CBAM BETWEEN TRADE LAW AND CLIMATE JUSTICE: CONDITIONAL WTO DEFENSIBILITY AND CBDR-RC SENSITIVE DESIGN REFORM

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ABSTRACT

The European Union's Carbon Border Adjustment Mechanism (CBAM) links market access in selected emissions-intensive sectors to a carbon price pegged to the EU Emissions Trading System (ETS).[1] Presented as a response to carbon leakage, CBAM operates at the intersection of WTO non-discrimination disciplines and climate justice debates under the principle of Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC).[2] This paper argues that CBAM's WTO defensibility is conditional rather than assured: the coexistence of free ETS allowances, conservative default emissions values and limited recognition of foreign climate measures risks less favourable treatment for imports and pushes the EU towards a contested reliance on GATT Article XX.[3] At the same time, CBAM's uniform border pricing externalises part of the EU's adjustment costs onto developing-country exporters without built-in differentiation or compensatory finance, placing the measure in structural tension with CBDR-RC.[4] The paper sketches a redesign pathway that aligns CBAM more strictly with the internal regime, strengthens producer-specific emissions verification, avoids export rebates, incorporates CBDR-RC-consistent differentiation and recycles a share of revenues towards decarbonisation support and adaptation in affected developing countries.[5]

[1] Regulation (EU) 2023/956 of the European Parliament and of the Council of 10 May 2023 Establishing a Carbon Border Adjustment Mechanism, 2023 O.J. (L 130) 52.

[2] United Nations Framework Convention on Climate Change art. 3(1), May 9, 1992, 1771 U.N.T.S. 107; Paris Agreement arts. 2(2), 4(3)-(4), Dec. 12, 2015, 55 I.L.M. 740 (2016).

[3] Michaël A. Mehling et al., Designing Border Carbon Adjustments for Enhanced Climate Action, 113 Am. J. Int'l L. 433 (2019); Gracia Marín Durán, Carbon Border Adjustments: Securing Compatibility with the Multilateral Climate and Trade Regimes, 72 Int'l & Comp. L.Q. 73 (2023).

[4] South Centre, *How the European Union's Carbon Border Adjustment Mechanism Discriminates Against Foreign Producers* (Pol'y Brief No. 124, Feb. 5, 2024).

[5] Mehling et al., Designing Border Carbon Adjustments for Enhanced Climate Action, 113 Am. J. Int'l L. 433 (2019); Lisa Fischer et al., Making a Border Carbon Adjustment Mechanism Work for Climate, Trade and Equity (TESS Pol'y Brief, 2022).

Introduction

Under the European Green Deal, the European Union's Carbon Border Adjustment Mechanism (CBAM) aims to match trade policy with the Union's climate ambitions. By forcing importers to buy CBAM certificates, the price of which is correlated with the auction price of permits under the EU Emissions Trading System (ETS), it imposes a carbon tax on a limited number of imports, initially iron and steel, aluminium, cement, fertilizers, energy, and hydrogen. Financial responsibilities are expected to start in 2026 after a transitional reporting period that starts in October 2023 and requires importers to disclose embedded emissions without paying. In order to guarantee that the carbon load of imported and local commodities is equal, CBAM is given as the external equivalent of the ETS.

CBAM sits at the intersection of two related tensions. The first is a trade-law tension between unilateral border carbon constraints and the World Trade Organization's (WTO) non-discrimination disciplines, particularly Most-Favoured-Nation (MFN) and National Treatment (NT).[6] The second is a justice tension between the formal equality of a uniform border carbon price and the principle of Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC), which recognises unequal historical responsibility and unequal capacity to respond to climate change.[7] For many developing countries and commentators, CBAM therefore appears as a form of "green protectionism" rather than a neutral climate instrument.[8]

Against this background, the central question is whether CBAM can be defended under WTO law without undermining CBDR-RC and, if not in its present form, what design changes would be needed. This paper argues that CBAM is only contingently WTO-defensible and is structurally misaligned with CBDR-RC because it equalises carbon costs at the border without meaningful differentiation or compensation.[9] However, a redesigned CBAM that more closely mirrors the internal carbon burden, avoids asymmetries created by free allowances and export rebates, embeds differentiation for vulnerable countries and recycles revenue for climate

[6] General Agreement on Tariffs and Trade 1994 arts. I, III, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1867 U.N.T.S. 187.
[7] United Nations Framework Convention on Climate Change art. 3(1), May 9, 1992, 1771 U.N.T.S. 107; Paris Agreement arts. 2(2), 4(3), Dec. 12, 2015, 55 I.L.M. 740 (2016).
[8] South Centre, How the EU's Carbon Border Adjustment Mechanism Discriminates Against Foreign Producers (Pol'y Brief No. 124, 2022).
[9] Mehling et al., Designing Border Carbon Adjustments for Enhanced Climate Action, 113 Am. J. Int'l L. 433 (2019); Marín Durán, Carbon Border Adjustments: Securing Compatibility with the Multilateral Climate and Trade Regimes, 72 Int'l & Comp. L.Q. 73 (2023).

support could move closer to what this paper calls "twin compatibility" between trade rules and climate justice.[10]

CBAM in Context: Objectives, Design and Operation

CBAM is officially presented as a complement to the EU's internal decarbonisation strategy under the European Green Deal and the revised ETS. The Commission frames CBAM as a response to carbon leakage: the risk that stringent EU climate policy will shift emissions-intensive production, and associated emissions, to jurisdictions with weaker regulation, undermining the environmental effectiveness of the ETS and eroding the competitiveness of EU industry.[11] CBAM seeks to level carbon costs between domestic and imported goods, preserve incentives to decarbonise within the Union and encourage trading partners to adopt comparable climate policies or carbon-pricing schemes.[12] In the official narrative, the measure is not a standalone trade instrument but an extension of the internal carbon regime to imports.

In design terms, CBAM is initially confined to emissions-intensive, trade-exposed sectors such as iron and steel, aluminium, cement, fertilisers, electricity and hydrogen.[13] During the transitional phase starting in October 2023, EU importers of covered goods must submit quarterly reports on embedded direct emissions, and in some cases indirect emissions, but no financial obligation arises. From 2026, importers will be required to buy and surrender CBAM certificates corresponding to the verified embedded emissions of their imports, with the certificate price indexed to the ETS allowance auction price so that imported and domestic goods nominally face comparable carbon costs.[14]

Several design features complicate this claim of equivalence. CBAM is phased in alongside the gradual elimination of free ETS allowances in the same sectors, so for a significant period EU producers will still benefit from free allocation while importers must surrender CBAM certificates priced at the full ETS level.[15] During that overlap, imports risk being subjected to

[10] Mehling et al., Designing Border Carbon Adjustments for Enhanced Climate Action, 113 Am. J. Int'l L. 433 (2019); Fischer et al., Making a Border Carbon Adjustment Mechanism Work for Climate, Trade and Equity (TESS Pol'y Brief, 2022).
[11] Eur. Parliamentary Rsch. Serv., Carbon Border Adjustment Mechanism (CBAM): Key Issues and Possible Impacts (2020).
[12] Mehling et al., Designing Border Carbon Adjustments for Enhanced Climate Action, 113 Am. J. Int'l L. 433, 436-40 (2019).
[13] Regulation (EU) 2023/956, Annex I, 2023 O.J. (L 130) 52.
[14] Regulation (EU) 2023/956 arts. 20-21, 32-33, 2023 O.J. (L 130) 52.
[15] Directive (EU) 2023/959 of the European Parliament and of the Council of 10 May 2023 Amending Directive 2003/87/EC, Annex VII, 2023 O.J. (L 130) 134.

a higher effective carbon cost than like domestic products. Differences in emissions scope, including the treatment of indirect emissions, also complicate the argument that CBAM simply "extends" the internal regime: the ETS regulates emissions at installation level, while CBAM operates at the product level and only partially converges with ETS coverage of indirect emissions.[16]

Embedded emissions for imports are calculated through a mix of default values and installation-specific data. Where verified data from third-country installations is unavailable, CBAM resorts to default emissions factors based on sectoral averages or "worst-performer" benchmarks, which can lead to overcharging relatively efficient producers in countries with limited monitoring and verification capacity.[17] CBAM's recognition of third-country climate measures is likewise narrow. Explicit carbon prices paid in the country of origin can be credited against CBAM liability, but non-price measures such as regulatory standards and technology mandates are only weakly accommodated.[18] These features shape both CBAM's legal exposure under WTO rules and its normative fit with CBDR-RC.[19]

WTO Law and the Conditional Legality of CBAM

A. Border Tax Adjustment or Disguised Tariff

A core WTO question is whether CBAM can be characterised as a permissible border tax adjustment or whether, in substance, it functions as a tariff or para-tariff measure. Under GATT Article II:2(a), a member may impose at importation a charge equivalent to an internal tax imposed consistently with Article III:2 on like domestic products. In the classic understanding, a border tax adjustment extends an internal tax to imports solely to avoid discrimination.[20]

On a sympathetic reading, the ETS is treated as an internal charge on carbon-intensive

[16] South Centre, How the EU's Carbon Border Adjustment Mechanism Discriminates Against Foreign Producers 5-8 (Pol'y Brief No. 124, 2022); Marín Durán, Carbon Border Adjustments: Securing Compatibility with the Multilateral Climate and Trade Regimes, 72 Int'l & Comp. L.Q. 73, 85-90 (2023).
[17] Philippe Branger & Philippe Quirion, From Theory to Practice: Determining Emissions in Traded Goods Under a Border Carbon Adjustment, 39 Oxford Rev. Econ. Pol'y 260 (2023).
[18] Mehling et al., Designing Border Carbon Adjustments for Enhanced Climate Action, 113 Am. J. Int'l L. 433 (2019); Fischer et al., Making a Border Carbon Adjustment Mechanism Work for Climate, Trade and Equity (TESS Pol'y Brief, 2022).
[19] Marín Durán, Carbon Border Adjustments: Securing Compatibility with the Multilateral Climate and Trade Regimes, 72 Int'l & Comp. L.Q. 73 (2023).
[20] General Agreement on Tariffs and Trade 1994 art. II:2(a), Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1867 U.N.T.S. 187; GATT, Report of the Working Party on Border Tax Adjustments, B.I.S.D. 18S/97 (1970).

production and CBAM as its extension to imports. On that framing, CBAM is presumptively consistent with Article II:2(a) read with Article III:2, provided the border charge does not exceed the carbon cost borne by like domestic products.[21] This logic is central to the EU's legal narrative, in which CBAM is presented as an "adjustment" of the ETS at the border rather than a new customs duty.

However, ETS design complicates the equivalence claim. The ETS is a cap-and-trade scheme with both auctioned and free allowances, not a uniform excise tax. In emissions-intensive, trade-exposed sectors, a significant share of allowances has historically been allocated for free to mitigate leakage and competitiveness concerns.[22] Where domestic producers receive free allowances while importers must buy CBAM certificates at the full ETS price, imports can face a higher effective carbon cost than like domestic products.[23] In such circumstances, CBAM is harder to justify as an "equivalent" extension of an internal charge within the meaning of Article II:2(a). CBAM's classification as a border tax adjustment therefore depends on close alignment between ETS obligations and the border charge, particularly the pace and credibility of the phase-out of free allocation in CBAM sectors and the harmonisation of emissions scope and benchmarks.[24]

B. MFN, National Treatment and Article XX

Even if CBAM can be framed as a border tax adjustment in principle, it must still comply with MFN and National Treatment obligations. MFN under GATT Article I requires that any advantage granted to one member's products be accorded immediately and unconditionally to like products originating in all other members. CBAM is formally MFN-neutral, since the certificate requirement applies across origins. Legal risk arises, however, if the EU credits foreign climate measures unevenly, for example by more generously recognising the carbon-pricing regimes of certain "climate club" partners or by providing softer treatment for particular

[21] Mehling et al., Designing Border Carbon Adjustments for Enhanced Climate Action, 113 Am. J. Int'l L. 433 (2019); Joost Pauwelyn, Carbon Leakage Measures and Border Tax Adjustments Under WTO Law (SSRN Working Paper No. 3324950, 2013).
[22] Directive (EU) 2023/959 of the European Parliament and of the Council of 10 May 2023 Amending Directive 2003/87/EC, 2023 O.J. (L 130) 134.
[23] South Centre, How the EU's Carbon Border Adjustment Mechanism Discriminates Against Foreign Producers (Pol'y Brief No. 124, 2022).
[24] Marín Durán, Carbon Border Adjustments: Securing Compatibility with the Multilateral Climate and Trade Regimes, 72 Int'l & Comp. L.Q. 73, 80-85 (2023); Rolf H. Weber, Ilaria Espa et al., The EU Proposal for a Carbon Border Adjustment Mechanism: An Analysis Under WTO and Climate Change Law (World Trade Inst. Working Paper No. 2022/06, 2022).

countries without objective, climate-related criteria.[25] Such differentiation could be characterised as an "advantage" not extended to all WTO members and would push the EU towards an Article XX defence.

National Treatment concerns are more acute. Article III prohibits treating imported products less favourably than like domestic products with respect to internal taxes and regulations. Differences between ETS and CBAM, including the availability of free allowances, the scope of emissions covered, verification burdens and penalty structures, may cumulatively disadvantage imports.[26] Conservative default emissions values for imports, compared with installation-specific data access for domestic producers, can also overstate the liability of foreign producers.[27] To the extent these differences translate into systematically higher costs or more onerous compliance burdens for imported like products, a violation of National Treatment obligations is plausible.

Many commentators therefore assume that CBAM, or parts of it, will have to be justified under the general exceptions in GATT Article XX. Climate protection and carbon-leakage prevention can plausibly fall under Article XX(b) on protecting human, animal or plant life or health, or Article XX(g) on the conservation of exhaustible natural resources.[28] The harder inquiry lies in the chapeau, which prohibits measures applied in a manner constituting arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade. WTO jurisprudence in *US-Gasoline* and *US-Shrimp* emphasises good-faith efforts to accommodate different conditions in trading partners, transparency and flexibility in application.[29] CBAM's limited and technically complex recognition of foreign measures, its essentially uniform border price despite divergent national circumstances and its asymmetric burdens on developing-country producers together support

[25] Rolf H. Weber, Ilaria Espa et al., The EU Proposal for a Carbon Border Adjustment Mechanism: An Analysis Under WTO and Climate Change Law (World Trade Inst. Working Paper No. 2022/06, 2022).
[26] General Agreement on Tariffs and Trade 1994 art. III, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1867 U.N.T.S. 187; Marín Durán, Carbon Border Adjustments: Securing Compatibility with the Multilateral Climate and Trade Regimes, 72 Int'l & Comp. L.Q. 73, 90-96 (2023).
[27] Branger & Quirion, From Theory to Practice: Determining Emissions in Traded Goods Under a Border Carbon Adjustment, 39 Oxford Rev. Econ. Pol'y 260 (2023).
[28] General Agreement on Tariffs and Trade 1994 art. XX(b), (g), Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1867 U.N.T.S. 187.
[29] Appellate Body Report, United States - Standards for Reformulated and Conventional Gasoline, WTO Doc. WT/DS2/AB/R (Apr. 29, 1996); Appellate Body Report, United States - Import Prohibition of Certain Shrimp and Shrimp Products, WTO Doc. WT/DS58/AB/R (Oct. 12, 1998).

an argument that the mechanism risks arbitrary or unjustifiable discrimination.[30]

C. SCM Agreement and Export Rebates

The Agreement on Subsidies and Countervailing Measures introduces a further layer of complexity. If the EU were to grant export rebates to offset domestic carbon costs embedded in exports, such rebates could be characterised as prohibited export subsidies under SCM Article 3.1(a), since they would be contingent on export performance and confer a benefit.[31] Even without explicit export rebates, the coexistence of CBAM with generous free allowance allocation can raise subsidy concerns: free allowances can be treated as a financial contribution that confers a benefit on EU producers, especially if they are allocated in excess of what would be required under a purely environmental rationale and if they cause adverse effects for other members' trade interests.[32]

Taken together, these issues suggest that CBAM's WTO compatibility is not an on-off proposition. It depends on a bundle of design choices: phasing out free allocation in CBAM sectors, avoiding export rebates, aligning emissions coverage and methodologies between ETS and CBAM and adopting credible, non-arbitrary mechanisms for recognising foreign climate efforts.[33] Only under a relatively disciplined configuration does CBAM have a strong chance of surviving combined scrutiny under Articles I, III and XX and the SCM Agreement.

CBDR-RC and Climate Justice: Equal Carbon, Unequal Worlds

A. CBDR-RC in the UNFCCC and Paris Regime

CBDR-RC sits at the normative core of the international climate regime. Originating in the 1992 UNFCCC, it reflects two linked propositions: differentiated responsibility for

[30] Marín Durán, Carbon Border Adjustments: Securing Compatibility with the Multilateral Climate and Trade Regimes, 72 Int'l & Comp. L.Q. 73, 100-03 (2023); Mehling et al., Designing Border Carbon Adjustments for Enhanced Climate Action, 113 Am. J. Int'l L. 433 (2019); South Centre, How the EU's Carbon Border Adjustment Mechanism Discriminates Against Foreign Producers (Pol'y Brief No. 124, 2022).

[31] Agreement on Subsidies and Countervailing Measures art. 3.1(a), Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1869 U.N.T.S. 14; Giulia Claudia Leonelli, Export Rebates and the EU Carbon Border Adjustment Mechanism: WTO Law and Environmental Objections, 57 J. World Trade 1 (2023).

[32] Giulia Claudia Leonelli, Export Rebates and the EU Carbon Border Adjustment Mechanism: WTO Law and Environmental Objections, 57 J. World Trade 1 (2023); Roland Ismer et al., Supporting the Transition to Climate-Neutral Production: An Evaluation Under the Agreement on Subsidies and Countervailing Measures, 15 J. Glob. Admin. L. 1 (2023).

[33] Mehling et al., Designing Border Carbon Adjustments for Enhanced Climate Action, 113 Am. J. Int'l L. 433 (2019); Weber, Espa et al., The EU Proposal for a Carbon Border Adjustment Mechanism: An Analysis Under WTO and Climate Change Law (World Trade Inst. Working Paper No. 2022/06, 2022).

accumulated greenhouse gases due to divergent historical emissions and unequal capability, financial, technological and institutional to address the climate crisis.[34] The Convention's preamble and Article 3(1) expressly recognise that developed countries should "take the lead" in combating climate change and its adverse effects.

The Paris Agreement moves away from rigid annex-based obligations towards nationally determined contributions, but it reaffirms that parties will act "in the light of different national circumstances" and that mitigation and finance efforts remain informed by CBDR-RC.[35] Developed countries are expected to move earlier and more ambitiously and to provide climate finance and technology transfer to developing countries, while the latter retain greater policy space to balance decarbonisation with poverty eradication and development.[36] CBDR-RC thus operates not only as a legal principle but as a distributive ethic: formally identical obligations may be substantively unequal where states differ sharply in responsibility and capability.[37]

B. How CBAM Conflicts with CBDR-RC

CBAM generates a clear tension with CBDR-RC. It applies a border charge reflecting the ETS carbon price irrespective of whether the exporting country is highly industrialised or late-developing. In effect, it projects the EU's carbon price externally across trading partners seeking access to the EU market in covered sectors.[38] This risks shifting part of the EU's adjustment costs onto developing-country exporters, even though their states often have far lower historical responsibility and more constrained capacity to decarbonise rapidly.[39]

The tension is sharpest in sectors such as steel, cement and aluminium, where low-carbon production technologies remain capital-intensive and technologically demanding and where export exposure to the EU is significant for several emerging economies.[40] Yet CBAM does not embed structural exemptions or compensation mechanisms for states most protected by

[34] United Nations Framework Convention on Climate Change pmbl. & art. 3(1), May 9, 1992, 1771 U.N.T.S. 107.
[35] Paris Agreement arts. 2(2), 4(3)-(5), Dec. 12, 2015, 55 I.L.M. 740 (2016).
[36] Paris Agreement arts. 2(2), 4(3)-(5), Dec. 12, 2015, 55 I.L.M. 740 (2016); United Nations Framework Convention on Climate Change arts. 4(3)-(7), May 9, 1992, 1771 U.N.T.S. 107.
[37] Anastasios Gourgourinis, Common but Differentiated Responsibilities in Transnational Climate Change Governance and the WTO, in RESEARCH HANDBOOK ON CLIMATE CHANGE AND TRADE LAW (Panagiotis Delimatsis ed., Edward Elgar Publ'g 2016).
[38] Marín Durán, Carbon Border Adjustments: Securing Compatibility with the Multilateral Climate and Trade Regimes, 72 Int'l & Comp. L.Q. 73, 97-103 (2023).
[39] André Nollkaemper & Marie-Cécile Pirlot, When Are Carbon Border Adjustment Measures Just? (2024) (unpublished manuscript) (on file with authors).
[40] Roland Ismer, Karsten Neuhoff et al., Border Carbon Adjustments in the EU: Issues and Options (Climate Strategies Report, 2020).

CBDR-RC. Least Developed Countries and Small Island Developing States, despite negligible historical responsibility and high vulnerability, are not automatically excluded from CBAM's scope. Nor are CBAM revenues earmarked for climate finance, technology transfer or adaptation support in affected developing economies.[41] Compliance also entails significant administrative burdens, which large multinational firms can bear more easily than smaller producers in the Global South. Where default values apply due to absent verified data, relatively efficient producers may be penalised through overstated embedded emissions and higher CBAM liabilities.[42] These features indicate that CBAM, as currently designed, imposes a formally equal carbon constraint on materially unequal parties.[43]

C. Effectiveness, Diversion and the Justice Critique

Economic modelling of border carbon adjustments suggests that, while they can reduce some leakage, the global emissions reduction they achieve is often modest.[44] Trade diversion is a repeated concern: exports to the regulating market may fall, but production and emissions can relocate to other, non-regulated markets rather than disappearing.[45] Unless CBAM is integrated into broader packages of technology transfer, climate finance and cooperative decarbonisation, its capacity to drive structural change in third countries is limited.

The justice critique becomes sharper if mitigation benefits are limited while distributional burdens on developing exporters are significant. In that scenario it is difficult to justify imposing non-trivial compliance costs and trade risks on less responsible and less capable states in exchange for incremental emissions reductions. CBAM then risks appearing less as a necessary instrument of collective climate action and more as a vehicle for green protectionism that secures the EU's decarbonisation pathway and industrial competitiveness by externalising

[41] Regulation (EU) 2023/956, 2023 O.J. (L 130) 52; South Centre, How the EU's Carbon Border Adjustment Mechanism Discriminates Against Foreign Producers (Pol'y Brief No. 124, 2022).
[42] Branger & Quirion, From Theory to Practice: Determining Emissions in Traded Goods Under a Border Carbon Adjustment, 39 Oxford Rev. Econ. Pol'y 260 (2023).
[43] Marín Durán, Carbon Border Adjustments: Securing Compatibility with the Multilateral Climate and Trade Regimes, 72 Int'l & Comp. L.Q. 73 (2023); Gourgourinis, Common but Differentiated Responsibilities in Transnational Climate Change Governance and the WTO, in RESEARCH HANDBOOK ON CLIMATE CHANGE AND TRADE LAW (Panagiotis Delimatsis ed., Edward Elgar Publ'g 2016).
[44] Ida Nordin et al., Border Carbon Adjustments in Agri-Food Markets: Not as Effective as One Might Think, 5 Q. Open qoae015 (2024).
[45] Nordin et al., Border Carbon Adjustments in Agri-Food Markets: Not as Effective as One Might Think, 5 Q. Open qoae015 (2024); Ismer, Neuhoff et al., Border Carbon Adjustments in the EU: Issues and Options (Climate Strategies Report, 2020).

adjustment burdens through trade.[46]

Towards Twin Compatibility: Designing a WTO-Compatible and CBDR-RC-Sensitive CBAM

CBAM is not irredeemable. Its legitimacy, both doctrinal and normative, depends on design choices that jointly address trade-law discipline and climate justice.[47] Rather than treating CBDR-RC as an external constraint to be minimised, CBAM can be reconceived as a design space in which WTO compatibility and CBDR-RC are co-optimised.

First, CBAM should be more strictly aligned with the domestic regime. The phase-out of free ETS allowances in CBAM-covered sectors must be robust and timely so that domestic producers and importers bear genuinely comparable carbon costs. Export rebates or compensatory subsidies linked to carbon costs should be rejected. ETS and CBAM should harmonise scope, both in the products and the emissions covered, to ensure that imports are not subject to a broader or differently calibrated carbon constraint than domestic production. CBAM should also credit foreign carbon prices more systematically and, as methodologies mature, recognise certain non-price policies that achieve comparable mitigation outcomes.[48]

Second, CBAM should rely on sound methodology and incorporate a credible Individual Adjustment Mechanism. Importers should be able to substitute verified producer-specific data for conservative default values to reflect actual embedded emissions. This avoids penalising efficient producers in third countries, improves economic efficiency and supports the claim that CBAM is calibrated to environmental objectives rather than being indifferent to the circumstances of particular producers.[49]

Third, differentiation consistent with CBDR-RC should be built into CBAM. The EU could provide full exemption or significantly softened treatment for Least Developed Countries and

[46] South Centre, How the EU's Carbon Border Adjustment Mechanism Discriminates Against Foreign Producers (Pol'y Brief No. 124, 2022); Das et al., Implementation of the EU's Carbon Border Adjustment Mechanism and Its Implications for India, Int'l Trade & Inv. Prac. Note (2023).
[47] Mehling et al., Designing Border Carbon Adjustments for Enhanced Climate Action, 113 Am. J. Int'l L. 433 (2019); Fischer et al., Making a Border Carbon Adjustment Mechanism Work for Climate, Trade and Equity (TESS Pol'y Brief, 2022).
[48] Mehling et al., Designing Border Carbon Adjustments for Enhanced Climate Action, 113 Am. J. Int'l L. 433 (2019); Ismer, Neuhoff et al., Border Carbon Adjustments in the EU: Issues and Options (Climate Strategies Report, 2020).
[49] Branger & Quirion, From Theory to Practice: Determining Emissions in Traded Goods Under a Border Carbon Adjustment, 39 Oxford Rev. Econ. Pol'y 260 (2023).

Small Island Developing States and phase in obligations more gradually for other low-income and lower-middle-income countries, coupled with targeted technical assistance and capacity-building.[50]

Fourth, CBAM should recycle a meaningful share of revenues in the service of climate justice. Revenue allocation could support decarbonisation and adaptation in affected developing countries through contributions to multilateral climate funds, targeted financing for low-carbon technology deployment in CBAM-exposed sectors and just-transition support in exporter economies.[51]

Conclusion

CBAM is one of the most ambitious attempts so far to align trade and climate policy in practice. Through a border charge linked to the ETS carbon price, it seeks to reduce carbon leakage, preserve EU industrial competitiveness and extend climate incentives beyond EU borders.[52] Yet it must satisfy two demanding standards: WTO non-discrimination disciplines and the CBDR-RC principle at the heart of the international climate regime.

This paper has argued that CBAM, in its current design, does not securely satisfy either standard. Its WTO legality is conditional, depending on contested classification as a border tax adjustment, on the pace and completeness of free-allowance phase-out and on its resilience under GATT Articles I, III and XX as well as subsidy disciplines. At the same time, CBAM's equalisation of carbon costs at the border, without embedded differentiation or meaningful compensation, sits uneasily with CBDR-RC and risks shifting adjustment burdens onto less responsible and less capable states.[53]

Design reforms grounded in stricter mirroring of the internal regime, rejection of export

[50] Marín Durán, Carbon Border Adjustments: Securing Compatibility with the Multilateral Climate and Trade Regimes, 72 Int'l & Comp. L.Q. 73, 100-03 (2023); Gourgourinis, Common but Differentiated Responsibilities in Transnational Climate Change Governance and the WTO, in RESEARCH HANDBOOK ON CLIMATE CHANGE AND TRADE LAW (Panagiotis Delimatsis ed., Edward Elgar Publ'g 2016).
[51] Nollkaemper & Pirlot, When Are Carbon Border Adjustment Measures Just? (2024) (unpublished manuscript) (on file with authors); Fischer et al., Making a Border Carbon Adjustment Mechanism Work for Climate, Trade and Equity (TESS Pol'y Brief, 2022).
[52] Markus W. Gehring & Lukas Stolz, Carbon Border Adjustment Measures: A Straightforward Multi-Purpose Climate Change Instrument?, 35 J. Envtl. L. 1 (2023).
[53] Marín Durán, Carbon Border Adjustments: Securing Compatibility with the Multilateral Climate and Trade Regimes, 72 Int'l & Comp. L.Q. 73 (2023); South Centre, How the EU's Carbon Border Adjustment Mechanism Discriminates Against Foreign Producers (Pol'y Brief No. 124, 2022).

rebates, producer-specific emissions verification, CBDR-RC-consistent differentiation and climate-justice-oriented revenue recycling can move CBAM closer to genuine twin compatibility between trade law and climate justice.[54] Whether CBAM ultimately becomes a prototype for cooperative climate-trade governance or a catalyst for legal and political backlash will depend on how these critiques are addressed as the mechanism moves from legislation to implementation and, in all likelihood, to adjudication.[55]

[54] Mehling et al., Designing Border Carbon Adjustments for Enhanced Climate Action, 113 Am. J. Int'l L. 433 (2019); Fischer et al., Making a Border Carbon Adjustment Mechanism Work for Climate, Trade and Equity (TESS Pol'y Brief, 2022).

[55] Weber, Espa et al., The EU Proposal for a Carbon Border Adjustment Mechanism: An Analysis Under WTO and Climate Change Law (World Trade Inst. Working Paper No. 2022/06, 2022).