OPPORTUNITY GREEN

Trade impacts and the IMO Net Zero Framework

Response to claims of disproportionate trade impacts | 01/09/2026

Introduction

With the International Maritime Organization (IMO) set to resume its negotiations over the Net Zero Framework (NZF) in September, fossil fuel exporting countries are ramping up their campaign to resist meaningful climate action in international shipping. These states maintain that it will be too costly and burdensome for shipping to transition to clean energy.

In the lead-up to September's talks, Qatar, Saudi Arabia and the United Arab Emirates (UAE) have submitted a document (ISWG-GHG 22/2/11) titled "*Trade and distributional shortcomings in the IMO Net-Zero Framework: non-uniform incidence, distance-dependent trade costs, and freight market effects*".[1] The submission argues that compliance costs of the NZF are distance-dependent, causing "potentially disproportionate impacts on long-haul trade and remote, trade-dependent economies".

This argument, and others like it, were already in circulation when the NZF was approved in April 2025. They remain demonstrably false. While trade impacts from adoption of the NZF would be partly distance-dependent:

- Overall trade impacts are governed by changes in the final price of imported goods, which depend on a range of additional factors.
- The alternative to adopting the NZF is shipping's continued reliance on fossil fuels, which will not stabilize global trade. Rather, it is that very reliance that has driven so much recent volatility.
- Most importantly, the increasingly severe climate impacts flowing from continued inaction will disproportionately impact many of the world's most remote, and

[1] Qatar, Saudi Arabia and United Arab Emirates, 'ISWG-GHG 22/2/11. Trade and distributional shortcomings in the IMO Net-Zero Framework: non-uniform incidence, distance-dependent trade costs, and freight market effects' (2026). Accessible via IMODOCS.

poorest, economies, including developing countries, Small Island Developing States (SIDS) and Least Developed Countries (LDCs).

The potential trade impacts on remote economies from adoption of the NZF are undoubtedly an important consideration. However, the most effective way to tackle these is not climate inaction. Instead, it is to design effective mitigating measures which revolve around just and equitable revenue distribution.

Distance-dependent impacts

The cosponsors of submission ISWG-GHG 22/2/11 state that "because compliance costs scale with fuel consumption and distance, the IMO Net Zero Framework operates as a distance-dependent trade cost that affects long-haul routes more than short-haul routes".[2]

A range of evidence supports the general principle that more geographically-remote economies can be more heavily impacted by the introduction of GHG emissions pricing for the shipping industry.[3;4] For these countries, maritime transport costs may account for a greater proportion of the final cost of imported goods, meaning increases in ship fuel, maintenance and capital costs—collectively ship running costs—resulting from the adoption of GHG pricing have a greater relative impact on the price of imported goods.

However, evidence also highlights that ship running costs, including any GHG pricing, are one of several determinants of overall maritime transport costs, alongside infrastructure costs and market-specific factors. These maritime transport costs, in turn, account for only a proportion of overall transport costs, which must include all transport modes in the journey of a product. Those overall transport costs then constitute only some proportion of the final trading cost of a given product.[5]

Because the economic impacts of GHG pricing on final import costs are diluted, so too are the comparative costs to countries trading over longer versus shorter distances, with evidence that voyage distance is only a minor determinant of the overall impact on trading costs.[6;7] For instance, a review of various proposed GHG pricing scenarios found that

[2] Qatar, Saudi Arabia and United Arab Emirates, 'ISWG-GHG 22/2/11. Trade and distributional shortcomings in the IMO Net-Zero Framework: non-uniform incidence, distance-dependent trade costs, and freight market effects' (2026). Accessible via IMODOCS.
[3] UN Trade & Development, 'Comprehensive impact assessment of the basket of candidate mid-term GHG reduction measures. Task 3: ASSESSMENT OF IMPACTS ON STATES' (2024). MEPC 82/INF.8/Add.2. Accessible via IMODOCS.
[4] See Rojon I and others, 'The Impacts of Carbon Pricing on Maritime Transport Costs and Their Implications for Developing Economies' (2021). 132 Marine Policy 104653 https://doi.org/10.1016/j.marpol.2021.104653 and references therein.
[5] Rojon I and others, 'The Impacts of Carbon Pricing on Maritime Transport Costs and Their Implications for Developing Economies' (2021). 132 Marine Policy 104653 https://doi.org/10.1016/j.marpol.2021.104653
[6] Denmark, 'MEPC 60/INF.7. Effects on sea transport cost due to an International Fund for GHG emission for ships' (2009). Accessible via IMODOCS.
[7] Tran T, Morimoto S and Shibasaki R, 'Modeling Global and Regional Economic Impacts of Greenhouse Gas Pricing on International Shipping and Policy Implications' (2025). 269 Ocean & Coastal Management 107804 https://doi.org/10.1016/j.ocecoaman.2025.107804

while maritime transport costs increased by between 0.4 and 16%, the increase in final costs of traded goods was significantly lower, and generally less than 1%.[8]

This is to conceptualize but not marginalize the impacts of GHG pricing on more remote economies, including developing countries, SIDS and LDCs. GHG pricing creates real costs.[9;10;11] However, **the IMO's NZF remains preferred to any proposed alternatives**, for two reasons discussed below.

The wrong comparator

First, to argue that the NZF is too costly, its opponents misleadingly assume that inaction would be characterised by stable, and fairly distributed, cost burdens.

This assumption is incorrect, because failing to adopt meaningful decarbonisation measures will prolong shipping's reliance on fossil fuels. This reliance has, in recent years, caused substantial, geographically-variable, trade impacts as a result of geopolitically-induced variations in the price of oil and, somewhat relatedly, freight rates. Bunker oil prices rose significantly due to Russia's invasion of Ukraine in 2022 and more recently doubled at the start of the US-Iran war.[12;13;14] These increases would have impacted remote and maritime transport-reliant nations most heavily.

Second, shipping's continued reliance on fossil fuels will also continue the sector's material contribution to the economic impacts of climate change. Shipping not only facilitates the fossil fuel economy—some 40% of ships transport fossil fuels[15]—but itself accounts for a material share of global emissions.[16] In general, climate impacts disproportionately impact the world's poorest,[17] particularly Small Island Developing States (SIDS) and Least Developed Countries (LDCs).

SIDS, firstly, include some of the world's most geographically remote economies. While therefore set to experience distance-dependent trade impacts due to adoption of the

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[8] Rojon I and others, 'The Impacts of Carbon Pricing on Maritime Transport Costs and Their Implications for Developing Economies' (2021). 132 Marine Policy 104653 https://doi.org/10.1016/j.marpol.2021.104653
[9] UN Trade & Development, 'Comprehensive impact assessment of the basket of candidate mid-term GHG reduction measures. Task 3: ASSESSMENT OF IMPACTS ON STATES' (2024). MEPC 82/INF.8/Add.22. Accessible via IMODOCS.
[10] Rojon I and others, 'The Impacts of Carbon Pricing on Maritime Transport Costs and Their Implications for Developing Economies' (2021). 132 Marine Policy 104653 https://doi.org/10.1016/j.marpol.2021.104653
[11] Pereda PC and others, 'Sustainable Shipping: Modeling Economic and Greenhouse Gas Impacts of Decarbonization Policies (Part II)' (2025). 17 Sustainability 3765 https://doi.org/10.3390/su17093765
[12] UN Trade & Development, 'Maritime Trade Disrupted: The war in Ukraine and its effects on maritime trade logistics' (no date). Accessed 24 August 2026 from https://unctad.org/isar/publication/maritime-trade-disrupted-war-ukraine-and-its-effects-maritime-trade-logistics
[13] Ship & Bunker, 'Global Average Bunker Price' (no date). Accessed 20 August 2026 from https://shipandbunker.com/prices/av/global/av-glb-global-average-bunker-price#_MGO
[14] UN Trade & Development, 'Strait of Hormuz Disruptions Implications for Global Trade and Development' (2026). Accessed 20 August 2026 from https://unctad.org/publication/strait-hormuz-disruptions-implications-global-trade-and-development
[15] Fricaudet M and others, 'Supply-side and demand-side stranded asset risks in shipping' (2025). Accessed 27 August 2026 from https://www.shippingandoceans.com/post/existing-ships-and-those-on-order-would-produce-twice-the-emissions
[16] International Maritime Organization, 'Fourth Greenhouse Gas Study 2020' (2020). Accessed 20 August 2026 from https://www.imo.org/en/ourwork/environment/pages/fourth-imo-greenhouse-gas-study-2020.aspx
[17] King AD and Harrington LJ, 'The Inequality of Climate Change From 1.5 to 2°C of Global Warming' (2018). 45 Geophysical Research Letters 5030 https://doi.org/10.1029/2018GL078430

NZF,[18] SIDS are also uniquely exposed to coastal climate risks including sea level rise, flooding, tropical cyclones marine heatwaves and ocean acidification.[19;20] As such, SIDS are vulnerable to greater economic damage as a result of climate change than other countries.[21;22] This is underscored by the catastrophic risks to SIDS associated with events which can be amplified by climate change—for instance, Hurricane Maria caused damages equivalent to 225% of Dominica's annual GDP in 2017.[23]

Similarly, landlocked LDCs are expected to face disproportionate trade impacts from the adoption of the NZF,[24] but at the same time face particularly acute risks from climate change due to geographic factors—e.g., vulnerability to desertification and heat stress—socioeconomic factors—e.g., high degree of employment in climate-sensitive sectors like agriculture—and a lack of mitigative and adaptive capacity.[25]

Estimates of the global economic costs of climate change are orders of magnitude larger than the predicted economic impacts of adopting the currently-agreed NZF.[26;27;28;29;30] Climate inaction by the shipping industry would, therefore, itself result in significant and geographically-variable economic impacts.

Revenue disbursement

Studies agree instead that the best way to address climate vulnerability and trade impacts in tandem is an effectively designed NZF, which includes mechanisms aimed at

[18] UN Trade & Development, 'Comprehensive impact assessment of the basket of candidate mid-term GHG reduction measures. Task 3: ASSESSMENT OF IMPACTS ON STATES' (2024). MEPC 82/INF.8/Add.2. Accessible via IMODOCS.
[19] Intergovernmental Panel On Climate Change (IPCC), 'The Ocean and Cryosphere in a Changing Climate: Special Report of the Intergovernmental Panel on Climate Change' (2022). Cambridge University Press. https://doi.org/10.1017/9781009157964.
[20] Vousdoukas MI and others, 'Small Island Developing States under Threat by Rising Seas Even in a 1.5 °C Warming World' (2023). 6 Nature Sustainability 1552 https://doi.org/10.1038/s41893-023-01230-5
[21] Thomas A and others, 'Climate Change and Small Island Developing States' (2020). 45 Annual Review of Environment and Resources 1 https://doi.org/10.1146/annurev-environ-012320-083355 and references therein.
[22] Global Center on Adaptation, 'State and Trends in Adaptation Report 2025: Small Island Developing States' (2025). Rotterdam. Accessed 20 August 2026 from https://gca.org/reports/sta25/
[23] Government of the Commonwealth of Dominica, 'Post-Disaster Needs Assessment Hurricane Maria September 18, 2017' (2017). Accessed 20 August 2026 from https://www.gfdrr.org/en/publication/dominica-post-disaster-needs-assessment-following-hurricane-maria
[24] UN Trade & Development, 'Comprehensive impact assessment of the basket of candidate mid-term GHG reduction measures. Task 3: ASSESSMENT OF IMPACTS ON STATES' (2024). MEPC 82/INF.8/Add.2. Accessible via IMODOCS.
[25] UN-OHRLLS, 'Climate Vulnerabilities of Landlocked Developing Countries' (2025). New York: UN-OHRLLS. Accessed 20 August 2026 from https://www.un.org/ohrlls/news/climate-vulnerabilities-lldcs
[26] Krol A, 'How much will climate change affect the world economy?' (2026). Accessed 20 August 2026 from https://climate.mit.edu/ask-mit/how-much-will-climate-change-affect-world-economy
[27] Kompas T, Pham VH and Che TN, 'The Effects of Climate Change on GDP by Country and the Global Economic Gains From Complying With the Paris Climate Accord' (2018). 6 Earth's Future 1153 https://doi.org/10.1029/2018EF000922
[28] Trust S and others, 'Planetary Solvency – finding our balance with nature Global risk management for human prosperity' (2025). Accessed 20 August 2026 from https://actuaries.org.uk/media/ni4erlna/planetary-solvency.pdf
[29] UN Trade & Development, 'Comprehensive impact assessment of the basket of candidate mid-term GHG reduction measures. Task 3: ASSESSMENT OF IMPACTS ON STATES' (2024). MEPC 82/INF.8/Add.2. Accessible via IMODOCS.
[30] Pereda PC and others, 'Sustainable Shipping: Modeling Economic and Greenhouse Gas Impacts of Decarbonization Policies (Part II)' (2025). 17 Sustainability 3765 https://doi.org/10.3390/su17093765

addressing disproportionate negative trade impacts.[31;32;33] For instance, the IMO's own impact assessment showed that the disproportionate economic impacts on SIDS and LDCs were lowest under mechanisms with high GHG prices, strict GFI requirements and targeted revenue disbursement.[34]

The design of revenue disbursement mechanisms undoubtedly requires further development.[35] However, it is clear that only the most ambitious NZF proposals, which include GHG pricing to raise revenues and broad revenue distribution mechanisms, can effectively tackle disproportionate trade impacts in a just and equitable manner.[36;37]

Summary

The potential disproportionate trade impacts on remote economies from adoption of the IMO NZF, including on developing countries, SIDS and LDCs, are undoubtedly an important consideration.

However, failure to adopt the NZF, as suggested by some fossil fuel exporters, will not level the playing field. Instead, it will lead to shipping's continued reliance on fossil fuels, coupled with escalating climate impacts, placing severe and disproportionate economic burdens on developing countries, SIDS and LDCs.

Instead, IMO Member States must proceed to adopt an ambitious NZF, which includes effective mitigating measures including targeted disbursement of revenues to tackle disproportionate trade impacts.

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[31] Rojon I and others, 'The Impacts of Carbon Pricing on Maritime Transport Costs and Their Implications for Developing Economies' (2021). 132 Marine Policy 104653 https://doi.org/10.1016/j.marpol.2021.104653

[32] Dominioni G, 'Revenue Distribution in the IMO Net-Zero Framework: Alternative Fuels and the Just and Equitable Energy Transition of Shipping' (2026). 15 Climate Law 267 https://doi.org/10.1163/18786561-bja10075

[33] Pereda PC and others, 'Sustainable Shipping: Modeling Economic and Greenhouse Gas Impacts of Decarbonization Policies (Part II)' (2025). 17 Sustainability 3765 https://doi.org/10.3390/su17093765

[34] UN Trade & Development, 'Comprehensive impact assessment of the basket of candidate mid-term GHG reduction measures. Task 3: ASSESSMENT OF IMPACTS ON STATES' (2024). MEPC 82/INF.8/Add.2. Accessible via IMODOCS.

[35] Fenton E and others, 'A just and equitable transition for shipping. Considerations for the disbursement of revenue from the IMO Net-Zero Fund' (2025). Accessed 20 August 2026 from https://opportunitygreen.org/climate-justice/reports/a-just-and-equitable-transition-for-shipping/

[36] Fraser M and others, 'The importance of the 'economic element' in the IMO Net-Zero Framework' (2026). Accessed 20 August 2026 from https://opportunitygreen.org/shipping/briefings/need-economic-element-in-imo-net-zero-framework/

[37] Dominioni G, 'Revenue Distribution in the IMO Net-Zero Framework: Alternative Fuels and the Just and Equitable Energy Transition of Shipping' (2026). 15 Climate Law 267 https://doi.org/10.1163/18786561-bja10075

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This paper was written by James Kershaw, and we are grateful to Andrew Friedman for providing comments. Any omissions or errors are the fault of the author alone.

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