# Distinguished Essay: Non-tariff Barriers and Climate Policy: Border-Adjusted Taxes and Regulatory Measures as WTO-Compliant Climate Mitigation Strategies

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## Introduction

Is it legal or legitimate in the multilateral trade regime for a State to take unilateral measures against the failure of other States to regulate carbon emissions? Everyone agrees that unilateral action is a second best to a comprehensive multilateral approach. Yet, as the impasse in the Kyoto process illustrates, collective action problems have plagued the effort to achieve such an approach. Leading economists, such as Joseph Stiglitz, have suggested that unilateralism is far better than doing nothing in the presence of a critical and urgent global challenge.[1]

The prospect of unilateral action creates a new set of costs for States that are holding out in multilateral fora and thus increases the incentives on these States to work toward a cooperative outcome. For the states taking unilateral action on the other hand, the incentives nevertheless remain strong to favour cooperation. Unilateral approaches, while significantly contributing to reductions in emissions, do not reach those emissions unconnected to goods and services traded with the countries taking unilateral measures, whereas a multilateral approach would do so, leading to far greater reductions.

The threat of unilateral action makes it most costly for a State to adopt a hold-out strategy in multilateral fora dealing with climate mitigation, free riding on the efforts

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This paper, primarily addressed to non-WTO specialists, draws on my more technical and extensive analysis of these issues in a coauthored work with Antonia Eliason. I also draw on my epilogue to Bartels, The Inclusion of Aviation in the EU ETS: WTO Law Considerations, ICTSD Issue Paper No. 6 (2012).

[1] Stiglitz (2006), p. 1.

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C. Herrmann et al. (eds.), *European Yearbook of International Economic Law 2015*,
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of others. Hence, not surprisingly, hold-out States have attempted to draw a line in the sand concerning unilateralism, relying on various arguments and concepts that are assumed to have a legal foundation. The basic claim is that States may not unilaterally regulate global environmental externalities, except to the extent that these externalities are also local ones, occurring within their territorial boundaries. This paper focuses largely on those legal arguments that invoke the rules of the World Trade Organization, embodied in treaties such as the General Agreement on Tariffs and Trade (GATT),[2] the General Agreement on Trade in Services (GATS),[3] and the Agreement on Technical Barriers to Trade (TBT).[4] Here, the GATT in particular will be emphasised in working through the issues, because the conceptual challenges are similar with GATS and TBT, as they have been interpreted in recent jurisprudence. However, since treaties such as these are to be interpreted in light of general international law, the paper will also consider claims that the kind of unilateral action in question violates customary international law norms concerning extraterritoriality. The paper will argue that border carbon adjustment measures can be designed in such a way as to be WTO compliant and will provide a guide to which design features will contribute to WTO compliance and which might compromise it.

Internalising global externalities means requiring that, through tax or other border carbon measures, climate externalities are attributed to goods and services produced in whole or in part in jurisdictions that do not regulate or underregulate carbon emissions. This is economically rational and environmentally desirable (as a second best option). As Helm et al. summarise, the lack of a carbon price "effectively comprises an implicit subsidy to dirtier production in non-regulated markets [...]. Free trade can reduce welfare when there is a global externality that has not been internalized" [references omitted].[5]

Such measures could undermine the contrary policies of countries that have chosen to "subsidise" economic growth and development by not making producers pay for the global environmental externalities that their economic activities generate. The countries in question often characterise such policies as their sovereign right, balancing environmental and growth concerns as they think is best for that society. But, of course, it is one thing to subsidise domestic economic development; it is another thing to do so at the expense of the global commons, imposing a large part of the costs on the rest of the world and distorting the allocation of productive resources not only domestically but globally.

At this point, the argument moves from sovereignty to historical equity: it is claimed that today's developed countries achieved economic progress for over a century by doing just this. Therefore, it is a matter of fairness now to allow today's developing countries to pursue such policies, despite the cost to the global public

[2] General Agreement on Tariffs and Trade 1947, 55 U.N.T.S. 194, incorporated by reference into the General Agreement on Tariffs and Trade 1994, 1867 U.N.T.S. 187.

[3] General Agreement on Trade in Services, 1869 U.N.T.S. 183.

[4] Agreement on Technical Barriers to Trade, 1868 U.N.T.S. 120.

[5] Helm et al. (2012), p. 368 (370–372).

good. This argument is in part reflected in the concept of differentiated responsibilities in the Kyoto climate regime, although it is more often used to excuse holding out from responsibilities altogether. But how sound is the argument? Today's developed countries also built their economies in prior centuries through military aggression, colonial oppression, and slavery. Yet one does not hear arguments that historical equity means permitting such practices now so that developing countries can catch up. This is *not* by any means to dismiss arguments in global justice that developing countries may be entitled to *redistributive* measures to assist them in *meeting* climate mitigation responsibilities, such as climate finance, technology transfer, and so on.

## Classifying Border Carbon Adjustment Measures

Helm et al. distinguish between three types of border carbon adjustment (BCA) measures: "(i) border taxes (as tariffs on imports and, less commonly, rebates on exports); (ii) mandatory emissions allowance purchase by importers; and (iii) embedded carbon product standards [reference omitted]. In every case the objective is to extend a domestic carbon pricing scheme to traded goods."[6]

Before beginning our analysis of the legal issues under the WTO, it is worthwhile considering the ways in which border carbon adjustment can have positive environmental and economic impacts:

As a second-best to a global carbon price, BCA will reduce *some* of the distortion in prices caused by the failure to internalise the costs of carbon emissions in other jurisdictions. It will thus lead to somewhat more efficient consumption and production decisions, with the positive effect of relatively less consumption of "dirty" products and relatively more of "clean" ones.

BCA can counter some of the effects of so-called carbon leakage. Carbon leakage occurs where a country introduces measures to internalise carbon externalities associated with domestic production, with the result that firms shift production to jurisdictions that do not require internalisation. In some scenarios, "carbon leakage" can actually result in domestic measures to internalise carbon externalities *adding to* rather than reducing global carbon emissions (for example, where the shift in the location of production results in greater output in the "dirty" jurisdiction). Using a newly developed general equilibrium model, Elliott et al. estimate that adding border adjustment to a domestic carbon tax would eliminate approximately 50 % of carbon leakage.[7]

BCA may have the dynamic effect of inducing the exporting State to introduce its own measures internalising the carbon externalities of its exports, so they are not

[6] Helm et al. (2012), p. 368 (369).

[7] Elliott et al. (2010), p. 465.

subject to the BCA of the importing country. Helm et al., using a game-theoretic model, suggest that this effect is indeed plausible, as the exporting country government would benefit from collecting the revenue from producers rather than letting the importing country do so.[8]

As already noted, BCA reduces the extent to which "hold out" States in multilateral climate negotiations can free ride; it thus increases the likelihood that such States will ultimately decide to cooperate. On the other hand, in the case of the States imposing the BCA, the incentive to cooperate remains strong since a BCA can only internalise a certain portion of externalities in other jurisdictions, those associated with imported products, and thus is very much a second best to a multilateral cooperative solution.

Finally, a BCA can address the loss of competitive advantage to domestic producers from the burden imposed upon them to internalise externalities, where they are competing with producers from jurisdictions that do not do so. While often stated as a political goal of BCA, this goal is not (as an end in itself) compatible with the principles of free trade upon which the WTO is based. However, to the extent that loss of competitive advantage leads to carbon leakage—relocation to another jurisdiction that is nonregulating—the ultimate aim is not fair trade or a level playing field but avoiding the harmful environmental effects associated with carbon leakage.

## Border Adjustment of a Domestic Carbon Tax Under WTO Rules

Where the underlying measure internalising carbon externalities is a *tax* applied to domestic production, the WTO rules concerning the border adjustment of the measure are quite clear. The border adjustment will be explicitly permissible under the GATT where (1) it is in the form of "a charge equivalent to an internal tax" and (2) the charge is imposed consistently with the general rules of the GATT concerning nondiscrimination in taxation between domestic and imported products (GATT, Article II:2(a)). These principles apply regardless of whether the tax is imposed with respect to the product itself or an input into the product.

A red herring that has sometimes been introduced into discussions of the application of these rules to border carbon adjustment is the notion that the rules only apply where what is taxed is some input physically incorporated into the product and that carbon is not such an input. An example of this red herring is the analysis in a recent paper published by the WTO Secretariat: "Even if a precedent may exist for taxing inputs that are not physically incorporated, GHG emissions are not an input but an output."[9] This is a mere semantic confusion that plays on the

[8] Helm et al. (2012), p. 368 (386).

[9] Low et al. (2011), p. 8, n. 9.

frequent use of the phrase "carbon tax," which suggests that what is taxed is the carbon itself rather than *products* the consumption or production of which results in *carbon externalities*. But, of course, strictly speaking, as a legal or administrative matter, the tax is *applied* to products or inputs in products, which are traded across borders, and not the actual emissions. The important point is that the WTO rules do not restrict the *policy purposes* of taxes that are eligible for border adjustment, with one exception: the rules on nondiscrimination necessarily exclude taxes that have the purpose of discriminating against imports (i.e., protecting domestic producers).

In the GATT *Superfund* case, the Panel found to be GATT consistent a border adjustment that involved applying to imported substances a charge that was equivalent to a domestic US tax on the chemicals used in the production of the imported substances; the domestic tax was aimed at addressing the environmental externalities of the chemicals in question. The Panel held: "the tax adjustment rules of the General Agreement distinguish between taxes on products and taxes not directly levied on products they do not distinguish between taxes with different policy purposes. Whether a sales tax is levied on a product for general revenue purposes or to encourage the rational use of environmental resources, is therefore not relevant for the determination of the eligibility of a tax for border tax adjustment. For these reasons the Panel concluded that the tax on certain chemicals, being a tax directly imposed on products, was eligible for border tax adjustment independent of the purpose it served."[10] Mattoo and Subramanian misread *Superfund* as premised upon the notion that the inputs have been physically incorporated into the final product that is crossing the border.[11] But this consideration was never mentioned by the *Superfund* Panel, for the simple reason that it is irrelevant. As the language of the GATT Panel report indicates, the important consideration is that the tax is "directly imposed" on *products* at the border; the concern with *inputs* is simply a matter of the underlying policy purpose of accounting for the environmental externalities generated by the production of those inputs outside the US, and, again, as the Panel indicates, the policy purpose is irrelevant to determining eligibility for border tax adjustment. In sum, the legal reasoning of the Panel is lucid on its own terms and displays why the Panel did not consider it relevant to mention or address the consideration of the inputs being physically incorporated into the product that is taxed.

In the *Superfund* case, the complainant had argued that a border adjustment of an environmental tax was impermissible under GATT rules, unless the environmental externalities created by the taxed products occurred within the taxing jurisdiction. The European Economic Community considered this to be an implication of the polluter-pays principle. However, the Panel found that such a notion had no place in WTO law and that the imported substances could be border adjusted even if the chemicals used in their production created environmental externalities exclusively

[10] GATT, report of the Panel, *United States – Taxes on Petroleum and Certain Imported Substances*, L/6175, BISD 34S/136, para. 5.24.

[11] Mattoo and Subramanian (2013), p. 7.

outside the United States.[12] An environmental tax can be border adjusted even if, in the case of the imported products, the externalities in question are created exclusively outside the taxing jurisdiction, *a fortiori* an environmental tax dealing with global carbon externalities (i.e., effects on climate change) must be, in principle, border adjustable.

This brings us to the general rules on nondiscrimination in taxation. Article III:2 of the GATT requires that (1) "like" domestic and imported products be taxed identically and (2) "directly competitive and substitutable" products be subject to similar taxation.

With respect to the obligation to tax identically "like" products, the WTO Appellate Body has held that the determination of "likeness" entails a case-by-case analysis of the physical characteristics of products, consumer tastes and perceptions, end uses, and customs classifications.[13]

Notably, the Appellate Body has also held, in the *EC – Asbestos* case, that the differing health effects of products may affect consumers' perceptions as to whether products are "like" or not. Recently, in reconsidering the criteria for likeness in the context of interpreting a nondiscrimination provision in a different treaty (the TBT Agreement), the Appellate Body reaffirmed "that regulatory concerns and considerations may play a role in applying certain of the 'likeness' criteria (that is, physical characteristics and consumer preferences) and, thus, in the determination of likeness under Article III:4 of the GATT 1994."[14] To the extent that consumers are concerned about climate change, or the kinds of impacts that climate change may have on their lives, it makes sense from this perspective to view products as "unlike" where they have different carbon footprints. Thus, whatever likeness means in Article III:2, it should not be interpreted so as to shut the door to using tax measures to internalise carbon externalities of imported products. In the recent *US – Tuna II* case, which concerned a US measure that, *inter alia*, prohibited the representation of tuna as "dolphin-safe" except for the use of label where specific criteria were enforced by the US government to determine dolphin safety, the determination under the national treatment obligations of the WTO TBT Agreement of whether the US measure was "even-handed" was unaffected by the fact that the measure entirely concerned production methods for tuna that did not affect its physical characteristics. The TBT Agreement defines "technical regulations" to include processes and production methods (PPM) that are "related" to characteristics of products; the Appellate Body did not consider it necessary even to address whether the US measure was a PPM in this sense, but it assumed that it was.

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[12] GATT, report of the Panel, *United States – Taxes on Petroleum and Certain Imported Substances*, L/6175, BISD 34S/136, para. 5.25.

[13] WTO, report of the Appellate Body, *Japan – Taxes on Alcoholic Beverages*, WT/DS8/AB/R, WT/DS10/AB/R, WT/DS11/AB/R, p. 20.

[14] WTO, report of the Appellate Body, *United States – Measures Affecting the Production and Sale of Clove Cigarettes*, WT/DS406/AB/R, para. 117.

Obviously, the Appellate Body does not see the concept of product characteristics as in any way limited to physical characteristics.[15]

With respect to the obligation in Article III:2 to tax "directly competitive and substitutable products" not dissimilarly, in the *Canada – Renewable Energy* case, the Appellate Body observed: "What constitutes a competitive relationship between products may require consideration of inputs and processes of production used to produce the product."[16] Notably, there was no qualification or limitation to those inputs or processes of production that affect the physical characteristics of the product.

Thus, neither the requirement to tax "like" products the same, nor that similar taxation of "directly competitive and substitutable products" prevents a WTO member imposing a tax at the border that accounts for the carbon externalities created by the production of the imported product. These disciplines do, however, have important implications for the *design* of a border carbon adjustment tax.

If the underlying regulatory consideration motivating the tax is climate change mitigation, then Article III:2 of the GATT would normally require that a domestic product and an imported product be taxed the same to the extent that they have the same carbon footprint. Leading proposals for domestic carbon taxes typically stipulate that the domestic tax is imposed on fossil fuels themselves and not on finished products the production of which has involved emissions from the consumption of fossil fuels.[17] In order for like products to be taxed identically, the domestic tax on

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[15] Cf. WTO, report of the Appellate Body, *United States – Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products*, WT/DS381/AB/R.

[16] WTO, report of the Appellate Body, *Canada – Measures Relating to the Feed-in Tariff Program*, WT/DS426/AB/R/; WTO, report of the Appellate Body, *Canada – Certain Measures Affecting the Renewable Energy Generation Sector*, WT/DS412/AB/R, WT/DS426/AB/R, para. 5.63.

[17] The Carbon Tax Center provides a summary of current and past proposals for carbon pricing. Two carbon-pricing schemes have been proposed during the first session of the 113th Congress. First, the Sanders-Boxer "Climate Protection Act" was introduced on 14 February 2012. The Act proposes a carbon tax of $20 per ton of $CO_2$ content, rising 5.6 % annually over a 10-year period. The Act also contains border-adjusting provisions: § 196(a) imposes a fee "on any manufacturer, producer, or importer of a carbon polluting substance." Second, the House Progressive Caucus has recently introduced a carbon tax in its 'Back to Work' Budget proposal, which contains a $25 per ton price on $CO_2$, also increasing at 5.6 % per year.

Previous legislative sessions have considered a range of climate pricing schemes, from carbon taxes to border-adjusting cap-and-trade proposals. The "Save Our Climate Act of 2009" (H.R. 594) would have imposed a carbon-content tax starting at $10 per ton of $CO_2$ and increasing by $10 every year. The "America's Energy Security Trust Fund Act of 2009" (H.R. 1337) contained both a carbon-content tax on fossil fuels starting at $15/ton of $CO_2$, increasing by $10 each year, and border adjusting measures in § 4693, which would have imposed a carbon equivalency fee on imports of carbon-intensive goods from noncarbon taxing nations. The "Raise Wages, Cut Carbon Act of 2009" (H.R. 2380) included an upstream carbon tax starting at $15 per ton of $CO_2$, which would have risen to $100 in 30 years; the Act imposed an equivalent tax on imports and credits for exports. The "American Clean Energy and Security Act of 2009" (H.R. 2454) included a cap-and-trade proposal aimed at reducing U.S. carbon emissions by 17 % by 2020 and 83 % by 2050. The bill also included provisions to "prevent an increase in greenhouse gas emissions in countries other

fossil fuels must be calibrated with the border adjustment on finished products such that, for example, an imported ton of steel that has a given carbon footprint is taxed identically to a domestic ton of steel with the same carbon footprint. So let's say that the domestic tax is based on assumptions that burning quantity *x* of coal produces *y* level of emissions; on this basis, the tax is set at amount *z* per ton of coal. A border adjustment consistent with Article III:2 of the GATT would entail determining what quantity of coal is "embedded" in the finished product. One way of doing this is to make certain assumptions about production processes. For a product that has many stages of production, this is a complex undertaking, especially if some of these stages have occurred in different jurisdictions. The national treatment obligation of the GATT applies to each individual imported product in competitive relationship to a domestic product and is not satisfied merely by the application of a criterion that may be even-handed in general or across the board as between domestic and imported (*US – Section 337* case) products.[18] If a particular imported product has been produced using energy-efficient or clean technology, it may have a better carbon footprint than would be indicated using rough assumptions about what level of emissions is required to produce a given quantity of that product. This difficulty is not even solved if the domestic tax is designed as a consumption tax on finished products because the amount of carbon emitted used to produce a car in the US, for instance, may be higher than that emitted to produce a competing or "like" car in Germany or Japan. Determining the baseline using assumptions about typical domestic production processes would likely violate the requirement of national treatment in Article III:2 of the GATT. In a very different context, a GATT Panel considered a claim that setting a minimum price for beer by Canadian provincial authorities violated the national treatment obligation of the GATT (in this case with respect to regulatory measures rather than taxation); a violation was found on the ground that the minimum price had been set on the basis of the production costs of major Canadian producers and thus disadvantaged imported beer that was produced more efficiently.[19]

An attractive solution would be to give the producer of an imported product the option to establish the actual amount of carbon emitted in the production of the product using any scientifically sound methodology; in such a case, the tax would be calculated based on this figure rather than a baseline informed by the importing member's general assumptions concerning production processes for the product in question.

Alternatively, Mattoo and Subramanian suggest that the exporting country be given the opportunity to impose export taxes based upon the carbon intensity of the

than the U.S." by requiring importers of certain products to purchase emission allowances. For an additional summary and comparison of recent and current proposals, see Carbon Tax Center (2013).

[18] GATT, report of the Panel, *United States – Section 337 of the Tariff Act of 1930*, L/6439, BISD 36S/345.

[19] GATT, report of the Panel, *Canada – Import, Distribution and Sale of Certain Alcoholic Drinks by Provincial Marketing Agencies*, DS17/R, BISD 39S/27.

exported products. Such taxes are, generally speaking, legal under the WTO framework. This might be attractive to the exporting country since in this scenario, it receives the taxation revenue that might otherwise be collected by the importing country. One difficulty with a carbon border tax adjustment scheme that provides an exception for States that implement instead an equivalent carbon export taxation scheme is that some WTO members, most notably China, have bound themselves not to apply export duties as a condition of accession to membership in the WTO.

It might constitute a violation of the most-favoured-nation (MFN) obligation in the GATT or the TBT Agreement to have an exemption that as a legal matter only some WTO members are able to take advantage of. In the *China – Raw Materials* case, the Appellate Body held that at least in the case of China's protocol of accession to the WTO, the Article XX exception could not be used to justify a departure from the undertaking not to impose export duties.[20]

## Border Adjustment of Regulatory Measures

So far in the WTO, the concept of border adjustment has been given a legal meaning only in the context of taxation measures. As we saw already with the *Superfund* case in the GATT, the dispute settlement system had no difficulty applying border adjustment in an environmental policy context, where the underlying measure was a tax. However, the one existing operational border adjustment scheme, the aviation regulations of the European Union Emissions Trading System (ETS), temporarily suspended pending a possible multilateral solution at ICAO, applies to regulatory measures not taxation: the ETS requires that carbon allowances be obtained (by being either granted or purchased) in respect of emissions from aircraft taking off and landing on the territory of the EU, even if the emissions have in large part occurred in airspace outside the EU, and this applies to both European and non-European airlines. While the WTO issues posed by the ETS are to some extent issues under the GATS not the GATT as the service of air transportation is affected, to the extent that the measure affects the relative cost of transportation of imported goods, the nondiscrimination provisions of the GATT may also be implicated. Article III:4 of the GATT requires "no less favourable" treatment of imported products than that accorded "like" domestic products. The same considerations in determining likeness apply to Article III:4 as to III:2 GATT. But it will be noted, and it has been emphasised by the WTO Appellate Body, that "no less favourable" treatment is not the same as *identical* treatment. This is an important difference between nondiscrimination in the case of taxation measures versus regulatory measures. Nonidentical treatment is permitted in the case of regulatory measures, provided the treatment is even-handed as between domestic and

[20] WTO, report of the Appellate Body, *China – Measures Related to the Exportation of Various Raw Materials*, WT/DS394/AB/R, WT/DS395/AB/R, WT/DS398/AB/R.

imported products. One of the clearest articulations of the meaning of treatment no less favourable is to be found in the Appellate Body opinion in the *Dominican Republic – Cigarettes* case. There, the Appellate Body held: "the existence of a detrimental effect on a given imported product resulting from a measure does not necessarily imply that this measure accords less favorable treatment to imports if the detrimental effect is explained by factors or circumstances unrelated to the foreign origin of the product, such as the market share of the importer in this case."[21]

As the Appellate Body more recently noted in the *US – Clove Cigarettes* report, in *Dominican Republic – Cigarettes*, the higher cost imposed on importers "did not conclusively demonstrate less favourable treatment, because it was [. . .] a function of sales volumes."[22] This jurisprudence is reinforced by the recent case law of the WTO Appellate Body concerning the national treatment obligation in the TBT Agreement, where the Appellate Body emphasised that even where the measure, due to its design, had a detrimental impact on imported "like products," this impact would not constitute impermissible discrimination if it could be "exclusively" attributed to a "legitimate regulatory distinction."[23]

This suggests that where a measure with border adjustment imposes a regulatory burden on imports that is commensurate with the magnitude of the carbon externalities associated with the imported product, it is likely to be considered consistent with Article III:4 GATT. This would be the case even if a like imported product, coming from a high-emitting country, would have to present more allowances than a like domestic product; there is no discrimination because the greater regulatory burden is simply due to the larger quantity of carbon embedded in the product.

The difficult issue of regulatory design emerges where the domestic measure (for example, cap and trade) applies not to finished products but to production facilities. The methodology for calculating the quantity of carbon embedded in a given finished product would have to be such that it does not impose a disproportionate burden on imported products. This is not in principle difficult in the case of what is referred to in some literature as primary direct carbon.[24] Take the example of steel. Both a domestic producer and a foreign producer burn coal in order to produce steel. The domestic producer's regulatory burden is calculated in terms of its level of emissions, but with some information and a little arithmetic it is possible to estimate the additional cost per ton of steel that is represented by the requirement to present allowances in respect of the quantity of carbon emitted by the production facilities. For the border adjustment to be even-handed as required by GATT

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[21] WTO, report of the Appellate Body, *Dominican Republic – Measures Affecting the Importation and Internal Sale of Cigarettes*, WT/DS302/AB/R, para. 96.

[22] WTO, report of the Appellate Body, *United States – Measures Affecting the Production and Sale of Clove Cigarettes*, T/DS406/AB/R, para. 179, n. 372.

[23] WTO, report of the Appellate Body, *United States – Measures Affecting the Production and Sale of Clove Cigarettes*, T/DS406/AB/R, para. 181. Now In *EC-Seal Products*, however, the AB has rejected the application of this approach to GATT III:4.

[24] Elliott et al. (2010), p. 465.

Article III:4, it would merely be necessary to ensure that the measure imposed on imported products at the border does not exceed this cost to domestic producers. Where, however, the carbon is embedded downstream, so that under the domestic scheme the allowances are required, for example, of the producer of an input purchased by the steel manufacturer, or of a utility that generates the electricity that the manufacturer of the steel purchases, the issue is more complicated. Depending upon elasticity, one may well predict that less than the full additional cost of the allowances will be passed on to the steel producer in higher prices for inputs or electrical power. It is thus a challenge to ensure that the amount of allowances that is required of imported products at the border does not result in a higher regulatory burden (i.e., greater additional cost per unit) for the producers of those finished products than for domestic producers of like finished products.

A different challenge for designing an even-handed border adjustment of a regulatory measure occurs where the domestic regulatory measure includes exemptions or special treatment for particular domestic industries or provides for certain quantities of free allowances. It is necessary to design the border adjustment such that domestic finished products are not advantaged over imports by these features of the underlying domestic emission control scheme.

In addition, as with carbon taxes, it is possible that using domestic baselines to determine the carbon embedded in imported finished products subject to border adjustment could result in discrimination if foreign production processes are different in such a way that the actual amount of embedded carbon in the imported product is less. Thus, again here, a BCA scheme should permit the producer of the importer product to provide information about actual embedded carbon as a basis for the calculation of the border adjustment. Finally, no matter how carefully some of the suggestions for regulatory design presented above are followed, there will be inevitably some asymmetry in the treatment of domestic and foreign products by virtue of the underlying domestic measure having a different design than the border adjustment applied to finished products. This is not fatal, however, to the effort to design a WTO-compliant BCA with respect to regulatory measures. As noted, in recent jurisprudence clarifying the meaning of "treatment no less favourable" in the context of the nondiscrimination provisions of the TBT Agreement (*US – Cloves*, *US – Tuna II*), the Appellate Body has held that there is no violation of national treatment where a negative differential impact on "like" imported products can be attributed exclusively to a "legitimate regulatory distinction."[25] Thus, negative asymmetry of treatment that can be shown to be an inevitable consequence of the operation of the scheme given its legitimate regulatory purposes will not result in a breach of Article III:4 GATT. Again, it should be recalled that in the *Superfund* case, the GATT Panel had no difficulty accepting the legality under the GATT of

[25] WTO, report of the Appellate Body, *United States – Measures Affecting the Production and Sale of Clove Cigarettes*, WT/DS406/AB/R; WTO, report of the Appellate Body, *United States – Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products*, WT/DS381/AB/R. This analysis was drafted before the AB ruling in *EC-Seal Products* and may now require reconsideration.

border adjustment in the context of a scheme to internalise environmental externalities, even if the externalities occurred outside the territory of the State imposing the measure.

## Designing a Border Carbon Adjustment That Is Defensible Under the Exceptions in the GATT

The complexities in designing a BCA that ensures compliance with the national treatment obligations of the GATT, discussed above, suggest that it is also desirable to design a BCA with a view to being able to defend it as an exception under Article XX of the GATT, the general exception provision. Article XX(g) provides an exception to GATT disciplines for measures taken "relating to the conservation of exhaustible natural resources" provided that these are taken in conjunction with restrictions on domestic consumption and production (as interpreted by the Appellate Body, a kind of loose even-handedness requirement).

Based on the broad and evolutionary meaning of "exhaustible natural resources" adopted by the Appellate Body in *Shrimp-Turtle*, which incorporates contemporary conceptions of biodiversity and sustainable development, it is unlikely to be controversial that the earth's atmosphere constitutes an "exhaustible natural resource."[26] In a case not dealing with climate change, *Brazil – Tyres*, the Appellate Body used climate change as an example of a regulatory area where it might be necessary to give particular deference to a WTO member's choice of policy instruments under Article XX of the GATT because the results from a particular policy instrument may not easily be known *ex ante* but only be capable of evaluation over a long period of time (*Brazil – Tyres*).[27] In the passage in question, the Appellate Body essentially took judicial notice of climate change as a fact. This suggests that any effort on the part of a complainant against the BCA to challenge the scientific basis for climate mitigation would be futile.

In the *US – Shrimp* case, the Appellate Body held that in order for a measure to be "in relation" to the conservation of exhaustible natural resources, it needed to be capable of making a contribution to conservation of the resource in question. The economic studies referred to earlier in this paper, among others, provide a more than adequate basis for the conclusion that a BCA will make a contribution to climate change mitigation. In *US – Shrimp*, however, the Appellate Body also created some confusion by raising but not clearly answering the question of whether a territorial nexus of some kind was required to justify a measure under Article XX GATT. The Appellate Body suggested that *if* it was required, the nexus was

[26] WTO, report of the Appellate Body, *United States – Import Prohibition of Certain Shrimp and Shrimp Products*, WT/DS58/AB/R.

[27] WTO, report of the Appellate Body, *Brazil – Measures Affecting Imports of Retreaded Tyres*, WT/DS332/AB/R, para. 151.

satisfied in that case by the fact that some of the endangered sea turtles being protected by the US ban on imports of shrimp fished in a manner that led to high rates of turtle mortality were present in US waters.

Conceptually, a territorial nexus should not matter where the resource being protected is in the nature of a global commons. Nevertheless, in challenging the application of the EU ETS to carbon emitted by aircraft outside of EU airspace before the European Court of Justice, the Air Transport Association, with Continental Airlines, United Airlines, and American Airlines, strenuously argued that the measure in question should be considered as extraterritorial in a manner contrary to customary international law.[28] But there is no clear agreed meaning to "extraterritoriality" in general international law, beyond the prohibition of the exercise of police power or use of military force on the territory of another State without its consent (of course with certain narrow exceptions such as self-defense). There is no question that intra-European effects from emissions are in question, at a minimum to the extent that climate change is a global problem with effects everywhere. Further, as pointed out in the advisory opinion of Advocate General Kokott and the ruling of the Court of Justice of the European Union, the extension of the EU ETS clearly has jurisdiction over aircraft taking off and landing in its territory and the implementation of its scheme in no way required the assertion of regulatory authority on the territory of other States.[29] In other words, there was no question of "long arm" jurisdiction.

The case law of the World Court, from the early case of *S.S. Lotus* to the *Nicaragua* decision, confirms that there is no general rule of customary

[28] The claimants argued that the inclusion of flights outside the EU airspace create "an exterritorial rule which contravenes, on the one hand, the sovereign rights of third countries and, on the other, the freedom of the high seas." ECJ, Case C-366/10, *The Air Transport Association of America and Others v. The Secretary of State for Energy and Climate Change*. Opinion by Advocate General Kokott, para. 143.

[29] In her advisory opinion, the Advocate General straightforwardly addressed the question of extraterritoriality: "The fact that the calculation of emission allowances to be surrendered is based on the whole flight in each case does not bestow upon Directive 2008/101 any extraterritorial effect. Admittedly, it is undoubtedly true that, to some extent, *account is thus taken of events* that take place over the high seas or on the territory of third countries. This might indirectly give airlines an incentive to conduct themselves in a particular way when flying over the high seas or [in] the territory of third countries, in particular to consume as little fuel as possible and expel as few greenhouse gases as possible. However, there is no concrete *rule* regarding their conduct within the airspace outside the European Union" [emphasis in the original]; see Case C-366/10, *The Air Transport Association of America and Others v. The Secretary of State for Energy and Climate Change*. Opinion by Advocate General Kokott, para. 147. In the judgment of the Court, the question of territoriality was further addressed: "In laying down a criterion for Directive 2008/101 to be applicable to operators of aircraft registered in a Member State or in a third State that is founded on the fact that those aircraft perform a flight which departs from or arrives at an aerodrome situated in the territory of one of the Member States, Directive 2008/101, inasmuch as it extends application of the scheme laid down by Directive 2003/87 to aviation, does not infringe the principle of territoriality or the sovereignty which the third States from or to which such flights are performed have over the airspace above their territory, since those aircraft are physically in the territory of one of the Member States of the European Union and are thus subject

international law that prohibits unilateral economic measures, even those aimed at putting pressure on other States to change their policies.[30] Thus, the holding of the Appellate Body in the *US – Shrimp* case, emphatically reaffirmed in its Article 21.5 judgment concerning US implementation of the original ruling,[31] is consistent with general international law: "conditioning access to a Member's domestic market on whether exporting Members comply with, or adopt, a policy or policies unilaterally prescribed by the importing Member may, to some degree, be a common aspect of measures falling within the scope of [. . .] Article XX [GATT]."[32] More recently in the *US – Tuna II* case, Mexico attempted to persuade the Appellate Body that the US measure enforcing a particular label and criteria for representing tuna as "dolphin-safe" that excluded tuna caught in a manner permitted by Mexico but prohibited by the US was "coercive" of Mexican policies and thus could not be a "legitimate objective" for purposes of the measure being permissible under Article 2.2 of the TBT Agreement. The AB held that considerations of whether the measure was aimed at least in part at the policies of other States did not affect the legitimacy of its objective both in environmental and consumer protection terms. Features of the scheme that Mexico described as "coercive" might only have some relevance in evaluating the trade restrictiveness of the means adopted to achieve the legitimate US goals. In sum, it is clear that, whether under the GATT Article XX or TBT Agreement, there is no general obstacle to a WTO member taking unilateral action to address a situation where another State has failed to adopt in its policies appropriate climate mitigation measures.

The most important issues of regulatory design posed by Article XX GATT relate to the chapeau or preambular paragraph, which sets out certain general conditions for the application of a measure if it is to be justified under Article XX GATT. With respect to the requirement in the chapeau that the measure be not applied so as to result in arbitrary or unjustifiable discrimination between countries where the same conditions prevail, under the Appellate Body approach in *Shrimp – Turtle*, the question will be to what extent the scheme provides flexibility to achieve the environmental objectives in question through approaches that may differ from that of the importing State but may be more appropriate to the conditions in the exporting country. Here, BCA schemes that provide for the recognition of equivalent emission control measures in the exporting country as fulfilling the

on that basis to the unlimited jurisdiction of the European Union." ECJ, Case C-366/10, *The Air Transport Association of America, American Airlines, Inc, Continental Airlines, Inc, United Airlines, Inc v The Secretary of State for Energy and Climate Change*, ECR [2011] I-13755.

[30] PCIJ, *The Case of the S.S. Lotus (Fr. v. Turk.)*, 1927, Series A, No. 10; ICJ, *Military and Paramilitary Activities in and against Nicaragua (Nicaragua v United States of America)*, ICJ Reports 1986.

[31] WTO, report of the Appellate Body, *United States – Import Prohibition of Certain Shrimp and Shrimp Products (Recourse to Art. 21.5 of the DSU by Malaysia)*, WT/DS58/AB/RW, para. 137 et seq.

[32] WTO, report of the Appellate Body, *United States – Import Prohibition of Certain Shrimp and Shrimp Products*, WT/DS58/AB/R, para. 121.

requirements of the BCA will likely be compatible with the conditions of the chapeau. Where such equivalent measures do not exist, assessing whether there is adequate flexibility under the chapeau requirement will involve complex judgments of environmental policy and science and also about administrability and the reasonableness of compliance costs both to the government and to the exporters, of various alternative ways of introducing flexibility.

The concern under the chapeau to avoid arbitrary or unjustifiable discrimination is closely related to some of the issues about even-handedness discussed above with respect to national treatment. Thus, for example, the calculation of embedded carbon based on assumptions that apply to domestic production processes but may not reflect conditions in other WTO members might well be inconsistent with the chapeau.

In the *US – Shrimp* case, the Appellate Body held that it was a violation of the chapeau that the US had made serious attempts to find a negotiated, cooperative solution to the problem of protecting sea turtles with some WTO members but not with the complainant States. Rather than simply being seen as a simple finding of discrimination between different countries, this aspect of the Appellate Body ruling was widely viewed as imposing, through the chapeau, a requirement that efforts at a negotiated, cooperative solution be exhausted before unilateral action can be justified under Article XX GATT. In a subsequent ruling, however, where the Appellate Body interpreted the equivalent provision to Article XX GATT in the GATS (*US – Gambling*), it clarified that there is no obligation whatsoever to attempt a negotiated solution, much less exhaust efforts at a cooperative approach, before a unilateral measure can be justified under Article XX GATT.[33]

## Conclusion

As the Appellate Body recently noted in its *US – Cloves* ruling, WTO rules on trade in goods “strike a balance between, on the one hand, the objective of trade liberalization and, on the other hand, Members’ right to regulate” and “should not be interpreted as prohibiting any detrimental impact on competitive opportunities for imports in cases where such detrimental impact on imports stems exclusively from legitimate regulatory distinctions.”[34] Border carbon adjustment is not *per se* incompatible with any rule in the GATT or related WTO Agreements. But to be compatible with nondiscrimination obligations, above all national treatment, it must be as even-handed as possible in its treatment of imported products, given the largely inevitable asymmetry of design between the domestic measure and the

[33] Cf. WTO, report of the Appellate Body, *United States – Measures Affecting the Cross-Border Supply of Gambling and Betting Services*, WT/DS285/AB/R.

[34] WTO, report of the Appellate Body, *United States – Measures Affecting the Production and Sale of Clove Cigarettes*, WT/DS406/AB/R, para. 174; see also para. 96.

border adjustment. While the need for such even-handedness poses certain challenges of regulatory design that have been discussed throughout this paper, even-handedness in the relevant sense is fully compatible with the environmental goal of setting price signals that result in the internalisation of the externalities in question to the fullest extent possible. It is not the economics of climate mitigation that may be in tension with the WTO rules but rather the politics since there are clearly domestic constituencies who will find it in their interests to seek features in a carbon scheme that may well be in tension with even-handedness as understood under WTO law. Can a winning political coalition be found for carbon scheme fully compatible with WTO law? This is a question beyond the competence of a mere WTO lawyer, but it is an all-important one for fully grasping the ultimate effects of WTO law on the prospects for climate change mitigation.

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