"Disciplining Clean Energy Subsidies to Speed the Transition to a Low-Carbon World"

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I. Introduction

It is tempting to view trade and climate change policy goals as irreconcilable when it comes to clean energy subsidies. For example, Wu and Salzman argue that trade disputes over "green industrial policy" require countries to choose between free trade principles and environmental protection.[1] However, this argument assumes that clean energy technologies require government intervention in order to compete with fossil fuels. This ignores the efficiency gains that trade and international competition can contribute to make clean energy competitive with fossil fuels, particularly once countries stop subsidizing fossil fuel consumption.

Technological change is bringing clean energy sources into the mainstream and prompting the private sector to address climate change and help make the transition to clean energy. On the supply side, the cost of photovoltaic (PV) energy generation recently fell below 3 cents; the Dubai Electricity and Water Authority received a bid for the third phase of the Mohammed bin Rashid Al Maktoum Solar Park for US 2.99 cents per kilowatt hour. This is half the cost of fossil fuel energy generation and this is with unsubsidized PV energy. On the demand side, a group of U.S. companies, including Walmart, General Motors, Google, Facebook and Microsoft, has created the Renewable Energy Buyers Alliance, which plans to use its purchasing power and capacity to enter long-term contracts to develop 60 GW of renewable energy by 2025. The demand for clean energy has prompted some U.S. utilities to allow big private sector customers to contract to purchase of renewables-generated power at the standard retail rate over a three to fifteen-year term.[2] Building operations and industry account for 66% of all energy consumption in the United States.[3] In 2015, the global PV market grew by 50 GW and total capacity reached at least 227 GW globally, producing more than 1.3% of the electricity demand in the world. PV can now compete with most fossil and nuclear sources of energy and contribute significantly to decarbonizing the electricity mix, sooner than expected and at a reasonable cost.[4] These developments indicate that it will be possible to transition to clean energy sources more quickly than previously thought.

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[1] Mark Wu and James Salzman, The Next Generation of Trade and Environment Conflicts: The Rise of Green Industrial Policy (2014) 108 Northwestern University Law Review 401, at 416.

[2] Krysti Shallenberger, Major US companies launch Renewable Energy Buyers Alliance, 13 May 2016, http://www.utilitydive.com/news/major-us-companies-launch-renewable-energy-buyers-alliance/419184/.

[3] http://architecture2030.org/wp-content/uploads/2010/03/us_energy_consumption_by_sector_20.png.

[4] International Energy Agency, Snapshot of Global Photovoltaic Markets 2015, http://www.iea-pvps.org/fileadmin/dam/public/report/PICS/IEA-PVPS_-__A_Snapshot_of_Global_PV_-_1992-2015_-_Final_2_02.pdf.

As the cost of clean energy technologies continues to decline, clean energy subsidies, and the trade measures taken against subsidized imports, may be motivated more by competitive concerns or by rent-seeking behavior than by environmental goals, as governments try to position their industries in the global market and vested interests seek to delay the transition from fossil fuels to clean energy.

The WTO Agreement on Subsidies and Countervailing Measures (SCM Agreement) and the GATT could be useful to address market distortions, because they restrict the use of subsidies and discriminatory treatment. They also can be used to address protectionist countervailing duties, which increase the cost of importing clean energy technologies. These treaty obligations can encourage greater competition in the production of clean energy, resulting in greater economic efficiency and a more rapid transition from fossil fuels. These treaties need to be designed and interpreted to facilitate the transition to clean energy and to combat regulatory capture by vested interests in the fossil fuel industry. This article analyzes how structural treaty analysis can be used to achieve that goal with respect to subsidies.

The argument presented in this article runs counter to some recent literature that argues in favor of greater regulatory autonomy in trade and investment agreements in order to facilitate public interest regulation.[5] Regulatory autonomy needs to be constrained with respect to clean energy subsidies, because the market distortions reduce global public welfare by increasing the cost and reducing the competitiveness of clean energy technology.[6] However, this may present a challenge in an environment in which parties to trade and investment agreements are under pressure to be seen to preserve regulatory space.[7]

II. Treaty Structure and the SCM Agreement (Use treaty structure stuff and SCM stuff from climate change book)

The structure of the SCM Agreement, in which there are no environmental exceptions, requires tribunals to exclude clean energy subsidies from the scope of application if they wish to avoid disciplining the use of prohibited subsidies and countervailing duties.

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[5] See for example Caroline Henckels, Protecting Regulatory Autonomy through Greater Precision in Investment Treaties: The TPP, CETA, and TTIP (2016) 19 J Int Economic Law 27-50; Bradly J. Condon, Treaty Structure and Public Interest Regulation in International Economic Law, 17 J Int Economic Law 333-353 (2014).

[6] See Gregory Shaffer, Robert Wolfe, and Vincent Le, Can Informal Law Discipline Subsidies? (2015) 18 J Int Economic Law 711-741 (Noting that some subsidies, such as for fossil fuels, adversely affect global public goods, such as a stable climate. Also see Gary Clyde Hufbauer and Euijin Jung, Why Has Trade Stopped Growing? Not Much Liberalization and Lots of Micro-Protection, 23 March 2016, https://piie.com/blogs/trade-investment-policy-watch/why-has-trade-stopped-growing-not-much-liberalization-and-lots (attributing trade and investment stagnation to the cumulative impact of micro-protectionist measures, including local content requirements and trade distorting subsidies).

[7] Armand de Mestral, When Does the Exception Become the Rule? Conserving Regulatory Space under CETA (2015) 18 J Int Economic Law 641-654.

Treaty Structure

The structure of a treaty—the manner in which its provisions limit the general scope of the treaty's application, limit the scope of positive obligations, establish positive obligations, or establish general or specific exceptions to positive obligations—has important implications for the allocation of the burden of proof between the complainant and the respondent and, subsequently, for regulatory autonomy. Particularly in cases that involve complex factual or scientific issues, the allocation of the burden of proof can play a pivotal role, since unclear or insufficient evidence can lead to a ruling against the party who bears the burden of proof. In the case of protectionist and rent-seeking measures related to clean energy trade and investment, the burden of proof should not be allocated in a way that enhances regulatory autonomy, since this could make such measures more difficult to challenge.

Based on treaty structure, we can categorize the allocation of the burden of proof according to five types of argument. The complainant bears the burden of proving: (1) the treaty applies to a measure (general scope of application); (2) a specific obligation applies to a measure (scope of obligation); and (3) the measure violates the applicable obligation. The respondent bears the burden of proving: (4) a specific exception applies to a measure (scope of exception) and (5) the requirements of the exception have been met.[8]

The approach that a tribunal takes in a given case will be dictated by the facts of the case and the structure of the particular treaty. Treaty negotiators and drafters need to keep this in mind when they decide whether to limit the scope of a treaty in general scope provisions, the language of obligations, specific exceptions to obligations or general exceptions. Limiting the application of trade and investment treaties in general scope provisions, where the burden of proof rests with the complainant, would make it more difficult to subject protectionist and rent-seeking measures to the treaty rules. In treaties that lack general exceptions, limiting the scope of application of the treaty or its specific obligations preserves regulatory autonomy to a greater degree. That allocates the burden of proof to the complainants and makes it easier for measures to escape scrutiny.

The political economy of climate change regulation means that it will likely involve measures that combine the pursuit of the public interest with elements that serve private interests, rather than purely public interest measures.[9] Energy matters can be politicized as matters of national security, which can serve as an argument in favor of excessive countervailing duties on imports of solar panels, for example. Subsidies for domestic clean energy producers can be presented with a similar national security argument, but can also be promoted as measures to combat climate change, to protect the environment, and to protect public health from air

[8] Bradly J. Condon, "Treaty Structure and Public Interest Regulation in International Economic Law", 17:2 *Journal of International Economic Law* 333-353 (2014).
[9] For an analysis of the political economy of trade and environment in China, the United States and the European Union, see Aluisio de Lima-Campos, Políticas de Comercio y Medio Ambiente: En Busca de un Alineamiento, 2:3 Revista de Derecho Económico Internacional 35-60.

pollution. Both types of measures could gain the support of both domestic clean energy suppliers and the fossil fuel industry; the former would see this as a rent-seeking strategy and the latter could see this as a strategy for increasing the cost of solar energy, which would make fossil fuels more price competitive and delay the transition to clean energy. Environmentalists would support subsidies for domestic clean energy producers on environmental grounds, on the assumption that this would make clean energy cheaper, but should not supports excessive countervailing duties for environmental reasons, since this would increase the cost of clean energy. Making clean energy subsidies contingent on the use of domestic inputs could gain the support of local suppliers or trade unions, depending on whether the domestic inputs would have to be supplied by multinational companies setting up local production facilities or whether domestic suppliers are already established. These mixed-motive measures will raise issues regarding the primary purpose of clean energy measures and the extent to which they serve the public interest, on the one hand, and the extent to which they serve private interests, on the other. Since regulatory capture has the potential to distort climate change regulation to serve private interests, these are important issues.

In the context of WTO law, arguments regarding general scope of application are used regarding the Agreement on Technical Barriers to Trade (TBT Agreement)[10] and the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement),[11] but tend not to be used for the GATT, which is much broader in scope and, unlike the TBT Agreement and the SPS Agreement, contains general exceptions for public interest regulation. Thus, in the GATT, arguments tend to focus on the scope of the obligations and the application of the exceptions, rather than on the scope of application of the GATT itself. In the TBT Agreement and the SPS Agreement, arguments regarding the scope of application of the agreement as a whole are important, but public interest regulation tends to be addressed in provisions that set out obligations and autonomous rights that have the effect of excluding the application of an obligation in certain circumstances. In the TBT Agreement, these tend to focus on the non-

[10] GATT Secretariat, *The Results of the Uruguay Round of Multilateral Trade Negotiations, the Legal Texts* (Geneva, 1994), 121.

[11] GATT Secretariat, *The Results of the Uruguay Round of Multilateral Trade Negotiations, the Legal Texts* (Geneva, 1994), 59.

discrimination obligations in Article 2.1, in which the Appellate Body has introduced a legitimate regulatory distinctions test, and the obligation to avoid unnecessary obstacles to trade in Article 2.2, which incorporates language from the general exceptions in GATT Article XX, but is expressed as an obligation. Similarly, arguments in the SPS Agreement tend to focus on obligations that incorporate language from GATT Article XX and set out obligations regarding risk assessment.

The Agreement on Subsidies and Countervailing Measures (SCM Agreement)[12] lacks a general exception and does not incorporate any language from GATT Article XX. In SCM Agreement, arguments regarding the scope of application of the agreement as a whole take on greater importance than in the GATT, the TBT Agreement and the SPS Agreement, since the SCM Agreement lacks the exclusions and general exceptions found in these other WTO agreements. Comparing the GATT, the TBT Agreement, the SPS Agreement and the SCM Agreement, the importance of arguments regarding the general scope of application is greatest for the SCM Agreement and least important for the GATT, with the TBT Agreement and the SPS Agreement falling somewhere in between. This continuum results from the interplay of provisions regarding the scope of application of each agreement and the presence or absence of general exceptions and specific exclusions. Arguments regarding the scope of application may be of similar importance in international investment agreements (IIAs) and the SCM Agreement. However, in the case of IIAs, arguments regarding the right to regulate in the public interest also are used to limit the scope of specific obligations, particularly regarding non-discrimination, the minimum standard of treatment for aliens and the obligation to compensate expropriations.

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[12] GATT Secretariat, *The Results of the Uruguay Round of Multilateral Trade Negotiations, the Legal Texts* (Geneva, 1994), 231.

The complainant bears the burden of proving that a measure falls within the scope of a treaty. However, such general scope provisions are not always clearly indicated as such. For example, the scope of the SCM Agreement is limited by the definition of 'subsidy' in Article 1.1. In *Canada – Renewable Energy* and *Canada – Feed-In Tariff Program*, both the Panel and the Appellate Body found that the complainants did not meet their burden of proving that the SCM Agreement applied to the measure, because they failed to prove the existence of a 'benefit' under Article 1.1(b).[13] Thus, there was no need to examine whether the measure was inconsistent with the prohibition of import substitution subsidies under Article 3.1(b) of the SCM Agreement.

Article 3.1(a) of the SCM Agreement prohibits the use of export subsidies. Article 27.2(b) provides that Article 3.1(a) 'shall not apply to' developing countries that comply with Article 27.4. The Appellate Body held that the conditions set forth in Article 27.4 are positive obligations for developing country Members, not affirmative defences. If a developing country Member complies with Article 27.4, the prohibition on export subsidies in Article 3.1(a) simply does not apply. Thus, the burden is on the complainant to demonstrate that the developing country Member has not complied with at least one of the elements set forth in Article 27.4, in addition to demonstrating a violation of Article 3.1(a).[14] There is no 'general rule-exception' relationship between Article 3.1(a)

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[13] WTO Appellate Body Reports, *Canada – Certain Measures Affecting the Renewable Energy Generation Sector (Canada – Renewable Energy)*, WT/DS412/AB/R, and *Canada – Measures Relating to the Feed-in Tariff Program (Canada – Feed-In Tariff Program)*, WT/DS426/AB/R, adopted 24 May 2013, para 5.219; WTO Panel Reports, *Canada – Certain Measures Affecting the Renewable Energy Generation Sector (Canada – Renewable Energy)*, WT/DS412/R, and *Canada – Measures Relating to the Feed-in Tariff Program (Canada – Feed-In Tariff Program)*, WT/DS426/R, adopted 24 May 2013, paras 7.309-7.319.

[14] WTO Appellate Body Report, *Brazil – Export Financing Programme for Aircraft (Brazil – Aircraft)*, WT/DS46/AB/R, adopted 20 August 1999, paras. 140-141.

and Article 27.2(b). The latter limits the scope of the former. Thus, WTO jurisprudence supports the proposition that the complainant bears the burden of proving that an obligation applies in a particular case.

When the text of a specific obligation provides little room for limiting its scope of application, and the treaty contains no general exception in which to address public interest regulation, tribunals should address public interest regulation in the general scope provisions. In the SCM Agreement, the text of Article 3 regarding prohibited subsidies obligation provides little room for limiting its scope of application and there are no general exceptions that serve this purpose.[15] Thus, the only means to preserve regulatory autonomy is to limit the general scope of application of the SCM Agreement as a whole, as the Panel and the Appellate Body did in *Canada – Renewable Energy* and *Canada – Feed-In Tariff Program*.[16]

The SCM Agreement only applies to a measure if it constitutes a subsidy within the meaning of SCM Agreement Article 1.1. A 'financial contribution' and a 'benefit' are two separate legal elements in Article 1.1, which together determine whether a subsidy exists.[17] The definition of 'financial contribution' is quite broad, and is the easier part of the definition of subsidy to prove (although it is quite detailed and technical). In *Canada – Aircraft*, the Appellate Body interpreted of the term 'benefit' under Article 1.1(b) as follows: 'a financial contribution will only confer a

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[15] This assumes that GATT Article XX is not applicable to the SCM Agreement. See Bradly J. Condon and Tapen Sinha, *The Role of Climate Change in Global Economic Governance* (Oxford: Oxford University Press, 2013), at 61-65.

[16] Appellate Body Reports, *Canada – Renewable Energy* and *Canada – Feed-In Tariff Program*, above n 32, para 5.219; Panel Reports, *Canada – Renewable Energy* and *Canada – Feed-In Tariff Program*, above n 32, paras 7.309-7.319.

[17] Appellate Body Report, *Brazil – Aircraft*, above n 31, para 156.

"benefit", i.e., an advantage, if it is provided on terms that are more advantageous than those that would have been available to the recipient on the market.'[18] The assessment of benefit must examine the terms and conditions of the challenged transaction at the time it is made and compare them to the terms and conditions that would have been offered in the market at that time.[19]

In *Canada – Renewable Energy* and *Canada – Feed-In Tariff Program*, a key issue was which market provides the most appropriate benchmark in determining the existence and magnitude of a benefit for solar and wind power producers.[20] In the absence of Ontario's feed-in-tariff (FIT) program, a competitive wholesale market for electricity in Ontario could not support commercially viable operations of solar and wind power producers.[21] The Panel rejected the complainants' argument that the analysis of benefit should compare the terms and conditions of participation in the FIT Program with those that would be available to generators participating in a wholesale electricity market where there is effective competition. The majority held that none of the alternatives that had been advanced by the complainants or Canada could be used as

[18] WTO Appellate Body Report, *Canada – Measures Affecting the Export of Civilian Aircraft* (*Canada – Aircraft*), WT/DS70/AB/R, adopted 20 August 1999, para 149.

[19] Appellate Body Report, *European Communities – Measures Affecting Trade in Large Civil Aircraft (EC and certain member States – Large Civil Aircraft)*, WT/DS316/AB/R, adopted 1 June 2011, para 838; Appellate Body Report, *United States – Large Civil Aircraft (2nd complaint)*, WT/DS353/AB/R, adopted 23 March 2012, para 636.

[20] Panel Reports, *Canada – Renewable Energy* and *Canada – Feed-In Tariff Program*, above n 32, para 7.270.

[21] Ibid, paras 7.276-7.277.

appropriate benchmarks against which to measure whether the FIT Program conferred a benefit within the meaning of Article 1.1(b) of the SCM Agreement.[22]

The Appellate Body held that the Panel had erred 'in not conducting the benefit analysis on the basis of a market that is shaped by the government's definition of the energy supply-mix, and of a benchmark located in that market reflecting competitive prices for wind power and solar PV generation.'[23] However, there were insufficient factual findings for the Appellate Body to complete the analysis, so it was unable to determine whether the measure conferred a benefit. Thus, on this issue, the Appellate Body reached the same conclusion as the Panel majority, but for different reasons. The Appellate Body decision indicates that the benefit analysis can still save a measure from the application of the SCM Agreement if no benefit is conferred to one solar or wind power producer compared to others in the market. That is, the government can determine the mix of energy sources without violating the SCM Agreement as long as it does not confer a benefit.

The absence of a general environmental exception in the SCM Agreement makes the role of the benefit analysis important in saving clean energy incentives from violating the SCM Agreement, by excluding them from the scope of application of the SCM Agreement based on the complainant's failure to meet the burden of proof. While the benefit analysis did not explicitly safeguard the right of governments to regulate in the public interest with respect to clean energy incentives, this was the effect addressing the measure in a general scope provision in which the complainants were unable to meet their burden of proof. However, if clean energy incentives have

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[22] Ibid, paras 7.309-7.319.

[23] Appellate Body Reports, *Canada – Renewable Energy* and *Canada – Feed-In Tariff Program*, above n 32, para 5.219.

the effect of distorting trade and delaying the transition to clean energy, making it difficult for complainants to meet their burden of proof in the general scope provision is not a good outcome, if the goal is to mitigate climate change.

SCM Agreement

It is instructive as well that the United States did not pursue claims under the SCM Agreement in India – Certain Measures Relating to Solar Cells and Solar Modules (which it had invoked in its request for consultations in this dispute), relying instead on TRIMS and GATT Article III:4.[24] The Appellate Body's restrictive interpretation of the scope provisions of the SCM Agreement in Canada – Renewable Energy makes it more difficult to discipline clean energy subsidies.

Subsidies will raise issues under GATT 1994, the Agreement on Agriculture and the SCM Agreement. The SCM Agreement applies cumulatively with GATT Articles VI and XVI. If the subsidies apply to agricultural goods, they may raise issues under the SCM Agreement or the Agreement on Agriculture or both. In general, panels examine claims under the more specific agreement on trade in goods before examining claims under the GATT 1994, because a provision of the more specific agreement prevails over a GATT 1994 provision in the event of a conflict.[25] However, the SCM Agreement does not preclude action 'under other relevant provisions of GATT 1994, where appropriate'.[26] Moreover, while claims regarding agricultural subsidies are examined first under the Agreement on Agriculture,[27] some are also subject to the disciplines of the SCM Agreement.

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[24] Appellate Body, India – Certain Measures Relating to Solar Cells and Solar Modules, WT/DS456/AB/R, 2016.

[25] General interpretative note to Annex 1A

[26] SCM Agreement note 56

[27] SCM Agreement art 3.1

An export subsidy that violates Articles 3.3 and 8 of the Agreement on Agriculture also violates SCM Agreement Article 3.1(a).[28] However, it seems less likely that an export subsidy that is *consistent* with the Agreement on Agriculture could be impugned under SCM Agreement Article 3.1(a). Since the former agreement permits certain export subsidies and the latter prohibits all export subsidies, there appears to be a conflict.[29] Given the conflict, the more specific provisions of the Agreement on Agriculture should prevail.[30] Not everyone agrees with this conclusion. However, the inconsistency between the two agreements is such that it would be difficult to reconcile through interpretation. If the application of the SCM Agreement means that the right to employ certain export subsidies in accordance with the Agreement on Agriculture is denied, the relevant provisions of the Agreement on Agriculture would not be effective. This result would run counter to the rule of effective treaty interpretation. Both agreements define export subsidies as being contingent upon export performance.[31] Nevertheless, this issue will become moot if WTO Members eliminate all agricultural export subsidies, as they agreed to do at the Ministerial

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[28] Appellate Body Report, *United States – Subsidies on Upland Cotton* (*US – Upland Cotton*), WT/DS176/AB/R, adopted 21 March 2005, paras 582-584

[29] In this situation, there is a conflict of norms in the sense that the exercise of rights under one norm constitutes a breach under the other norm. See Joost Pauwelyn, *Conflict of Norms in Public International Law: How WTO Law Relates to other Rules of International Law* (Cambridge University Press, Cambridge 2003) 275

[30] Agreement on Agriculture art 1

[31] Agreement on Agriculture art 1(e); SCM Agreement art 3.1(a); Luís Yahir Acosta Pérez, 'La Relación entre el Acuerdo sobre Agricultura y el Acuerdo sobre Subvenciones y Medidas Compensatorias' (August 2009), Documento de trabajo no 9 <http://cdei.itam.mx/AcostaSMCAA.pdf> (accessed 21 December 2012); Bradly J. Condon, *El Derecho de la Organización Mundial de Comercio: Tratados, Jurisprudencia y Practica* (Cameron May, London 2007) 278

conference in Hong Kong.[32] In contrast, even if WTO Members comply with their obligations regarding domestic support commitments in the Agreement on Agriculture, they could still violate Article 3.1(b) of the SCM Agreement if those domestic subsidies are made contingent on the use of domestic goods.[33]

Subsidies are also subject to Part III (actionable subsidies) and Part V (countervailing measures) of the SCM Agreement. Countervailing measures can be applied to imports to counter the effect of subsidized products where the subsidy causes injury to the domestic producers of like products. Part III can be used to attack subsidies that cause adverse effects in third country markets, for example due to lost sales and price suppression. Unlike countervailing measures, there is no obligation in the SCM Agreement to quantify the precise amount of the subsidy for purposes of an adverse effects claim.[34] Agricultural subsidies are also subject to these Parts of the SCM Agreement.[35] Thus, subsidies related to climate change policies could be subject to multilateral action under Part III or unilateral action under Part V.

In addition to more obvious subsidies, carbon taxes could be structured in a manner that violates provisions of the SCM Agreement (for example, differential taxation of 'carbon-friendly' products). Since the SCM Agreement and GATT Article III:2 are not mutually exclusive, such measures could be subject to both sets of obligations. These two sets of provisions can apply

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[32] Hong Kong Ministerial Declaration, WT/MIN(05)/DEC, Adopted 18 December 2005, para 6

[33] Appellate Body Report, *US – Upland Cotton* para 550

[34] Appellate Body Report, *United States – Measures Affecting Trade in Large Civil Aircraft – Second Complaint (US – Large Civil Aircraft (2nd complaint))*, WT/DS353/AB/R, adopted 23 March 2012, para 697

[35] Condon (2007) 334

cumulatively to different aspects of the same measure.[36] The same logic would apply to the relationship between the SCM Agreement and GATT Article I:1.

While some have argued in favor of imposing countervailing duties against products from countries that do not require emissions reductions, the definition of subsidy would likely preclude such actions unless, for example, a country applied a general carbon tax but then subsidized a specific industry by not collecting the tax.[37] The SCM Agreement only applies to a measure if it constitutes a subsidy within the meaning of SCM Agreement Article 1.1. A 'financial contribution' and a 'benefit' are two separate legal elements in Article 1.1, which together determine whether a subsidy exists.[38] The differential application of carbon taxes could constitute a 'financial contribution by a government' within the meaning of Article 1.1(a)(1)(ii). The two principal cases on this point held that there was a subsidy within the meaning of SCM Agreement Article 1.1(a)(1)(ii) in the following situations: (1) different tax treatment for income from foreign and domestic sales (*US – FSC*) and (2) an exemption from payment of a MFN import duty that would otherwise apply to auto imports, conditional upon domestic production requirements (*Canada – Autos*).

The source of a subsidy affects the evidence required and the difficulty to prove that the subsidy is subject to the SCM Agreement. The SCM Agreement distinguishes between subsidies made by 'a government or any public body' and those made by a 'private body'. Financial

[36] Panel Report, *Indonesia – Certain Measures Affecting the Automobile Industry* (*Indonesia – Autos*), WT/DS54/R, WT/DS55/R, WT/DS59/R, WT/DS64/R, adopted 23 July 1998, paras 14.36, 14.97-14.99

[37] Tarasofsky 14.

[38] Appellate Body Report, *Brazil – Export Financing Programme for Aircraft* (*Brazil – Aircraft*), WT/DS46/AB/R, adopted 20 August 1999, para 156

contributions from a private body are only subject to the SCM Agreement if there is an affirmative demonstration of the link between the government and the specific conduct of the private body, an element that does not need to be demonstrated in the case of a governmental entity. In the SCM Agreement, unlike Article 5 of the ILC Articles on State Responsibility, the question of attribution of conduct to a State requires an examination of both the particular conduct and the type of entity. A public body's conduct can be attributed directly to the State, whereas a private body's conduct can be attributed to the State only indirectly. A public body within the meaning of Article 1.1(a)(1) of the SCM Agreement must possess, exercise or be vested with governmental authority. The question of whether an entity is a public or private depends on whether an entity is vested with authority to exercise governmental functions. However, apart from an express delegation of authority in a legal instrument, the existence of mere formal links between an entity and government is insufficient to establish the necessary possession of governmental authority. For example, the mere fact that a government is the majority shareholder of an entity does not demonstrate that the government exercises meaningful control or has bestowed it with governmental authority. However, where the evidence shows formal government control, and that such control has been exercised in a meaningful way, the evidence may permit an inference that the entity concerned is exercising governmental authority.[39]

According to the Appellate Body, 'the mere fact that revenues are not 'due' from a fiscal perspective does not determine that the revenues are or are not 'otherwise due' within the

[39] Appellate Body Report, *United States – Definitive Anti-Dumping and Countervailing Duties on Certain Products from China (US – Anti-Dumping and Countervailing Duties (China))*, WT/DS379/AB/R, adopted 25 March 2011, paras 284-322

meaning of Article 1.1(a)(1)(ii) of the SCM Agreement'.[40] A 'financial contribution' does not arise simply because a government does not raise revenue which it could have raised. The term 'otherwise due' implies a comparison with a 'defined normative benchmark', as established by the tax rules applied by the Member in question.[41] The determination of 'whether revenue foregone is otherwise due must allow a comparison of the fiscal treatment of comparable income, in the hands of taxpayers in similar situations'.[42]

If a country taxes products according to their carbon footprint, the most probable result is that different products will be subject to different tax rates. One example is where fossil fuels are subject to a sales tax that is not applied to other products, as is already the case in some jurisdictions. For example, the Canadian province of British Columbia introduced a carbon tax on fossil fuels in 2008. A more elaborate scheme might apply different levels of sales taxes to different categories of products based on different ranges of carbon footprints, taking into account the production of carbon emissions during the lifecycle of the products. If such schemes are designed so that domestic products are subject to a lower tax than imported products, then the lower tax rate might constitute revenue foregone that is otherwise due. If both the domestic and imported products are substitutable inputs for domestic production (as is the case with fuels) and the foregone revenue confers a benefit, then there could be a violation of SCM Agreement Article 3.1(b). This could be the case if countries diverge in their regulation and reduction of carbon emissions, so that some countries engage in less carbon-intensive production than others.

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[40] Appellate Body Report, *United States – Tax Treatment for 'Foreign Sales Corporations' (Article 21.5 – EC)* (*US – FSC (Article 21.5 – EC*), WT/DS108/AB/RW, adopted 29 January 2002, para 88

[41] Appellate Body Report, *United States – Tax Treatment for 'Foreign Sales Corporations'* (*US – FSC*), WT/DS108/AB/R, adopted 20 March 2000, para 90

[42] Appellate Body Report, *US – FSC (Article 21.5 – EC)* para 98

Moreover, such divergences in the carbon intensity of production would probably lead to differential treatment of imports, thereby raising issues regarding MFN treatment. The reference in footnote 1 to 'the exemption of an exported product from duties or taxes borne by the like product' could indicate that Article 1.1(a)(1)(ii) is intended to apply to other cases where like products receive different consumption tax treatment. In this regard, the Appellate Body has stated: 'The tax measures identified in footnote 1 as not constituting a 'subsidy' involve the exemption of exported products from product-based consumption taxes'.[43] However, revenue is not otherwise due just because certain revenue is not taxed (or not taxed at as a high a level as it could be); a WTO Member is 'free *not* to tax any particular categories of revenues'.[44] Thus, it is not clear in which circumstances differential taxation of products based on their carbon footprints might constitute a 'financial contribution by a government' within the meaning of the SCM Agreement.

In *Canada – Aircraft*, the Appellate Body interpreted of the term 'benefit' under Article 1.1(b) as follows: 'a financial contribution will only confer a 'benefit', i.e., an advantage, if it is provided on terms that are more advantageous than those that would have been available to the recipient on the market.'[45] 'A 'benefit'…must be received and enjoyed by a beneficiary or a recipient' and 'calls for an inquiry into what was conferred on the recipient'; the measurement of the benefit is not whether there was a cost to the government.[46] The person or entity receiving

[43] Appellate Body Report, *US – FSC* para 93

[44] Ibid para 90

[45] Appellate Body Report, *Canada – Measures Affecting the Export of Civilian Aircraft* (*Canada – Aircraft*), WT/DS70/AB/R, adopted 20 August 1999, para 149

[46] Ibid para 154

the benefit does not have to be the same as the one who received the financial contribution.[47] The assessment of benefit must examine the terms and conditions of the challenged transaction at the time it is made and compare them to the terms and conditions that would have been offered in the market at that time.[48] Thus, Article 1.1(b) could require an analysis of whether a benefit is obtained from differential carbon tax rates, by whom, whether such a benefit could have been otherwise obtainable in the marketplace, and what the relevant marketplace is.

The Panel Reports in *Canada – Renewable Energy* and *Canada – Feed-In Tariff Program* indicate that the issue of benefit might be used to exclude clean energy subsidies from the application of the SCM Agreement. The issue was which market provides the most appropriate benchmark in determining the existence and magnitude of a subsidy benefit for solar and wind power producers, in particular the extent to which the wholesale market for electricity in Ontario should be the appropriate focus of the benefit analysis.[49] In the absence of Ontario's feed-in-tariff (FIT) program, a competitive wholesale market for electricity in Ontario could not support commercially viable operations of solar and wind power producers.[50] The Panel rejected the complainants' argument that the analysis of benefit should compare the terms and conditions of

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[47] Appellate Body Report, *United States – Countervailing Measures Concerning Certain Products from the European Communities*, WT/DS212/AB/R, adopted 8 January 2003, para 110

[48] Appellate Body Report, *European Communities – Measures Affecting Trade in Large Civil Aircraft (EC and certain member States – Large Civil Aircraft)*, WT/DS316/AB/R, adopted 1 June 2011, para 838; Appellate Body Report, *US – Large Civil Aircraft (2nd complaint)*, WT/DS353/AB/R, adopted 23 March 2012, para 636

[49] Panel Reports, *Canada – Certain Measures Affecting the Renewable Energy Generation Sector (Canada – Renewable Energy)*, WT/DS412/R, and *Canada – Measures Relating to the Feed-in Tariff Program (Canada – Feed-In Tariff Program)*, WT/DS426/R, circulated 19 December 2012, para 7.270

[50] Ibid paras 7.276-7.277

participation in the FIT Program with those that would be available to generators participating in a wholesale electricity market where there is effective competition. The the evidence indicated that competitive wholesale electricity markets will rarely operate to remunerate adequately the mix of generators needed to secure a *reliable* electricity system that pursues *human health and environmental* objectives through the inclusion of facilities using solar photovoltaic and wind technologies into the supply-mix. However, the Panel also rejected Canada' argument that the relevant market comparator must be the market for electricity produced from wind and solar power technologies. The majority held that none of the alternatives that had been advanced by the complainants or Canada could be used as appropriate benchmarks against which to measure whether the FIT Program conferred a benefit within the meaning of Article 1.1(b) of the SCM Agreement.[51] However, in a dissenting opinion, one panellist concluded that there was a benefit. By bringing these high cost and less efficient electricity producers into the wholesale electricity market, when they would otherwise not be present, Ontario's purchases of electricity from solar and windpower generators under the FIT Program conferred a benefit.[52] It remains to be seen whether and how the Appellate Body will address this issue on appeal. The absence of a general environmental exception in the SCM Agreement makes the role of the benefit analysis important in saving clean energy subsidies from violating the SCM Agreement. Can this analysis take into account that the higher cost of clean energy incorporates the externality of environmental harm, whereas the lower cost of fossil fuel energy does not? What are the implications for clean energy subsidies made under the Clean Development Mechanism?

In *Canada – Renewable Energy* and *Canada – Feed-In Tariff Program* the FIT Program imposed domestic input requirements on the recipients. The Panel found this to be a violation of

[51] Ibid paras 7.309-7.319

[52] Ibid para 9.23

GATT Article III:4 and Article 2.1 of the Agreement on Trade-Related Investment Measures (TRIMS Agreement). Paragraph 1(a) of the Illustrative List in the Annex to the TRIMs Agreement provides that TRIMs are inconsistent with GATT Article III:4 when compliance is necessary to obtain an advantage and requires the purchase or use by an enterprise of products of domestic origin. GATT Article III:8(a) did not exclude the FIT Program from the application of Article III:4 since the procurement was undertaken with a view to commercial resale.[53] Thus, while the benefit analysis saved the FIT Program from a finding of inconsistency with Article 3.1(b) of the SCM Agreement, it remains inconsistent with WTO law. However, a finding of inconsistency with GATT Article III:4 leaves open the possibility of justification under GATT Article XX, which is unlikely to be a possibility in the event of a violation of the SCM Agreement. Thus, the approach to the analysis of this issue in *Canada – Renewable Energy* and *Canada – Feed-In Tariff Program* leaves open the possibility that *non-discriminatory* clean energy subsidies could survive a WTO challenge.

Could environmental subsidies that are inconsistent with the SCM Agreement or the Agreement on Agriculture be justified under GATT Article XX? Marceau and Trachtman have suggested that it would require a 'heroic approach to interpretation' to extend the application of GATT Article XX to justify a violation under another agreement of Annex 1A.[54] However, in *US – Shrimp (Thailand)* and *US – Customs Bond Directive*, the Appellate Body declined to express a view on whether a defense under GATT Article XX(d) was available to justify a measure found to

[53] Ibid paras 7.112-7.166

[54] Gabrielle Marceau and Joel Trachtman, 'The Technical Barriers to Trade Agreement, the Sanitary and Phytosanitary Measures Agreement, and the General Agreement on Tariffs and Trade' (2002) 36 Journal of World Trade 811, 874

constitute a 'specific action against dumping' under Article 18.1 of the Antidumping Agreement.[55] Article 18.1 of the Anti-Dumping Agreement provides that '[n]o specific action against dumping of exports from another Member can be taken except in accordance with the provisions of the GATT 1994, as interpreted by this Agreement.' Having found that the enhanced continuous bond requirement constituted 'specific action against dumping' and that it was not a 'reasonable security' under the Ad Note to Article VI of the GATT 1994, and thus was not 'in accordance with the provisions of the GATT 1994, as interpreted by the [Anti-Dumping] Agreement', the Panel in that case examined the United States' defense under Article XX(d) of the GATT 1994, but found that the measure could not be justified as necessary.

The chapeau of GATT Article XX indicates that the general exceptions apply to 'this Agreement'. This appears to exclude the application of Article XX beyond the provisions of the GATT itself. However, the provisions of the GATT serve as the starting point for the majority of the multilateral agreements on trade in goods.

In *China – Publications and Audiovisual Products*, the Appellate Body concluded that China could invoke GATT Article XX as a defense against a violation of section 5.1 of its Protocol of Accession.[56] In *China – Raw Materials*, both the Panel and the Appellate Body concluded that

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[55] Appellate Body Report, *United States – Shrimp (Thailand)* and *United States – Customs Bond Directive*, WT/DS343/AB/R, WT/DS345/AB/R, adopted 1 August 2008, paras 310, 319

[56] Appellate Body Report, *China – Measures Affecting Trading Rights and Distribution Services for Certain Publications and Audiovisual Entertainment Products (China – Publications and Audiovisual Products)*, WT/DS363/AB/R, adopted 19 January 2010; Bradly J. Condon, 'Comentario sobre China – Publicaciones y productos audiovisuales, Informe del Órgano de Apelación' (2010) <http://cdei.itam.mx/medios_digitales/archivos/investigacion/ComentarioChinaPublicaciones.pdf> (accessed 21 December 2012)

China could not invoke GATT Article XX as a defense against a violation of section 11.3 of its Protocol of Accession.[57] After observing that the WTO Agreement contains no general exception, the Panel concluded that the reference in the chapeau of Article XX to 'this Agreement' indicates that its general exceptions apply only to the GATT, and not to other WTO Agreements. The Panel further noted that WTO Members had incorporated Article XX by reference, in the TRIMS Agreement, and that other WTO Agreements contained their own general exceptions, such as GATS Article XIV.[58] However, the Appellate Body limited its analysis to why GATT Article XX could not apply to section 11.3 of China's Protocol of Accession. The Appellate Body considered that Article XX could not be invoked to justify the violation of an obligation that was not regulated by the GATT. The obligation emanated exclusively from the Protocol. It also observed, as did the Panel, that section 11.3 made no reference to Article XX, even though it referred expressly to GATT Article VIII. Unlike sections 11.1 and 11.2, section 11.3 contained no obligation to ensure conformity with GATT. Moreover, unlike section 5.1 of the Protocol in *China – Publications and Audiovisual Products*, section 11.3 made no reference to the right of China to regulate trade in a manner compatible with the WTO Agreement.[59] The Appellate Body's reasoning in these cases indicates that the applicability of the general exceptions of GATT Article XX to other WTO Agreements depends on the specific provision and its context.

In the case of subsidies, GATT Articles VI (countervailing duties) and XVI (subsidies in general) apply together with the provisions of the SCM Agreement. Indeed, the principal object

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[57] Appellate Body Report, *China – Measures Related to the Exportation of Various Raw Materials (China – Raw Materials)*, WT/DS394/AB/R, WT/DS395/AB/R, WT/DS398/AB/R, adopted 22 February 2012

[58] Panel Report, *China – Measures Related to the Exportation of Various Raw Materials (China – Raw Materials)*, WT/DS394/R, WT/DS395/R, WT/DS398/R, adopted 22 February 2012, paras 7.150-7.154

[59] Appellate Body Report, *China – Raw Materials* paras 290-303

and purpose of the SCM Agreement is to augment and improve GATT disciplines regarding the use of subsidies and countervailing measures.[60] Also note that the name of the SCM Agreement (Agreement on Subsidies and Countervailing Measures), in contrast to that of the Antidumping Agreement (Agreement on Implementation of Article VI of the General Agreement on Tariffs and Trade 1994), does not indicate that it serves merely to interpret and apply GATT provisions. It would be odd if GATT Article XX could be applied to GATT Articles VI and XVI, but not to the SCM Agreement itself, absent evidence of a contrary intention (which SCM Agreement Article 8 might provide). This assumes that GATT Article XX could be applied to GATT Articles VI and XVI. However, it is not at all clear how this would work in the case of countervailing measures. Would environmental subsidies that meet the requirements of GATT Article XX be non-actionable and thus not subject to countervailing duties under Part V or multilateral action under Part III of the SCM Agreement? This was the case for a limited range of environmental subsidies before the expiry of SCM Agreement Article 8.[61] Since negotiators developed specific exceptions and language to address the issue of environmental subsidies, and did not incorporate the language of Article XX or incorporate Article XX by reference, it seems unlikely that GATT Article XX could be invoked to preclude action under parts III and V. Moreover, in the case of actionable subsidies under Part III, negotiators specified that Article 5 and 6 would not apply to subsidies maintained on agricultural

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[60] Appellate Body Report, *United States – Countervailing Duties on Certain Corrosion-Resistant Carbon Steel Flat Products from Germany*, WT/DS2133/AB/R, adopted 19 December 2002, para 73; Appellate Body Report, *United States – Final Countervailing Duty Determination with Respect to Certain Softwood Lumber from Canada*, WT/DS257/AB/R, adopted 17 February 2004, para 64; Appellate Body Report, *Brazil – Measures affecting Dessicated Coconut* (*Brazil – Desiccated Coconut*), WT/DS22/AB/R, adopted 20 March 1997, 15

[61] SCM Agreement art 8.1, 8.2 (c), 8.3, 10, 31

products as provided in Article 13 of the Agreement on Agriculture.[62] While Article 13 has since expired, this indicates that negotiators turned their minds to the issue of whether to exclude certain types of subsidies from the application of Part III. Similarly, in Part V the non-actionability of certain types of subsidies, including environmental subsidies, was carefully circumscribed.[63]

Environmental subsidies could be non-actionable under parts III and V of the SCM Agreement if differences in carbon footprints can be used to conclude that products are not 'like' as that term is used in the SCM Agreement. The SCM Agreement uses the term 'like products' for a variety of purposes. It is a pivotal issue in Part V regarding the initiation of countervailing duty investigations (Articles 11.2 (i), 11.4, 16.1) and the determination of injury (Articles 15.1, 15.2, 15.3, 15.6) and, in Part III, regarding the determination of serious prejudice in paragraphs a, b, and c of Article 6.3.[64] In addition, environmental subsidies could be designed so as to not be specific to an enterprise or industry under SCM Agreement Article 2 and thereby be non-actionable under parts III and V. However, if the importing Member produces environmental products that are like those that benefit from the subsidy in the exporting Member, the subsidies could be actionable under parts III and V. Recent WTO disputes in this category relate to solar panel, wind power equipment and feed-in tariffs programs for the renewable energy sector.[65]

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[62] SCM Agreement art 5, 6.9

[63] SCM Agreement art 8, 10, footnote 35

[64] Condon (2007) 331-332

[65] *United States – Countervailing Duty Measures on Certain Products from China*, WT/DS437, Panel established 28 September 2012 <http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds437_e.htm> (accessed 21 December 2012); *China – Measures concerning wind power equipment*, WT/DS419, in consultations 22 December 2010 <http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds419_e.htm> (accessed 21 December 2012); Panel Reports, *Canada – Renewable Energy*, *Canada – Feed-In Tariff*

What about prohibited subsidies (export subsidies and subsidies contingent on the use of domestic goods)? Such subsidies are deemed to be specific under Article 2.3. SCM Agreement Article 32.1 provides that '[n]o specific action against a subsidy of another Member can be taken except in accordance with the provisions of GATT 1994, as interpreted by this Agreement.' SCM Agreement note 56 provides that '[t]his paragraph is not intended to preclude action under other relevant provisions of GATT 1994, where appropriate.' However, SCM Agreement Article 3.1 indicates that export subsidies and subsidies contingent on the use of domestic goods are prohibited '[e]xcept as provided in the Agreement on Agriculture'. This could be interpreted as precluding the application of any other exceptions to SCM Agreement Article 3.1, including the general exceptions of GATT Article XX, which would make it difficult for export subsidies to be found consistent with WTO law, even those designed to address competitive disadvantages from domestic carbon taxes or other climate change measures with similar effects.

However, the preamble of the Agreement on Agriculture refers to 'the need to protect the environment' and Article 14 of the Agreement on Agriculture indicates that the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement)[66] applies cumulatively to the Agreement on Agriculture. The preamble of the SPS Agreement indicates that it elaborates on GATT rules, in particular Article XX(b). Thus, the argument could be made that the Agreement on Agriculture opens the door to the application of GATT Article XX(b). However, the Agreement on

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Program; *European Union and certain Member States — Certain Measures Affecting the Renewable Energy Generation Sector*, in consultations 5 November 2012, WT/DS452, <http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds452_e.htm> (accessed 21 December 2012)

[66] GATT Secretariat, The Results of the Uruguay Round of Multilateral Trade Negotiations, the Legal Texts (Geneva, 1994) 59

Agriculture only applies to the 'agricultural products' listed in Annex 1 of the Agreement on Agriculture.[67] Thus, even if one were to accept the foregoing argument, the application of GATT Article XX(b) to SCM Agreement Article 3.1 could be limited to measures affecting these agricultural goods. The more likely conclusion is that Article XX is not available to justify a violation of the Agreement on Agriculture. Rather, environmental subsidies that applied to agricultural products would have to comply with the commitments in the schedules of WTO Members. As with environmental subsidies for non-agricultural products, environmental subsidies for agricultural products could be non-actionable under parts III and V of the SCM Agreement either because they are not specific or because differences in carbon footprints are relevant in the like products analysis, as noted above.

A more general argument might be raised regarding the applicability of GATT Article XX to all Agreements in Annex 1A, including the SCM Agreement, based on the argument that all WTO Agreements are cumulative and apply simultaneously and that the effective interpretation principle requires that both rights (such as those in Article XX) and obligations are cumulative.[68] However, the foregoing analysis suggests that the applicability of GATT Article XX to the other agreements in Annex 1A would have to be considered one agreement at a time and one provision at a time. This approach is consistent with the view of the Appellate Body that the relationship between the GATT 1994 and the other agreements in Annex 1A must be considered on a case-by-case basis.[69] It is also consistent with *China – Raw Materials*, in which the Appellate Body found that China could not invoke Article XX as a defense under Section 11.3 of its Protocol of

[67] Agreement on Agriculture art 2

[68] Marceau and Trachtman 874-875

[69] Appellate Body Report, *Brazil – Desiccated Coconut* 13

Accession.[70] In *China – Publications*, the Appellate Body reasoned that Article XX could be invoked when the measure could be inconsistent with a GATT provision or a provision related to goods in another WTO agreement. Otherwise, a complainant could deprive a respondent of its rights under Article XX by avoiding claims under the GATT. In China – Raw Materials, the Appellate Body placed greater emphasis on the wording and the context of the specific provision. Taken together, these two cases suggest that, in order to invoke Article XX, a provision outside the GATT would have to contain a reference to Article XX, a right to regulate trade or other reference to the GATT. Nevertheless, where a provision contains no such reference, but incorporates language from Article XX, it might be interpreted in a manner that is consistent with Article XX, as the Appellate Body did in *US – Clove Cigarettes* with respect to TBT Agreement Article 2.1.[71] The foregoing series of Appellate Body reports, together with our analysis of the text of the SCM Agreement, indicate that Article XX could not be invoked as a defense under the SCM Agreement.

III. GATT Exemptions and Exceptions (Use Article XX stuff and stuff on the difference between exemptions and exceptions).

New issue: Can democratic concerns be taken into account in Article XX exceptions? To what extent can the need to respond to voters (e.g. NIMBYism regarding wind turbines) influence compliance with Article XX? Is it a relevant condition prevailing in the countries in the Preamble analysis? The WTO Agreement has majority voting provisions. Can this context influence Article XX exceptions? Perhaps not if the measure fails to pursue a legitimate public policy regarding clean energy, but maybe, if the determination of the energy mix must respond to democratic concerns in order to move the transition along, albeit at a slower or more costly pace.

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[70] Appellate Body Report, *China – Raw Materials* paras 290-291

[71] Danielle Spiegel Feld & Stephanie Switzer, 'Whither Article XX? Regulatory Autonomy Under Non-GATT Agreements After China—Raw Materials' (2012) 38 Yale Journal of International Law 16, 29-30; Appellate Body Report, *United States – Measures Affecting the Production and Sale of Clove Cigarettes* (*US – Clove Cigarettes)*, WT/DS406/AB/R, adopted 24 April 2012, para 182

Exemptions and Exceptions

GATT Article XX and Local Content Requirements for Clean Energy

It is instructive that India did not invoke GATT Articles XX(b) or XX(g) in India – Certain Measures Relating to Solar Cells and Solar Modules, instead invoking (unsuccessfully) Articles XX(d) and XX(j).[72] GATT Article III:8 exemptions and Article XX(b) or XX(g) exceptions do not accommodate infant industry justifications for trade-distorting measures applied to clean energy technologies. Indeed, once clean energy technologies are price-competitive with (unsubsidized) fossil fuels, trade distortions could delay the transition to clean energy sources by making clean energy more costly than it should be.[73] By requiring the use of less efficient and more costly local suppliers, local content rules increase the cost of clean energy. Similarly, the use of countervailing (or antidumping) duties increases the cost of imports. Therefore, it is more environmentally friendly to eliminate the use of trade-distorting subsidies and countervailing duties, which delay the transition to clean energy by increasing its cost.

Two paragraphs b and g in GATT Article XX will play an important role in determining the kind of measures that may be used to combat climate change. In addition, the analysis under the chapeau of Article XX will determine how those measures should be applied.

Article XX(g) applies to measures 'relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption'. This phrase raises four key issues. (1) Is the climate an 'exhaustible natural resource'? (2) If a jurisdictional nexus is required between the Member enacting a measure and the natural resource, does a sufficient nexus exist between all WTO Members and the global climate? (3) How should a panel determine whether a specific measure relates to climate change? (4) Are the measures 'made effective in conjunction with restrictions on domestic production or consumption'?

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[72] Appellate Body, India – Certain Measures Relating to Solar Cells and Solar Modules, WT/DS456/AB/R, 2016.

[73] It is beyond the scope of this article to present an argument against fossil fuel subsidies. Suffice it to say that their use is widespread and that they need to be eliminated in order to reduce greenhouse gas emissions. See Bradly J. Condon and Tapen Sinha, The Role of Climate Change in Global Economic Governance (Oxford: Oxford University Press, 2013), 210-18.

In *US – Shrimp*, the Appellate Body interpreted the term 'exhaustible natural resources' to include both living and non-living natural resources.[74] The Appellate Body and GATT panels have found the following to be exhaustible natural resources: clean air;[75] migratory sea turtles;[76] salmon and herring;[77] tuna;[78] and dolphins.[79] In *US – Shrimp*, since the migratory sea turtles were listed under CITES as being in danger of extinction, the Appellate Body held that they were exhaustible natural resources. Preserving the global climate could be considered analogous to the preservation of clean air in *US – Gasoline*. Alternatively, the issue of the levels of carbon and other greenhouse gases in the atmosphere could be viewed as a clean air issue.[80] The US Environmental Protection Agency decision to address greenhouse gases under the Clean Air Act supports this view.[81] Multilateral environmental agreements on climate change might be taken into account to

[74] Appellate Body Report, *United States – Import Prohibition of Certain Shrimp and Shrimp Products* (*US – Shrimp*), WT/DS58/AB/R, adopted 6 November 1998, paras 128-131

[75] Appellate Body Report, *United States – Standards for Reformulated and Conventional Gasoline* (*US – Gasoline*), WT/DS2/AB/R, adopted 20 May 1996

[76] Appellate Body Report, *US – Shrimp*

[77] GATT Panel Report, *Canada – Measures Affecting Exports of Unprocessed Salmon and Herring* (*Canada – Salmon and Herring*), L/6268 - 35S/98, adopted 22 March 1988

[78] GATT Panel Report, *United States – Prohibition of Imports of Tuna and Tuna Products from Canada* (*US – Tuna from Canada*), L/5198 - 29S/91, adopted 22 February 1982

[79] GATT Panel Report, *US – Tuna (Mexico)*

[80] I thank the moot team from the University of Melbourne in the 2009 ELSA moot court competition on WTO law in Taipei, Taiwan for this observation (Ms. Bellamy, Mr. Kruse and Mr. Tran).

[81] Also see *Massachusetts et al v Environmental Protection Agency et al* (United States Supreme Court) 549 US (2007)

support the view that the global climate is an exhaustible natural resource. The following passage in *US – Shrimp* lends support to this view:

> The words of Art. XX(g), 'exhaustible natural resources', … must be read by a treaty interpreter in the light of contemporary concerns of the community of nations about the protection and conservation of the environment. […] From the perspective embodied in the Preamble of the WTO Agreement [[Rf: objective of sustainable development]], the generic term of 'natural resources' is not 'static' in its content or reference but is rather, by definition, evolutionary.[82]

In *US – Shrimp*, the Appellate Body held there was a sufficient jurisdictional nexus between migratory sea turtles and the United States because they spent part of their migratory life cycle in American waters, without ruling on whether there was a jurisdictional limit implied in the language of Article XX(g). The effects of climate change are global. Therefore, there should be a sufficient jurisdictional nexus between all WTO Members and climate change.

The term 'relating to' has been interpreted to mean 'primarily aimed at', rather than 'necessary or essential'.[83] The term 'relating to' requires an examination of 'the relationship between the measure at stake and the legitimate policy of conserving exhaustible natural resources'. This requires 'a close and genuine relationship of ends and means' and an examination of 'the relationship between the general structure and design of the measure…and the policy goal

[82] Appellate Body Report, *US – Shrimp* paras 129-130

[83] GATT Panel Report, *Canada – Salmon and Herring*; Appellate Body Report, *US – Gasoline*; Appellate Body Report, *US – Shrimp*

it purports to serve'.[84] Multilateral environmental agreements on climate change could serve as evidence that measures aimed at the reduction of greenhouse gas emissions relate to the conservation of the global climate. This could include measures such as differential tax treatment based on the different carbon emissions resulting from production processes, provided that there is a close and genuine relationship between the general structure and design of the measure and the policy goal of reducing carbon emissions to conserve the global climate. If the structure and design of the measure is based on specific obligations in a multilateral environmental agreement on climate change, it would be more likely to meet the requirements of paragraph g. While this is probably not essential, such specific obligations would provide evidence that the measure does relate to climate change.

Article XX(g) also requires that conservation measures be 'made effective in conjunction with restrictions on domestic production or consumption'. In *US – Gasoline*, the Appellate Body interpreted 'made effective' as referring to a governmental measure being 'operative', as 'in force', or as having 'come into effect'. The clause does not establish an empirical 'effects test' for the availability of the Article XX(g) exception. Rather, this clause is a requirement of even-handedness in the imposition of restrictions, in the name of conservation, upon the production or consumption of exhaustible natural resources, but does not require identical treatment of domestic and imported products.[85] In *China – Raw Materials*, the Appellate Body noted that the equivalent terms in Spanish and French of 'made effective' ('se apliquen' and 'sont appliqués') confirm this interpretation. There is no additional requirement that the trade measure be primarily aimed at making the domestic restrictions effective.[86] It is not clear whether differences

[84] Appellate Body Report, *US – Shrimp*

[85] Appellate Body Report, *US – Gasoline* 20-21

[86] Appellate Body Report, *China – Raw Materials* para 356

in the treatment of products, based on their impact on climate change, could meet this requirement without the differences in treatment being justified by reference to the evidence regarding the reasons for the differential treatment, such as scientific evidence comparing the carbon footprints of different products.

Article XX(b) applies to measures 'necessary to protect human, animal or plant life or health'. This paragraph requires that the policy goal at issue falls within the range of policies designed to protect human, animal or plant life or health. In *Brazil – Retreaded Tyres*, the panel accepted that measures aimed at protecting Brazil's environment fell within the range of policies covered by Article XX(b).

Once it is established that the policy goal fits the exception, the issue is whether the measure is 'necessary' to achieve the policy goal. This analysis takes place in light of the level of risk that a Member sets for itself. To demonstrate that the measure is necessary involves weighing and balancing a series of factors. First, the greater the importance of the interests or values that the challenged measure is intended to protect, the more likely it is that the measure is necessary. Second, the greater the extent to which the measure contributes to the end pursued, the more likely that the measure is necessary. Third, the less the trade impact of the challenged measure, the more likely that the measure is necessary. Fourth, whether a WTO-consistent alternative measure which the Member concerned could reasonably be expected to employ is available, or whether a less WTO-inconsistent measure is reasonably available. The weighing and balancing process of the first three factors also informs the determination of the fourth.[87]

[87] Appellate Body Report, *Korea – Measures Affecting Imports of Fresh, Chilled and Frozen Beef* (*Korea – Beef*), WT/DS161/AB/R, adopted 10 January 2001; Appellate Body Report, *EC – Asbestos*; Appellate Body Report, *United States – Measures Affecting the Cross-Border Supply of Gambling and Betting Services* (*US –*

There is no question that environmental protection would be considered an important interest or value in Article XX(b). In *Brazil – Retreaded Tyres* the Panel found that 'few interests are more 'vital' and 'important' than protecting human beings from health risks, and that protecting the environment is no less important'.[88] The Appellate Body agreed that protection of the environment is an important value.[89] However, the weight accorded to the objective of environmental protection could be less than that accorded to the objective of protecting human life or health, given the Appellate Body's characterization of the former as 'important' (*Brazil – Retreaded Tyres*) and of the latter as 'both vital and important in the highest degree' (*EC – Asbestos*).

The extent to which a climate change measure contributes to the end pursued would be difficult to measure. A measure must be 'apt to produce a material contribution to the achievement of its objective'.[90] A measure that only makes 'a marginal or insignificant contribution' to the objective is not enough to be considered necessary.[91] Nevertheless, in *Brazil – Retreaded Tyres*, the Appellate Body emphasized the need to view the measure against the

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Gambling), WT/DS285/AB/R, adopted 20 April 2005; Appellate Body Report, *Dominican Republic – Measures Affecting the Importation and Internal Sale of Cigarettes* (*Dominican Republic – Cigarettes*), WT/DS302/AB/R, adopted 19 May 2005; Appellate Body Report, *Brazil – Measures Affecting Imports of Retreaded Tyres* (*Brazil – Retreaded Tyres*), WT/DS332/AB/R, adopted 17 December 2007

[88] Panel Report, *Brazil – Measures Affecting Imports of Retreaded Tyres* (*Brazil – Retreaded Tyres*), WT/DS332/R, adopted 17 December 2007, para 7.108

[89] Appellate Body Report, *Brazil – Retreaded Tyres* para 179

[90] Ibid para 151

[91] Ibid para 150

broader context of a comprehensive strategy to deal with a problem.[92] Moreover, the Appellate Body stated that the contribution of a trade-restrictive measure to address climate change, while not immediately observable, can be justified under Article XX(b):

> We recognize that certain complex public health or environmental problems may be tackled only with a comprehensive policy comprising a multiplicity of interacting measures. In the short-term, it may prove difficult to isolate the contribution to public health or environmental objectives of one specific measure from those attributable to the other measures that are part of the same comprehensive policy. Moreover, the results obtained from certain actions—for instance, measures adopted in order to attenuate global warming and climate change...—can only be evaluated with the benefit of time.[93]

In *China – Raw Materials*, the Panel had to confront China's arguments based on this passage.[94] China argued that this passage indicates that the contribution should be evaluated in the present and in the future.[95] The Panel first focused on the contribution in the present. Taking into consideration how some regulatory policies cancelled the alleged environmental benefits of others, the panel found that the net effect of the export restrictions did not contribute significantly to environmental protection. The Panel then rejected China's argument that its policies would contribute to its economic development over the long-term, which would in turn

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[92] Ibid para 154

[93] Ibid para 151

[94] Panel Report, *China – Raw Materials* paras 7.470-7.471

[95] Ibid para 7.518

contribute to its ability to protect the environment, in accordance with the Kuznet's curve, which shows a correlation between pollution and the level of economic development. The Panel concluded that, while economic growth makes environmental protection statistically more likely, this did not prove that China's export restrictions were necessary to obtain environmental benefits.[96]

Regarding the trade impact of the challenged measure, if a 'comprehensive regulatory strategy' is relevant the extent of the contribution, then it should also be examined in assessing the trade-restrictive impact of the measure. In that case, the cumulative impact of a series of climate change measures could together have much more significant restrictive effects than a measure considered in isolation.

The same issue arises regarding the issue of whether alternative measures would achieve the same objectives as the challenged measure. If the challenged measure is part of a comprehensive regulatory strategy and the effect of the measure might not be revealed in the near future, this will be a difficult point to argue. The Member defending the measure may point out why alternative measures would not achieve the same objectives as the challenged measure, but it is under no obligation to do so in order to establish, in the first instance, that its measure is 'necessary'. If the complainant raises a WTO-consistent alternative measure that, in its view, the respondent should have taken, the respondent will be required to demonstrate why its challenged measure nevertheless remains 'necessary' in the light of that alternative or, in other words, why the proposed alternative is not, in fact, 'reasonably available'. If the respondent demonstrates that the alternative is not 'reasonably available', in the light of the interests or values being pursued and the party's desired level of protection, it follows that the challenged measure must

[96] Ibid paras 7.540-7.551

be 'necessary'.[97] Should the alternatives be considered in the light of relevant international norms, such as those set out in multilateral environmental agreements on climate change? Should any alternative measures be measures that the respondent can take alone, rather than measures that are beyond its control or that would require consultations or negotiations with other countries?[98] What kind of scientific evidence will be required? The Appellate Body has stated the following in this regard: 'In justifying a measure under Article XX(b) of the GATT 1994, a Member may also rely, in good faith, on scientific sources which, at that time, may represent a divergent, but qualified and respected, opinion.'[99]

The purpose of the chapeau is to prevent the abuse of the exceptions in Article XX. The chapeau embodies the recognition on the part of WTO Members of the need to maintain a balance between the right of a Member to invoke an exception on the one hand, and the substantive rights of the other Members on the other hand.[100]

The chapeau requires that a measure that has been provisionally justified under one of the paragraphs of Article XX not be applied in a manner that constitutes: (1) arbitrary discrimination between countries where the same conditions prevail; (2) unjustifiable discrimination between countries where the same conditions prevail; or (3) a disguised restriction on international trade. The respondent has the burden of proof to show that the application of the measure meets the requirements of the chapeau. In order for the measure to pass the chapeau test, the respondent

[97] Appellate Body Report, *US – Gambling* paras 310-311

[98] Ibid paras 316-318

[99] Appellate Body Report, *EC – Asbestos* para 178, citing Appellate Body Report, *European Communities – Measures Concerning Meat and Meat Products (Hormones)* (*EC – Hormones*), WT/DS26/AB/R, WT/DS48/AB/R, adopted 13 February 1998, para 194

[100] Appellate Body Report, *US – Shrimp*

must prove that all three requirements have been met. In order for the measure to fail the chapeau test, the complainant only needs to show that one of these three requirements has not been met.

There are three elements in the chapeau analysis of whether a measure is applied in a manner that constitutes 'arbitrary or unjustifiable discrimination between countries where the same conditions prevail': (1) the application of the measure results in discrimination; (2) the discrimination is arbitrary or unjustifiable; and (3) the discrimination occurs between countries where the same conditions prevail (between different exporting countries or between the exporting countries and the importing country). The chapeau also refers to disguised restrictions on international trade. The jurisprudence has tended to find that the evidence that supports a finding of arbitrary or unjustifiable discrimination also supports a finding of disguised restrictions on international trade.[101]

In *US – Gasoline* and *US – Shrimp*, the Appellate Body identified two main criteria to determine whether discrimination that has been shown to exist is arbitrary or unjustifiable: (1) a serious effort to negotiate with a view to achieving the policy goal of the measure at stake; and (2) flexibility of the measure (e.g. in taking into account the situation prevailing in other countries). With respect to the second criteria, in *US – Shrimp (Art. 21.5)*, the Appellate Body agreed with the Panel that conditioning market access on the adoption of a programme *comparable in effectiveness*, allows for sufficient flexibility in the application of the measure, so as to avoid arbitrary or unjustifiable discrimination.[102]

[101] Appellate Body Report, *US – Gasoline* 23; Panel Report, *Brazil – Retreaded Tyres* para 7.319; Appellate Body Report, *Brazil – Retreaded Tyres* para 239

[102] Appellate Body Report, *US – Shrimp (Art. 21.5)* para 144

In *US – Shrimp*, the Appellate Body found that the American regulations were arbitrary or unjustifiable because the US: (1) required WTO members to adopt 'essentially the same policy' as that applied in the United States without taking into account other policies and measures a country may have adopted that would have a comparable effect on sea turtle conservation; (2) applied the same standard without taking into consideration whether it was appropriate for the conditions prevailing in other countries; (3) failed to engage in 'serious, across-the-board negotiations with the objective of concluding bilateral or multilateral agreements for the protection and conservation of sea turtles, before enforcing the import prohibition'; and (4) failed to provide due process in the denial of certification compared to those who were granted certification.[103] However, the chapeau does not require that a Member succeed in its efforts to negotiate a multilateral solution to a transnational environmental problem.[104]

In *Brazil – Retreaded Tyres*, the Appellate Body held that 'there is arbitrary or unjustifiable discrimination when a measure provisionally justified under a paragraph of Article XX is applied in a discriminatory manner 'between countries where the same conditions prevail', and when the reasons given for this discrimination bear no rational connection to the objective falling within the purview of a paragraph of Article XX, or would go against that objective'.[105] This requirement that the reasons for the discrimination relate to the objective of the particular paragraph of Article XX might explain diverging WTO jurisprudence on whether the chapeau requires an effort to negotiate prior to employing trade restrictions to address environmental issues. In the two WTO cases involving paragraph g, the Appellate Body found that a failure to negotiate led to a failure to

[103] Appellate Body Report, *US – Shrimp* paras 163-166, 181

[104] Appellate Body Report, *US – Shrimp (Art. 21.5)*

[105] Appellate Body Report, *Brazil – Retreaded Tyres* para 227

comply with the non-discrimination requirements of the chapeau.[106] In *US – Shrimp*, it was unclear whether the obligation to negotiate stemmed from multilateral environmental documents that expressed a preference for multilateral solutions to transboundary or global environmental problems or whether it stemmed from the American failure to negotiate with Asian countries having done so with countries in the Americas. In the cases involving paragraph b, the Appellate Body has not found any obligation to negotiate in order to comply with the non-discrimination requirements of the chapeau.[107]

The divergence in the jurisprudence might be explained by arguing that paragraphs b and g apply to different matters.[108] This might explain why in some cases the avoidance of arbitrary or unjustifiable discrimination requires an effort to negotiate. The rule of effective treaty interpretation requires that treaty terms be interpreted so as to avoid redundancy. This suggests that paragraphs b and g must apply to different matters. However, paragraph g has been applied to measures aimed at the conservation of animals (migratory turtles,[109] salmon,[110] herring,[111] tuna[112] and dolphins[113]) and paragraph b has also been applied to a measure aimed at protecting

[106] Appellate Body Report, *US – Gasoline*; Appellate Body Report, *US – Shrimp*

[107] Appellate Body Report, *EC – Asbestos*; Appellate Body Report, *Brazil – Retreaded Tyres*; Appellate Body Report, *US – Gambling* (considering a comparable provision in Article XIV of the GATS)

[108] Bradly J. Condon, 'GATT Article XX and Proximity of Interest: Determining the Subject Matter of Paragraphs b and g' (2004) 9 UCLA Journal of International Law and Foreign Affairs 137

[109] Appellate Body Report, *US – Shrimp*; Appellate Body Report, *US – Shrimp (Art. 21.5)*

[110] GATT Panel Report, *Canada – Salmon and Herring*

[111] Ibid

[112] GATT Panel Report, *US – Tuna from Canada*

[113] GATT Panel Report, *US – Tuna (Mexico)*

animals (monkeys in Brazil[114]). The only obvious difference in these animals is that those considered under paragraph g are migratory, and hence a transboundary environmental issue, whereas the monkeys considered under paragraph b are not migratory, and hence a domestic environmental issue. In addition to migratory species, a clean air measure has been addressed under paragraph g. While the clean air at issue was that of the United States, and hence domestic, clean air is a transboundary environmental issue. Air pollution does not respect national boundaries. Examples include forest fires in Mexico causing air pollution in the United States and air pollution in the United States causing acid rain in Canada. Thus, the case law supports the view that one difference between the two paragraphs might be that b addresses domestic issues and g addresses transboundary issues. An analysis under the Vienna Convention on the Law of Treaties, Articles 31, 32 and 33 also supports this view.[115]

The obvious objection to the notion that paragraph (g) addresses only transboundary issues is that this appears to exclude exhaustible natural resources that are contained within one country's borders, such as mineral resources. The answer to this objection is not obvious. One possibility is to consider that mineral resources are a finite global resource, even when they are contained within the borders of one country.[116] Another possibility is to address domestic resources under other exceptions, such as: GATT Article XX (i) (for restrictions on exports of domestic materials necessary to ensure essential quantities of such materials to a domestic processing industry); GATT Article XX (j) (for measures essential to the acquisition or distribution of products in general or local short supply); or GATT Article XXI (for measures necessary for the protection a Member's

[114] Appellate Body Report, *Brazil – Retreaded Tyres*

[115] Vienna Convention on the Law of Treaties, opened for signature 23 May 1969, 1155 UNTS 331 (entered into force 27 January 1980); Condon (2004)

[116] I thank David Morgan for this idea.

essential security interests).[117] However, neither the Panel nor the Appellate Body considered the difference between paragraphs b and g in *China – Raw Materials*.

The different thresholds in paragraphs b and g also suggest that they apply to different matters. WTO jurisprudence has indicated that the term 'necessary' sets a higher threshold than the term 'relating to'. At the same time, WTO jurisprudence has indicated that there is no interest or value more important than human life and health.[118] It would be an odd result to set a higher threshold for measures that aim to preserve human life and health than for the conservation of an exhaustible natural resource. Another possible reason for a stricter threshold in paragraph b is that the cause of protecting human, animal or plant life or health can be more easily abused by Members because it is more subjective than the conservation of natural resources, which can be determined more objectively.[119] One solution to this conundrum is for WTO jurisprudence to evolve to a point where the threshold converges.[120] If one considers that the avoidance of arbitrary or unjustifiable discrimination under the chapeau requires WTO Members to seek multilateral solutions to address the conservation of transboundary resources, while no such requirement exists for measures that address the protection of domestic human, animal or plant life or health, the analysis under the chapeau would eliminate any difference in the thresholds in paragraphs b and g. In other words, the term 'relating to', in combination with a negotiation requirement, would set a higher threshold than the term 'necessary' without a negotiation requirement. Indeed, a negotiation requirement could act as a barrier to litigation, not just a threshold issue in litigation. In the context of GATS Article XIV(a), the Appellate Body disagreed

[117] I thank David Morgan again for helping me on this point.

[118] Appellate Body Report, *EC – Asbestos* para 172

[119] I thank an anonymous reviewer for making this point.

[120] I thank Professor Matsushita for this idea.

with the panel that the term ‘necessary’ implied a negotiation requirement.[121] However, the circumstances in which there might be a negotiation requirement in the chapeau of GATT Article XX or GATS Article XIV has not been resolved in WTO jurisprudence. It is also inappropriate to require international cooperation or negotiations to address domestic health issues, since each WTO Member has the right to determine its appropriate level of health protection[122] and this issue is entirely within each Member’s jurisdiction. Indeed, limiting the scope of paragraph (b) to domestic concerns resolves the question of whether there is an implicit jurisdictional limitation in paragraph (b) and paragraph (g).

Other paragraphs that use the term ‘necessary’ are consistent with the idea that this threshold applies to domestic matters. GATT Article XX(a) applies this term to ‘public morals’ and GATS[123] Article XIV(a) to ‘public morals’ and ‘public order’. Since the standards for public morals vary from one country to the next (and even among communities within the same country), it is reasonable to conclude that these paragraphs apply to domestic issues. Similarly, public order is a domestic issue. GATT Article XX(d) and GATS Article XIV(c) apply the term ‘necessary’ to measures to secure compliance with laws or regulations. The Appellate Body has held that the term ‘laws or regulations’ in GATT Article XX(d) refers to domestic laws or regulations.[124] GATS Article XIV(b) applies to the same subject matter as GATT Article XX(b).

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[121] Appellate Body Report, *US – Gambling* paras 308, 317, 321

[122] Appellate Body Report, *EC – Asbestos* paras 167-168

[123] GATT Secretariat, The Results of the Uruguay Round of Multilateral Trade Negotiations, the Legal Texts (Geneva, 1994), 284.

[124] Appellate Body Report, *Mexico – Tax Measures on Soft Drinks and Other Beverages* (*Mexico – Taxes on soft drinks*), WT/DS308/AB/R, adopted 24 March 2006, para 69

If Article XX(b) does not apply to transnational or global environmental concerns, measures aimed at addressing climate change would not fall within the range of policies covered by Article XX(b), unless it could be shown that the measures also addressed domestic environmental or health concerns. While climate change is a global issue, it can also affect domestic issues such as human health.[125] It is possible for more than one paragraph in Article XX to apply to different aspects of the same measure. The Appellate Body ruled that the GATT and the GATS could apply to different aspects of the same measure.[126] Thus, measures aimed at climate change could be characterized as addressing both transnational and domestic issues, allowing both paragraphs to apply. The issue of whether a measure addresses a transnational or domestic problem is a question of fact. The scope of paragraphs b and g is a question of law.

[125] Bradly J. Condon and Tapen Sinha, *Global Lessons from the AIDS Pandemic. Economic, Financial, Legal and Political Implications* (Springer Verlag, Berlin 2008) 5-6; Bradly J. Condon and Tapen Sinha, 'Chronicle of a Pandemic Foretold: Lessons from the 2009 Influenza Epidemic (2010) 22 Florida Journal of International Law 1

[126] Appellate Body Report, *European Communities – Regime for the Importation, Sale and Distribution of Bananas* (*EC – Bananas III*), WT/DS27/AB/R, adopted 25 September 1997, para 221