



IMO News Brief

ISWG-GHG 18



The 18th session of Inter-sessional Working Group on Reduction of GHG Emissions from Ships (hereinafter referred to as ISWG-GHG) was convened as a hybrid meeting from 17th April to 21st February 2025. This news briefs on the discussion progress and the outcomes of ISWG-GHG 18.

Executive summary

Regarding the combined mid-term measures for GHG reduction in international shipping discussed during the 18th ISWG-GHG meeting, no decisions were reached on the specifics of technical and economic measures due to sharp conflicts among country groups, including developed countries, developing countries, and small island developing states (SIDS), as follows:

- The method for calculating achieved GHG Fuel Intensity (GFI) remains unresolved. Specifically, there is no consensus on whether to include the full lifecycle GHG emissions of marine fuel (using a Well-to-Wake basis) or to consider only the onboard emissions (Tank-to-Wake basis).
- No decision has been made regarding the introduction of a separate levy per tonne of GHG emissions as an economic measure, alongside the trading or purchase of GHG credits.
- A compromise of the two – a new option was put forwards but fails to gain support.

For further details on the discussion, please refer to the following items:

1. Basket of mid-term measures to reduce GHG emission from international shipping

In accordance with the "Milestone" outlined in the 2023 IMO Revised Strategy for GHG Reduction (Res. MEPC.377(80)), the integrated amendment to MARPOL Annex VI for the implementation of IMO mid-term measures (IMO Net-Zero Framework) must be approved at the 83rd session of the MEPC, scheduled for April 2025. To advance the development of mid-term measures and bridge the differences surrounding the above issues, the 18th session of the ISWG-GHG continued discussions on combined mid-term measures, focusing on the following key aspects:

Framework	Key functions
<p>GHG Fuel Standard with a flexible mechanism and a GHG pricing mechanism</p>	<ul style="list-style-type: none"> ● Applying the GHG reduction targets (annual reduction for 2027 to 2035, 2040, 2045 and 2050) from the 2023 revised Strategy to establish a GHG emissions pathway in absolute terms. ● The attained GFI (GHG Fuel Intensity) will be calculated based on the WtW GHG emissions, as defined in the LCA Guidelines. It also includes a remedial action that allows ships that cannot operate on low-GHG fuels to continue to operate, by using the Surplus Compliance Units (SCU)¹ or Remedial Compliance Units (GCU)². ● The universal GHG contribution of \$100 per tonnes of CO_{2eq} was proposed and the uptake of zero or near-zero GHG fuels which emit less than 10 gCO_{2eq}/MJ will be subject to the incentives. The revenue collected will be used for rewards for eligible zero or near-zero emission technologies, support for energy transition, and promotion of research, development and innovation (R&D&I).
<p>International Maritime Sustainable Fuels and Fund</p>	<ul style="list-style-type: none"> ● Target GHG fuel intensity (GFI) set using Tank-to-Wake (TtW³) Value

¹ Over-compliant ships earn rewards by selling the units to non-compliant ships

² Non-compliant ships buy GHG Remedial Units at a certain price from GFS Registry as a last resort compliance option

³ Tank-To-Wake(Propeller) emissions factor, also known as downstream or direct emissions, is an average of all the GHG emission released into the atmosphere from a fuel consumption to operate a ship.

(INSF&F) mechanism	<p>2⁴. Attained GFI calculated on the based on TtW Value 2, with adjustments for Well-to-Wake (WtW⁵) GHG emissions and sustainability performance.</p> <ul style="list-style-type: none"> ● It also provides a flexible mechanism allowing the transaction of Surplus Units (SU) between ships in a compliance pool. Non-compliant ships can obtain Remedial Units (RU) through monetary contributions to the Sustainable Shipping Fund (SSF). ● Under this framework, the application of an independent levy is not required to avoid double taxation. Revenues collected will be used for rewards for eligible zero or near-zero (ZNZ) GHG fuels and technologies, promotion of R&D and technology transfer, support for capacity-building and infrastructure investment in developing countries, and mitigation of negative impacts on developing countries.
Universal mandatory GHG Levy with a simplified Global GHG Fuel Standard	<ul style="list-style-type: none"> ● A carbon levy (\$ 150) to be introduced in 2027 based on well-to-wake CO_{2eq}, in accordance with the guidelines on lifecycle GHG intensity of marine fuels (LCA guidelines). At each 5-year period the levy rate (per tonne of CO_{2eq}/GHG) will be reviewed and increased as necessary to further reduce or eliminate the price gap between fossil fuels and low- and zero-GHG technologies and fuels. ● Flexibility mechanisms such as credit trading SCU/GCU units, pooling and FONAR are not accepted under this framework. ● Revenues collected will be used for supporting climate-vulnerable developing countries, particularly Small Island Developing States (SIDS) and Least Developed Countries (LDCs) as a priority, GHG emission mitigation measures (offer targeted incentives for ships that surpass GFI targets and fund RD&D of eligible ZNZs), and a just transition for the international maritime workforce.
Simplified Global GHG Fuel Standard with Pooling⁶ Compliance mechanism	<ul style="list-style-type: none"> ● GHG fuel intensity is calculated on a Well-to-Wake basis, and the pooling compliance is allowed provided the arithmetic average GFI of participating ships meets the required GFI. No credits (units) is generated, traded, or banked, and simple fixed "GHG surcharge fee" applies to under-compliant ships. ● An initial flat fee (\$18.75 per tonne of CO_{2e} emitted, equivalent to about \$60 per tonne of conventional fuel) from ships as part of a fund and a reward (\$100 per tonne of CO_{2e} prevented) and the need to narrow the price gap between alternative and conventional fuels via a rewards programme for CO_{2eq} or GHG emissions prevented by ships using eligible alternative fuels were proposed. ● Bunker Delivery Note (BDN) can be used as a basis for compliance with the required GFI for individual ship. Under this scheme, a ship not able to purchase compliant fuel oil to meet the required GFI is allowed to consider FONAR (Fuel Oil Non-Availability Report) system. ● At least 80% of the revenues will be used to reward ZNZs. The revenues will be limited to the purposes directly contributing to shipping decarbonization or climate adaptation for maritime sector such as capacity-building in developing countries, funding for R&D for alternative fuels and innovative technologies, etc.

⁴ "TtW GHG intensity value 2", as defined in the 2024 *Guidelines on life cycle GHG intensity of marine fuels* (2024 LCA Guidelines), accounts for the carbon source of biogenic fuels or those made from captured carbon. This calculation allows CO₂ converted from these sources to be excluded from downstream emissions. For instance, sustainable advanced bio-methanol would have zero CO₂ emissions when measured by TtW Value 2.

⁵ Well-To-Tank emissions factor, also known as upstream or indirect emissions, is an average of all the GHG emissions released into the atmosphere from the production, processing and delivery of a fuel or energy vector.

⁶ The mechanism would permit a ship, or ships, which 'over-comply' with the required GFI – operated by the same or different companies and registered with one or more flag states – to share the 'excess' required GFI with another ship or ships in the 'pool' that may be unable to comply fully with the requirement.

Green Balance Mechanism (GBM)	<ul style="list-style-type: none"> ● Green Balance GFI to enable the use of green fuel, based on a GFI reference line which is aligned with IMO's net-zero endpoint, was proposed. ● Incentivization and penalization would be determined by the performance of a ship relative to the GFI and Green Balance GFI reference line. The GBM would use WtW calculations to establish the attained GFI value for the reporting period and allows for the use of flexible compliance mechanisms or pooling of ships. ● Under this framework, the application of an independent levy is not required. Payment into, and allocation from, the Fund would be proportional to the GHG reduction achieved as follows: <ul style="list-style-type: none"> - Ships which have an attained GFI equal to, or less than 65% reduction from the reference GFI would be required to contribute into the green balance fund; - Ships with an attained GFI values equal to or better than 65% reduction from the reference GFI, but less than 80% reduction, will receive a green balance allocation from the green balance fund; - Ships with an attained GFI value equal to or better than 80% reduction from the reference GFI will also receive a higher level of green balance allocation.
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ISWG-GHG 18 continued developing "IMO Net-Zero Framework" as amendments to MARPOL Annex VI on legal implementation of IMO Mid-term measures for the purpose of incorporating into one single text and considered following outstanding elements:

Draft Regulations	Main Contents
Applicability	<ul style="list-style-type: none"> ● It was agreed that new chapter 5 of MARPOL Annex VI (IMO GHG Mid-term measures) shall apply to all ships of 5,000 gross tonnage and above, as same as the current IMO DCS reporting framework. ● Regarding the expansion of the application of chapter 5 to ships of 400 GT and above, it was agreed to further review in future evaluations of the GHG Strategy and the Fifth IMO GHG Study.
Regulations for the non-Party ships	<ul style="list-style-type: none"> ● The treatment of non-Party ships was discussed that the related provisions should be included in the legal text rather than guidelines. ● Given the opinion that it ensures compliance with port State control and facilitate contributions to the Fund and the issuance of Statement of Compliance (SoC), a placeholder was kept for further discussions in the next sessions.
Goal	<ul style="list-style-type: none"> ● The goal of new chapter 5 of MARPOL Annex VI was agreed: The goal of this chapter is to reduce GHG emissions from international shipping as soon as possible, delivering on the reduction targets set out in the <i>2023 IMO Strategy on Reduction of GHG emissions from ships</i>, 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.
Functional requirements	<ul style="list-style-type: none"> ● The functional requirements could mirror the text in the 2023 GHG Strategy regarding the technical and economic measures of the basket, as this text has already been agreed upon. Thus, it was agreed to further consider the functional requirements once the consideration of the measures has been finalized.
Application date of GHG Fuel Intensity (GFI)	<ul style="list-style-type: none"> ● While maintaining the entry into force date for IMO Mid-term measures of 1 March 2027, it was agreed to left the reference to the 2028 calendar year in square brackets for further consideration at the next session, given the practical reasons that the first effective application year of GFI data collection had to be 2028 since SEEMPs may only be updated after entry into force of the amendments, and the attained GFI

	<p>could only be calculated using data from the full preceding calendar year (1 January to 31 December).</p>
<p>Attained GFI calculation methodology</p>	<ul style="list-style-type: none"> ● There are the main differences in the draft legal text concerning the GFI calculation methodology as follows: <ul style="list-style-type: none"> - How to take into account the well-to-wake (WtW) GHG emissions of marine fuels as addressed in the LCA Guidelines ● The formula below calculates the average GHG intensity of all energy and fuels used by a ship. It multiplies the GHG intensity (EI) of each energy source by the energy used (Energy), sums the results, and divides by the total energy consumption (Energy_{total}) to obtain the attained GFI value. A lower value indicates more environmentally friendly energy usage. $GFI_{attained} = \frac{\sum_{j=1}^J EI_j \times Energy_j}{Energy_{total}}$ ● However, there is still no agreement on whether the GHG intensity of each fuel should be determined based on the well-to-wake basis (fuel life cycle GHG emissions) or the adjusted tank-to-wake basis (ship GHG emissions). ● In particular, the term "adjusted tank-to-wake basis" refers to the GFI for a specific fuel type based on the ratio between the WtW and TtW reference values. This adjustment involves applying a correction factor of approximately 0.8 to the GHG emissions calculated on a WtW basis, thereby slightly reducing the reported GHG emissions. <ul style="list-style-type: none"> - The possible inclusion of a correction factor relaxing the application of the regulations for some shipping routes (f_{voy}). ● While the formula below is essentially the same as the method for calculating the GHG fuel intensity of individual ships mentioned above, a specific correction factor (F_{voy}) is further given in the formula. This correction factor is applicable to ships servicing in the eligible ports located in developing countries that are expected to be negatively impacted by the introduction of Mid-term measures, helping to reduce the total energy consumption. $GFI_{attained} = \frac{\sum_{j=1}^J EI_j * Energy_j}{Energy_{total}} \cdot (1 - f_{voy})$ ● As described above, an agreement on how to calculate the attained GFI for individual ships could not be reached due to sharp conflict among country groups, including developed countries, developing countries, and small island developing state (SIDS), instead it was agreed to keep the equations for the "full WtW approach", the "adjusted TtW approach" and the equation including the F_{voy} factor with square brackets for further consideration at the next sessions.
<p>GFI Alternative Compliance Approaches</p>	<ul style="list-style-type: none"> ● The alternative compliance approaches allow the trading of GHG emissions among ships as part of the technical measures. The non-compliant ships using fossil fuels that cannot meet the required GFI may comply with the standard by purchasing Surplus Compliance Units from the ships using alternative fuels with low GHG emissions or GHG Remedial Compliance Units from GFS Registry with the predetermined price.

	<ul style="list-style-type: none"> ● In addition, a pooling compliance allowed for non-compliant ships by teaming up with over-compliant ships has also been discussed, this mechanism would permit over-compliant ships to share their emission credits with non-compliant ships in the same pool. ● However, due to divergent views regarding the appropriate price level of Remedial Units, the mechanism for determining Remedial Unit prices, and the potential inequalities among countries caused by the credit trading scheme, an agreement could not be reached. It was agreed to further discuss the matter in the next session.
<p>Basic functionalities of the GFI Registry</p>	<ul style="list-style-type: none"> ● The GFI Registry is a central system that collects and manages GFI data for individual ships, supporting the implementation of the GFI alternative compliance option. For example, ships that exceed the required GFI value can generate Surplus Compliance Units through this registry and trade them with other ships. ● Additionally, the registry manages the GFI emissions of ships and facilitates the purchase of Remedial Compliance Units if a ship fails to meet the required GFI value and is unable to acquire surplus units.
<p>Uptake of zero or near-zero GHG emission technologies, fuels and/or energy sources</p>	<ul style="list-style-type: none"> ● The IMO mid-term measures are designed to provide incentives for ships using zero or near-zero GHG emission technologies, fuels, and/or energy sources. However, clear definitions for these terms have not yet been established. To provide the industry with a clear benchmark for GHG reduction technology levels, it was agreed to further discuss the definitions of zero and near-zero GHG emission technologies in the next session.
<p>Economic measures</p>	<ul style="list-style-type: none"> ● The economic measures related to the IMO mid-term measures refer to the introduction of market-based mechanisms (MBMs) to promote the reduction of GHG emissions from ships. ● These measures aim to create economic incentives for ship operations and fuel choices by imposing costs on GHG emissions or providing rewards for cleaner practices. The level of the levy contribution has been proposed within the range of USD 18.75 to 150 per tonne of CO₂eq so far. ● However, a consensus could not be reached on the possible approaches for revenue generation, such as a mandatory, predictable financial contribution or revenue generated as a by-product from the acquisition of GFI remedial units. This reflects the ongoing debate on whether to introduce a separate levy per tonne of GHG emissions as an economic measure, in addition to the trade or purchase of GHG credits allowed under the alternative compliance mechanism. ● In this regard, the following bridging proposal was additionally considered to reconcile the proposals for the universal levy framework and the alternative compliance approach. <div data-bbox="683 1619 1273 2033" style="text-align: center;"> </div>

	<ul style="list-style-type: none"> ● This means that ships using zero or near-zero fuels and technologies will not be subject to levy contribution. Instead, they can generate Surplus Compliance Units (SCUs), which can be sold as emission allowances to ships that fail to meet the required GFI standards, thereby creating a revenue stream. ● However, ships with attained GFI falling under Tier I will be required to pay a certain amount as a levy. Ships classified under Tier II will face an additional surcharge, imposed as a punitive levy on top of the Tier I carbon tax. However, the specific baseline values for distinguishing each Tier, as well as the exact amounts for the SCUs, levy, and punitive surcharge, have not been clearly defined. ● As mentioned above, while there was overall support for the introduction of economic measures to achieve net-zero GHG emissions in international shipping by 2050, sharp disagreements among countries regarding the approaches between the universal levy framework and the alternative compliance approach prevented a final agreement. It was agreed to continue discussions in the next session, including consideration of possible bridging options.
<p style="text-align: center;">Organizational and operational aspects of the IMO Net-zero Fund</p>	<ul style="list-style-type: none"> ● The IMO Net-Zero Fund is being considered as a financial mechanism to support the achievement of net-zero GHG emissions in international shipping by 2050. This fund is expected to be established based on revenues generated through market-based mechanisms, such as a carbon levy or the purchase of remedial units. It aims to provide financial support for the sustainable transition of the international shipping industry while ensuring equitable assistance for developing countries and vulnerable regions. ● While there was overall support for the establishment of the IMO Net-Zero Fund, further discussions are needed regarding its operational regulations, board composition, and initial cost coverage. There was general consensus that MARPOL Annex VI should include only the minimum necessary provisions, while detailed operational aspects should be managed through guidelines. Notably, the preferred approach is to operate the IMO Net-Zero Fund independently, utilizing the fund's own resources without imposing additional financial burdens on IMO. Therefore, the IMO Net-Zero Fund is intended to provide financial support for the transition to net-zero GHG emissions in international shipping, ensuring fair fund management and inclusive participation of developing countries, with further discussions scheduled for the next session.
<p style="text-align: center;">Disbursement of revenue</p>	<ul style="list-style-type: none"> ● The fund generated from the implementation of IMO mid-term measures is being discussed for various uses, including providing incentives for alternative-fuel ships, developing infrastructure for alternative fuel supply in developing country ports, and supporting GHG-vulnerable countries such as small island developing states (SIDS). However, sharp disagreements driven by differing national interests continue to prevent a consensus from being reached. ● Various opinions were presented regarding the revenue disbursement and reward system of the IMO Net-Zero Fund, including rewards for zero or near-zero GHG technologies, support for developing countries, and coverage of administrative costs. It was agreed that MARPOL Annex VI should only specify the key areas of fund allocation, while detailed operational aspects would be managed through separate guidelines. Further detailed discussions on specific provisions and legal aspects will continue in the next session.
<p style="text-align: center;">Review provision</p>	<ul style="list-style-type: none"> ● The review process of the IMO Mid-term Measures is designed to evaluate the effectiveness of the implemented measures, assess the

	<p>level of goal achievement, and facilitate adjustments if necessary. However, considering the lack of final agreement on the GFI calculation method and the approach to GHG taxation, it was deemed premature to finalize the details of the review provisions. Consequently, it was agreed to continue discussions on this matter in the next session.</p>
<p>Further development of new and existing guidelines and appendices to MARPOL Annex VI</p>	<ul style="list-style-type: none"> ● To technically and procedurally support the implementation of the IMO mid-term measures, the need for additional guidelines has been identified, including the calculation guidelines for attained GFI, guidelines for implementing the GFI alternative compliance mechanism, guidelines for the operation and management of the GFI registry, and guidelines for the operation and management of the IMO Net-Zero Fund. These guidelines are expected to be developed with the aim of being adopted alongside the MARPOL Annex VI amendments during the special MEPC session for the adoption of the IMO mid-term measures.

Discussions on developing mid-term measures to further reduce GHG emissions from international shipping will continue at ISWG-GHG 19, scheduled for 31 March to 1 April 2025. Meanwhile, draft amendments to MARPOL Annex VI aimed at implementing these measures will be approved at MEPC 83 from 7 to 11 April 2025 and entered into force on 1 March 2027 after being adopted at an extra MEPC session in the latter half of 2025.

Should you have any questions, please contact P.I.C. Thank you.

**General Manager
Convention & Legislation Service Team**

P.I.C: Kim Hoijun / Principal surveyor
Tel: +82 70 8799 8330
Fax: +82 70 8799 8339
E-mail: convention@krs.co.kr

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