INTERNATIONAL MARITIME ORGANIZATION

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INTERSESSIONAL MEETING OF THE WORKING GROUP ON REDUCTION OF GHG EMISSIONS FROM SHIPS
18th session
Agenda item 2

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FURTHER CONSIDERATION OF THE DEVELOPMENT OF THE BASKET OF CANDIDATE MID-TERM GHG REDUCTION MEASURE(S), USING ANNEX 1 TO DOCUMENT MEPC 82/WP.9 AS THE BASIS

Updated prototype for web-based, automated GHG levy/contribution and reward mechanism, to be administered by the proposed IMO GHG Strategy Implementation Fund

Submitted by ICS

SUMMARY

Executive summary:	In support of the consolidated proposal for draft amendments to MARPOL Annex VI set out in document ISWG-GHG 18/2/5 (Austria et al.), this document contains a link to an updated prototype for a web-based and fully automated maritime GHG emissions pricing mechanism, to be administered by the proposed IMO GHG Strategy Implementation Fund, for calculating and collecting annual GHG levy/contributions from ships per tonne of CO_2e emitted and for calculating and disbursing rewards to ships for CO_2e emissions prevented by the use of eligible zero or near-zero GHG emission technologies, fuels and/or energy sources (ZNZs).
Strategic direction, if applicable:	3
Output:	3.2
Action to be taken:	Paragraph 17
Related documents:	MEPC 82/WP.9; ISWG-GHG 17/2/5 and ISWG-GHG 18/2/5

Introduction

1 In document ISWG-GHG 18/2/5 (Austria et al.), the co-sponsors of that document (which include ICS) set out a consolidated proposal, inter alia, for a maritime GHG emissions pricing mechanism, with the annex to the document setting out draft amendments to MARPOL Annex VI that require an annual GHG levy/contribution to be made by ships per tonne of CO_2e emitted via an IMO GHG Strategy Implementation Fund. The draft regulations proposed by the same joint submission also set out requirements for rewards to ships that use eligible ZNZ fuels.

2 In support of the proposed draft amendments to MARPOL Annex VI set out in document ISWG-GHG 18/2/5, ICS has updated its working prototype of a fully automated, internet-based, GHG levy/contribution and reward system, which would be administered by the proposed IMO GHG Strategy Implementation Fund.

3 An internet link to allow Member States to explore how the GHG levy/contribution and reward system will work can be found here: **Combined sets – IMO GHG Strategy Implementation Fund Prototype 2025 (figma.com)**

Discussion

4 This updated prototype is intended to demonstrate how the proposed draft MARPOL Annex VI amendments, set out in the annex to document ISWG-GHG 18/2/5, which are addressed to the Organization, might be implemented in real life. This is to show the practicality and feasibility of the Organization establishing such an automated mechanism by 2028, from which date annual GHG levy/contributions would begin to be transferred by ships to the proposed IMO GHG Strategy Implementation Fund.

5 This prototype, previously submitted to ISWG-GHG 16, has been updated as follows:

.1 to be consistent with the terminology used in the annex of document ISWG-GHG 18/2/5;

.2 to be consistent with the convergent view amongst the co-sponsors of document ISWG-GHG 18/2/5 that each ship's verified fuel consumption data, as reported by its flag State Administration to the Organization via the IMO Fuel Oil Data Collection System (DCS), should be transferred by the Organization to the proposed IMO GHG Strategy Implementation Fund, so that the annual GHG levy/contribution can be calculated and collected; and

.3 so that, as proposed in document ISWG-GHG 17/2/5 (Bahamas et al.), each ship would be allocated an account with the IMO GHG Strategy Implementation Fund, linked to each ship's unique IMO number, to which this verified data about fuel consumption and CO_2e emissions during the previous calendar year would – to be consistent with the proposal set out in document ISWG-GHG 18/2/5 – be automatically transferred by the Organization as soon as it is reported to the Organization by the flag State Administration.

6 The purpose of this updated prototype is to show how a system can readily be established for a maritime GHG emissions pricing mechanism, using an annual GHG levy/contribution system which – as proposed by document ISWG-GHG 18/2/5 – also includes a reward element for the use of ZNZ fuels, whilst minimizing additional administrative burden for both Administrations and the Organization.

7 The prototype also demonstrates how, for the majority of ships initially using eligible ZNZ fuels which are likely to be dual fuel ships that will also be using non-ZNZ fuels, if the annual reward due for the CO_2e emissions prevented is less than the annual GHG levy/contribution which is due for the same reference period, that the annual reward can be deducted from the annual GHG levy/contribution so that the ship can transfer a "net" GHG levy/contribution to the IMO GHG Strategy Implementation Fund. The prototype also shows how the small number of ships, in the early years of implementation, which might primarily consume ZNZ fuels would receive a "net" annual reward for CO_2e emissions prevented during the preceding calendar year.

8 As ICS takes no firm position on what the rate of the annual levy/GHG contribution should be, for illustrative purposes only, this updated prototype allows the user to select a GHG levy/contribution rate set at either $6.24 per tonne of CO_2e (equivalent to $20 per tonne of diesel/gas oil) or $62.40 per tonne of CO_2e (equivalent to $200 per tonne of diesel/gas oil). Also, for illustrative purposes only, the reward rate per tonne of eligible ZNZ fuel consumed, as used by this prototype, is set at $100 per tonne of CO_2e prevented. In practice, it is expected that both the annual GHG levy/contribution rate and the reward rate will be decided at MEPC/ES.2 (October 2025), when the amendments to MARPOL Annex VI and guidelines with respect to the calculation of GHG levy/contribution and reward rates for different fuel types will be adopted concurrently.

9 This updated prototype, which would use data already being provided by ships for the existing IMO DCS in accordance with regulation 27 of MARPOL Annex VI, as may be amended to facilitate reporting consumption of other types of fuel, including ZNZ fuels, demonstrates:

.1 how the annual GHG levy/contribution by ships per tonne of CO_2e emitted would be automatically calculated and collected by the IMO GHG Strategy Implementation Fund;

.2 how rewards to ships for CO_2e emissions prevented by the use of eligible ZNZ fuels could be calculated and disbursed; and

.3 how – consistent with the consolidated proposal in document ISWG-GHG 18/2/5 – the IMO GHG Implementation Fund would provide flag State Administrations with the information required, via an annual Electronic Account Statement which will be generated for each ship following receipt of the required annual GHG levy/contribution, to allow flag State Administrations to issue each ship with a Statement of Compliance.

10 The Working Group is invited to note that the annual GHG levy/contribution rates and reward rates used by this updated prototype to calculate contributions and rewards per tonne of fuel consumed for different fuel types are for illustrative purposes only, using CO_2e conversion factors and energy density figures which may be different to those which are finally agreed at MEPC/ES.2, based on the [2025] LCA Guidelines. This prototype is only intended to provide a general indication of how the contribution and reward system will work and the value of rewards that might be received by ships for the use of ZNZ fuels that may be eligible for rewards.

11 By exploring the prototype, the Working Group will be able to see:

.1 that shipping companies whose ships which are required to make annual GHG levy/contributions per tonne of CO_2e emitted can create an account for each ship which is linked to the IMO ship identification number;

.2 all calculations of annual GHG levy/contributions and rewards can be conducted automatically by the IMO GHG Strategy Implementation Fund, as well as the collection of annual GHG levy/contributions and the disbursement of rewards for the CO_2e prevented by the use of eligible ZNZs, and the generation of documentary evidence to show that the required annual GHG levy/contributions have been made;

.3 no monies would be handled by governments, and that using an annual Electronic Account Statement to be generated by the IMO GHG Strategy Implementation Fund, which each ship can transmit to its flag State

Administration, the only task of Administrations (or organizations acting on their behalf) will be to issue the ship with a Statement of Compliance; and

.4 for biofuels, as these will for the most part be used by ships as biofuel blends, the system allows the liquid fuel oil and biofuel components of the biofuel blend to be reported separately, with contributions and rewards for these components also calculated separately. (For simplicity, the prototype uses the example of a 10% biofuel blend, rather than, for example, B24.)

12 Furthermore, by exploring this prototype, which is meant to be intuitive, it can be seen that the incentive to use ZNZ fuels can be provided by a reward to each ship for the CO_2e emissions prevented by the use of eligible ZNZ fuels which works in combination with a lower annual GHG levy/contribution rate, per tonne of fuel consumed, compared with using a non-ZNZ fuel.

13 Another feature of the prototype is a "Pay As You Go" function, so that – consistent with the consolidated proposal in document ISWG-GHG 18/2/5 – ships will have the option of making contributions in advance whenever fuel is purchased, rather than making a single annual GHG levy/contribution to the IMO GHG Strategy Implementation Fund. This is so that the ship can recover the cost of the annual GHG levy/contribution from other stakeholders, such as charterers, at the time when marine fuel is purchased, given that there could be a significant gap of up to 18 months between the date when fuel is consumed (and CO_2e is emitted) and the time when the annual GHG levy/contribution is transferred by the ship (by its company) to the IMO GHG Strategy Implementation Fund.

14 Finally, it should be noted that the system used by this prototype could also be used to calculate rewards for CO_2e emissions prevented by the use of onboard carbon capture technology, although, at the moment, only a "place holder" has been inserted to accommodate this possibility.

Possible costs to the Organization of establishing a fully automated web-based GHG levy/contribution and reward mechanism

15 If based on something similar to this prototype, it is currently estimated that the cost in the private sector of establishing a fully operational, automated and web-based contribution and reward system to be administered by the IMO GHG Strategy Implementation Fund would be around $1.5 million. If work on this commences immediately following MEPC/ES.2, it should be feasible and practical for it to be fully operational and thoroughly tested before 2028, which is when GHG levy/contributions from ships would start to be collected.

16 This would include all of the necessary financial technology and (cyber) security protocols, such as those used by commercial banks, public utilities or local authorities, to carry out all of the necessary financial transactions, for tens of thousands of ships each year, in a safe and secure manner.

Action requested of the Working Group

17 The Working Group is invited to consider the information contained in this document and to explore the updated prototype, via the internet link provided in paragraph 3, to gain a better understanding of how the "IMO Net-Zero Framework" would be implemented if based on the draft amendments to MARPOL Annex VI as set out in document ISWG-GHG 18/2/5, and take action as appropriate.

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