made by ships, collecting these contributions and providing evidence that the required contributions have been made. All that would be required of Administrations would be to issue the ship with a Statement of Compliance, which would be used as the primary means of demonstrating compliance to port State control.

13 The proposal is also intended to minimise resource implications for the Organization, as the IMO Climate Fund would be responsible for meeting all the costs to the Organization incurred exclusively for providing administrative support to the IMO Climate Fund.

14 However, detailed consideration is still needed on the rate and value of the proposed IMO climate contribution plus, importantly, the purpose for which these contributions should be used by the IMO Climate Fund. Given the political nature of these issues, which will require further consideration by the MEPC, the co-sponsors choose only to provide preliminary views on these matters to ISWG-GHG 10.

**Rate and value of IMO climate contribution**

15 The co-sponsors concur with those delegations that expressed support at MEPC 76 for the need to define a carbon price to provide a signal to the industry and energy providers and to generate funds to provide support (inter alia) to SIDS and LDCs. However, a comprehensive impact assessment will be required to assess the macro-economic impacts on all Member States on proposals concerning the specific rate and value of an IMO climate contribution.

16 The co-sponsors note that the quantum of the carbon levy suggested in document MEPC 76/7/12 is higher than those carbon prices which currently apply to other parts of the global economy, and that when carbon prices have been introduced to other sectors for the first time they have usually been phased-in incrementally to mitigate the economic impacts.

17 When considering the rate and value of the IMO climate contribution which will initially apply when the MBM enters into force, the principal purpose of the climate contribution should be to help close the price gap between new low- and zero-carbon fuels and existing fuels, so as to expedite the transition to zero-carbon technologies. However, given that shipping is recognized as a hard to abate sector, the co-sponsors emphasize that when the MBM is first established, it will be premature to impose a disproportionately high carbon price on shipping, especially if there are no zero-carbon technologies that can be readily applied to international shipping which are available for ships to transition to at the time when the MBM is implemented. Otherwise the MBM will primarily be a revenue raising exercise which will not contribute to achieving the IMO level of ambition for 2050 and might even serve to undermine this objective by diverting funds from investment in low and zero-carbon shipping.

18 For this reason, similar to the mechanism for ‘upward ratchets’ in a five-yearly review cycle proposed in document MEPC 76/7/12, in the amendments to MARPOL Annex VI set out in the annexes to this document, the co-sponsors have included a review clause, whereby, five years after the entry into force of the new chapter of MARPOL Annex VI, it is suggested that the Organization should review the status of technological developments and the availability of zero-carbon technologies suitable for application to international shipping and, if appropriate, consider amending the rate and value of the IMO climate contribution.

19 In the accompanying guidelines included within the annexes to this document, it is suggested that the five-yearly review of the rate and value of the IMO climate contribution should also take account of the application, at that time, of carbon prices to other sectors of the world economy.

**Possible use of funds collected via an MBM**

20 Apart from the need for the immediate acceleration of R&D (which is already addressed by the IMRF proposal) one of the biggest potential obstacles to decarbonizing the sector may be the provision of any new bunkering infrastructure that could be required in many ports around the world to supply ships safely with alternative fuels.

21 It is clearly preferable that, so far as possible, any new fuels or energy sources developed can utilise existing bunkering infrastructure. However, this will depend on which alternative fuels prove to be commercially feasible and technically viable for use by different types of ships (something which the IMRB will help to identify). But to the extent that current bunkering infrastructure cannot be utilised, the IMO Climate Fund could be used to support the rapid deployment of any new bunkering infrastructure required, so that new fuels can be made available globally and from as many ports as possible. As well as making the price of zero-carbon fuels less of an obstacle to a rapid transition, support for the deployment of any necessary new bunkering infrastructure would also increase shipowners’ confidence with regard to decisions about investments in zero-carbon ships and technologies.

22 Cognizant of the CBDR-RC principle, the co-sponsors propose, in the amendments to MARPOL Annex VI set out in the annexes to this document, that funds contributed to the IMO Climate Fund should initially be used to provide support, as may be decided by the MEPC, to assist maritime GHG reduction efforts of developing countries, in particular LDCs and SIDS, including deployment of any necessary bunkering infrastructure for the supply of low-carbon and zero-carbon fuels for use by international shipping.

23 It should be noted that the use of the word “including” (in the proposed amendment to MARPOL Annex VI) is deliberate, so as not to preclude discussion of the IMO Climate Fund potentially being used for other purposes, such as providing support for the reduction of the costs of new fuels in order to close the price gap with existing fuels. However, to expedite early approval of an MBM, discussion about other potential purposes for which the IMO Climate Fund might be used could be concluded by the Committee after the proposed MARPOL Annex VI amendments are adopted by the Organization or following the proposed five-yearly review of technology developments and of the rate and value of the IMO climate contribution, as referred to in paragraphs 18 and 19 above.

24 The co-sponsors concur with the view of those delegations at MEPC 76 which expressed concern about the use proposed, in document MEPC 76/7/12, of the Green Climate Fund, set up under UNFCCC, as a mechanism to collect and distribute funds, and agree that such a mechanism should be kept under the auspices of IMO, in accordance with the principles of the IMO Convention, the MARPOL Convention and the Initial Strategy. However, recognising that this is also a political question, the co-sponsors remain open to considering ideas about the potential relationship between the IMO Climate Fund and Green Climate Fund, either before or after the proposed MARPOL Annex VI amendments are adopted by the Organization.

**Arguments in support of a levy-based MBM**

25 A number of international organisations, including the World Bank and the IMF, have concluded that the most appropriate global MBM for shipping is probably a levy-based system, something further supported by the most recent academic research. The World Bank and IMF have noted that a levy-based system[[2]](#footnote-2) gives price certainty, and so more stability for making transport decisions and developing long-lived emissions saving technology.

26 A study by Chai et al.[[3]](#footnote-3) in 2019, using multi-criteria analysis also finds that a levy is more suitable as an MBM for international shipping as it is more effective in encouraging the adoption of technology with high Technology Readiness Levels (TRL), stimulating investment into low TRL technologies (both of which are favourable with greater carbon price stability) and, significantly, for generating funds. Other studies have arrived at similar conclusions, including most recently that by Psaraftis et al.[[4]](#footnote-4) in 2021 which suggests, inter alia, that a levy-based system carries less risk of administrative burdens or ‘split incentives’ between shipowners and charterers.

27 In the current context of international shipping – characterised by a large number of ships, high variability of each ship’s fuel consumption and the importance of innovation of low TRL low-carbon technologies – Chai et al. suggest a levy-based system seems to be more suitable. Furthermore, they suggest an emissions trading system would be harder to operationalise (on a global basis) as the large number of ships trading globally could require a significant amount of time to set up, operate and review the system, and a high variability in each ship’s fuel consumption makes it difficult to allocate carbon credits to ships accurately.

28 The co-sponsors caution that the variable price of carbon under a trading system at any given time may be volatile and subject to extreme fluctuation. If the object of an MBM is to expedite the uptake of zero-carbon fuels, the guaranteed price of a fixed levy, even if subject to periodical review, will provide more confidence with regard to investment decisions relating to the uptake and deployment of new technologies. Unlike a trading system, a levy-based system also carries no risk of the rate and value of the price of carbon emitted being negatively affected by speculative trading in-sector or out-of-sector.

29 In order to work within the enforceable legal framework of the MARPOL Convention, payment of the levy would need to be made on behalf of a ship. Nevertheless, the cost of the levy needs to be recovered from the entity that **assumes the commercial operation of a ship, usually under a contractual agreement such as a charter party contract, and is responsible thereby for purchasing and paying** for the cost of the marine fuel. This needs to made clear within any regulatory framework which is adopted for a global MBM.

30 If, as is the case with trading schemes, the carbon price is variable, potentially fluctuating significantly on a daily basis, and changing significantly between the time when the fuel is purchased and carbon allowances are paid for, this makes the recovery from other entities such as charterers far more complicated. This is a particular problem for the tramp sector (ships that provide non-scheduled services) which, according to UNCTAD, conducts the majority of international shipping trade, further complicated by the fact that this sector mostly comprises Small and Medium-sized Enterprises (SMEs) for which mandatory participation in carbon trading systems would create disproportionately negative financial and administrative burdens.

31 The United States Congressional Budget Office (CBO) study “Policy Options for reducing CO2 emissions”[[5]](#footnote-5) identifies that incentive-based approaches can reduce emissions at a lower cost than more restrictive command-and-control approaches because they provide more flexibility about where and how emission reductions are achieved. The US CBO concluded that given the gradual nature of climate change, the uncertainty that exists about the cost of reducing emissions, and the potential variability of the cost of meeting a particular cap on emissions at different points in time, a levy could offer significant advantages. If policymakers chose to specify a long-term target for cutting emissions, a levy could be set at a rate that could meet that target at a lower cost than a comparable cap. In addition, if policymakers set the levy rate at a level that reflects the expected benefits of reducing a tonne of emissions (which would rise over time), a levy would keep the costs of emission reductions in balance with the anticipated benefits, whereas a cap would not.

**CONCLUSION**

32 In view of the importance of signalling to the World that the Organization remains on track with respect to implementation of the Initial Strategy, the co-sponsors assert that a levy-based system, along the lines set out in the annex to this document, is politically plausible and could be established by the Organization relatively quickly to expedite the uptake and deployment of zero-carbon technologies.

33 Such an approach would be consistent with the nine fundamental principles previously agreed to assess MBM proposals (MEPC 57/21, paragraph 4.73), as listed above in paragraph 6, and “*the requirement for all ships to give full and complete effect, regardless of flag, to implementing mandatory measures to ensure the effective implementation [of the Initial Strategy]*” (paragraph 3.2.2 of the Initial Strategy).

34 It is emphasized that the variable price of carbon under a trading system at any given time may be volatile and subject to extreme fluctuation. If the object of an MBM is to expedite the uptake of zero-carbon fuels, the guaranteed price of a fixed levy, even if subject to periodical review, will provide more confidence with regard to investment decisions relating to the uptake and deployment of new technologies.

35 The rate and value of a fuel levy, however, requires careful consideration, recognising that in order for an MBM to be effective, the technologies to which the MBM is meant to expedite transition towards will need to exist for that transition to take place. Otherwise this measure could be little more than a revenue raising exercise which could potentially undermine the Initial Strategy by diverting investment from genuine decarbonisation efforts by the industry. The co-sponsors reiterate that the commercial development of relevant technologies, fuels, propulsion systems and related infrastructure are the responsibility of other **out-of-sector** stakeholders rather than shipowners.

**ACTION REQUESTED OF THE COMMITTEE**

36 The ISWG-GHG is invited to consider this document, including the attached annexes, and take action as appropriate.

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**ANNEX 1**

**Proposed Draft Amendments to MARPOL Annex VI**

**(Establishment of the IMO Climate Fund)**

**Regulation 6**

The title of the regulation is amended (deletion shown as ~~strikethrough~~, additions shown as underlined) as follows:

*Issue or endorsement of Certificates and Statements of Compliance related to fuel oil consumption reporting, ~~and~~ operational carbon intensity rating and the IMO Climate Fund*

A new title and paragraphs A1 and A2 are added as follows:

**Statement of Compliance – IMO Climate Fund (ICF)**

A1 Upon receipt of the ICF Annual Account Statement pursuant to
regulation DD.6 of this Annex, the Administration, or any organization duly authorized by it, shall determine whether the IMO climate contribution has been made to the ICF in accordance with regulation DD.1 of this Annex by checking whether the information provided in the ICF Annual Account Statement is consistent with the ship’s fuel oil consumption data pursuant to regulation 27.3 of this Annex and, if so, issue a Statement of Compliance related to the ICF no later than six months from the beginning of the calendar year. In every case, the Administration assumes full responsibility for this Statement of Compliance.

A2 With respect to a ship not registered by a Party to this Annex, the Statement of Compliance related to the ICF may be issued by the appropriate Administration of any Party to this Annex, if satisfied that the IMO climate contribution required under regulation DD.1 of this Annex has been made to the ICF for the previous calendar year for that ship.  A Statement of Compliance so issued shall have the same force and receive the same recognition as a Statement of Compliance issued under paragraph A1 of this regulation.

**Regulation 8**

The title of the regulation is amended (deletion shown as ~~strikethrough~~, additions shown as underlined) as follows:

*Form of Certificates and Statements of Compliance related to fuel oil consumption reporting, ~~and~~ operational carbon intensity rating and the IMO Climate Fund*

A new title and paragraph B1 are added as follows:

**Statement of Compliance – IMO Climate Fund**

B1 The Statement of Compliance pursuant to regulations 6.A1 and 6.A2 of this Annex shall be drawn up in a form corresponding to the model given in Appendix [XII] to this Annex and shall at least be written in English, French or Spanish. If an official language of the issuing country is also used, this shall prevail in case of a dispute or discrepancy.

**Regulation 9**

The title of the regulation is amended (deletion shown as ~~strikethrough~~, additions shown as underlined) as follows:

*Duration and validity of Certificates and Statements of Compliance related to fuel oil consumption reporting, ~~and~~ operational carbon intensity rating and the IMO Climate Fund*

A new title and paragraph C1 are added as follows:

**Statement of Compliance – IMO Climate Fund**

C1 The Statement of Compliance pursuant to regulations 6.A1 and 6.A2 of this Annex shall be valid for the calendar year in which it is issued and for the first six months of the following calendar year.

**Regulation 10**

*Port State control on operational requirements*

A new paragraph D1 is added as follows:

D1 In relation to chapter Z of this Annex, any port State inspection shall be limited to verifying, when appropriate, that there is a valid Statement of Compliance related to the ICF on board, in accordance with article 5 of the Convention.

A new chapter Z is added as follows:

**Chapter Z – IMO Climate Fund to expedite GHG emissions reduction by international shipping**

**Regulation AA**

*Application*

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

2 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; and

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

**Regulation BB**

*Organization and administration of the IMO Climate Fund*

1 The Marine Environment Protection Committee shall oversee the activities and governance of the ICF in accordance with the Organization’s rules and regulations, taking into account Guidelines adopted by the Organization.[[6]](#footnote-6)

**Regulation CC**

*IMO Climate Fund*

1. The Organization shall establish an IMO Climate Fund (ICF) to expedite the uptake and deployment of zero-carbon fuels and propulsion systems, to be administered by the Organization in accordance with
regulation BB of this Annex, taking into account Guidelines adopted by the Organization.[[7]](#footnote-7)

2 The funds contributed to the ICF shall be used to:

.1 provide support, as may be decided by the Marine Environment Protection Committee, to assist maritime GHG reduction efforts of developing countries, in particular LDCs and SIDS, including deployment of bunkering infrastructure for the supply of low-carbon and zero-carbon fuels for use by international shipping; and

.2 meet the costs to the Organization incurred exclusively for providing administrative support to the ICF.

3 The IMO climate contributions made to the ICF shall only be used for the purposes specified in paragraph 2 of this regulation.

**Regulation DD**

*Contribution made to the IMO Climate Fund*

1 Subject to regulation EE of this Annex, within four months after the end of each calendar year, each ship of 5,000 gross tonnage and above to which this Chapter applies shall make a contribution to the IMO Climate Fund (ICF). The IMO climate contribution for each ship to which this regulation applies shall be fixed at a rate and value to be determined by the Organization.[[8]](#footnote-8)

2 For ships using alternative low-carbon fuels and energy sources, or fuels with lower GHG emissions than conventional fuel oil, a lower IMO climate contribution than required under paragraph 1 of this regulation shall apply, as may be determined by the Organization, taking into account Guidelines adopted by the Organization.4

3 For ships emitting zero CO2 emissions, taking into account Guidelines adopted by the Organization[[9]](#footnote-9), the IMO climate contribution required under
paragraph 1 of this regulation shall be zero.

4 Within three months after the end of each calendar year, each ship shall provide the ICF with fuel oil consumption data as reported to the Administration, or any organization duly authorized by it, in accordance with regulations 27.3, 27.4 or 27.5 of this Annex.

5 No later than one month after receiving the contribution from each ship, as required under paragraph 1 of this regulation, the ICF shall provide an ICF Annual Account Statement to each ship confirming that the total IMO climate contribution to be made to the ICF for that ship for the previous calendar year, including the portion thereof as provided for in paragraphs 7 and 8 of this regulation, has been made.

6 Following receipt of the ICF Annual Account Statement, the ship shall promptly provide the Administration, or any organization duly authorized by it, with the ICF Annual Account Statement.

7 In the event of the transfer of a ship from one Administration to another, the IMO climate contribution made by the ship in accordance with paragraph 1 of this regulation shall cover the period of the calendar year corresponding to the losing Administration.

8 In the event of a change from one Company to another, the IMO climate contribution made by the ship in accordance with paragraph 1 of this regulation shall cover the portion of the calendar year corresponding to the previous Company.

9 In the event of change from one Administration to another and from one Company to another concurrently, paragraph 7 of this regulation shall apply.

**Regulation EE**

*Dates for implementation*

1 Implementation of the requirements stipulated under regulation DD of this Annex shall commence on a date after the ICF has been established in accordance with the requirements of regulations BB and CCof this Annex, and that the ICF is ready to commence operations.

2 The Organization shall review and confirm that the requirements under regulations BB and CC have been met no later than 12 months after entry into force of chapter Z of this Annex. The Parties, based on the review undertaken by the Organization, shall decide whether the ICF is ready to commence operations. If the ICF is not ready to commence operations then a further review should be undertaken within six months.

**Regulation FF**

*Review of this chapter*

1 After an operational period of five years, and every five years thereafter, beginning on the date that this chapter enters into force, the Organization shall review the status of this chapter and amend the relevant provisions if necessary.

2 Pursuant to paragraph 1 of this regulation, the Organization shall review the status of technological developments and the availability of zero-carbon technologies suitable for application to international shipping and, if appropriate, consider amending the rate and value of the IMO climate contribution, taking into account Guidelines adopted by the Organization.[[10]](#footnote-10)

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Appendix [XII]

**Form of the Statement of Compliance – IMO Climate Fund**

**statement of compliance – IMO CLIMATE fund**

Issued under the provisions of the Protocol of 1997, as amended, to amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 related thereto (hereinafter referred to as "the Convention") under the authority of the Government of:

. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

*(full designation of the Party)*

by . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

*(full designation of the competent person or organization authorized under the provisions of the Convention)*

**Particulars of ship**[[11]](#footnote-11)

Name of ship . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

Distinctive number or letters. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

IMO Number[[12]](#footnote-12) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

Port of registry . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

Gross tonnage. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .. . . . . . . . . . . . . .

THIS IS TO DECLARE:

1. That the ship has submitted to this Administration an ICF Annual Account Statement required by regulation DD.5 of Annex VI of the Convention, which is consistent with the ship’s fuel consumption data pursuant to regulation 27.3 of Annex VI of the Convention, covering ship operations from (01/01/yyyy) through (31/12/yyyy).

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

Issued at: . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

*(place of issue of Statement)*

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

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

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

**ANNEX 2**

**Resolution MEPC.XXX(7X)**

**(Adopted on [same date as adoption of draft amendments for Establishment of the IMO Climate Fund])**

**[20XX] Guidelines for the ESTABLISHMENT AND governance of the IMO CLIMATE Fund under Chapter Z of MARPOL Annex VI**

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 (the Committee) conferred upon it by international conventions for the prevention and control of marine pollution from ships,

RECALLING ALSO that it adopted, by resolution MEPC.XXX(XX), 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 (Establishment of the IMO Climate Fund),

NOTING that the aforementioned amendments to MARPOL Annex VI, which included a new chapter Z on IMO Climate Fund to expedite GHG emissions reduction by international shipping, entered into force on [XXX],

NOTING ALSO that regulation BB of MARPOL Annex VI, as amended, requires the Marine Environment Protection Committee to oversee the activities and governance of the IMO Climate Fund in accordance with the Organization’s rules and regulations,

NOTING FURTHER that regulation CC of MARPOL Annex VI, as amended, requires the Organization to establish an IMO Climate Fund (ICF) to expedite the uptake and deployment of zero-carbon fuels and propulsion systems,

RECOGNIZING that the aforementioned amendments to MARPOL Annex VI require the adoption of relevant guidelines for uniform and effective implementation of the regulations and to provide sufficient lead time for the Organization and Administrations to prepare,

HAVING CONSIDERED, at its [seventy-XXX] session, draft [20XX] Guidelines for the establishment and governance of the IMO Climate Fund under Chapter Z of MARPOL Annex VI,

1 ADOPTS the [20XX] Guidelines for the establishment and governance of the IMO Climate Fund under Chapter Z of MARPOL Annex VI (the [20XX] Guidelines), as set out in the annex to the present resolution;

2 INVITES the Organization to take the annexed [20XX] Guidelines into account when developing and implementing the requirements set forth in Chapter Z of MARPOL Annex VI, as amended;

3 AGREES to keep the [20XX] Guidelines under review in light of the experience gained with their implementation.

**ANNEX**

**[20XX] Guidelines for the establishment and governance of the IMO Maritime Climate Fund under Chapter Z of MARPOL Annex VI**

**Introduction**

1 The purpose of these guidelines is to direct the Organization’s governance and the operation of the IMO Climate Fund(ICF) to be established under Chapter Z of MARPOL Annex VI.

**IMO Climate Fund**

*Establishment, management and operation of the ICF*

2 The Secretary-General of the Organization should make arrangements to establish, manage and operate the ICF. The ICF should be established, managed and operated without cost to the Organization, and once the ICF is operational, all costs can be recovered by the Organization from the ICF.

*Collection of IMO climate contributions to ICF*

3 The ICF should establish an ICF account for each ship to which
Chapter Z of MARPOL Annex VI applies, in accordance with the IMO ship identification scheme (resolution A.1078(28)) to which IMO climate contributions can be submitted by the Company responsible for that ship as defined by paragraph 2.8 of regulation 2 of MARPOL Annex VI.

4 No later than one month after receiving the data specified in
regulation 27.3 of MARPOL Annex VI, the ICF should provide a provisional statement for each ship which sets out the total IMO climate contribution to be made to the ICF for the previous calendar year, as required under regulation DD.1 of MARPOL
Annex VI.

5 No later than one month after receiving the IMO climate contribution from each ship, as required under regulation DD.1, the ICF shall provide an ICF Annual Account Statement to each ship confirming that the total IMO climate contribution to be made to the ICF for that ship for the previous calendar year has been made, in accordance with regulation DD.5 of MARPOL Annex VI.

6      The mechanism for the ICF to collect the IMO climate contributions should allow the Company, as defined by paragraph 2.8 of regulation 2 of MARPOL Annex VI, responsible for making IMO climate contributions on behalf of the ship, to make a single annual IMO climate contribution calculated from the data reported to the ICF in accordance with regulation DD.4 of MARPOL Annex VI. In addition, the mechanism should allow the Company the option to make IMO climate contributions in advance, on a quarterly basis or as frequently as may be required, based on fuel oil purchased for consumption.

*Review of IMO climate contribution to ICF*

7 Any review of the rate and value of the IMO climate contribution set out in regulation DD.1, should take account of developments with respect to the availability of zero-carbon technologies that can be applied to international shipping, in particular for transoceanic voyages, and the application or otherwise of market-based measures to other sectors of the world economy.

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**ANNEX 3**

**Resolution MEPC.XXX(7X)**

**(Adopted on [same date as adoption of draft amendments for Establishment of the IMO Climate Fund])**

**IMO CLIMATE contribution to the imo CLIMATE fund**

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 (the Committee) conferred upon it by international conventions for the prevention and control of marine pollution from ships,

RECALLING ALSO that it adopted, by resolution MEPC.XXX(XX), 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 (Establishment of the IMO Climate Fund),

NOTING that the aforementioned amendments to MARPOL Annex VI, which included a new regulation CC of MARPOL Annex VI establishing an IMO Climate Fund (ICF), entered into force on [XXX],

NOTING ALSO that regulation DD.1 of MARPOL Annex VI, as amended, requires each ship to make an IMO climate contribution to the ICF,

RECOGNIZING that the aforementioned amendments to MARPOL Annex VI require the Organization to determine a fixed rate and value for the IMO climate contribution,

HAVING CONSIDERED, at its [seventy-XXX] session, a draft IMO climate contribution to the IMO Climate Fund,

1 ADOPTS the IMO climate contribution to the IMO Climate Fund, as set out in the annex to the present resolution;

2 REQUESTS the Parties to MARPOL Annex VI and other Member Governments to bring the IMO climate contribution to the attention of shipowners, ship operators, charterers, port State authorities and any other interested parties.

**ANNEX**

**IMO CLIMATE contribution to the IMO CLIMATE FUND**

1 Pursuant to regulation DD.1 of MARPOL Annex VI, the IMO climate contribution made to the IMO Climate Fund for each ship shall be calculated as follows:

**Rate of IMO climate contribution**: Tonne of fuel oil \* CF[[13]](#footnote-13) = CO2 emissions[[14]](#footnote-14)

**Value of IMO climate contribution**: For liquid fuel oil including Diesel/Gas Oil, Light Fuel Oil (LFO) and Heavy Fuel Oil (HFO)[[15]](#footnote-15):

 US$XXX per tonne of CO2 emissions

 (equivalent to US$X per tonne of liquid fuel oil consumed by the ship)

For LPG[[16]](#footnote-16):

US$XXX per tonne of CO2 emissions

(equivalent to US$X per tonne of LPG consumed by the ship)

For LNG:

US$XXX per tonne of CO2 emissions
(equivalent to US$X per tonne of LNG consumed by the ship)

Methanol:

US$XXX per tonne of CO2 emissions

(equivalent to US$X per tonne of methanol consumed by the ship)

Ethanol:

US$XXX per tonne of CO2 emissions

(equivalent to US$X per tonne of ethanol consumed by the ship)

2 In the case of a ship equipped with a dual-fuel main or auxiliary engine, the ship shall provide the ICF with fuel oil consumption data for both types of fuel, as provided to the Administration in accordance with regulation 27.3 of MARPOL Annex VI.

3 Notwithstanding the requirement under regulation DD.1 of MARPOL Annex VI for a ship to make an IMO climate contribution to the IMO Climate Fund, the entity responsible for paying for the cost of the fuel oil shall be responsible for meeting the cost of the IMO climate contribution. When a ship is hired out to a charterer and is operating under a charter party clause which requires, inter alia, the charterer to pay for the fuel oil purchased for consumption on that ship, the cost of the associated IMO climate contribution to the IMO Climate Fund for that ship shall be the responsibility of the charterer.

4 The mandatory IMO climate contribution by a ship to the funding mechanism established for international shipping should not be duplicative, and emissions or fuel oil consumption for the basis of such a contribution should be accounted for only once.

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1. <http://mission-innovation.net/missions/shipping/> [↑](#footnote-ref-1)
2. *World Bank and IMF (2012). Market-based instruments for international aviation and shipping as a source of climate finance. Keen, M., Parry, I., Strand, J. (January 2012) WPS No. 5950, Washington, DC: World Bank.* [↑](#footnote-ref-2)
3. *Chai, K-H., Xin Ni, L., Gaudin, A. (2019). A Systems Perspective to Market – Based Mechanisms (MBM) Comparison for International Shipping. 10.2139/ ssrn.3347448. Subsequently re-issued as: A Multi-Criteria Analysis of Market-Based Mechanisms for CO2 mitigation in International Shipping, Working Paper, 24 February 2020, National University of Singapore* [↑](#footnote-ref-3)
4. Psaraftis H, Zis T, Lagouvardou S (2021). A Comparative Evaluation of Market Based Measures for Shipping Decarbonization, Technical University of Denmark Maritime, Transport Research 2 (2021) 100019 [↑](#footnote-ref-4)
5. United States Congressional Budget Office (2008) Policy Options for Reducing CO2 Emissions, February 2008, The Congress of the United States, Pub. No. 2930, Summary, p. V [↑](#footnote-ref-5)
6. By MEPC resolution at the time of adoption of these amendments. See annex 2 of this document. [↑](#footnote-ref-6)
7. By MEPC resolution at the time of adoption of these amendments. See annex 2 of this document. [↑](#footnote-ref-7)
8. By MEPC resolution at the time of adoption of these amendments. See annex 3 of this document. [↑](#footnote-ref-8)
9. Guidelines to be developed on alternative low-carbon fuels and energy sources, or fuels with lower GHG emissions than conventional fuel oil and “zero” CO2 emitting ships, including consideration of WTW or TTW emissions. [↑](#footnote-ref-9)
10. By MEPC resolution at the time of adoption of these amendments. See annex 2 of this document. [↑](#footnote-ref-10)
11. Alternatively, the particulars of the ship may be placed horizontally in boxes. [↑](#footnote-ref-11)
12. In accordance with IMO ship identification number scheme (resolution A.1078(28)). [↑](#footnote-ref-12)
13. CF; Conversion factor between fuel consumption and CO2 emissions, as set out in paragraph 2.2.1 of annex to resolution MEPC.308(73) 2018 Guidelines on the method of calculation of the attained Energy Efficiency Design Index (EEDI) for new ships, as amended. [↑](#footnote-ref-13)
14. Guidelines to be developed on alternative low-carbon fuels and energy sources, or fuels with lower GHG emissions than conventional fuel oil and “zero” CO2 emitting ships, including consideration of WTW or TTW emissions. [↑](#footnote-ref-14)
15. For the purpose of calculating the IMO climate contribution to the ICF, the CO2 emissions of all types of liquid fuel oil are treated as being equal to Diesel/Gas Oil. [↑](#footnote-ref-15)
16. The CO2 emissions of butane LPG are regarded as equal to propane. [↑](#footnote-ref-16)