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Carbon pricing for international shipping, equity, and WTO law

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Abstract

The International Maritime Organization (IMO) is working on the adoption of a greenhouse gas (GHG) pricing instrument to decarbonise international shipping. This article analyses whether World Trade Organization (WTO) law can limit the implementation of an IMO GHG pricing instrument. In particular, it breaks new ground by analysing the compatibility of current proposals tabled at the IMO with the General Agreement on Trade in Services and the General Agreement on Tariffs and Trade. In addition, it analyses whether WTO law limits the IMO's ability to adopt a GHG pricing instrument that addresses equity concerns via the implementation of exemptions for developing countries, Least Developed Countries, and Small Islands Developing States.

1 | INTRODUCTION

Following a groundbreaking agreement in July 2023, the International Maritime Organization (IMO) continues to work on the implementation of a greenhouse gas (GHG) emissions pricing instrument to decarbonise international shipping.[1] In previous rounds of negotiations, some IMO member States argued that World Trade Organization (WTO) law limits the ability of the IMO to implement GHG pricing—or at least some forms of GHG pricing—for shipping.[2] In response to a request from the IMO, the WTO Secretariat identified various WTO law provisions that can be relevant for the implementation of an IMO GHG pricing instrument.[3]

Most academic literature on the compatibility of GHG pricing instruments for international shipping with WTO law focuses on the European Union (EU) emissions trading system (ETS).[4] Despite the fact that WTO law is frequently invoked in IMO debates on shipping decarbonisation,[5] very few contributions have analysed whether WTO law can constrain the adoption of a GHG pricing instrument by

[1]IMO, 'Revised GHG Reduction Strategy for Global Shipping Adopted' (7 July 2023) <https://imopublicsite.azurewebsites.net/en/MediaCentre/PressBriefings/pages/Revised-GHG-reduction-strategy-for-global-shipping-adopted-.aspx>.

[2]India and Saudi Arabia, 'Possible Incompatibility between the WTO Rules and Market-Based Measures for International Shipping' MEPC 64/5/3 (IMO Marine Environment Protection Committee (MEPC) 2012).

[3]'World Trade Organization's Views on Document MEPC 64/5/4 Submitted by India and Saudi Arabia, Note by the IMO Secretary-General' MEPC 65/INF.18 (IMO MEPC 2013).

[4]M Kremlis, 'The Inclusion of the Shipping Industry in the EU ETS' (2010) 19 European Energy and Environmental Law Review 145; T Bäeuerle et al, 'Integration of Marine Transport into the European Emissions Trading System. Environmental, Economic and Legal Analysis of Different Options' (Federal Environment Agency (Umweltbundesamt) 2010) <https://www.osti.gov/etdeweb/biblio/21326834>; H Ringbom, 'Global Problem—Regional Solution? International Law Reflections on an EU CO2 Emissions Trading Scheme for Ships' (2011) 26 International Journal of Marine and Coastal Law 613; C Hermeling et al, 'Sailing into a Dilemma: An Economic and Legal Analysis of an EU Trading Scheme for Maritime Emissions' (2015) 78 Transportation Research Part A: Policy and Practice 34; NL Dobson and C Ryngaert, 'Provocative Climate Protection: EU "Extraterritorial" Regulation of Maritime Emissions' (2017) 66 International and Comparative Law Quarterly 295; D Heine et al, 'A Regional Solution for a Transnational Problem? A Mechanism to Unilaterally Tax Maritime Emissions While Satisfying Extraterritoriality, Tax Competition and Political Constraints' (Rotterdam Institute of Law and Economics 2015) <https://papers.ssrn.com/abstract=2512747>.

[5]For recent examples in the context of establishing green corridors, see, for instance, Angola et al, 'The Draft Revised IMO Strategy on Reduction of GHG Emissions from Ships' ISWG-GHG 14/2/10 (IMO Intersessional Working Group for the Reduction of GHG Emissions from Ships (ISWG-GHG) 2023); 'Report of the Marine Environment Protection Committee on Its Seventy-Ninth Session' MEPC 79/15 (IMO MEPC 2023) MEPC 79/15.

the IMO.[6] Research that has focused on this has looked at the WTO law compatibility of GHG pricing instruments proposed in the 2010–2013 round of negotiations[7] or rules that would apply to a *hypothetical* IMO GHG price.[8]

This article adds to this research in two ways. First, it analyses the compatibility of proposals for a GHG pricing instrument as tabled in the current round of negotiations at the IMO with WTO law. Second, it focuses on the WTO law compatibility of exemptions in favour of developing countries, or for Least Developed Countries (LDCs) and Small Islands Developing States (SIDS), an important design feature of a GHG pricing instrument for international shipping that has not been analysed in the literature despite its relevance in the policy debate on the equitable transition of the sector.[9] In doing so, this article contributes to the academic scholarship[10] and grey literature[11] that focuses on the equitable energy transition of international shipping.

The remainder of this article is structured as follows. Section 2 provides background information on the implementation of a GHG pricing instrument at the IMO. Section 3 discusses key equity concerns that have arisen in IMO negotiations in relation to the implementation of a GHG pricing instrument. Next, Section 4 examines whether WTO law, and in particular the General Agreement on Trade in Services (GATS) and the General Agreement on Tariffs and Trade (GATT), constrain the implementation of a GHG pricing instrument for international shipping. This is followed by a discussion on whether WTO law constrains the design of such measures to address equity considerations through the use of exemptions (Section 5). Finally, Section 6 draws some concluding remarks.

2 | IMO GHG PRICING MECHANISMS: THE CURRENT STATE OF PLAY

Negotiations at the IMO's Marine Environment Protection Committee (MEPC) are currently focusing on the implementation of mid-term measures—that is, measures that, according to the Initial IMO GHG Strategy, are to be implemented between 2023 and 2030—to decarbonise international maritime transport.[12] At the 80th session of the MEPC, concluded on 7 July 2023, IMO member States adopted the '2023 IMO Strategy on Reduction of GHG Emissions from Ships' (2023 IMO GHG Strategy). According to this strategy, mid-term measures will include 'an economic element, on the basis of a maritime GHG emissions pricing scheme'.[13] The 2023 IMO GHG Strategy also sets a timeline for the development of these measures, which are expected to be approved in Spring 2025 at MEPC 83, and adopted in Autumn 2025.[14]

At the moment, it is unclear what form a GHG pricing instrument adopted by the IMO is likely to take. Various IMO member States have differing views on which instrument would be most appropriate.[15] For instance, the Belize and others proposed the implementation of a global GHG levy.[16] The levy would apply to all GHGs released by international shipping on a well-to-wake basis.[17] The levy would start at US$150 per tonne of GHG and gradually increase over time.[18]

EU Member States have also proposed a levy on well-to-wake GHG emissions from international shipping.[19] Under this proposal, part of the revenues will be used to support zero and near-zero GHG fuels. In particular, a reward will be applied on the basis of the GHG intensity of fuels on a well-to-wake basis.[20]

Argentina and others proposed the International Maritime Sustainability Funding and Reward (IMSF&R) mechanism.[21] Under this mechanism, vessels need to meet an annual GHG fuel intensity target pay a fee, and vessels that meet this target do not pay the fee, and

[6]See A Chircop et al, 'International Law and Policy Considerations for Shipping's Contribution to Climate Change Mitigation' (Centre for International Governance Innovation 2018) <https://digitalcommons.schulichlaw.dal.ca/reports/16> 21–22; T Falcao, 'Taxing Carbon Emissions from International Shipping' (2019) 47 Intertax 843; S Karim and F Deane, 'Proposed MBMs for Reduction of Greenhouse Gas Emissions from International Shipping and the WTO Rules' (2014) Lloyd's Maritime and Commercial Law Quarterly 370.

[7]Karim and Deane (n 6).

[8]See Chircop et al (n 6) 21–22; Falcao (n 6) 843.

[9]Various IMO member States have proposed or expressed interest in considering the implementation of exemptions from an IMO GHG price. See, e.g., Argentina et al, 'Proposal to Establish an International Maritime Sustainability Funding and Reward (IMSF&R) Mechanism as an Integrated Mid-Term Measure' ISWG-GHG 12/3/9 (IMO ISWG-GHG 2022) para 6; Argentina et al, 'Elaborations on the Key Elements of the International Maritime Sustainable Fuels and Fund (IMSF&F) Mechanism Presented in Document ISWG-GHG 16/2/13' ISWG-GHG 16/2/14 (IMO ISWG-GHG 2024) 13; Brazil, 'Assessing Economic and Environmental Impacts' GHG-EW 4/3 (IMO Expert Workshop on the Life Cycle GHG Intensity of Marine Fuels 2023) 9. Others have opposed the use of exemptions to address equity concerns, see, for instance, Canada, 'Proposal for the Maritime GHG Pricing Mechanism' ISWG-GHG 16/2/16 (IMO ISWG-GHG 2024), paras 18 and 19. On the policy relevance of exemptions and carbon revenue use for the equitable transition of international shipping at the IMO see G Dominioni, 'Towards an Equitable Transition in the Decarbonization of International Maritime Transport: Exemptions or Carbon Revenues?' (2023) 154 Marine Policy 105669.

[10]Dominioni (n 9); Y Chen, 'Reconciling Common but Differentiated Responsibilities Principle and No More Favourable Treatment Principle in Regulating Greenhouse Gas Emissions from International Shipping' (2021) 123 Marine Policy 104317.

[11]A Shaw and C De Beukelaer, 'Why Should We Talk about a "just and Equitable" Transition for Shipping?' (United Nations Conference on Trade and Development (UNCTAD), 15 September 2022) <https://unctad.org/news/why-should-we-talk-about-just-and-equitable-transition-shipping>; G Dominioni et al, 'Carbon Revenues from International Shipping: Enabling an Effective and Equitable Energy Transition – Summary for Policymakers' (World Bank 2022); G Dominioni et al, 'Distributing Carbon Revenues from Shipping' (World Bank 2023).

[12]IMO, 'Initial IMO Strategy on Reduction of GHG Emissions from Ships' Resolution MEPC.304(72) (IMO MEPC 2018) 4.1.2.

[13]IMO, '2023 IMO Strategy on Reduction of GHG Emissions from Ships' Resolution MEPC.377(80) (IMO MEPC 2023) 4.5.2.

[14]ibid 6.2.

[15]This section discusses GHG pricing measures proposed by IMO Member States that are under consideration at ISWG-GHG 16 and MEPC 81, in March 2024. Other proposals have been put forward by industry representatives, such as WSC, 'Consideration of a "Green Balance Mechanism"' ISWG-GHG 16/2/4 (ISWG-GHG 2024).

[16]Belize et al 'Way Forwards for a Universal Mandatory GHG Levy Acting in Combination with a Simplified Global GHG Fuel Standard' ISWG-GHG 16/2/6 (ISWG-GHG 2024). This proposal builds on Marshall Islands and Solomon Islands, 'Proposal for IMO to Establish a Universal Mandatory Greenhouse Gas Levy' MEPC 76/7/12 (IMO MEPC 2021).

[17]Marshall Islands, 'Factsheet – Universal Mandatory Greenhouse Gas Levy (GHGL)' GHG-EW 3/INF.10 (IMO Expert Workshop on the Life Cycle GHG Intensity of Marine Fuels). Well-to-wake coverage means that the mechanism will apply to emissions released while using fuels on vessels and to emissions released upstream in the production and distribution of the fuels.

[18]Belize et al (n 16).

[19]Austria et al, 'Combination of Technical and Market-Based Mid-Term Measures Illustrated by Combining the GHG Fuel Standard and a Levy' ISWG-GHG13/4/8 (ISWG-GHG 2022).

[20]Austria et al, 'Fact Sheet — Development of a Basket of Candidate Mid-Term GHG Reduction Measures' (ISWG-GHG16) 1.4.

[21]Argentina et al, 'Elaborations on the Key Elements' (n 9).

vessels that outperform the target receive a reward.[22] In establishing whether the target has been met, consideration is given to the average GHG intensity of fuels used by a vessel with corrections made for sustainability criteria and equity considerations.[23]

Japan proposed the Zero-Emission Shipping Incentive Scheme (ZESIS).[24] Under this feebate mechanism vessels pay a price for their GHG emissions and revenues are distributed to vessels that use low- or zero-well-to-wake GHG emissions fuels and to support a just and equitable transition.[25]

A feebate scheme has been proposed also by Bahamas, Liberia and the International Chamber of Shipping (ICS). Under this scheme, vessels make mandatory contributions for their annual GHG emissions to a Zero Emission Shipping Fund (ZESF) administered by the IMO.[26] Funds collected would support zero and near-zero GHG fuels and technologies and maritime decarbonisation in developing countries, especially SIDS and LDCs.[27]

Many of the details of these proposals will be further developed in the coming years, but they all indicate that the GHG price will be paid directly by vessels into a fund through an electronic system.[28] Such payments would be made on the basis of data collected on fuel oil consumption through the IMO data collection system for fuel oil consumption of ships (IMO DCS),[29] and in the case of the proposal by Argentina and others also using additional data currently not covered by the IMO DCS.[30] It is possible that the final IMO GHG pricing instrument will combine different elements of the proposals above.

3 | THE IMO GHG PRICING INSTRUMENT AND THE EQUITABLE ENERGY TRANSITION OF INTERNATIONAL SHIPPING

This section provides background information for the analysis presented later in the article. In particular, it discusses key equity concerns related to implementing GHG pricing instruments in international shipping.

Stakeholders at the MEPC are increasingly calling for an equitable and/or just transition of the shipping sector, with many advocating for a transition that leaves no country behind.[31] Language on the need for a just and equitable transition is included in the 2023 IMO GHG Strategy, also in relation to the development of a GHG pricing instrument: Paragraph 4.5 states that '[t]he mid-term GHG reduction measures should effectively promote … a just and equitable transition'.[32] While there is no explicit common understanding of what a 'just' or 'equitable' transition means, 'just' is generally understood as referring to the welfare of maritime workers,[33] while 'equitable' has a broader meaning and relates primarily to distributional aspects of the transition between States.[34] In this respect, for many stakeholders, a key component of the equitable transition includes the implementation of a GHG pricing instrument that raises revenues as part of the revenues could be distributed to States to address equity concerns.[35] Estimates indicate that between US$40–60 billion per year could be raised up to 2050 by an IMO GHG pricing instrument.[36] All the measures discussed above provide that a share of the revenues raised by the GHG pricing instrument is used to address equity concerns[37]—even though the specific use of the revenues remains a contentious issue.[38]

The 2023 IMO GHG Strategy includes guiding principles that relate closely to equity considerations. In particular, it recognises the need to be cognisant of the principle of 'common but differentiated responsibilities and respective capabilities in the light of different national circumstances' (CBDRRC).[39] The CBDRRC principle calls on all countries to act on climate change but recognises that those that

[22]Argentina et al, 'Further Proposal on the International Maritime Sustainable Fuels and Fund (IMSF&F) Mechanism and Associated Draft Amendments to MARPOL Annex VI' ISWG-GHG16/2/13 (ISWG-GHG 2024).
[23]ibid 12–e13.
[24]Japan, 'Proposal on Market-Based Measures (MBMs) to Incentivize GHG Emission Reduction and to Make Equitable Transition with an Overview of Mid- and Long-Term Measures' MEPC 78/7/5 (IMO MEPC 2022); Japan, 'Further Proposal on Zero-Emission Shipping Incentive Scheme (ZESIS)' ISWG-GHG 14/3/1 (IMO ISWG-GHG 2023); Japan, 'Further Proposal on the Feebate Mechanism' ISWG-GHG 16/2/12 (IMO ISWG-GHG 2024).
[25]Japan, 'Further Proposal on the Feebate Mechanism' (n 24) para 23–24.
[26]Bahamas et al, 'Possible Draft Amendments to MARPOL Annex VI to Establish a Fund and Reward (Feebate) Mechanism as a Maritime GHG Emissions Pricing Mechanism' ISWG-GHG 16/2/3 (IMO ISWG-GHG 2024).
[27]ibid 28–29.
[28]Argentina et al, 'Proposal to Establish' (n 9) paras 10.5–10.6; Austria et al, (n 19) para 17; Bahamas et al (n 29) para 31; Marshall Islands (n 17) 1.2.2; Japan, 'Factsheet – Feebate Mechanism or Zero-Emission Shipping Incentive Scheme' GHG-EW 3/INF.5 (IMO Expert Workshop on the Life Cycle GHG Intensity of Marine Fuels) 1.2.2.
[29]Bahamas et al (n 26) para 31; Brazil, 'Factsheet – International Maritime Sustainability Funding and Reward (IMSF&R)' GHG-EW 3/INF.9 (IMO Expert Workshop on the Life Cycle GHG Intensity of Marine Fuels) 1.2.2; Marshall Islands (n 17) 1.2.2; Japan (n 28) 1.2.2.
[30]Argentina et al, 'Fact Sheet – Development of a Basket of Candidate Mid-Term GHG Reduction Measures' (ISWG-GHG 16) 1.3.
[31]For a recent review, see Fiji et al, 'Defining an "Equitable Transition" and Related Terminology "Just", "Fair" and "Inclusive" to Aid Delegations in the Choice of Wording for Use in the Revised Strategy' ISWG-GHG 14/2/5 (IMO ISWG-GHG 2023).
[32]IMO (n 13) 4.5.
[33]This reading is consistent with paragraph 5.6 of the 2023 IMO GHG Strategy, which states that the IMO has to contribute to a 'just transition for seafarers and other maritime workforce' (ibid 5.6).
[34]For a detailed discussion of the meaning of these terms proposed by some Pacific States, see Fiji et al (n 31). At the moment, it is unclear whether the meaning of 'equitable transition' and 'just transition' in the IMO context will follow the interpretation of these terms in the context of the United Nations Framework Convention on Climate Change (UNFCCC). Contrary to the principle of common but differentiated responsibilities and respective capabilities, for which the 2023 IMO GHG Strategy makes a clear reference to the UNFCCC, the strategy is silent on whether 'equitable transition' and 'just transition' should be interpreted in light of the UNFCCC, Kyoto Protocol and Paris Agreement. For a discussion of the meaning of 'equitable transition' and 'just transition' outside of the IMO context, see C Carlarne and JD Colavecchio, 'Balancing Equity and Effectiveness: The Paris Agreement & The Future of International Climate Change Law' 27 New York University Environmental Law Journal 107; and V Johansson, 'Just Transition as an Evolving Concept in International Climate Law' (2023) 35 Journal of Environmental Law 229.
[35]Fiji et al (n 31); UNCTAD, 'An Equitable and Just Transition to Low-Carbon Shipping' (UNCTAD 2023) <https://unctad.org/system/files/official-document/presspb2023d6_en.pdf>; Marshall Islands and Solomon Islands, 'Embedding an Equitable Transition in the Revised IMO GHG Strategy' ISWG-GHG 13/3/6 (IMO ISWG-GHG 2022).
[36]G Dominioni and D Englert, 'Carbon Revenues from International Shipping: Enabling an Effective and Equitable Energy Transition – Technical Paper' (World Bank 2022) <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099415003292255977/p177583029511105208243O5d5b779f0c96>.
[37]Bahamas et al (n 26) para 28; Argentina et al 'Proposal to Establish' (n 9) para 7; Austria et al (n 20) 4.5; Japan, 'Further Proposal on ZESIS' (n 24) para 15; Marshall Islands (n 17) 1.2.2.
[38]A key issue is whether revenues should be used 'in-sector' or also 'out-of-sector', with some countries supporting to spend revenues exclusively or primarily on maritime transport, and other IMO stakeholders supporting the use of revenues for climate and development finance more broadly. On this, see for instance, Dominioni et al 'Distributing Carbon Revenues' (n 11).
[39]IMO (n 1) 3.5.1.2.

have contributed less to causing climate change or have less capacity to address it should bear a lower burden in the transition.[40] The specific reference in the 2023 IMO GHG Strategy to the Paris Agreement version of the CBDRRC principle[41] indicates that IMO member States recognise the fluidity of the respective responsibilities and capabilities of countries. For example, some States that have historically contributed little to GHG emissions have become major polluters in the last two decades while also developing significant capacity to address climate change.[42]

The other equity principle included in the 2023 IMO GHG Strategy refers to assessing and addressing disproportionately negative impacts (DNI) that may arise from implementing GHG policies to decarbonise shipping.[43] For example, the implementation of a GHG price in international shipping would increase transport costs; this could reduce access to maritime services, lead to reduced exports, or increase risks for food and energy security.[44] A recent literature review indicates that for most products the increase in prices of traded products is likely to be relatively small, around 1%.[45] However, for high-weight-low-value products and for some countries, including some SIDS and LDCs, the increase in prices and the related trade costs would be more severe.[46]

At MEPC 80, IMO member States agreed to carry out a comprehensive impact assessment of the proposed GHG measures, which is to be concluded in 2024.[47] However, it remains to be seen whether these negative effects will be seen as 'disproportionate', as there is no agreed definition of what disproportionate means among IMO member States.[48]

4 | AN IMO GHG PRICING INSTRUMENT AND WTO LAW

This section discusses whether WTO law constrains the possibility of implementing an IMO GHG pricing instrument. The analysis focuses on the General Agreement on Trade in Services[49] and the General Agreement on Tariffs and Trade.[50] The analysis starts by considering under what conditions an IMO GHG price could be challenged under WTO law. It then looks at whether measures adopted to implement or enforce an IMO GHG price that are found to violate provisions of the GATS or the GATT could be justified under Article XIV GATS and Article XX GATT. While a full analysis of the future IMO GHG pricing instrument can be carried out only after such an instrument is fully developed, the current state of negotiations at the IMO allow for the identification of design features that can reduce risks of a WTO dispute. This can be important in a context where IMO member States aim to comply with WTO law and the potential threat of a WTO dispute—whether well-grounded in WTO law or not—can affect the development of IMO negotiations.

4.1 | Who could challenge an IMO GHG pricing mechanism under WTO law?

WTO members can challenge measures implemented by other WTO members for violation of GATS or GATT rules. A new IMO convention or an amendment to the International Convention for the Prevention of Pollution from Ships (MARPOL)[51] that introduces an GHG pricing instrument would therefore not be subject to challenge at the WTO. However, national or EU legislation, regulation, or administrative practices (hereinafter referred to as 'measures') adopted by WTO members to implement or enforce an IMO convention—such as measures to implement or enforce the GHG price by flag States or port States—are subject to WTO law.

In this context, the question arises as to whether a WTO member whose export or fleet is subject to the IMO GHG price could challenge national or EU measures adopted to implement or enforce the GHG price. Some legal scholarship argues that countries that ratify a multilateral convention would have no possibility to challenge trade restrictions implemented unilaterally to comply with the convention.[52] If accepted, this approach may restrict the possibility of challenging national or EU measures adopted to implement or enforce an IMO GHG price.[53] In practice, such possibility will depend on the legal instrument and procedure used by the IMO to adopt the GHG pricing instrument.

[40]C Voigt and F Ferreira, '"Dynamic Differentiation": The Principles of CBDR-RC, Progression and Highest Possible Ambition in the Paris Agreement' (2016) 5 Transnational Environmental Law 285; Chen (n 10).

[41]In the Paris Agreement, the CBDRRC principle is framed 'in the light of different national circumstances', which marks a departure from the versions of CBDRRC included in the UNFCCC and Kyoto Protocol.

[42]Voigt and Ferreira (n 40).

[43]IMO (n 13) 3.5.1.4 and 4.13.

[44]CE Delft, 'Study on Assessment of Possible Global Regulatory Measures to Reduce Greenhouse Gas Emissions from International Shipping: Final Report' (European Commission 2021) <https://data.europa.eu/doi/10.2834/330363>.

[45]I Rojon et al, 'The Impacts of Carbon Pricing on Maritime Transport Costs and Their Implications for Developing Economies' (2021) 132 Marine Policy 104653.

[46]ibid. A more recent working paper indicates that the regions most negatively affected by an IMO carbon tax would be East Africa, West Africa and South Central Africa; see P Pereda et al, 'Carbon Tax in the Shipping Sector: Assessing Economic and Environmental Impacts' (Department of Economics, FEA/USP 2023). Of course, impacts on States may depend on how the measure is implemented and may vary depending on market conditions. See, e.g., V Kosmas and M Acciaro, 'Bunker Levy Schemes for Greenhouse Gas (GHG) Emission Reduction in International Shipping' (2017) 57 Transportation Research Part D: Transport and Environment 195.

[47]IMO (n 13) 6.2.

[48]Dominioni (n 9).

[49]General Agreement on Trade in Services (adopted 15 April 1994, entered into force 1 January 1995) 1869 UNTS 183 (GATS).

[50]General Agreement on Tariffs and Trade 1994 (adopted 15 April 1994, entered into force 1 January 1995) 1867 UNTS 187 (GATT).

[51]MARPOL is the international convention that may be amended to introduce a GHG pricing instrument by the IMO; see International Convention for the Prevention of Pollution from Ships (adopted 2 November 1973; entered into force as modified by the Protocol of 1978, 2 October 1983) 1340 UNTS 61 (MARPOL).

[52]DC Esty, *Greening the GATT: Trade, Environment, and the Future* (Institute for International Economics 1994) 139–141.

[53]Please note that the IMO tends to operate on a consensus basis, see H N Psaraftis and CA Kontovas, 'Influence and Transparency at the IMO: The Name of the Game' (2020) 22 Maritime Economics and Logistics 151, 152.

The first option would be to adopt a new convention.[54] In this situation, countries that have ratified the new convention would be barred from challenging unilateral measures that implement or enforce the GHG pricing instrument. However, the IMO GHG price would, most likely, be applied also to goods exported from and to vessels flagged in countries that are not party to the convention.[55] This is because, the IMO tends to operate on the basis of the no more favourable treatment (NMFT) clause—referred to also as the non-discrimination principle—which requires States part of an IMO convention to apply that convention to all vessels visiting their ports, regardless of whether the vessel is registered in a state that is party of the convention or not.[56] This principle is enshrined in the 2023 IMO GHG Strategy[57] and, normally, IMO conventions do not derogate from this principle.[58] WTO members that are not party of the new convention—or of the IMO *tout court*[59]—would not be barred from challenging unilateral measures that implement or enforce it. The number of countries party of the convention is difficult to predict, and may depend on the rules for entering into force established in the convention.[60]

The second option would be to amend MARPOL Annex VI, that is, the annex of MARPOL that deals with air pollution from ships.[61] Currently, 71 countries that are members of the IMO have not ratified MARPOL Annex VI.[62] These countries do not apply MARPOL Annex VI to vessels entering their ports and cannot vote to amend MARPOL Annex VI. However, exports from these countries and vessels flagged in these countries would be still subject to the IMO GHG price by virtue of the NMFT principle discussed above. Countries that are party to MARPOL Annex VI can sanction vessels from non-MARPOL Annex VI countries if these do not comply with MARPOL Annex VI rules (e.g. detention of vessels). Countries not party to MARPOL Annex VI could challenge unilateral measures adopted to implement or enforce an IMO GHG price.

A third group of countries that may attempt to challenge unilateral measures adopted to implement or enforce an IMO GHG price are countries that have ratified MARPOL Annex VI, but that have expressed disagreement with the amendments that introduce the IMO GHG price. While the IMO tends to operate on a consensus basis for MARPOL amendments, when an agreement is unreachable, countries can resort to a vote. In this case, a two thirds majority of members to the convention that are present and voting is needed for the amendment to be adopted.[63] After this, at least two thirds of the parties to the Annex representing at least 50% of the gross tonnage of the global merchant fleet need to accept the amendment before it enters into force.[64] Previous IMO GHG measures have been adopted through this procedure, with China, Chile, Brazil, Kuwait, and Saudi Arabia voting against their adoption.[65] In case the IMO GHG price is adopted through the voting procedure, countries that have voted against could attempt to challenge the measure under WTO law. Arguably, their case would be weaker because, while they have voted against the amendment, they have accepted to be bound by the voting procedure to amend MARPOL.

Ultimately, whether a WTO dispute on an IMO GHG price materialises will depend on a political decision of countries negatively affected by this measure. WTO disputes are costly for governments, both in terms of monetary costs of preparing a dispute and potential diplomatic repercussions.[66] The decision to challenge a measure under WTO law will normally be the result of domestic lobbying from industries harmed by the measure challenged.[67] In the context of a GHG price for international shipping, such lobbying may derive from industries that are likely to be disproportionately negatively affected by the measure, such as exporters of high-weight and low-value products located far away from their export market, shipping companies that would be penalised by the measure, or fossil fuel companies as they charter a significant portion of the dry and liquid bulk sector.[68]

4.2 | Potential grounds for complaint under the GATS and GATT

This section analyses the potential grounds for complaint against an IMO GHG price under the GATS and the GATT. This analysis indicates that there are likely limited grounds to challenge an IMO GHG price under the GATS or GATT—especially if the GHG price is implemented as a direct payment from vessels to an international fund.

Measures that implement or enforce an IMO GHG price could be challenged under the most-favoured nation (MFN) principle under the GATS. MFN requires WTO members to grant treatment 'no less favourable than that it accords to like services and service suppliers of

[54]Article 3(b) of the Convention on the International Maritime Organization recognises that the IMO can draft new treaties; see Convention on the International Maritime Organization (adopted 6 March 1948, entered into force 17 March 1958) 289 UNTS 3, art 3(b).
[55]Regardless of whether they are IMO member States or not.
[56]H Aidun et al, 'Principles of International Law and the Adoption of a Market-Based Mechanism for Greenhouse Gas Emissions from Shipping' (Columbia Law School 2021) <https://scholarship.law.columbia.edu/faculty_scholarship/2749> 25.
[57]IMO (n 13) 3.5.1.1.
[58]Chen (n 10) 2.
[59]Currently, 15 countries that are not IMO members are WTO members: Afghanistan, Burkina Faso, Burundi, Central African Republic, Chad, Eswatini, Kyrgyz Republic, Lao People's Democratic Republic, Lesotho, Liechtenstein, Mali, Niger, Rwanda, Chinese Taipei, Tajikistan.
[60]Normally, in the IMO context, such rules combine several countries members of the IMO and a percentage of the global fleet. See, A O'Leary and J Brown, 'The Legal Basis for IMO Climate Measures' (Sabin Center for Climate Change Law 2018).
[61]This is the MARPOL Annex that includes GHG measures adopted by the IMO in 2011, 2016 and 2021; see IMO, 'Improving the Energy Efficiency of Ships' <https://www.imo.org/en/OurWork/Environment/Pages/Improving%20the%20energy%20efficiency%20of%20ships.aspx>.
[62]See IMO, 'Status of Conventions' <https://www.imo.org/en/About/Conventions/Pages/StatusOfConventions.aspx>.
[63]MARPOL (n 51) art 16(2)(d).
[64]ibid art 16(2)(f)(i).
[65]Transport and Environment, 'International Shipping: The First Industry with a Global Climate Standard' (2011).
[66]CL Davis, *Why Adjudicate? Enforcing Trade Rules in the WTO* (Princeton University Press 2012).
[67]ibid.
[68]See International Transport Forum, 'Carbon Pricing in Shipping' (OECD Publishing 2022). On the concerns expressed at MEPC 80 by some developing countries on the potential impacts of a GHG levy on their trade, see O Telling, 'China Urges Developing Countries to Oppose "Unrealistic" Shipping Levy' (Financial Times, 2 July 2023); and J Lo, 'Latin America Leads Resistance to Global Shipping Emission Tax' (Climate Home, 29 June 2023) <https://www.climatechangenews.com/2023/06/29/shipping-imo-brazil-tax-levy-emissions-shipping/>.

any other country'[69] and applies to both *de jure* and de facto discrimination.[70] Karim and Deane have argued that a GHG pricing instrument under which 'the method for the calculation of the liability is applied in the same manner to all vessels or vessel owners regardless of their flag'[71] would not violate MFN under the GATS. If this line of reasoning is accepted, it could be argued that none of the GHG pricing instruments currently under discussion at the IMO violate MFN under the GATS as they do not differentiate per flag of registration (see further Section 5.2).

However, upon closer inspection, there are situations where a GHG price applied uniformly to emissions from vessels regardless of their flag of registration[72] could be challenged for violation of the MFN rule. In particular, to the extent that there are systematic variations in the GHG performance of the fleet of different countries, WTO members that have a less performing fleet could challenge domestic measures adopted to implement or enforce such GHG pricing instruments for de facto discriminating against their vessels. In this respect, there are reasons to believe that the energy efficiency of the fleet of various countries is heterogeneous. Indeed, there are significant differences in factors that determine the energy efficiency of vessels—such as ship age[73] and size[74]—across the fleet of different countries.

Measures that implement or enforce a GHG pricing instrument under MFN that apply a GHG price only to a subset of the global fleet may be especially likely to prompt challenges. For instance, as discussed in Section 2, the proposal by Argentina and others provides that vessels that meet the GHG fuel intensity target not be subject to the fee. Under such a measure, the burden faced by the fleet of each country will depend on how the benchmark for the application of the fee is established. A complaining country could question how such a benchmark was chosen.

Note however that MFN coverage of maritime transport under the GATS is limited. Despite maritime transport services falling under the GATS, the application of MFN to this sector is suspended as negotiations are still undergoing.[75] An exception to this suspension applies when a WTO member has made a specific commitment on maritime transport services without listing maritime transport as an exemption. The number of countries that made such commitments has increased significantly in the last decade, reaching 62 countries as of 2020.[76] Only measures implemented by countries that have made commitments for MFN that apply to maritime transport may be challenged for violation of this principle.

Measures that implement or enforce an IMO GHG price could also be challenged under Article XI:1 GATT, which applies to quantitative restrictions on products. WTO jurisprudence has interpreted this provision as having broad coverage, which encompasses 'any form of limitation imposed on, or in relation to importation'.[77] Measures that have restrictive *effects* on the importation of goods can violate this provision.[78] As discussed above, the IMO GHG price is expected to increase transport costs and, relatedly, the price of goods traded via maritime transport. As such, EU and national measures adopted to implement or enforce the IMO GHG price could be challenged under Article XI:1 GATT.

It has been argued that an IMO GHG price applied to all ships would not violate Article XI:1 GATT because the prohibition included in this article does not apply when the quantitative restriction bear on like products of all third countries.[79] However, as discussed in Section 3, existing empirical research on the impacts of a GHG pricing instrument indicates that products of different countries are likely to be impacted differently by such an instrument. Indeed, one of the most debated points in current IMO negotiations is how to address concerns of countries that will be *disproportionately* impacted. In light of this, a complaining country could argue that the quantitative restriction applied on their export is more severe—and thereby different—than that applied to like products from third countries.

Many other provisions of the GATT and GATS that the WTO Secretariat has indicated as potentially relevant for the implementation of an IMO GHG pricing instrument are less likely to be violated by current proposals. As discussed in Section 2, all the proposals submitted to the IMO in this round of negotiations indicate that the GHG price would be paid directly by vessels into an international fund on the basis of data on fuel oil consumption (and amended IMO DCS in case of the proposal by Argentina and others). A direct payment made by a vessel to an international fund on a periodic basis (e.g. bimonthly or every year) is unlikely to qualify as a charge 'imposed on or in

[69] GATS (n 49) art II:1.

[70] P Van den Bossche and W Zdouc, *The Law and Policy of the World Trade Organization: Text, Cases and Materials* (4th edn, Cambridge University Press 2017) 326.

[71] Karim and Deane (n 6) 376.

[72] Any country can grant a ship the right to register under its flag. Vessels registered under the flag of a country are subject primarily to its legislative and enforcement jurisdiction when on the high seas. The country where a vessel is registered does not need to be, and often is not, the one where the vessel owner is located nor the one where the vessels travels from/to. On flag States, see R Barnes, 'Flag States' in D Rothwell et al (eds), *The Oxford Handbook of The Law of the Sea* (Oxford University Press 2015) 304. Note also that the conclusion reached by Karim and Deane accounts only for part of the potential legal issues because for maritime transport services the flag of registration is not the only criterion used to determine the origin of services, the other being the person that provides the service 'through the operation of a vessel and/or its use in whole or in part' as per GATS (n 49) art XXVIII(f)(i). Currently, there is only a limited overlap between the country of ownership, operation, and registration of vessels at the global level; see UNCTAD, 'Review of Maritime Transport 2023' (UNCTAD 2023); Dominioni and Englert (n 36).

[73] For instance, the average age of container vessels registered in Europe was 13 years in 2023. In the same year, the average age of the fleet registered in South America was 18 years. See UNCTADStat, 'Merchant Fleet by Flag of Registration and by Type of Ship, Annual' <https://unctadstat.unctad.org/datacentre/dataviewer/US.MerchantFleet>.

[74] UNCTAD (n 72).

[75] GATS (n 49) Annex on negotiations on maritime transport services, para 1. See also Chircop et al (n 6); D Pérez Rodríguez, 'The Inclusion of Shipping in the EU Emission Trading Scheme: A Legal Analysis in the Light of Public International Law' (2012) 3 Revista Catalana de Dret Ambiental <https://revistes.urv.cat/index.php/rcda/article/view/1286>; L Zhao, 'Maritime Transport, the WTO, and Regional Trade Agreements: Too Many Cooks?' in R Tamara Hoffmann and M Krajewski (eds), *Coherence and Divergence in Services Trade Law* (Springer 2020) 219.

[76] Zhao (n 75).

[77] *Colombia — Indicative Prices and Restrictions on Ports of Entry* (Panel Report) WT/DS366/R (27 April 2009) para 7.227.

[78] *China — Measures Related to the Exportation of Various Raw Materials* (Appellate Body Report) WT/DS394/AB/R (30 January 2012) para 320.

[79] Karim and Deane (n 6).

connection with importation or exportation',[80] or as an internal tax or charge,[81] or as a fee or charge imposed in connection with importation or exportation.[82] A violation of these rules is more likely to occur if the GHG price was levied by importing countries[83] on the basis of the GHGs released in transporting imported goods.[84] Under such a scenario, the IMO GHG price would, de facto, target GHG emissions embedded in imported products and therefore potentially be subject to WTO law challenges that apply to other instruments that price GHG emissions embedded in imported products, such as border carbon adjustment mechanisms.[85]

4.3 | Justification under Articles XIV GATS and Article XX GATT

In the case that EU or national measures introduced to implement or enforce an IMO convention on the GHG price are found to be incompatible with the main provisions under the GATS or GATT, the question would arise as to whether the EU/national measures would be justifiable under Article XIV GATS or Article XX GATT. To be justifiable under Article XIV GATS or Article XX GATT, a measure needs to pass a two-tier test, that is, comply with (1) the requirements of one of the justifications and (2) the precepts included in the *chapeau*.

Under the GATS and the GATT a justification for domestic measures that implement or enforce an IMO GHG pricing instrument would be Article XIV(b) and Article XX(b), which justify measures that are 'necessary to protect human, animal or plant life or health'.[86] While this justification relates to measures aimed to protect public health, it can apply also to measures that aim to address environmental problems,[87] and climate change.[88] Indeed, climate change poses severe risks to the life and health of humans, animals and plants. For instance, climate change is related to increases in the frequency of extreme weather events and biodiversity loss.[89]

Whether a measure is 'necessary' has to be determined through a weighing and balancing process that accounts for: the importance of the policy objective pursued, the contribution of the measure to achieve the public health aim pursued, and the trade restrictiveness of the measure.[90] Because mitigating climate change is broadly recognised as one of the main policy priorities of our time,[91] the importance of the policy objective pursued is likely to be seen as high.

The contribution of the measure to addressing the public health issue at hand, in this case climate change, needs to be 'apt to make a material contribution'.[92] It is too early to know whether the IMO GHG price will contribute significantly to decarbonising international shipping, as this will depend on its design, including the price level, whether it applies to all GHG emitting vessels, and how carbon revenues—if raised—will be used. However, in principle, a GHG price is considered a useful component of the policy mix to decarbonise the sector as it can help to close the competitiveness gap between fossil-based bunker fuels and zero-carbon bunker fuels,[93] reduce risks of rebound effects, and provide funding to support the production and distribution of zero-carbon bunker fuels and technologies.[94] Simulations confirm that a sufficiently ambitious GHG price can contribute to reducing GHG emissions from international shipping[95] even when they take the form of a feebate.[96] Thus, measures adopted to implement or enforce a GHG pricing instrument can, at least in principle, be seen as apt to make a material contribution.

Lastly, with regard to the trade restrictiveness of the measure, this will depend on how the instrument is designed. However, existing evidence indicates that the impact of a GHG price on the price of traded products is likely to be small on average—but will be higher for some developing countries.[97] As mentioned above, IMO member States have decided to carry out a comprehensive impact assessment on the impacts of a GHG price on States, which is expected to be concluded in 2024.[98] If the higher trade impacts are addressed—for instance, through the strategic use of carbon revenues[99]—the measure is likely to pass the necessity test.

[80]GATT (n 50) art I:1.
[81]ibid art III:2.
[82]ibid art VIII.
[83]Jamaica, 'Achieving Reduction in Greenhouse Gas Emissions from Ships through Port State Arrangements Utilizing the Ship Traffic, Energy and Environment Model, STEEM' MEPC 60/4/40 (IMO MEPC 2010).
[84]This approach has been proposed for the implementation of a GHG price for international shipping by the EU, see G Dominioni et al, 'Regional Carbon Pricing for International Maritime Transport: Challenges and Opportunities for Global Geographical Coverage' (2018) 12 Carbon and Climate Law Review 140.
[85]For a discussion of potential challenges to border carbon adjustment mechanisms under Articles I and III:2 GATT, see MA Mehling et al, 'Designing Border Carbon Adjustments for Enhanced Climate Action' (2019) 113 American Journal of International Law 433; G Dominioni and D Esty, 'Designing Effective Border-Carbon Adjustment Mechanisms: Aligning the Global Trade and Climate Change Regimes' (2023) 65 Arizona Law Review.
[86]GATS (n 49) art XIV(b).
[87]There is little WTO case law on Article XIV(b) GATS. However, case law on Article XX(b) GATT likely applies to interpreting Article XIV(b) GATS; see T Cottier et al, 'Article XIV GATS: General Exceptions' in R Wolfrum et al (eds), *WTO: Trade in Services*, vol 6 (Martinus Nijhoff 2008) 287.
[88]*Brazil — Certain Measures Concerning Taxation and Charges* (Panel Report) WT/DS472/R (3 December 2017) para 7.880.
[89]Intergovernmental Panel on Climate Change (IPCC), 'Summary for Policymakers' in V Masson-Delmotte et al (eds), *Global Warming of 1.5 °C* (IPCC 2018).
[90]For a review of this weighing and balancing process under Article XIV GATS, see Cottier et al (n 87).
[91]As evidenced by the inclusion of climate action in SDG 13, see UN, 'Sustainable Development Goals' <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>.
[92]*Brazil — Measures Affecting Imports of Retreaded Tyres* (Appellate Body Report) WT/DS332/AB/R (3 December 2007) (*Brazil — Retreaded Tyres*) paras 151–154. In this case, the Appellate Body explicitly mentioned that for some measures, including climate change measures, the positive effects may become observable only after some time, see ibid para 151.
[93]For a discussion on zero-carbon bunker fuels needed to deliver on the IMO GHG targets see D Englert et al, 'The Role of LNG in the Transition Toward Low- and Zero-Carbon Shipping' (World Bank 2021) 4.
[94]D Baresic et al, 'Closing the Gap: An Overview of the Policy Options to Close the Competitiveness Gap and Enable an Equitable Zero-Emission Fuel Transition in Shipping' (UMAS 2022) 26–43; I Parry et al, 'A Carbon Levy for International Maritime Fuels' (2022) 16 Review of Environmental Economics and Policy 25.
[95]G Mundaca et al, 'Carbon Pricing of International Transport Fuels: Impacts on Carbon Emissions and Trade Activity' (2021) 110 Journal of Environmental Economics and Management 102517; P Cariou et al, 'Ship-Owner Response to Carbon Taxes: Industry and Environmental Implications' (2023) 212 Ecological Economics 107917.
[96]Parry et al (n 94).
[97]Rojon et al (n 45); UNCTAD, 'Preliminary Expert Review of the Technical and Economic Elements, and Their Possible Combinations, of the Proposals for Candidate Mid-Term GHG Reduction Measures Submitted to ISWG-GHG and MEPC' MEPC 80/INF.39/Add.1 (UNCTAD 2023).
[98]IMO (n 13) 4.11.
[99]On the use of carbon revenues from shipping to address negative impacts on States see Dominioni and Englert (n 36) 23–25.

Compliance with Article XIV(b) will also require that there is no reasonably available and less trade-restrictive alternative measure to achieve the same public health aim.[100] A GHG price is a cost-effective measure to reduce GHG emissions because it is expected that GHG abatements will occur where they are cheaper.[101] The GHG price can therefore be seen as lowering abatement costs compared with measures that force the adoption of certain types of GHG technologies. Ultimately, the compliance costs under a GHG price will depend on its design, including the reporting and enforcement procedures. Exempting smaller vessels or simplifying reporting and payment procedures can reduce the trade restrictiveness of a GHG price. However, regardless of the design of the instrument, the fact that the GHG price was adopted through a multilateral process at the IMO that lasted many years would provide a strong indication that no other less trade-restrictive and easily available GHG reduction measures existed.

The second step in the two-tier test is to check compliance with the *chapeau* of Article XIV GATS and Article XX GATT, which requires that a measure is not applied in a way that constitutes 'arbitrary and unjustifiable discrimination between countries where like conditions prevail'[102] or 'a disguised restriction on trade in services'.[103] Measures adopted to implement or enforce a GHG price adopted through a multilateral UN process involving more than 170 countries are unlikely to be seen as constituting arbitrary and unjustifiable discrimination. Indeed, previous Appellate Body jurisprudence indicates that even a serious *attempt* to reach a multilateral agreement can help to shield a measure against such claims.[104] In addition, discriminatory effects that can be explained by the rationale of the measure are less likely to be found arbitrary and unjustifiable.[105] Thus, domestic measures—for example, enforcement by a flag State or port State—that result in a greater burden on vessels that emit more GHGs is may not be seen as arbitrary and unjustifiable.[106]

The analysis above suggests that a carefully designed IMO GHG pricing instrument can be justified under Article XIV GATS and Article XX GATT. In this respect it is important to stress that under Article XX GATT there is an additional exception available that focuses explicitly on environmental matters, that is, Article XX(g), which applies to measures 'relating to the conservation of exhaustible natural resources'.[107] This exception is likely to apply to measures that address climate change, as what constitutes an exhaustible natural resource has to be decided on the basis of 'contemporary concerns of the community of nations'.[108] Addressing climate change is without a doubt a core policy concern of the community of nations—as indicated by the nearly universal ratification of the Paris Agreement.[109]

To qualify for the exception under Article XX(g), the measure needs to 'relate to' conserving the exhaustible natural resource, meaning that the measure is not merely incidentally related to the conservation of an exhaustible natural resource.[110] EU or national measures applied to implement or enforce an IMO convention on GHG emissions from shipping can meet this requirement.

Lastly, to qualify for exception (g) a measure should be 'made effective in conjunction with restrictions on domestic production or consumption'.[111] To meet this requirement, domestic and imported products should be treated evenhandedly.[112] The global nature of the instrument would also help to show the even-handedness of the treatment reserved for domestic and foreign producers.

Overall, the analysis indicates that—on the basis of the submissions currently tabled at the IMO—the possibility to challenge domestic measures implemented in relation to an IMO GHG price for incompatibility with the GATS or the GATT are very limited in terms of the grounds of complaint. This is particularly the case if the GHG price is paid directly by vessels into an international fund. In addition, in the case that such a challenge materialises, a well-designed measure is likely to be justified under Article XIV of the GATS and Article XX of the GATT.

As discussed in Section 3, the implementation of a revenue raising GHG price on shipping is seen by many stakeholders as a core component of the equitable energy transition of international maritime transport. The GATT and GATS do not seem to pose major barriers to the implementation of such an instrument.

5 | EXEMPTIONS FROM THE IMO GHG PRICING INSTRUMENTS AND WTO LAW

Key equity-related concerns expressed in the 2023 IMO GHG Strategy include the need to be cognisant of CBDRRC and the need to address disproportionately negative impacts on States. IMO member States are considering the implementation of exemptions as a way to address these concerns.[113] Among the proposals currently tabled for discussion, the measure proposed by Argentina and others includes an adjustment of the benchmark for vessels that have served ports of developing countries likely to be negatively impacted.[114] This adjustment would result in a lower payment—or no payment—on an annual

[100] *European Communities—Measures Affecting Asbestos and Asbestos-Containing Products* (Appellate Body Report) WT/DS135/AB/R (12 March 2001) (*EC — Asbestos*) para 172.
[101] A Baranzini et al, 'Carbon Pricing in Climate Policy: Seven Reasons, Complementary Instruments, and Political Economy Considerations' (2017) 8 WIREs Climate Change e462, 2.
[102] GATS (n 49) art XIV.
[103] ibid.
[104] *United States — Import Prohibition of Certain Shrimp and Shrimp Products* (Appellate Body Report) WT/DS58/AB/R (12 October 1998) (*US — Shrimp*) para 166. In this case, the Appellate Body pointed out that the United States had not put sufficient effort in negotiating agreements with trading partners to support the conservation of marine turtles.
[105] *Brazil — Retreaded Tyres* (n 92) para 232. In this dispute, the Appellate Body found that 'rational' acts that go against or have no relationship with the rationale of the paragraphs of Article XX under which the measure is provisionally justified can be 'arbitrary or unjustifiable'.
[106] Dobson and Ryngaert (n 4) 323.
[107] GATT (n 50) art XX(g).
[108] *US — Shrimp* (n 104) para 129. Here, the Appellate Body recognised that language included in an international agreement—in that case, the WTO Agreement—can indicate what are the concerns of the signatories to the agreement.
[109] UNFCCC, 'Paris Agreement – Status of Ratification' <https://unfccc.int/process/the-paris-agreement/status-of-ratification>.
[110] For this interpretation of 'relate to', see *US — Shrimp* (n 104) para 136.
[111] GATT (n 50) art XX(g).
[112] *United States — Standards for Reformulated and Conventional Gasoline* (Appellate Body Report) WT/DS2/AB/R (29 January 1996) para 21.
[113] See, e.g., Brazil (n 9) 9 and 22; IMO Secretariat, 'Update on the Work by the Steering Committee on the Comprehensive Impact Assessment – Outcomes of the First and Second Meetings' MEPC 81/7 (IMO MEPC 2023) para 24.
[114] Argentina et al, 'Elaborations on the Key Elements' (n 9) 13.

basis made by vessels that call at eligible ports in developing countries. A detailed discussion of how such (partial) exemption would work in practice is likely to take place in the coming months.

In light of these developments in IMO negotiations, the question arises as to whether exemptions applied to voyages from or to ports of developing countries—or to SIDS and LDCs—would make the GHG pricing instrument more likely to be successfully challenged under the GATS or the GATT.

The question arises for two reasons. First, differential treatment between vessels applied depending on whether they serve ports of a developing country might be seen as infringing de facto on the MFN principle under the GATS. For instance, this could be the case if the fleet of a country ends up paying a higher GHG price than that of another country because the latter tends to serve exempted ports while the former serves primarily ports where the exemption does not apply.

Second, exemptions weaken the GHG effectiveness of a GHG pricing instrument, potentially undermining the applicability of exceptions under Article XIV GATS and Article XX GATT. Indeed, a key effect of exemptions is the reduction of incentives to decarbonise. In addition, they can result in the adoption of avoidance and evasion strategies. For instance, if the exemption is designed so that vessels that call ports of developing countries face a lower liability under the GHG price, there would be an incentive for vessels to call ports of developing countries to qualify for such an exemption.

In case the exemption applies exclusively to the GHG emissions released on voyages from/to the port of a developing country, additional avoidance strategies could become available, such as changing the order of port of calls to reach an exempted port before calling at a non-exempted one.[115] Research on the EU ETS suggests that such avoidance strategies could become profitable even at moderate carbon price levels of about €25–30 per tonne of carbon.[116] This research suggests that the risk of avoidance strategies cannot be discounted even if the exemption is partial.[117] In the scenario where the IMO implements a GHG price of US$150 per tonne of carbon, an exemption that reduces the GHG price applied on vessels that call developing countries' ports by 20%, would result in a GHG price differential of US$30. In this scenario, the possibility that avoidance strategies become profitable cannot be ruled out.[118]

Of course, the effects of exemptions on the GHG effectiveness of the market-based measure will depend on how *broad*—that is, to which routes or cargoes they apply—and *deep*—that is, whether it is a partial, full or temporary—these exemptions are. Broad and deep exemptions, such as a full exemption that applies to all routes to/from low- and middle-income countries, may significantly reduce the GHG effectiveness of the measure, as maritime ports in developing countries accounted for more than 60% of imports and 55% of exports globally in 2021.[119] By contrast, a partial and temporary exemption to selected developing countries (e.g. SIDS and LDCs) is much less likely to lead to compliance issues.[120] Other types of exemptions would fall between these two extremes.

If exemptions for developing countries are included in the GHG pricing instrument, one of the most contentious issues in the negotiations will be the identification of developing countries that would be eligible for such an exemption. In this respect, it is interesting to notice that the GHG pricing instrument proposed by Belize, the Marshall Islands, and other Pacific Island States, including some LDCs, does not include exemptions for their ports. Instead, their call to address equity concerns relies on the use of revenues from the GHG price.[121] This poses an interesting dilemma for the operationalisation of the CBDRRC principle because—as discussed above—some wealthier countries that have contributed more to climate change have called for their ports to be exempted.

In case exemptions are not employed to address equity concerns, the strategic use of carbon revenues can provide a potential alternative. As mentioned above, an IMO GHG pricing mechanism can raise between US$40–60 billion a year up to 2050.[122] This money could provide an important *new and additional* source of climate finance that complements current flows from developed countries. To put this into context, the Organisation for Economic Co-operation and Development (OECD) estimates that public climate finance flows in 2021 were US$73.1 billion, including both bilateral and multilateral finance.[123] Indeed, many climate-vulnerable countries, including the Climate Vulnerable Forum[124] and more recently the African Climate Summit[125] have supported the implementation of a GHG price at the IMO to provide additional climate finance.

5.1 | Exemptions, Article XIV GATS and Article XX GATT

One potential way to support the compatibility of exemptions with the *chapeau* of Article XX GATT is to rely on the part of the provision stating that discrimination is forbidden only when it applies between countries 'where the same conditions prevail'.[126] Some scholarship reads this part of the provision as permitting—or even requiring—

[115]Dominioni (n 9).
[116]S Defour and F Afonso, 'All Aboard! Too Expensive for Ships to Evade EU Carbon Market' (Transport and Environment 2020); S Lagouvardou and HN Psaraftis, 'Implications of the EU Emissions Trading System (ETS) on European Container Routes: A Carbon Leakage Case Study' (2022) 3 Maritime Transport Research 100059.
[117]Dominioni (n 9).
[118]ibid.
[119]UNCTAD, 'Review of Maritime Transport 2021' (UNCTAD 2021).
[120]Note that exemptions for SIDS and LDCs are unlikely to cause significant carbon leakage in the short term, as ports in these countries tend to have limited capacity. However, in the long term, carbon leakage risks may increase as exemptions incentivise the enlargement of this infrastructure; see Lagouvardou and Psaraftis (n 116).
[121]Marshall Islands and Solomon Islands (n 16).
[122]Dominioni et al, 'Carbon Revenues from Shipping' (n 11).
[123]OECD, 'Climate Finance and the USD 100 Billion Goal' <https://www.oecd.org/climate-change/finance-usd-100-billion-goal/>.
[124]'Dhaka-Glasgow Declaration of the CVF' (2021) <https://thecvf.org/our-voice/statements/dhaka-glasgow-declaration-of-the-cvf/>.
[125]African Climate Summit, 'Nairobi Declaration' (2023) https://africaclimatesummit.org/
[126]GATT (n 50) art XX, *chapeau*.

differentiation between countries where different conditions exist.[127] The key issue here is to identify what 'conditions' should be accounted for. The Appellate Body provided some guidance on this point in *EC—Seal Products*,[128] indicating that relevant conditions are those that relate to the policy objective under which the measure has been provisionally justified—in this context, exceptions Article XX(b) and (g). In addition, the 'type or cause of the violation'[129] can help to determine which countries should be compared.

Recent scholarship on border carbon adjustment mechanisms interprets this jurisprudence as indicating that similarities need to be assessed in relation to countries' responsibilities and capabilities to mitigate climate change, and stresses the need for *objective criteria* to determine when two countries are in the same conditions.[130] Such criteria are identified in the Paris Agreement's Articles 4(5) and 4(6): the former requiring developed countries to provide climate finance to developing ones, and the latter providing additional flexibility on mitigation action for LDCs and SIDS.[131] In the context of border carbon adjustment mechanisms, these criteria have been interpreted as justifying the provision of financial support for developing countries and *exemptions* for SIDS and LDCs.[132]

It is unclear whether a similar line of reasoning could apply in the context of an IMO GHG pricing mechanism to justify exemptions for SIDS and LDCs. Contrary to border carbon adjustment mechanisms,[133] an IMO GHG price does not aim to incentivise the uptake of more stringent GHG policies in SIDS and LDCs[134]—but targets GHG emissions that are primarily[135] outside of countries' nationally determined contributions. The additional flexibility granted in the Paris Agreement to SIDS and LDCs for *domestic* GHG mitigation may therefore not provide a solid basis for exempting ports of SIDS and LDCs.

More generally, there is a long-standing approach in WTO jurisprudence to equate differentiation between countries with discrimination under Article XX.[136] Policy approaches that deviate from this path, are—at least in theory—at risk of being challenged.

In practice, as discussed in the previous section, the chances of a challenge to a domestic measure that implements or enforces an IMO GHG price that exempts SIDS and LDCs, or a broad group of developing countries, might be low—especially if the measure is adopted via a MARPOL amendment. Indeed, all high-income countries—with the exception of Israel, Liechtenstein and the United Arab Emirates—and the vast majority of developing countries have ratified MARPOL Annex VI as of January 2024.[137] Any potential WTO challenge from the vast majority of developed and developing countries would therefore be rather weak if the measure is adopted via a MARPOL amendment. Unless the way in which exemptions are adopted leaves one or more developing countries not part of MARPOL Annex VI deeply unsatisfied (e.g. a developing country excluded from the exemption), the chances of a challenge are low.

The situation could be different if the IMO GHG price is adopted via a new convention. If this were to happen, any developed or developing country not part of the new convention could potentially bring such a challenge. In this respect, it is important to stress that some key industry-related stakeholders have been vocal in their opposition to the application of exemptions from a GHG price for international shipping.[138] In light of this, the next two sections consider potential alternative routes to make exemptions compatible with the GATS and GATT.

5.2 | Exemptions and the LDC service waiver under the GATS

A potential alternative route to make exemptions compatible with the GATS would be to rely on the LDC service waiver. Under this waiver, WTO members are allowed to provide preferential treatment to services and service suppliers from LDCs in derogation to Article II.1 GATS.[139] The waiver is temporary, applying to 15 years from the day of its adoption.

In practice, there are various factors that limit the usefulness of an LDC service waiver with regard to the implementation of exemptions from a GHG price on international shipping to address equity concerns. First, the LDC waiver does not apply to SIDS that are not LDCs; this can be a constraint in the IMO context where SIDS and LDCs are often seen as a single block of countries when it comes to equity-related concerns—as indicated by the constant reference to 'SIDS and LDCs' as a group in the language of the 2023 IMO GHG Strategy.[140]

Second, the LDC service waiver needs to be granted by individual jurisdictions. This is not a limit when it comes to GHG pricing instruments applied by individual countries. However, if applied in

[127] L Bartels, 'The Chapeau of the General Exceptions in the WTO GATT and GATS Agreements: A Reconstruction' (2015) 109 American Journal of International Law 95, 114–115; G Marín Durán, 'Securing Compatibility of Carbon Border Adjustments with the Multilateral Climate and Trade Regimes' (2023) 72 International and Comparative Law Quarterly 73, 98–99; I Venzke and G Vidigal, 'Are Unilateral Trade Measures in the Climate Crisis the End of Differentiated Responsibilities? The Case of the EU Carbon Border Adjustment Mechanism (CBAM)' (2022) Netherlands Yearbook of International Law 187.

[128] *European Communities – Measures Prohibiting the Importation and Marketing of Seal Products* (Appellate Body Report) WT/DS400/AB/R; WT/DS401/AB/R (22 May 2014) paras 5.299–5.300.

[129] ibid para 5.300.

[130] Marín Durán (n 127) at 98–99.

[131] ibid.

[132] ibid.

[133] On the GHG incentives of border carbon adjustment mechanisms, see Mehling et al (n 85).

[134] Even though it can help to stimulate the production of zero-carbon bunker fuels; see Dominioni (n 9).

[135] To the extent that the IMO GHG price will cover also GHG emissions released upstream, in the production and distribution of bunker fuels, it may apply also to GHG emissions that fall under countries' nationally determined contributions.

[136] Bartels (n 127) 112; Marín Durán (n 127) 95.

[137] See IMO (n 62).

[138] See, for instance, a 2024 briefing from the Getting to Zero Coalition, a coalition of over 200 organisations, including 170 companies, that focuses on shipping decarbonisation: F Spiegelenberg et al, 'Unravelling IMO Policy Measures Towards a Just and Equitable Energy Transition' (Getting to Zero Coalition 2024).

[139] WTO, 'Preferential Treatment to Services and Service Suppliers of Least-Developed Countries' WT/L/847 (17 December 2011).

[140] LDCs are mentioned 13 times in the 2023 IMO GHG Strategy; each time, they are mentioned together with SIDS. For instance, the 2023 IMO GHG Strategy states that there is a 'need to consider the impacts of measures on States, including developing countries, in particular on LDCs and SIDS' (IMO (n 1) 3.5.1.3).

connection with an IMO GHG price, it would require concerted action among all IMO countries to which MFT applies under the GATS. This can create additional transaction costs in IMO negotiations and in domestic policy in these countries, especially because the ministry that leads the negotiations at the IMO is not necessarily the one that has competence to grant the LDC service waiver.[141]

Third, the LDC waiver would de facto apply to a very small percentage of the global fleet. This is because the LDC waiver can apply to entities that: (1) are 'constituted or otherwise organized under the law of a least-developed country'[142] and (2) if it is owned by a foreign company or person that 'is engaged in substantive business operations in the territory of any least-developed country'.[143] While some LDCs—notably Liberia—are important flag registries,[144] in terms of fleet ownership they account for a very small percentage of the global fleet.[145] In addition, it is unclear how many of the foreign owned vessels flagged in an LDC would qualify as engaging in substantive business operations in LDCs. This implies that it is unclear which proportion of the LDC registered fleet could benefit from the LDC waiver.

Lastly, and perhaps most importantly, an exemption that applies on the basis of flag of registration would contravene the IMO NMFT clause. Currently, no IMO proposal for a GHG pricing instrument suggests exempting vessels based on their flag of registration. Thus, an exemption for vessels flagged in LDC countries is therefore unlikely to be adopted.

5.3 | Exemptions and the Enabling Clause under the GATT

Another potential way to address potential incompatibilities between exemptions from a GHG price in shipping and the GATT is to rely on the GATT Decision on Differential and More Favourable Treatment Reciprocity and Fuller Participation of Developing Countries[146]—the so-called 'Enabling Clause'. According to the Enabling Clause WTO members can 'accord differential and more favourable treatment to developing countries'[147] in derogation to Article I GATT. The Enabling Clause is an operationalisation of special and differential treatment (or SDT).[148] Similarly to CBDRRC in the UNFCCC context, SDT recognises that all countries are subject to a common WTO legal framework, but within this framework developing countries—and especially LDCs—should be subject to more favourable treatment.[149]

The applicability of the Enabling Clause to exemptions from a GHG pricing instrument in shipping is however uncertain. The Enabling Clause applies to (i) tariff barriers and (ii) 'provisions of the General Agreement concerning non-tariff measures governed by the provisions of instruments multilaterally negotiated under the auspices of the GATT'.[150] In *Brazil – Taxation*, the Appellate Body indicated with regard to non-tariff measures that the Enabling Clause applies to a narrow set of situations—that is, to instruments 'multilaterally negotiated under the auspices of the GATT'.[151]

The applicability of the Enabling Clause to an IMO GHG pricing instrument may depend on the design of the instrument. As discussed above, if the GHG price is paid directly by vessels to an international fund on a periodic basis, then MFN under the GATT is unlikely to apply and there would be no need to rely on the Enabling Clause to justify exemptions. If the price is instead levied in ports on imported products—as per the Jamaica proposal discussed above—the applicability of the Enabling Clause will depend on whether the price is seen as a tariff.

6 | CONCLUSIONS

As the IMO works on adopting a GHG pricing mechanism for international shipping, this article has analysed whether measures that implement or enforce such GHG pricing mechanism could be challenged under the GATT and the GATS. The analysis indicates that the possibility of challenging these measures depends on both the instrument design and the procedure used to adopt it.

From a procedural perspective, the key aspect is whether the IMO GHG price is adopted through an amendment of MARPOL Annex VI or a new convention. For measures that implement or adopt an IMO GHG pricing mechanism adopted through a MARPOL Annex VI amendment, the risks of a challenge do not seem high, especially if the amendment is adopted through consensus. If the IMO GHG pricing mechanism is instead adopted through a new convention, the possibility of challenging measures that implement or adopt it may be broader, but it will depend on how many countries ratify the convention.

From an instrument design perspective, an IMO GHG pricing mechanism paid directly by vessels into a fund is less likely to provide opportunities to challenge measures that implement or enforce it. GHG pricing instruments with universal GHG coverage are also less likely to provide room for a challenge. In addition, potential violations of GATT and GATS rules may be justifiable under Article XX GATT and Article XIV GATS, especially if the GHG pricing instrument is carefully designed. Including exemptions for voyages from/to ports of

[141]Often, IMO negotiations are undertaken by personnel of the Ministry of Transport.
[142]WTO (n 139) para 5(b)(i).
[143]ibid.
[144]About 15% of the global merchant fleet of vessels of at least 100 gross tons are registered in Liberia; see UNCTADstat (n 73).
[145]According to UNCTAD, they account for approximatively 1% of the global merchant fleet of vessels of 1,000 gross tons and above; see ibid.
[146]'Decision of the Contracting Parties of 28 November 1979 on Differential and More Favourable Treatment, Reciprocity and Fuller Participation of Developing Countries' L/4903, BISD 26S/203 (1979) (Enabling Clause) <http://www.wto.org/english/docs_e/legal_e/tokyo_enabling_e.pdf>.
[147]ibid para 1.
[148]WTO, 'Special and Differential Treatment' <https://www.wto.org/english/tratop_e/dda_e/status_e/sdt_e.htm>.
[149]For a discussion of SDT, see Venzke and Vidigal (n 127).
[150]Enabling Clause (n 146) para 1(b).
[151]*Brazil — Certain Measures Concerning Taxation and Charges* (Appellate Body Report) WT/DS472/AB/R; WT/DS497/AB/R (13 December 2018) para 5.432.

developing countries can increase the chances of a successful challenge. However, such a risk may depend on the design of such exemptions—including their depth and breadth.

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