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"We cannot solve our problems with the same thinking we used when we created them."

– Albert Einstein[1]

I. INTRODUCTION

Carbon Border Adjustment Mechanisms (CBAMs), deployed in the service of national and potentially multilateral climate policy, are having a moment on the international stage. CBAMs are potentially among the more effective policy mechanisms to combat climate disruption, harnessing the power of virtually unregulated – indeed, purposefully deregulated – private trade in goods produced with climate-degrading fossil fuels.

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1. Frequently attributed to Einstein in this formulation, this quotation appears to originate from an appeal for funding for a public education campaign about the dangers of atomic energy. *See Atomic Education Urged by Einstein*, N.Y. TIMES, (May 25, 1946), at 13, col. 4 ("[A] new type of thinking is essential if mankind is to survive and move toward higher levels.")

One analysis has described CBAMs as "an available tool to reshape the world."[2] At the same time, CBAMs are also among the most controversial of interventions related to climate policy. CBAMs in structure and functioning have the potential to operate as trade barriers, disciplined by the World Trade Organization (WTO) suite of agreements, and regional (preferential) trade agreements like the U.S.-Mexico-Canada (U.S.M.C.A.) Free Trade Agreement.

The concept of a CBAM also taps into long-simmering debates about the potential need for differential treatment of states of the Global North and Global South, presumptively at different levels of economic development, in a transition to a just, carbon-free future from existing reliance on fossil fuels. This is a disparity that arises not coincidentally, but as a result of present and historical emissions of carbon associated with the burning of coal, petroleum, and natural gas. Not surprisingly, international economic law, specifically the international law of trade in goods, is a major player in the larger policy debate.

II. DEFINITION, STRUCTURE AND OPERATION

The toolbox of potential governmental responses to the existential threat of climate disturbance is quite varied in range. These include command-and-control interventions such as emissions limits on carbon dioxide from power plants, or technological ones such as carbon capture and storage. Yet another category of measures involves enlisting market-based mechanisms, such as carbon taxes or tradeable emissions permits, as established by the Kyoto Protocol[3] and the EU emissions trading system (ETS).[4] A CBAM falls in the latter category, in the form of fees levied on goods in international trade – the equivalent of a tariff (for imports) or a tax adjustment (for exports), or both.

As a generalization, CBAMs "seek to alleviate the negative impacts of uneven climate efforts by levelling the resulting carbon constraint at the border. In their most elementary form, they take the shape of a tariff or other fiscal measure applied to imported goods from

2. Julien Bueb, Lilian Richieri Hanania & Alice Le Clézio, *Border Adjustment Mechanisms: Elements for Economic, Legal, and Political Analysis*, THE POL. ECON. OF CLEAN ENERGY TRANSITIONS 60, 74 (Douglas Arent et al. eds., 2017).

3. Kyoto Protocol to the United Nations Framework Convention on Climate Change, Dec. 10, 1997, 2303 U.N.T.S. 162. Art. 17.

4. Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2013 establishing a scheme for greenhouse gas emission allowance trading within the Community, 2003 O.J. (L 275) 25.

countries that have not taken comparable climate action."[5] From a quantitative perspective, a CBAM is "a tariff measure that internalizes carbon emissions into the price of a given imported product."[6] Much of the literature addresses at-the-border offsets to carbon taxes and/or greenhouse gas (GHG) emissions trading schemes, among the easier domestic measures to quantify. The fundamental problem, however, is considerably more challenging, and should include other strategies for regulating carbon emissions, including sectoral interventions such as those found in the United States.[7]

Utilizing prices to encourage the internalization of the costs of pollution to public goods—in this case erosion of the integrity of the global climate, a public resource whose integrity affects the entire world—is familiar from the discipline of welfare economics. A CBAM consequently can operate as an intervention ancillary to domestic climate policies. A CBAM is responsive to challenges arising from trade policies that otherwise might not distinguish among different goods in international trade based on their contributions – or not, as the case may be – to climate degradation due to carbon emissions associated with the product's manufacture.

In quantifying the costs of a product manufactured with polluting fossil fuels and levying that amount as a surcharge, a CBAM can consequently address competitiveness concerns, by "level[ing] the [policy] playing field between domestic producers facing costly climate change measures and foreign producers facing very few."[8] A CBAM also helps to assure the capture of emissions that otherwise might be subject to "leakage" that can arise from offshoring domestic, fossil-fuel-intensive industries, particularly those in energy-intensive industries such as steel or cement manufacture, to jurisdictions with less demanding regulatory requirements,[9] resulting in "an increase in

5. Michael A. Mehling et al., *Designing Border Carbon Adjustments for Enhanced Climate Action*, 113 AM. J. INT'L L. 433, 442 (2019). The actual design of a CBAM may be more complex, including "(i) a tax on imported products based on taxes applied on similar domestic products (tax adjustment on imports); (ii) tax credits on exported products (tax adjustment on exports); (iii) mandatory acquisition of emission permits in sectors where carbon leaks have been identified; or (iv) the allocation of free permits for those sectors subject to high competition." Bueb, Hanania & Le Clézio, *supra* note 1, at 63.

6. Bueb, Hanania & Le Clézio, *supra* note 1, at 61.

7. *See, e.g.*, Goran Dominioni & Daniel C. Esty, *Designing Effective Border Carbon Adjustment Mechanisms: Aligning the Global Trade and Climate Change Regimes*, 65 ARIZ. L. REV. 1 (2023). Terminology has not been fully standardized, and includes concepts such as "environmental countervailing duties," encountered earlier in the trade-environment literature. *E.g.*, David A. Wirth, *The International Trade Regime and the Municipal Law of Federal States: How Close a Fit?*, 49 WASH. & LEE L. REV. 1389, 1391 (1992).

8. Bueb, Hanania & Le Clézio, *supra* note 1, at 61.

9. *E.g.*, Mehling, et al., *supra* note 2, at 445.

GHG emissions elsewhere that negates the stringent climate change requirements of . . . high-standard nations."[10]

In responding to the challenges of climate change, economists have tended to favor a carbon price or tax deployed universally, as encouraging an efficient allocation of resources.[11] So far, however, the likelihood of such a harmonized intervention appears to be low. The principal fora for negotiation of an internationally-harmonized carbon tax—the UN Framework Convention on Climate Change (UNFCCC) and its ancillary Paris Agreement – have demonstrated little appetite to address such a possibility,[12] partially as a result of anticipated hostility from the United States.[13] But even in the absence of a price on carbon, a CBAM can contribute to the efficient allocation of resources in a world that is now much more aware of the environmental and welfare costs of continued reliance on fossil fuels.

As of this writing, with one important exception, CBAMs are inherently unilateral. The EU's harmonized carbon border adjustment mechanism only just entered into application in its transitional phase on October 1, 2023, with the first reporting period for importers ending

10. Dominioni & Esty, *supra* note 6, at 3.

11. *E.g.*, Rohit Azad & Shouvik Chakraborty, *Balancing Climate Injustice: A Proposal for Global Carbon Tax*, in HANDBOOK OF GREEN ECONOMICS (Sevil Acar & Erinc Yeldan eds., 2019).

12. *See* Patrick Low, Gabrielle Marceau & Julia Reinaud, *The Interface Between the Trade and Climate Change Regimes: Scoping the Issues* (WTO, Working Paper No. ERSD-2011-1, 2011).

13. Although a carbon tax is unlikely to be adopted in the U.S. in the medium term due to political opposition, EPA and other federal agencies nonetheless use the concept of the "social cost of carbon" to evaluate the benefits of regulatory policies. *See, e.g.*, *Fact Sheet: Biden-Harris Administration Announces New Actions to Reduce Greenhouse Gas Emissions and Combat the Climate Crisis*, *THE WHITE HOUSE* (Sept. 21, 2021), https://www.whitehouse.gov/briefing-room/statements-releases/2023/09/21/fact-sheet-biden-harris-administration-announces-new-actions-to-reduce-greenhouse-gas-emissions-and-combat-the-climate-crisis/ ("agencies should consider the Social Cost of Greenhouse Gases (SC-GHG) — a well-established metric for the known damages that greenhouse gas emissions cause across society"); Interagency Working Group on Social Cost of Greenhouse Gases, United States Government, *Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates under Executive Order 13990* (Feb. 2021), https://www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf; Coral Davenport, *Biden Administration Unleashes Powerful Regulatory Tool Aimed at Climate*, N.Y. TIMES (Dec. 2, 2023), https://www.nytimes.com/2023/12/02/climate/biden-social-cost-carbon-climate-change.html (discussing nearly four-fold increase in social cost of carbon under Biden). Even absent a carbon tax, there may still be an implicit, effective carbon price within the U.S. resulting from the cumulative effect of prescriptive regulation of GHG emissions.

at the close of January 2024.[14] Bills have been introduced in Congress that would establish a U.S. CBAM.[15] Trade negotiations currently underway could in theory require, encourage, or create policy space for a CBAM, although the Office of the U.S. Trade Representative appears to demonstrate little inclination to engage with the debate one way or the other. Besides the EU, other trading partners such as India are discussing the deployment of CBAMs, as potentially affecting market access for their goods abroad, or influencing their domestic climate policies.[16]

III. INTERNATIONAL LEGAL IMPLICATIONS

International economic law, hotly contested in some critical particulars, can operate as a constraint on a governmentally established CBAM. Quintessentially affecting international trade in goods, a CBAM from a trade perspective can appear to operate as a trade barrier, attenuating market access for goods in international trade imported into the state maintaining such a measure. Indeed, the potential for abuse of a CBAM by protectionist interests to "level the playing field" from a competitive – as opposed to policy – perspective is readily apparent.

Rules contained in free trade agreements, such as those set out in the World Trade Organization's (WTO's) suite of agreements and/or bilateral or regional (preferential) pacts, govern trade-based measures such as a CBAM.[17] Importantly, in contrast to the UNFCCC, Paris Agreement, and other multilateral environmental agreements, those principles do not mandate or require governmental regulatory action. Rather, they establish constraints on individual states' capacity to impede market access in a manner analogous to the Dormant Commerce Clause of the U.S. Constitution. Because of the importance of reciprocal implementation – a state of export realizes the benefits of the agreement in the form of market access only if the state of import restricts its domestic trade barriers – all free trade agreements have

14. *See Carbon Border Adjustment Mechanism*, EUROPEAN COMMISSION, https://taxation-customs.ec.europa.eu/carbon-border-adjustment-mechanism_en (last visited Mar. 5, 2024).

15. *E.g.*, Clean Competition Act, S. 4355, 117th Cong.; FAIR Transition and Competition Act of 2021, H.R. 4534, 117th Cong. § 9904 (2021).

16. *See* Guilherme Magacho, Etienne Espagne, & Antoine Godin. *Impacts of the CBAM on EU Trade Partners: Consequences for Developing Countries*. 24 CLIMATE POLICY 243 (2023).

17. Carlos Alonso Gayon, *The EU's CBAM: Complying with the CBDR Principle Could Also Mean Compliance with WTO Law*, 32 MINN. J. INT'L. L. 269 (2023).

compulsory dispute settlement provisions, among the most vigorous found in public international law.

While no CBAM has yet been challenged through these channels, there is reason to believe that a carefully-designed CBAM could satisfy these rules, and survive the equivalent of judicial review at the international level. Among the salient obligations or "disciplines" are the following:

Nondiscrimination. A principal purpose of the trade disciplines is to prevent discrimination, as between the sources of imported goods or between imports and domestically manufactured products.[18] Depending on one's point of view and interpretation of the WTO jurisprudence (case law), a CBAM might or might not be considered to satisfy the WTO's most-favored-nation[19] and national treatment[20] disciplines.

Product/process distinction. Three decades ago, a trade agreement dispute settlement panel found that a U.S. embargo on tuna caught via methods that harm air-breathing dolphins violate the basic disciplines of non-discrimination.[21] Since then, there has been major debate regarding the acceptability of at-the-border measures based on "process and production methods" (PPMs).[22] The life-cycle impact of many products depends on the process by which they are produced, a central feature of a CBAM.

Environmental and public health exceptions. Like the domestic Dormant Commerce Clause, trade law creates exceptions for measures that are otherwise discriminatory, provided they address "exhaustible natural resources"[23] or "human, animal or plant life or health."[24] A CBAM arguably satisfies one or both of these

18. Andrew Mitchell, David Heaton, & Caroline Henckels, *Non-discrimination and Regulatory Purpose,* in NON-DISCRIMINATION AND THE ROLE OF REGULATORY PURPOSE IN INTERNATIONAL TRADE AND INVESTMENT LAW (2016).

19. General Agreement on Tariffs and Trade art. I, (Oct. 30, 1947), 61 Stat. A-11, 55 U.N.T.S. 194 [hereinafter GATT].

20. GATT art. III.

21. For WTO law on this question, *see, e.g.*, Appellate Body Report, *United States—Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products*, WTO Doc. WT/DS381/AB/R (May 16, 2012); Appellate Body Report, *United States—Import Prohibition of Certain Shrimp and Shrimp Products*, WTO Doc. WT/DS58/AB/R (Oct. 12, 1998).

22. Jason Potts, *The Legality of PPMs under the GATT: Challenges and Opportunities for Sustainable Trade Policy*, INTERNATIONAL INSTITUTE FOR SUSTAINABLE DEVELOPMENT (2008).

23. GATT art. XX(g).

24. GATT art. XX(b).

requirements, and the WTO jurisprudence contains indications of receptivity to measures aimed at climate protection.[25] However, the precise contours of these exceptions as applied to a CBAM have yet to be fully explored.

Relationship to domestic climate policy. While analyses differ as to the potential to craft a CBAM that would meet the requirements of existing WTO jurisprudence,[26] one conclusion is indisputable: throughout the text of the WTO rules and the interpretive jurisprudence, it is clear that a border measure, such as a CBAM, would not survive scrutiny if that were a state's sole regulatory intervention to protect the climate from emissions of GHGs. In other words, a valid CBAM would have to be coupled to domestic regulatory restrictions on fossil fuels, in the form of an identifiable governmental measure or combination of measures imposing meaningful domestic production restrictions.[27] The precise nature of the relationship, however, is not clear, especially in situations such as in the U.S. where domestic policy is focused on sectoral, command-and-control regulations, as opposed to fiscal measures such as a carbon tax.

IV. RESOLVING COMPETING POLICY CONSIDERATIONS

Since the adoption of the UNFCCC in 1992, the global community has attempted to put in place a multilateral legal architecture in which legal and policy responses to the challenge of climate disruption could be embedded. Those include the pathbreaking Kyoto Protocol and the 2015 Paris Agreement. Yet in reality, there has not been a single year since in which global emissions have declined,[28]

25. *E.g.*, Panel Report, *Brazil—Measures Affecting Imports of Retreaded Tyres*, WTO Doc. WT/DS332/AB/R ¶ 151 (adopted Dec. 3, 2007) (suggesting in dictum that "measures adopted in order to attenuate global warming and climate change" might qualify for article XX(b) exception).

26. *Compare* Joost Pauwelyn, *Carbon Leakage Measures and Border Tax Adjustments Under WTO Law*, *in* RESEARCH HANDBOOK ON ENVIRONMENT, HEALTH AND THE WTO 448 (Geert Van Calster & Denise Prévost eds., 2013); Joel P. Trachtman, *WTO Law Constraints on Border Tax Adjustment and Tax Credit Mechanisms to Reduce the Competitive Effects of Carbon Taxes*, 70 NAT'L TAX J. 469 (2017).

27. *See* GATT, *supra* notes 12-13, 15. Similarly, the exception provided in GATT article II:2(a) would very likely have to be coupled to analogous domestic measures.

28. *See* Ian Tiseo, *Annual carbon dioxide (CO_2) emissions worldwide from 1940 to 2023*, STATISTA (Dec. 6, 2023), https://www.statista.com/statistics/276629/global-co2-emissions.

and it appears that breaching the 1.5º C target set out in the Paris Agreement may now be inevitable.[29]

Facing such a dire situation, it is only responsible to examine every available legal and policy tool to facilitate meaningful reductions in GHG emissions. Somewhat surprisingly, the juncture of international trade in goods is an underutilized point of regulatory intervention for potentially identifying potential further reductions. A legal analysis is only the beginning of the debate concerning a CBAM, whose adoption has major political implications even if the question of the measure's legality under principles of international economic law were to be settled.

A. The Utility and Benefits of CBAMs

Consistent with the constraints of the trade law jurisprudence, from a policy point of view a CBAM imposed unilaterally – or collectively[30] – is unlikely to meet expectations as the principal structural workhorse to assure meaningful emissions reduction (mitigation) measures. A CBAM nonetheless has potentially significant salutary benefits as an ancillary public policy vehicle, including:

Preventing carbon leakage at the juncture of international trade in goods, particularly with respect to exports from states with less demanding mitigation (emissions reduction) requirements to those with more stringent domestic measures;

Leveling the playing field with respect to competition, particular with respect to imports into states that have explicit or implicit requirements or incentives for low- or zero-carbon energy supplies (assuming, of course, consistency with the requirements of international trade law);

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29. *See, e.g.*, Shannon Osaka, *Earth breached a feared level of warming over the past year. Are we doomed?*, WASH. POST (Feb. 8, 2024), https://www.washingtonpost.com/climate-environment/2024/02/08/1-5-celsius-global-warming-record.

30. Proposals have circulated for the creation of "climate clubs" of like-minded states committed to meaningful reductions, ring-fenced by trade restrictions that bear considerable resemblance to a CBAM. *E.g.*, William Nordhaus, *Climate Clubs: Overcoming Free-Riding in International Climate Policy*, 105 AM. ECON. REV. 1339, 1341 (2015). From a trade law point of view, such agreements present significant challenges beyond the scope of this Essay. *See* GATT art. XXIV ¶¶ 4, 7(a), 9 (requirements for customs unions and regional/preferential trade agreements). International concerns about CBAMs can, of course, also be addressed on a bilateral or – in the case of the EU – transatlantic basis as well.

Discouraging offshoring to, and the creation of pollution havens for carbon intensive industries and associated jobs in, states with less rather than more stringent mitigation requirements;

Encouraging internalization of the costs of manufacturing with climate-degrading fossil fuels;

Encouraging decarbonization, particularly in energy-intensive sectors such as cement and steel; and

Assuring the sustainability of international trade, particularly with respect to consumer confidence.

B. Addressing Trade Law and Policy Concerns

The multiple tests under international trade law that might apply to a CBAM are directed at one fundamental goal: the identification of a measure as a trade barrier – or not, as the case may be – by addressing the potential for abuse by the state maintaining the measure. The trade-based obligations or "disciplines" are primarily "negative," in that they establish constraints on governmental policies that potentially could impede market access. By contrast, regulating activities that degrade a global commons resource such as climate, and controlling externalities in the form of carbon-based pollution, largely anticipate affirmative, prescriptive governmental interventions.

The law and policy of climate on the one hand and trade on the other are potentially competing—not just in terms of trade-offs between the two, but also in their contrasting operational structures: the former is fundamentally prescriptive, and the latter proscriptive. This juxtaposition accounts for much of the trade-and-environment policy debate and corresponding literature, academic and otherwise. More specifically, in the present context the question becomes: Is a particular CBAM a trade barrier, or is it a legitimate public policy intervention? The answer is provided by an analysis of the particular law or policy, as measured against the trade-based tests, on a case-by-case basis, rooted in the particulars of its design.

Public policies with respect to climate protection and international trade are both intended to promote public welfare. As a matter of first principle, then, the two bodies of law and policy ought to be presumed to be complementary, or at a minimum not in conflict with one another. In other words, the trade disciplines ought not to be presumed to operate as a blunt-edge instrument categorically to rule out the possibility of CBAMs as a public policy measure. While the

potential for a confrontational challenge to a CBAM in the WTO is always a possibility, the global public interest is presumably best served by mutual accommodation between the two regimes.

At the same time, an acceptable CBAM cannot serve as a subterfuge for policies that protect domestic industries from foreign competition. This, indeed, is an attribute of the border adjustment (tariff) component that could well make a CBAM all too attractive from a political perspective, and all too susceptible to abuse. And, not coincidentally, preventing such abuse is the primary raison d'être of the trade regime.

The WTO to a considerable extent has been hobbled by U.S. blockage of appointments to the Organization's Appellate Body, situated at the top of the WTO's two-tier, rule-of-law dispute settlement process. But the current disarray in the WTO may actually present underappreciated opportunities for rethinking the Appellate Body's jurisprudence that could constrain the efficacy of at-the-border climate-directed measures such as a CBAM. In a new era, a reconstituted Appellate Body of necessity will be called upon to address a considerably altered political, economic, public health, and environmental landscape – including not only the substantially enhanced urgency of the climate crisis, but also shocks to the system such as the COVID pandemic and a dramatically altered political landscape with respect to international trade.

The most obvious component of WTO jurisprudence in need of further examination is the treatment of PPMs. It is now clear that effectively addressing questions such as the climate impact of trade in energy-intensive sectors such as cement and steel requires a life-cycle analysis, addressing not only the finished product itself but the method by which it is produced and its likely environmental impact after use. The mandate for a new UN initiative on a binding instrument to end global plastics pollution expressly calls for a life-cycle approach.[31] Appellate Body jurisprudence on the article XX exceptions for health and exhaustible natural resources, along with the chapeau, would also benefit from a thorough review in light of significantly changed circumstances.

While much of the debate has focused on the legal particulars, it would be helpful to undertake a policy dialogue on the extent to which CBAMs meeting certain requirements might be identified as "a

31. *See* U.N. Environment Assembly of the U.N. Environment Programme Res. 14, *End plastic pollution: Towards an international legally binding instrument,* U.N. Doc. UNEP/EA.5/Res.14 (Mar. 2, 2022).

kind of acceptable form of . . . barrier."[32] One point of fundamental principle, reflecting the existing WTO jurisprudence,[33] would seem to exclude "naked" CBAMs, applying only to goods in international trade without a corresponding domestic regulatory program addressing GHGs emissions internally within a state. With that foundation already in place, a further discussion of an acceptable CBAM design might stand some chance of success.[34]

C. North-South Issues

Since before the negotiation of the UNFCCC, international climate discussions have been dominated by a North/South divide. States of the Global South have tended to argue that it is inequitable to expect them to make emission reduction commitments of a magnitude and rigor commensurate with those of states such as the members of the Organization for Economic Cooperation and Development (OECD), the now-38-member state group of high-GDP, industrialized, market-oriented economies. From this perspective, cumulative prior carbon emissions – correlated with economic development – from states such as the U.S. have both facilitated prior industrialization and consumed a disproportionate share of the world's "carbon budget."[35]

CBAMs are especially likely to affect imports from large, developing, and emerging economies such as China and India, which in turn can be expected to interpret them as potential trade barriers. Individual states (or, as in the case of the EU, regional economic integration organizations) may well implement a CBAM unilaterally, as the EU has already done. Multilateral debate is likely to play out in one or both of two fora: the UNFCCC/Paris Agreement setting; and the WTO.[36]

The 2015 Paris Agreement is now recognized as the primary multilateral instrument governing international climate policy, and

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32. I owe this insight to Susy Frankel (personal communication Mar. 14, 2017). The comment was made in the context of the WTO intellectual property regime, which has evolved from treating "the protection of patents, trademarks and copyrights" as necessitating an express exception in GATT article XX(d), to the TRIPS regime of mandatory IP protection. *See generally* Susy Frankel, *Challenging TRIPS-Plus Agreements: The Potential Utility of Non-Violation Disputes*, 12 J. INT'L ECON. L. 1023 (2009).

33. *See supra* text accompanying note 17.

34. *But see* WTO Secretariat, *Trade and Environment at the WTO*, 35-39 (2004).

35. Jason Hickel, *Quantifying national responsibility for climate breakdown: an equality-based attribution approach for carbon dioxide emissions in excess of the planetary boundary*. 4 THE LANCET PLANETARY HEALTH 399 (2020).

36. *But cf. supra* note 22 (addressing climate clubs, regional/preferential trade agreements, and bilateral/transatlantic settings).

particularly emissions of carbon from the burning of fossil fuels.[37] The Paris Agreement was built on the earlier Kyoto Protocol by expanding coverage from the 30+ enumerated states and international organizations identified in that agreement to essentially the totality of the states on the planet.[38] But that occurred only after an unsuccessful false start 6 years earlier in Copenhagen, which consumed precious time until the Paris breakthrough. The Paris Agreement is also far from complete in its coverage. Among other areas, neither the text of the Paris Agreement nor the decision effecting its adoption mention international trade. Closing these gaps has largely been left to domestic, unilateral actions, as well as to other international institutions and regimes.

The Paris Agreement, which built on a bilateral understanding between the U.S. and China, the world's largest economies and biggest emitters, is widely understood to rest upon the Agreement's loosely-textured, largely voluntary, "bottom up" approach that rests on a highly decentralized system of voluntary unilateral national pledges known as "nationally determined contributions" (NDCs).[39] A key theme reflected throughout the Paris Agreement is "differentiation," resulting in a scaling of the rigor of expectations under the agreement to the varying capacities and circumstances of states of the Global North and South.[40] Operationally, both the structure and the intent of the Paris Agreement result in a situation in which, even among parties to the Agreement, obligations under it can vary quite considerably.

Perhaps nowhere is the concept of differentiation more pronounced than in the identification of nationally determined contributions (NDCs), articulating mitigation (emissions reductions) goals. This structure in effect provides a multilateral imprimatur to a potentially wide variety of domestic policies, expressly anticipated to

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37. *See* David A. Wirth, *The Multilateral Climate Regime*, *in* GLOBAL CLIMATE CHANGE & U.S. LAW 33, 52 (Michael Gerrard, Jody Freeman & Michael Burger eds., Am. Bar Ass'n 3d ed. 2023).

38. *See* Lindsay Maizland, *Global Climate Agreements: Successes and Failures*, COUNCIL ON FOREIGN RELATIONS (2023) (noting that "major climate agreements have evolved in how they pursue emissions reductions. The Kyoto Protocol required only developed countries to reduce emissions, while the Paris Agreement recognized that climate change is a shared problem and called on all countries to set emissions targets.").

39. *See* Paris Agreement to the United Nations Framework Convention on Climate Change, Dec. 12, 2015, T.I.A.S. No. 16-1104. Article 4.

40. For example, the phrase "common but differentiated responsibilities and respective capabilities, in the light of different national circumstances" appears verbatim four times in the Agreement. Paris Agreement to the United Nations Framework Convention on Climate Change, pmbl. ¶ 3; art. 2, ¶ 2; art. 4 ¶ 3; art. 4 ¶ 19, Dec. 12, 2015, T.I.A.S. No. 16-1104.

vary in the vigor of their regulatory demands. It is unclear how this feature of the Paris Agreement may affect the analysis of the consistency of a particular CBAM measure by reference to the legal tests of the international law of trade in goods. More specifically, CBAMs as a class of governmental measures plainly present the challenge of how, if at all, to mediate the tension between the trade law regime's fundamental principle of nondiscrimination on the one hand and the Paris Agreement's express reliance on differentiation on the other.

The UNFCCC/Paris forum to date has not engaged with the question of the desirability of CBAMs as a policy tool – one of any number of gaps in that regime, including other major questions such as the acceptability of geoengineering interventions. Even obtaining agreement for further discussion, however, would likely involve considerable controversy, and the global consensus necessary to move forward in this forum may well be elusive.

Meanwhile, as noted above, the WTO has experienced significant institutional disruptions, particularly with respect to its all-important dispute settlement mechanisms.[41] Nonetheless, the WTO has managed to engage with a number of environmental challenges, most recently producing a new agreement on the elimination of trade-distorting subsidies in the fisheries sector. With progress on fisheries as a model, the identification of substandard climate policies as de facto export subsidies could well be a breakthrough that could pave the way for greater multilateral acceptance of CBAMs.

V. CONCLUSION

CBAMs are a potentially useful component of the regulatory toolbox that can be deployed in the service of climate protection, and there is good reason to believe that an appropriately designed CBAM will survive WTO review. But the present analysis identifies yet another potential benefit of CBAMs more generally: the possibility to contribute to the efficacy of both the climate and trade regimes, as mediated by principles of sustainability.

While the WTO suite of agreements pays lip service to sustainability,[42] in practice, the rules of GATT/WTO prioritize market

41. *See* Keisuke Iida, *Is WTO Dispute Settlement Effective?* 10 GLOBAL GOVERNANCE 207 (2004).

42. *See* Marrakesh Agreement Establishing the World Trade Organization, pmbl. ¶ 1, Apr. 15, 1994, 1867 U.N.T.S. 154 (referring to goal of assuring "the optimal use of the

access by restricting governmental actions. This tendency towards deregulation may conflict with sustainability objectives. The WTO, and particularly its dispute settlement mechanism, have yet to fully regroup from devastating institutional discontinuities. In this context, the climate crisis generally, and CBAMs more specifically, provide a ready occasion to revisit existing jurisprudence to craft a law of sustainable – as opposed to deregulated – trade.

One underappreciated aspect of the existing jurisprudence is the de facto requirement for domestic regulatory measures for GHGs as a condition of a CBAM. This attribute creates incentives for states – and individual politicians –that might be inclined to constrict market access for imports to take the need for domestic measures more seriously than they otherwise might. Among other benefits, consumers of both imported and domestically-manufactured goods would be assured that they are purchasing sustainably-produced goods, likely considering the entire life cycle of the product.

Other aspects of existing Appellate Body jurisprudence, such as the continued uncertainty surrounding the acceptability of PPMs, should be rethought at the earliest opportunity. Any reasonable principles of sustainable trade, including CBAMs, of necessity will have to acknowledge the relevance of methods of production, not just the physical attributes of finished goods themselves.

As Einstein said, "In the middle of difficulty lies opportunity."[43] The twin challenges of WTO institutional disruption and the now very real possibility of impending climate chaos suggest that he was doubly prescient.

world's resources in accordance with the objective of sustainable development, seeking both to protect and preserve the environment and to enhance the means for doing so").

43. As attributed by Einstein's close colleague. *See* John Archibald Wheeler, *The Outsider*, NEWSWEEK, (Mar. 12, 1979), at 67.