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CVF INSIGHTS

DECARBONIZATION OF THE INTERNATIONAL SHIPPING SECTOR

ENSURING A JUST & EQUITABLE TRANSITION



Photo credit: Cargo ship terminal | Sven Hansche, Shutterstock

Member States of the International Maritime Organization (IMO), including numerous Climate Vulnerable Forum (CVF) members, have been actively involved in negotiations to decarbonize the activities of the international shipping sector during the past decade.

FROM AMBITIOUS TARGETS TO LEGALLY BINDING MEASURES

IMO negotiations since 2018 resulted in adoption of the 2023 IMO Strategy on Reduction of Greenhouse Gas (GHG) Emissions from Ships (IMO GHG Strategy). This unanimously adopted Strategy commits the industry to reaching net-zero “...by or around, i.e. close to, 2050”, with checkpoints to cut GHG emissions by 20-30% by 2030 and by 70-80% by 2040.¹ This barely gives us a fighting chance at ensuring shipping makes a proportionate contribution to keeping warming below 1.5 degrees.²

Beyond these mitigation targets, the IMO GHG Strategy has committed to developing legally binding measures that *should* be aligned with the CVF 1.5°C limit that will “...effectively promote the energy transition of shipping and provide the world fleet with a needed incentive while contributing to a level playing field and a just and equitable transition.”³ These measures need to ensure that the Strategy’s targets will be met. Failing to do so would further jeopardize the habitability of the planet, particularly in CVF countries.

The IMO is unique in two ways. First, it regulates a global industry that sets uniform rules for the entire shipping fleet, regardless of flag or ownership. This ensures a level playing field and the highest possible level of compliance. Second, the IMO has legally binding “Conventions” that are enforced by both Flag States and Port States. This overlap of responsibilities means that it is difficult to evade rules and obligations.

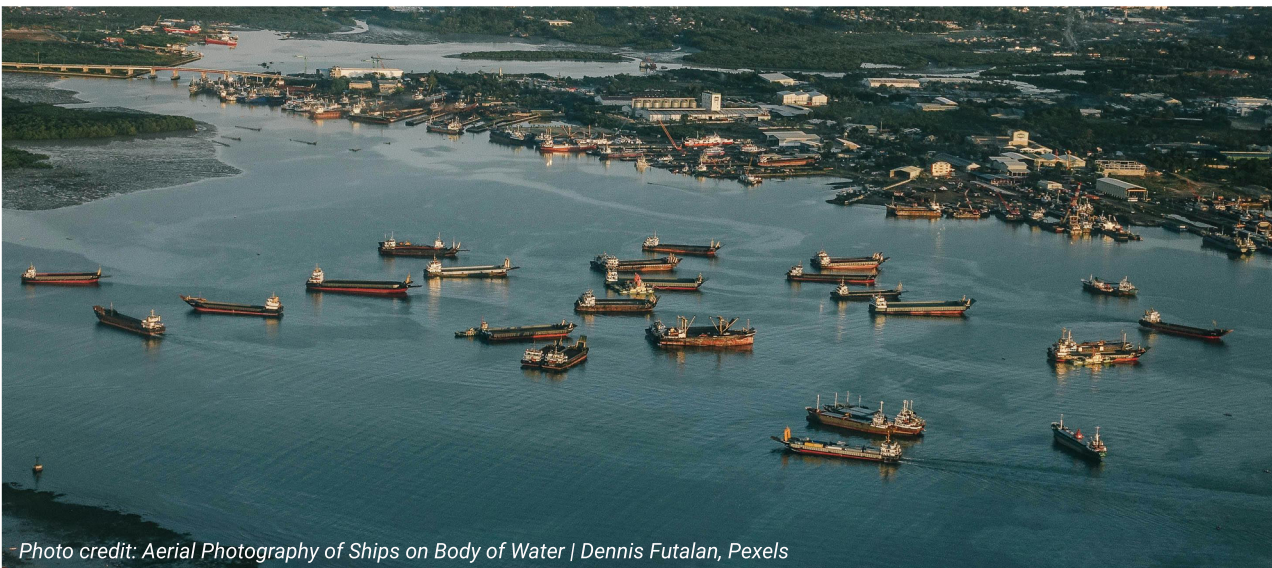


Photo credit: Aerial Photography of Ships on Body of Water | Dennis Futalan, Pexels

¹ [IMO RESOLUTION MEPC.377\(80\)](#) (All IMO documents are accessible through [IMODOCS](#))

² [Bullock, Mason, and Larkin, 2023](#); [De Beukelaer and Smith 2023](#).

³ [IMO RESOLUTION MEPC.377\(80\)](#); see [Shaw and De Beukelaer, 2022](#) for a substantive discussion of what a Just and Equitable Transition means at the IMO.

By mid-2025 IMO Member States need to agree on adopting the necessary measures called for in the IMO GHG Strategy. It has already been agreed that the measures will include a combination of a technical element and an economic element. The technical measure is named in the Strategy as a Global Fuel Standard (GFS), which lowers the allowed GHG fuel intensity in line with the Strategy's targeted emissions reductions. The economic measure is more controversial, as some want to only price emissions *above* the GFS threshold, whereas *all* shipping's GHG emissions need to be priced to ensure the polluter pays. Numerous states, including Pacific and Caribbean Islands, as well as the EU, have therefore called for a Universal GHG Levy that ensures the industry has the certainty and clarity needed to kick-start the necessary investments.⁴

This levy, if adopted, will be enshrined as a legally binding amendment of MARPOL Annex 6, the IMO's regulatory framework for preventing pollution of the air by international shipping. The IMO has a track record of being an effective regulator, as existing measures (including a cap on sulphur oxides emissions) has shown. It is precisely because of that track record that some member states were happy to agree on a "strategy" but are trying to water down these promises through the "measures" that are meant to deliver on the strategy's targets.

It is of utmost importance to reiterate that the IMO GHG Strategy's targets have been set and are no longer subject to discussion. This transition will be difficult and costly, but it *has* to happen, and it *will* happen. The question that remains is: who pays for this transition and how will the full participation of the climate vulnerable be assured, while ensuring no state is left behind in this ambitious transition?

PACIFIC LEADERSHIP FOR A GFS / LEVY COMBINATION

An informal alliance of Pacific Island countries, known as the "6PAC+" (Marshall Islands, Kiribati, Fiji, Nauru, Solomon Islands, Tonga, Tuvalu, Vanuatu, and Palau) has shown consistent leadership at the IMO. These countries have been advocating for the most ambitious and effective combination of measures that will ensure international shipping decarbonizes its activities in a just and equitable manner. They are supported by a growing group of Caribbean states (including Antigua and Barbuda, Belize, Dominica, Grenada, Jamaica and Saint Lucia) calling for a rapid and equitable maritime energy transition.⁵

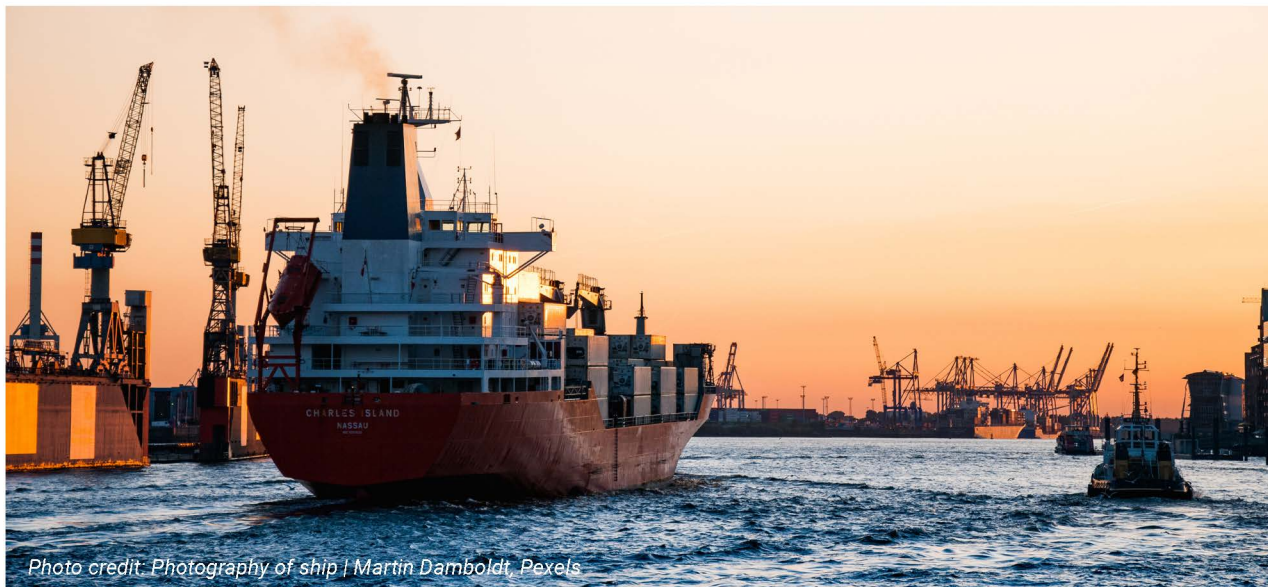
The 6PAC+ alliance has consistently pushed for a universal levy, set at a high enough entry price (starting at \$150 per ton of CO_{2e} of emissions) to deliver the transition at the agreed-upon scale and speed.⁶ This levy will generate significant revenues, upwards of \$60b a year (if set at \$100 per ton of CO_{2e} of emissions), according to World Bank calculations.⁷ To ensure a just and equitable transition (which IMO Member States committed to in the 2023 GHG Strategy) revenues will then need to flow both towards ending shipping's emissions (through "in-sector" spending) and addressing the impacts of shipping's contribution to the climate emergency (through "out-of-sector" spending). The IMO's

⁴ Belize et al. ISWG-GHG 17/2/14; Austria et al. ISWG-GHG 17/2/2; Antigua & Barbuda et al. ISWG-GHG 17/2/18.

⁵ Belize et al. ISWG-GHG 17/2/14

⁶ Belize et al. ISWG-GHG 16/2/6

⁷ [World Bank, 2022.](#)



comprehensive impact assessment for mid-term measures is clear that the proposed Levy and Distribution will have the least impact globally, and the least regressive effect on climate vulnerable communities.⁸ The explanation for the levy having the least impact globally is because it achieves the lowest cost of abatement – higher levels of energy efficiency and a lower cost of energy transition (away from fossil fuels). The policy is least regressive, both because it has the least abatement cost, and because the levy enables a redistribution of impacts through the allocation of revenues to those countries who are most vulnerable economically and in relation to climate impacts.

Opponents to using a Levy as the emissions pricing mechanism at the IMO, primarily BRICS and Oil-Producing States, have consistently argued that a Levy would be “uniquely damaging” to exports and GDP of developing countries, a narrative that is not supported in IMO or scientific evidence.

The Marine Environment Protection Committee agreed that the IMO should commission a Comprehensive Impact Assessment (CIA) on the Candidate mid-term measures on states, to gauge the likely consequences of different combinations of technical and economic measures before any measures could be adopted. This process was initiated shortly after the adoption of the 2023 IMO GHG Strategy and was completed in August 2024. The CIA analysis has now been released to Member States.⁹

That CIA analysis is clear: All measures proposed at the IMO will increase transport costs (because they need to incentivize a shift from fossil fuels to more expensive renewable alternatives); there is no low-cost option. Though a universal levy is the most effective at driving emissions reductions, with the lowest GDP impact compared to all other proposals under consideration, without increasing the overall cost of transition.¹⁰ Consideration must therefore be given to the measure/combination of measures that both have the least cost and least regressive effect on climate vulnerable communities.

⁸ [Frosch, Fricaudet, Baresic, and Rehmatulla, 2024](#)

⁹ [IMO MEPC 82-INF 8 and addenda 1-3](#)

¹⁰ [Frosch, Fricaudet, Baresic, and Rehmatulla, 2024](#)

The following is a summary of the CIA analysis on the Universal Levy. The main country categories used in the CIA are “Developed” and “Developing” countries, as well as Small Island Developing States (SIDS) and Least Developed Countries (LDCs). Hence the focus on these country groups in the summary below. These *strictly analytical* categories do not preclude an additional focus on different groups of countries (like the CVF Membership, or LLDCs) when discussing the distribution of levy revenues to states.

A LEVY CAN REDUCE THE INEVITABLE INCREASE IN TRANSPORT COSTS, RELATIVE TO A GFS-ONLY TRANSITION

Analysis carried out on the impact of measures on the fleet by Det Norske Veritas (DNV) enables side-by-side comparison of levy-led and Global Fuel Standard (GFS)-led policy mixes and their effects on the fleet. Counter to the narrative that a levy is “uniquely damaging,” this shows that two effects mean a strong (high price) levy component can be “uniquely beneficial” in helping to minimize the cost increase, particularly for climate vulnerable states. As shown in the analysis for the ‘base’ scenarios, the three lowest increases in maritime logistics costs occur in the three scenarios that include a levy because:

1. The price effect of a levy (on all emissions) has an effect of increasing energy efficiency in the fleet, which both postpones/delays the need for low emission fuels, and achieves lower cost GHG reductions than those incentivized by a GFS.
2. When a portion of levy revenues are prioritized for the incentivization of early use of ‘eligible’ fuels, the result is a lower cost in the long-run, and a reduction of the ‘technology lock-in’ that can occur in GFS/flexibility-led transition (DNV analysis describes that scenarios with GFS and a flexibility mechanism incentivize the use of technologies that are initially competitive and low cost, but then are hard to retrofit to reach zero and therefore result in higher costs in the 2040/2050).

GLOBAL GDP IMPACT IS LOWER IN THE LONG RUN WITH A LEVY

UNCTAD (United Nations Trade & Development) modeling for the CIA shows that the four scenarios which include a levy result in less negative Global Domestic Product (GDP) impacts (global and developing economies aggregate) than any of the other scenarios by 2050. This is even before any of the positive effects of revenue use are considered.

Once the effects of Levy revenue disbursement are taken into account, the magnitude of negative global GDP in 2050 is approximately half the level in the scenario where the Levy price starts at \$150 per tonne of CO_{2e}, than in the lowest impact GFS/flexibility-led policy scenario. The scenarios where the levy price starts at \$150/tCO_{2e}, and the revenues are disbursed only to SIDS and LDCs see the lowest GDP impact. This evidence is the result of analysis based on SIDS/LDCs country categories; it neither offers policy prescriptions in general, nor for these two country groups in particular.

A HIGH GHG PRICE REDUCES LONG RUN IMPACTS MORE THAN A LOW GHG PRICE

For all the above effects, there are sensitivities to GHG price. Across the two GHG price scenarios modeled (\$30-120 and \$150-300), the higher GHG price leads to greater efficiency improvements, lower long-run energy mix cost, greater revenues available for disbursement, and lower global GDP impact by 2050. This suggests that a high GHG price is both more effective in terms of climate mitigation and ensuring an equitable transition.

LEVY SCENARIOS CAN CREATE A PROGRESSIVE TRANSITION, REDUCING NEGATIVE IMPACTS ON LOWER INCOME AND CLIMATE VULNERABLE COUNTRIES

Although a high GHG price leads to a transition with a lower overall (global level) cost and more limited impact on GDP, these impacts do not impact all countries evenly. An increase in maritime logistics costs can still create the highest impacts on lower income countries and climate vulnerable countries. However, when revenues raised in levy scenarios are disbursed primarily to developing countries, small islands developing states (SIDS) and least developed countries (LDCs), the most negatively impacted countries (including SIDS and LDCs) can be significantly 'lifted' out of negative impacts. Depending on which group of countries the revenue distribution is focused on, many of the most negatively impacted countries can be completely lifted out of negative impacts and achieve positive impacts (increase in GDP) in scenarios that include a levy.

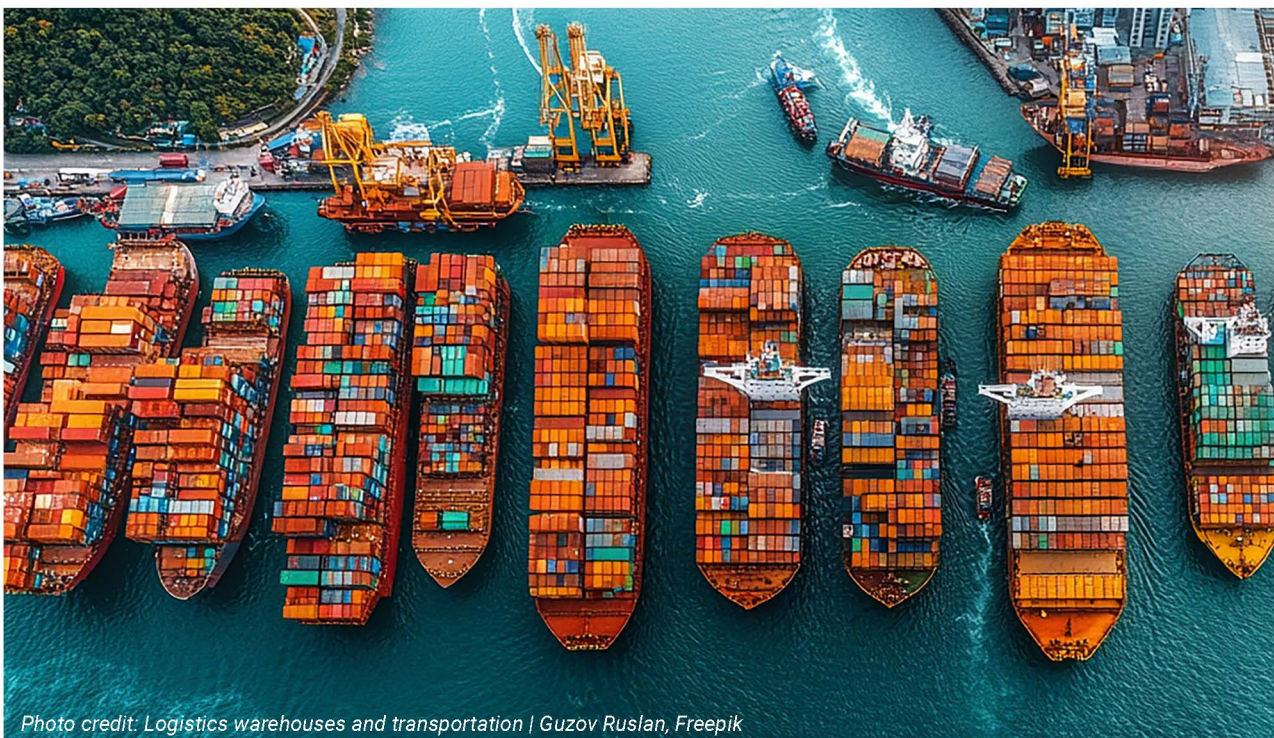


Photo credit: Logistics warehouses and transportation | Guzov Ruslan, Freepik

DEVELOPING COUNTRIES (INDIVIDUALLY AND AS AN AGGREGATE) EXPERIENCE LOWER ABSOLUTE GDP IMPACTS IN SCENARIOS THAT INCLUDE A LEVY AND ANY REVENUE DISTRIBUTION, THAN ANY GFS-CENTRIC SCENARIO

The developing group of countries contains many large economies, even if they have lower GDP per capita than developed countries. In the IMO's CIA modeling undertaken by UNCTAD, the positive effects of revenue disbursement on these economies are unsurprisingly more modest than the effects on the smaller size of economy, including many SIDS and LDCs (e.g. it is not possible in the scenarios modeled to completely 'lift' all developing economies out of negative impacts).

However, it is the case that developing economies experience consistently lower impacts (in absolute terms) in scenarios that include a levy, regardless of whether revenues are distributed to all countries, all developing countries, or only SIDS and LDCs. To reiterate, these country categories are analytical, not prescriptive. The distribution of revenues is a political decision to be made by IMO member states.

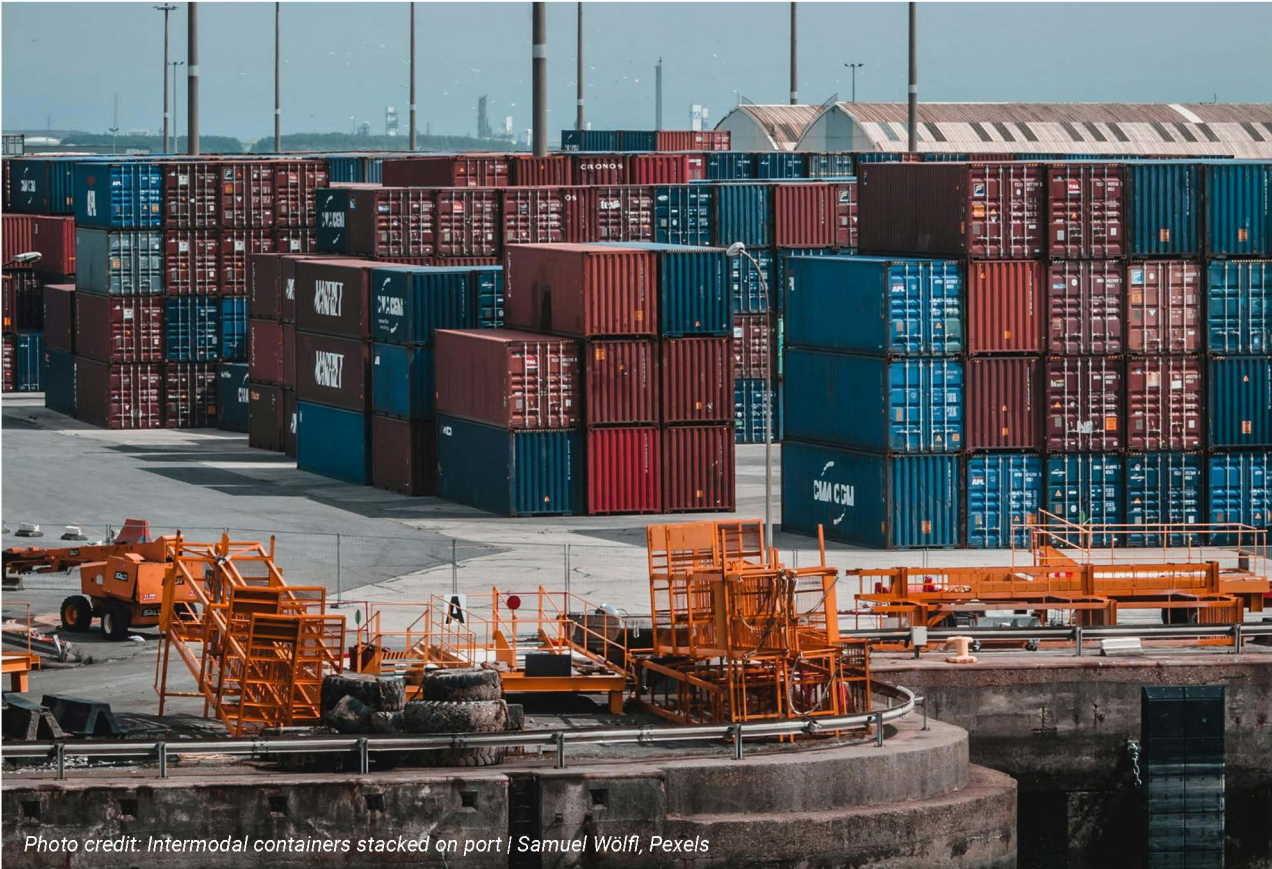
THE LEVY-SCENARIOS CREATE THE LEAST IMPACT ON FOOD SECURITY

By 2050, the high levy scenarios lead to the smallest increase in maritime logistics costs for food & beverages and agriculture. This means that the levy scenarios can have a lower impact on food prices (imports & exports), relative to the no-levy scenarios. In and around 2030, in scenarios with the higher levy price (\$150-300), there can be a higher short-term maritime logistics cost in levy scenarios than in no-levy scenarios (which is reversed by 2040 with the levy scenarios becoming cheaper than no-levy scenarios). When considering the use of revenues, this short-term negative effect can, relative to a no-levy scenario, be neutralized across countries generally, or could be even more focused on climate vulnerable countries particularly sensitive to food trade to further compensate for any negative impacts.

BEYOND THE IMO: STATE OBLIGATIONS UNDER UNCLOS

The recent advisory opinion (AO) by the International Tribunal for the Law of the Sea (ITLOS, May 2024) unambiguously classifies GHG emissions as pollution of the maritime environment, protected by the United Nations Convention of the Law of the Sea (UNCLOS). The AO clarifies that parties to UNCLOS should take "all necessary measures" to prevent, reduce and control GHG emissions from ships. To account for historical pollution, Developed States need to provide assistance, including financial assistance, to developing States (in particular, climate vulnerable States). A Universal Levy on GHG emissions from shipping would help ensure that historical emitters pay, while climate vulnerable countries with the lowest historical emissions are paid to tackle this pollution at the necessary scale and speed.

The ITLOS Advisory Opinion effectively reinforces the repeated calls to support the highest possible level of ambition at the IMO. This supports the technical and economic measures needed to deliver on the 2023 IMO GHG Strategy.



RECOMMENDED ACTION

The policy choices made in 2024, and notably during the adoption of measures at the IMO in 2025, will shape climate action in the shipping industry during the coming decades.

These measures adopted as amendments to the IMO's MARPOL Annex VI will act as guardrails for public and private stakeholders to make investment decisions. Considering the average 25-year life span of ships, these decisions will "lock in" emissions beyond 2050. Potential for strengthening the measures that are being negotiated over the next year will be limited beyond 2025. It is thus important that the decisions made at MPEC82 (2024) and MEPC83 (2025) are grounded on sound and authoritative expert analysis.

The best available science suggests that CVF Members stand to benefit most from supporting a combination of a strict GFS with a high GHG Levy on international shipping emissions.

If a Levy cannot be agreed upon, the alternative could be measures that rely solely on a Global Fuel Standard (with a flexibility mechanism) which would increase shipping costs as much as adopting a Levy. Though there would be comparatively very limited revenues to support an equitable transition for climate vulnerable communities. UNCTAD modelling suggests that this would be more damaging to the global economy by 2050, with many Climate Vulnerable countries among those hit the hardest.

ABOUT THE AUTHORS



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