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Abstract

I argue that an appropriately conceived and well-designed border climate adjustment scheme, as a policy mechanism potentially utilizable by many States party to the United Nations Framework Convention on Climate Change, may lead to desirable consequences for the development of comprehensive global greenhouse gas management in furtherance of the Framework Convention's objectives. By creating the conditions for a healthy experimentalism and regulatory competition among the regulating bodies of diverse national markets, the use of origin-neutral border climate adjustment schemes, equivalent to the climate regulatory costs imposed on like domestic products as a condition of market access, may lead to a quicker development of more efficient and ultimately more effective global greenhouse gas management than is likely to be achieved through ex ante international consensus. Finally, I contrast my scheme design proposal with recent important proposals including climate border adjustment provisions in the U.S. Congress.

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List of Abbreviations

BAT	Best Available Technology
BCA	Border Climate Adjustment
BTA	Border Tax Adjustment
CDM	Clean Development Mechanism
COP	Conference of the Parties
DSB	Dispute Settlement Body
E.U. ETS	European Union Emissions Trading Scheme
GATT	General Agreement on Tariffs and Trade
GHG	Greenhouse Gas
IPCC	Intergovernmental Panel on Climate Change
OECD	Organization for Economic Cooperation and Development
SCM	Subsidies and Countervailing Measures
tCO_2e	Ton of Carbon Dioxide Equivalent
UNFCCC	United Nations Framework Convention on Climate Change
U.S.	United States
WP	Working Party
WTO	World Trade Organization

I. Introduction

A growing international consensus surrounding the problem of anthropogenic climate change[1] has led to the imminent rise of ever-expanding regimes of climate policy—what I will call greenhouse gas (GHG) management. International negotiations are currently under way in an attempt to secure consensus within the Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC or Framework Convention) regarding how best to coordinate international effort to achieve the Framework Convention's objective of stabilizing global GHG emissions at levels sufficient to prevent dangerous anthropogenic interference with the planetary climatic systems[2]—a goal that recent assessments by the Intergovernmental Panel on Climate Change (IPCC or Intergovernmental Panel) suggest would require dramatic reductions from present emissions levels.[3]

Despite an ostensibly coordinated top-down international response to the threat of climate change through the UNFCCC, however, in reality the task of stabilizing and reducing GHG emissions has manifested itself as an immensely complex and difficult process, grid-locking high-level political decision-making and only recently picking up speed in the form of a fragmented experimentalism at more localized levels.[4] Because climate change response can be extremely complex and involve many competing interests,[5] there are

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1. The concern is that the emission of certain gases in the course of a number of fundamental industrialized processes could reach a quantity that would cause the earth's atmosphere to trap an increasing amount of heat that would normally be radiated out to space, causing the overall global temperature to rise, and consequently altering a number of important eco-systemic processes. *See generally* International Panel on Climate Change, http://www.ipcc.ch/ [hereinafter IPCC].

2. *See* United Nations Framework Convention on Climate Change, *available at* http://unfccc.int/essential_background/convention/background/items/2853.php [hereinafter UNFCCC]. For up to date information on the ongoing negotiations, see UNFCCC Secretariat, http://unfccc.int/2860.php.

3. *See* IPCC, CLIMATE CHANGE 2007: SYNTHESIS REPORT. CONTRIBUTION OF WORKING GROUPS I, II AND III TO THE FOURTH ASSESSMENT, *available at* http://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_synthesis_report.htm [hereinafter FOURTH ASSESSMENT REPORT].

4. *See, e.g.*, David Victor et. al., *A Madisonian Approach to Climate Policy*, 309 SCIENCE 1820 (2005); Richard B. Stewart, *States and Cities as Actors in Global Climate Regulation*, 50 ARIZ. L. REV. 681 (2008).

5. *See, e.g.*, WILLIAM NORDHAUS, A QUESTION OF BALANCE: WEIGHING THE OPTIONS ON GLOBAL WARMING POLICIES (Yale University Press 2008) (approaching global response to

great political hurdles to simply establishing a holistic, coherent, and effective global administrative regime for top-down GHG management. As witnessed by the difficulties encountered in international negotiations regarding existing agreements on global climate change—including especially the failure to get all States to agree to binding limits on their future GHG emissions[6]—such hurdles to a top-down administrative design process may prove insurmountable. Political difficulties may thus significantly hinder the progressive development of comprehensive global GHG management, and in so doing, may obstruct the objective of UNFCCC itself—the stabilization of atmospheric GHG levels so as to prevent dangerous anthropogenic interference with the planetary climatic system.[7]

In addition to the mechanisms established by the Kyoto Protocol to the UNFCCC[8], GHG management campaigns have been undertaken by a substantial array of governmental and non-governmental actors. From national emissions regulation policies, to regional or sub-national governmental initiatives, to voluntary organized self-regulation, these initial instantiations of what must ultimately be understood as a global abatement effort are beginning to occur at multiple levels and scope of governance. In this paper I will focus on just one dimension of this fragmented process of GHG-management regime-development—requirements for GHG emissions accounting (measured in tons of carbon dioxide equivalent, or tCO_2e) and restrictions at the national level.

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climate change as a complex and highly interdisciplinary issue).

6. The UNFCCC Parties are categorized within two Annexes: Annex I Parties explicitly commit themselves to national GHG mitigation policies, whereas non Annex I Parties do not. *See* UNFCCC, *supra* note 2, Art. 4. Importantly, however, some non Annex I Parties are major GHG emitters. *See, e.g.*, Chris Buckley, *China Report Warns of Greenhouse Gas Leap*, REUTERS, Oct. 22, 2008, *available at* http://www.reuters.com/article/environmentNews/idUSTRE49L0Z920081022 (reporting on a Chinese Academy of Sciences 2008 report concluding that China, a non Annex I UNFCCC Party, is likely to contribute GHG emissions to the global atmosphere that "will tower over all others' much sooner and higher than an earlier government forecast indicated," and that "[r]esearchers abroad estimate China's carbon dioxide emissions now easily outstrip that of the United States, long the biggest emitter").

7. UNFCCC, *supra* note 2, at Art. 2 ("The ultimate objective of this Convention and any related legal instruments that the Conference of the Parties may adopt is to achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.").

8. Kyoto Protocol to the United Nations Framework Convention on Climate Change, *available at* http://unfccc.int/resource/docs/convkp/kpeng.pdf [hereinafter Kyoto Protocol].

Further, I will focus on just one aspect of GHG-emissions regulation—the regulation of GHGs emitted in the course of GHG-intensive *industrial production*.[9] Specifically, I will argue that the nature of GHG emissions and of contemporary globalized markets suggest that a State may most effectively and appropriately regulate its ongoing contribution to GHG emissions from global production by orienting its internal GHG-regulatory scheme so as to regulate production at the point at which the final product enters the national market for consumption. I will then trace the legal implications of this insight as a matter of international trade law. In utilizing the concept of border climate adjustment (BCA) schemes, I will mean a general category of national regulations directed at certain categories of imported products, which seek to impose a price approximating their production's cost to the global climate,[10] so as to preserve their competitive relationship with similarly regulated domestic production; conversely, BCA schemes may also include components directed at similar categories of exported products, which seek to remove certain domestically-assessed climate costs, in order to allow such products to be fairly taxed by the countries of their final destination.

I argue that BCA measures, when adopted in conjunction with domestic cap and trade legislation in which GHG emission permits are initially allocated by governmental auction, may be analyzed under the law of the World Trade Organization (WTO) in the same way as border tax adjustments levied on imports to adjust for what is essentially an internal indirect tax on GHG-intensive energy input into like domestic production—a tax paid by domestic producers to the government in the form of the purchase of emissions permits at governmental auctions. On this understanding, I argue that provided that such BCA measures do not, in their design or application, unjustifiably violate a WTO Member's legal obligations—such as the most favored nation or the national treatment provisions—they are in principle permissible as a matter of WTO law.

To illustrate, I propose some considerations for designing a WTO-compliant and environmentally effective BCA scheme to complement internal GHG emissions cap and trade programs. In the last section of this paper, I will contrast this origin-neutral design proposal with three important BCA schemes

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9. GHGs emitted in the course of certain energy-intensive industrial production are a significant source of GHG pollution worldwide. My use of the term 'GHG-intensive industrial products' will generally correspond to the use of the term 'primary product' in the U.S. BCA proposals discussed below. *See infra* note 128.

10. The imposed cost will, of course, reflect the political constraints on efficient regulation. Nevertheless, the important point is that such an approximation is the aim in the regulation of *both* imports and like domestic products.

recently proposed to the U.S. Congress, which tend to classify products according to their country of origin and to involve complicated determinations regarding whether the country in which a covered product was produced imposes GHG regulations that are 'comparable in effect' to those that would be imposed under the proposed U.S. acts. I argue that these proposals place the U.S. legislation into unnecessary tension with U.S. legal obligations under the General Agreement on Tariffs and Trade (GATT or General Agreement).

Some may argue that a successful international agreement within the UNFCCC COP may obviate the need for, or even prohibit the use of BCA measures. First, in the event that international consensus is not reached on a global regulatory scheme sufficiently stringent to ensure the level of emissions reductions recommended by the Intergovernmental Panel, Parties may wish to enact more stringent internal regulatory programs in furtherance of the Framework Convention's objectives. In that case, stringent regulatory schemes may not be politically viable without the inclusion of BCA measures (or without significantly reducing incentives for meaningfully restructuring the country's economic infrastructure toward a low-GHG economy). Second, as I will argue in the Sections that follow, the use of origin-neutral BCA measures may in any case be desirable as a matter of both economic efficiency and environmental effectiveness, by allowing for a healthy experimentalism and policy competition among diverse regulatory jurisdictions.

In sum, I will argue that (1) given the issue's complexity and the political difficulties of reaching timely international consensus regarding an appropriately stringent global GHG management regime, the use of well-designed BCAs may prove more successful at progressing the bottom-up development of comprehensive GHG management than an exclusive strategy of ex ante international negotiations (Section II); (2) BCAs may further prove advantageous from a number of important perspectives, including by encouraging greater popular sovereignty or sovereign autonomy, as well as greater regulatory competition in an uncertain field in need of innovation (Section III); (3) properly conceived, designed and implemented, BCA schemes are in principle consistent with a Member's legal obligations in the WTO (Section IV); and (4) existing legislative proposals for a BCA to complement the passage of a U.S. GHG-regulatory regime are designed in a way that unnecessarily conflicts with U.S. obligations under WTO law (Section V). A clash between global objectives with respect to climate change, which may require the use of BCAs to safeguard the individual effectiveness of bottom-up initiatives, and global trade objectives, which demand that such BCAs be applied so as to carefully impose as little restriction on trade as possible, may be unnecessarily detrimental to both sets of important interests.

II. Continued Relevance of BCA Despite International Negotiations in the UNFCCC COP

The UNFCCC is universally ratified by all Member States of the United Nations. There exists accordingly near universal consensus among the peoples of the world that GHG concentrations in the global atmosphere must be stabilized "at a level that would prevent dangerous anthropogenic interference with the climate system."[11] The IPCC, whose first assessment report served as a basis for negotiating the UNFCCC,[12] recently reported that "[g]lobal atmospheric concentrations of [GHGs] have increased markedly as a result of human activities since 1750 and now far exceed pre-industrial values,"[13] and that "[t]here is high agreement and much evidence that with current climate change mitigation policies and related sustainable development practices, global GHG emissions will continue to grow over the next few decades."[14] The IPCC further reports that "[m]ost of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic GHG concentrations,"[15] and that the impacts of a continued rise in global temperature, ranging across a two to three Celsius degree change from average temperature over 1980-1999, are likely to include "[h]undreds of millions of people [being] exposed to increased water stress"; "[u]p to 30% of species at increasing risk of extinction"; "[w]idespread coral mortality"; "[m]illions more people ... experienc[ing] coastal flooding each year"; "increasing burden from malnutrition, diarrhoeal, cardio-respiratory and infectious diseases"; and "[i]ncreased morbidity and mortality from heat waves, floods and droughts."[16]

Negotiating a comprehensive global regime for effective GHG management under the UNFCCC has proven a contentious and slow-moving affair. As is well-known, international recognition of a potential danger from

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11. UNFCCC, *supra* note 2, at Art. 2.

12. World Meteorological Organization & United Nations Environment Programme, *Intergovernmental Panel on Climate Change: 16 Years of Scientific Assessment in Support of the Climate Convention*, Dec. 2004, *available at* http://www.ipcc.ch/pdf/10th-anniversary/anniversary-brochure.pdf.

13. IPCC, FOURTH ASSESSMENT REPORT, *supra* note 3, § 2.2 *Drivers of Climate Change*.

14. *Id.* § 3.1 *Emissions Scenarios*.

15. *Id.* § 2.4 *Attribution of Climate Change*. Anthropogenic GHG emissions impact the global climate system in many complicated ways. *See id.* ("[D]iscernible human influences extend beyond average temperature to other aspects of climate change, including temperature extremes and wind patterns.").

16. *Id. Figure 3.6: Examples of Impacts Associated with Global Average Temperature Change*.

excessive GHGs in the planet's atmosphere began to gain momentum in the 1970s. The Intergovernmental Panel was established in 1988, and the Framework Convention adopted at the Earth Summit in 1992. At its third meeting, in 1997, the Conference of the Parties to the Framework Convention adopted the Kyoto Protocol, designed to lower collective GHG emissions in industrialized countries to about 5% below 1990 levels by 2012.[17]

Nevertheless, results have been mild. While IPCC findings suggest that GHG levels in the atmosphere should be reduced by approximately 80% relative to 1990 levels by 2050 in order to prevent dangerous interference with the global climate,[18] as of 2007 the global concentration of GHGs in the atmosphere was about 24% higher than in 1990.[19] It is likely that even the relatively modest aim agreed to in Kyoto—a reduction of just 5% of industrialized countries' GHG emissions relative to 1990 by 2012—may not be accomplished, given that the United States, whose territory contributes about one quarter of global GHG emissions,[20] is not a party, and that some states who are parties have already expressed concerns about their ability to meet their targets.[21]

At the thirteenth COP, in December 2007, the UNFCCC Parties agreed on a plan of action which emphasized "the urgency of confronting climate change as indicated in the fourth evaluation report of the IPCC."[22] In order to prevent the projected climatic changes attributable to a two to three Celsius degree rise in global temperature as a result of continued anthropogenic GHG emissions, the IPCC reports that overall global GHG emissions should be reduced by 50-85% relative to levels in the year 2000.[23] However, the UNFCCC contemplates

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17. *See generally* Kyoto Protocol, *supra* note 8. The protocol came into force in 2005. *See* UNFCCC, Kyoto Protocol, *available at* http://unfccc.int/kyoto_protocol/items/2830.php.

18. *See generally* IPCC, FOURTH ASSESSMENT REPORT, *supra* note 3.

19. World Meteorological Organization, WMO Greenhouse Gas Bulletin, *The State of Greenhouse Gases in the Atmosphere Using Global Observations through 2007*, *available at* http://www.wmo.int/pages/prog/arep/gaw/ghg/documents/ghg-bulletin-4-final-english.pdf.

20. *See* United States Environmental Protection Agency, *U.S. Greenhouse Gas Inventory Report*, *available at* http://www.epa.gov/climatechange/emissions/usinventoryreport.html.

21. *See, e.g.*, Environment Canada, *A Climate Change Plan for the Purposes of the Kyoto Protocol Implementation Act – 2007*, *available* at http://www.ec.gc.ca/doc/ed-es/p_123/CC_Plan_2007_e.pdf (referring to the economic difficulty in meeting deadlines set by the Kyoto Protocol).

22. UNFCCC, *Report of the Conference of the Parties on its Thirteenth Session*, at 3, *available at* http://unfccc.int/resource/docs/2007/cop13/eng/06a01.pdf#page=3 (last visited January 2, 2009).

23. *See* IPCC, FOURTH ASSESSMENT REPORT, *supra* note 3, Table 5.1 Note (a), at 67 ("The emissions reductions to meet a particular stabilisation level reported in the mitigation studies assessed here might be underestimated due to missing carbon cycle feedbacks.").

that, under the principle of Parties' "common but differentiated responsibilities and respective capabilities[,] . . . the developed country Parties should take the lead in combating climate change and the adverse effects thereof."[24] Accordingly, the findings of the IPCC Fourth Assessment Report have been interpreted on the basis of the UNFCCC's equity principle to require a 25-40% reduction of developed (Annex I) states' GHG emissions, relative to 1990 levels, by 2020, and a 80-95% reduction by 2050.[25]

Agreement regarding the distribution of global GHG abatement effort necessary to achieve the UNFCCC's objective in light of such IPCC findings has thus far been, and may continue to prove to be politically difficult. A complicating factor is the deep inter-penetration of GHG emissions reduction effort and fundamental economic drivers such as energy demand.[26] According to a recent written submission to the ongoing negotiating process,[27] the U.S. is committed to reaching international agreement in the UNFCCC COP to the extent that "the agreement will reflect the important national actions of all countries with significant emissions profiles to contain their respective emissions."[28] To that end, the U.S. seeks to require all Parties, including

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24. *See* UNFCCC, *supra* note 2, at Art. 23(1), (noting that while all Parties should protect the climate system, developed country Parties should take the lead).

25. *See* IPCC, "Emission Reduction Trade-offs for Meeting Concentration Targets," at 2, *Workshop on IPCC AR4 at Bonn Climate Change Talks - UNFCCC SBSTA 28th Session* (June 6, 2008) *available at* http://www.ipcc.ch/pdf/presentations/briefing-bonn-2008-06/emission-reduction-trade-offs.pdf (showing a projected 25–40% reduction of developed states' GHG emissions by 2020 under Scenario A). *See also* John Drexhage, International Institute for Sustainable Development [IISD], "*Overview of Outcomes of COP 13 and the Bali Action Plan*," at 4, *available at* http://www.iisd.org/pdf/2008/way_forward_drexhage.pdf (March 25, 2008) (referring to IPCC's table of emission reductions required to meet temperature scenarios).

26. *See* IPCC, FOURTH ASSESSMENT REPORT, *supra* note 3, at § 4.3 *Mitigation Options* ("Initial estimates show that returning global energy-related CO2 emissions to 2005 levels by 2030 would require a large shift in the pattern of investment, although the net additional investment required ranges from negligible to 5 to 10%.").

27. At the fifteenth COP in Copenhagen, Denmark, in December 2009, the UNFCCC Parties re-emphasized their commitment to the Framework Convention's objectives, *see* UNFCCC, *Copenhagen Accord*, at ¶¶ 1-2, *available at* http://unfccc.int/meetings/cop_15/items/5257.php (last visited January 31, 2010) [hereinafter *Copenhagen Accord*], particularly "with a view to reduce global emissions so as to hold the increase in global temperature below 2 degrees Celsius," *id.* at ¶ 2, and agreed to continue negotiations toward an international agreement on allocation of global GHG abatement effort. *See* UNFCCC, *Outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention*, at ¶¶ 1-2, *available at* http://unfccc.int/meetings/cop_15/items/5257.php (last visited January 31, 2010).

28. UNFCCC, Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA), *U.S. Submission on Copenhagen Agreed Outcome*, at 1, *available at* http://unfccc.int/files/kyoto_protocol/application/pdf/usa040509.pdf.

especially developing country Parties (with the exception of the least developed among them), to submit annual inventories of GHG emissions,[29] proposing that those developing country Parties "whose national circumstances reflect greater responsibility or capability"[30] take on quantified short-term emissions reduction targets and long-term reduction strategies "consistent with the levels of ambition needed to contribute to meeting the objective of the Convention."[31]

With respect to developing (non-Annex I) countries with "significant emissions profiles,"[32] certain countries in particular uncontroversially spring to mind. Although China has not reported an inventory of its GHG emissions to the UNFCCC since 1994,[33] studies suggest that China's GHG emissions surpassed those of the U.S. around 2006,[34] and "are now increasing about 10 times faster than in the United States."[35] Indeed, "[t]o put the size of the increase in [China's GHG] emissions in sharp perspective, it is significantly larger than the decrease in emissions embodied in the Kyoto protocol."[36]

In a recent submission to the ongoing negotiations, however, China emphasized that "[t]he most urgent requirement at present is to set the mid-term emission reduction target for developed country [Annex I] Parties, rather than a general long-term global goal,"[37] and warned that all Annex I Parties to the

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29. *Id.* at ¶ 5. The Framework Convention already requires annual reporting. UNFCCC, *supra* note 2, at Art. 4(1)(a). Many Parties, however, remain in perpetual breach of this obligation. *See generally* UNFCCC, *Greenhouse Gas Inventory Data – Detailed Data By Party*, *available at* http://unfccc.int/di/DetailedByParty.do. The Copenhagen Accord agreed to at the fifteenth COP reiterates the requirement of national inventory reports from non Annex I Parties. *See Copenhagen Accord*, *supra* note 27, at ¶ 5.

30. *Id.* at ¶ 3.

31. *Id.*

32. *See* IPCC, FOURTH ASSESSMENT REPORT, *supra* note 3 (referring to developing countries that would require a significant shift in economic investment to meet GHG emissions reduction goals).

33. *See* UNFCCC, *Greenhouse Gas Inventory Data – Detailed Data By Party*, *available at* http://unfccc.int/di/DetailedByParty.do.

34. *See* Maximilian Auffhammer & Richard T. Carson, *Forecasting the Path of China's CO2 Emissions Using Province-Level Information*, 55 J. ENVT'L ECON & MANAGEMENT 229, 229 (2008) (paraphrasing strong prediction that China's carbon dioxide emissions will surpass the United States by 2006).

35. Richard Harris, *Greenhouse Gas Emissions Rise in China*, NATIONAL PUBLIC RADIO, ALL THINGS CONSIDERED, Mar. 14, 2008, *available at* http://www.npr.org/templates/story/story.php?storyId=88251868 (stating that China's GHG emission levels are now increasing about ten times faster than the U.S.).

36. Auffhammer & Carson, *supra* note 34, at 245.

37. UNFCCC, Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA), *China's Submission on Elements to be Included in the Draft Negotiating Text of LCA*, at § 1(e), *available at* http://unfccc.int/files/kyoto_protocol/application/pdf/china240409b.pdf (last visited January 31,

Convention must commit to at least a 40% reduction relative to 1990 levels by 2020 before meaningful dialogue regarding long-term global commitments may begin.[38] (To put this requirement into perspective, consider that the European Union, which boasts the world's most sophisticated and effective GHG permit market,[39] has voiced a commitment to reduce only 30% of its 1990 emissions levels, provided other Annex I countries make similar commitments, and only 20% if no comparable commitments are made.[40]) Further, as has already been noted, China has not reported its GHG inventory to the UNFCCC since 1994,[41] a move that some have speculated reflects the country's persistent fear of, and continued resistance to, pressures to accept quantified reduction targets.

The point is not to lay blame on any one Party for its negotiating position. As Gregg Marland, a researcher in the Carbon-Climate Simulation Science Group at the Oak Ridge National Laboratory, rightly points out, "[a] significant fraction of emissions from China are to produce goods that will be consumed in the United States,"[42] a point I will return to. I seek rather to emphasize the significant obstacles which still remain in the way of an ex ante international consensus regarding restrictions on GHG emissions which are sufficiently stringent to achieve the massive reductions suggested by the IPCC as required to achieve the UNFCCC's objective. In this case, the unilateral measures that large-market UNFCCC Parties like the E.U. or the U.S. will choose to undertake in furtherance of the Convention's objective will be of vital importance to the continued development of an effective inventory of and regulatory regime for global atmospheric GHG concentrations.

One potentially highly effective way in which Parties have proposed to regulate GHG emissions is by putting a price on every ton of GHG emitted in the course of particularly GHG-intensive production, such as iron, steel, aluminum, pulp and paper, and cement.[43] Importantly, however, both industry and environmental interests have raised concerns regarding the probable

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38. *Id.*; *see also id.*§ 2(b).

39. *See generally*, European Commission, Environment, Climate Change, *Emission Trading System (EU ETS)*, *available at* http://ec.europa.eu/environment/climat/emission/index_en.htm (last modified July 5, 2009).

40. *See* European Commission, Environment, Climate Change, *available at* http://ec.europa.eu/environment/climat/home_en.htm (last modified February 10, 2009) (paraphrasing the EU's intentions to reduce emissions, dependent upon other Annex I countries' similar commitments).

41. *See* UNFCCC, *supra* note 33.

42. Harris, *supra* note 35.

43. *See, e.g.*, Warner-Lieberman Climate Security Act of 2008, S. 3036, 110TH CONGRESS at § 6001(10) [hereinafter Warner-Lieberman].

increase of production in less regulated jurisdictions, and the attendant rise in GHG emissions, that unilateral domestic regulation is likely to engender in a world of globalized markets.[44] Accordingly, measures to correct for the competitiveness-distorting/ emissions leakage effects of domestic GHG regulation may prove a necessary component of such nationwide schemes, both as a matter of political viability and environmental effectiveness.

A logical way of dealing with leakage is to assess the cost of GHGs emitted in the course of production at point of market entry—if the final product seeking market access is required to pay the climate costs of production at the point of accessing the market in the country of destination (consumption), irrespective of the regulations in place in the country of origin (production), then the competitive relationship between products produced in the country in which they are consumed and those consumed in the same market but produced in other regulatory jurisdictions will in principle remain unaffected by the additional costs, if any, imposed upon industry by GHG regulation. Such market access-conditioning provisions fall within the scope of what I have followed others in calling border climate adjustment measures (BCAs). Until recently, BCAs have been the preferred method of approaching the GHG emissions leakage issue, with both the U.S. and E.U. entertaining proposals for BCA schemes with respect to certain categories of imported products to complement the imposition of a price on GHGs emitted in the course of like domestic production.[45]

Recently, however, as a result of intense political pressure,[46] proposals for a market access-conditioning approach to combating the leakage concerns of national GHG regulation have yielded to a preference instead for a scheme which essentially subsidizes the regulatory compliance costs of internationally competitive GHG-intensive industrial production. Rather than forcing the internalization of production's cost to the global climate into the costs of production of all GHG-intensive industry seeking access to the regulated market, the current approach—embodied in, for example, recent draft legislation in the U.S. House of Representatives[47] or the recent European

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44. E.U. Commission President José Manuel Barroso has observed that "[t]here would be no point in pushing EU companies to cut emissions if the only result is that production, and indeed pollution, shifts to countries with no carbon disciplines at all." EURACTIV.COM, *EU Warned of Trade War Over Climate Measures*, Jan. 28, 2008, *available at* http://www.euractiv.com/en/trade/eu-warned-trade-war-climate-measures/article-169878.

45. *See* Warner-Lieberman, S. 3036, §§ 6001 *et seq.*; E.U. Commission, Draft Directive amending Directive 2003/87/EC – Future Allowance Import Requirement (FAIR).

46. *See, e.g.*, EURACTIV.COM, *supra* note 44.

47. *See* American Clean Energy and Security Act, H.R. 2454, 111th U.S. Cong. (2009) (as passed by the House) [hereinafter ACESA (House)]. The ACESA was negotiated on the basis

Commission proposal for a directive amending the E.U. Emissions Trading Scheme[48]—seeks rather to rebate the costs of emissions permits to leakage-prone (i.e., internationally-competitive GHG-intensive) industry, or else to allocate such permits to such industries free of charge.[49] Needless to say, the structure of this approach is evidently contrary to the very object and purpose of putting a price on GHG emissions in the first place—if globally-competitive GHG-intensive industrial sectors are effectively *exempt* from having to pay the (approximate) costs of their production to the global atmosphere, then they have little incentive to restructure their cost-benefit analyses in ways that more nearly approximate optimal social efficiency, and accordingly little incentive to reorient themselves on a path toward a low-GHG economy.

The arguments in favor of this switch from BCA-enabled approximately equivalent market access-conditioning requirements for domestic and imported production to the exemption of competitive energy-intensive industry from the GHG regulatory burden generally take the form of a fear of protectionism and challenge in the WTO.[50] As I hope this paper will show, a properly designed BCA not only better safeguards the object and purpose of national GHG-intensive production regulation (i.e., the establishment of a price on every ton of GHG emitted in the course of covered production), but is in principle entirely compatible with a Member's legal obligations in the WTO. Furthermore, as I will argue in the following Section, from the perspective of environmental effectiveness (i.e., a given regulatory scheme's ability to effect meaningful GHG emission reductions), as well as from that of sovereign autonomy (i.e., a given sovereign's control over its GHG cost-internalization strategy), appropriately designed and implemented BCA measures may not only be a more environmentally attractive option for making national GHG regulation more politically viable, but may in any case be a more desirable

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of an initial discussion draft. *See* Reps. Henry Waxman & Edward Markey, Discussion Draft, H.R. 2454, 111th U.S. Cong. at §§ 768 et seq. (May 15, 2009), *available at* http://energycommerce.house.gov/Press_111/20090515/hr2454.pdf. The discussion draft provides an additional example of a proposal including the possible use of BCA in conjunction with mandatory GHG restrictions. *See infra*, Section V.

48. *See* E.U. Commission, *Proposal for a Directive of the European Parliament and of the Council Amending Directive 2003/87/EC So As To Improve and Extend the Greenhouse Gas Emission Allowance Trading System of the Community*, at 13–14, *available at* http://ec.europa.eu/prelex/detail_dossier_real.cfm?CL=en&DosId=196654.

49. *Id.* at 14.

50. *See, e.g.*, EURACTIV.COM, *supra note* 44 (noting that while rebates to competitive industries may be similarly open to challenge in the WTO as actionable subsidies under the SCM Agreement, Members are often less likely to bring challenges to subsidies, for fear that their own subsidies to domestic industry will be left more open to attack).

alternative to a detailed and rigid ex ante harmonization of international GHG regulatory policy.

III. BCA Advantages from Environmental, Sovereign Autonomy, and Economic Efficiency Perspectives

A. Environmental

As previously noted, for large market players like the United States, joining and implementing an international protocol with binding commitments to significantly reduce GHG emissions raises concerns that all global GHG emitters be similarly required to take on binding commitments.[51] One concern in this regard is global competitiveness: at least at present levels of technological innovation, meaningfully restricting firms' ability to emit GHGs has the potential to initially raise their costs of production, hampering their short-term competitiveness in a global marketplace relative to firms located in countries that do not impose similar costs on their industry.[52]

This concern about industry viability translates into a problem of global GHG management which transcends State borders. Because the nature of GHG emissions is such that their effect upon global atmospheric GHG concentrations is irrespective of the *location* of their emission, loss of competitiveness of industry within one regulatory jurisdiction threatens, in a globalized world with significantly liberalized markets, to lead to increased production within or general relocation to *less* regulated jurisdictions. This in turn results in greater total levels of GHG emissions worldwide, accordingly undermining the environmental objectives of those countries with more stringent emissions regulatory schemes.

The very same competitiveness concerns that make unilateral GHG restrictions difficult accordingly have important implications for the actual effectiveness of any State's implemented commitment to limit its own contribution of GHGs to the global atmosphere, for if business relocates from one territory to another, it not only takes its economic benefits with it, but also its emissions. The impetus behind a political push for BCA measures to complement strong regulation of GHGs emitted in the course of domestic production—such as the European Emissions Trading Scheme, or the kind of national cap and trade draft proposals now circulating in the U.S. Congress—accordingly has simultaneously a trade competitiveness concern *and* an

51. *See generally* Byrd-Hagel Resolution, S. RES. 98, 105TH Cong. (1997).

52. *See generally id.*

environmental concern behind it. This impetus is known as the problem of emissions leakage.[53]

Imagine the following: Rather than negotiating a comprehensive ex ante distribution of global GHG stabilization effort, the UNFCCC Parties agree to build up a global GHG management scheme by leaving it up to each Party to effectively regulate is own contribution to ongoing[54] GHG emissions worldwide. To prevent against emissions leakage – that is, to *effectively* regulate some discrete portion of continued global GHG emissions which may be directly traced back to consumption demands within a given national market – each party regulates the emissions emitted in the course of producing only and all those units of (covered) production that enter its market.[55]

Under existing international law, each Party is free to experiment in the regulation policies it adopts in furtherance of the object and purpose of the UNFCCC (or its specific abatement obligations under the Kyoto Protocol). Further, as I aim to show in the following Section, if a WTO Member chooses to regulate a portion of worldwide ongoing GHG emissions that is directly linked to its national market by conditioning access to the market by GHG-intensive goods, then it is free to do so, particularly when the scheme does not offend the two great pillars of the General Agreement—that no trading partner is favored over another, and that the scheme is not protectionist.

From the perspective of the UNFCCC—that is, achieving stringent and effective GHG stabilization effort that, *inter alia*, comprehensively covers the vast majority of GHGs emitted in the course of certain GHG-intensive production—the market access-conditioning approach may have an advantage over an internationally negotiated consensus on a comprehensive global regulatory architecture. Consider again the negotiating positions of big emitters and big consumers of GHG-intensive products, such as the U.S. and China. As these negotiating positions appear difficult to reconcile, many fear agreement on sufficiently stringent allocation of GHG abatement effort may not be forthcoming.[56]

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53. *See, e.g.*, ZhongXiang Zhang & Andrea Baranzini, *What Do We Know About Carbon Taxes? An Inquiry Into Their Impacts on Competitiveness and Distribution of Income*, 32 ENERGY POL'Y 507, 512–16 (2004) (arguing in the context of a tax analysis that any legislation that imposes a rise in production costs—whether by tax or by price of tradable allowance—will have the same effect).

54. This would not include historical emissions. Historical responsibility is not a question of efficiency and should therefore be dealt with by other mechanisms; for example, side payments, capacity-building, technology-transfer, etc.

55. *See infra* Section IV.

56. *See supra* Section II.

Now consider the possibility that the U.S. adopts a regulatory policy with respect to GHG emissions that consumption demands within its regulatory jurisdiction cause to be emitted in the course of GHG-intensive industrial production, conditioning access to the U.S. market for such products (whether domestically produced or imported) on surrendering a number of emissions permits equal to the tCO_2e emitted per unit of product entered onto the market, averaged over total production volume (i.e., a nationwide cap and trade scheme coupled with the type of BCA that I will argue for in Section IV below). As the analysis in the next Section will show, were such a scheme to be carefully designed and applied so as to be neither protectionist nor discriminatory among trading partners, it would likely withstand challenge in the WTO. Nevertheless, it is foreseeable that, for example, China, having witnessed certain of its GHG-intensive exports to the U.S. incur additional climate costs under the BCA at the U.S. border, may seek to adopt and establish a similar market access-conditioning policy, so as to similarly impose climate costs on GHG-intensive products in *its* home market. Such border adjustment measures are, again, in principle consistent with China's obligations under the GATT, so long as access to the market is conditioned in this way for *all* products (Chinese and imported) consumed in China. The result of this likely development, if China is not to breach its WTO obligations, would therefore be another UNFCCC Party's effective regulation of those GHGs that are emitted in the course of GHG-intensive production as a result of *that* Party's contribution to global consumption demands.

Thus far under the above hypothetical, GHGs emitted in the course of, for example, steel that is eventually consumed in either the U.S. or China—that is, a significant percentage of all steel produced in the world[57]—are *effectively* (i.e., not subject to significant emissions leakage) under a GHG cost-internalization scheme. As other parties begin to appreciate the benefits of similar market access conditions,[58] the percentage of *regulated* tCO_2e emitted in the course of GHG-intensive industrial production would accordingly gradually rise to encompass the greater portion of all such emissions, culminating in the build-up of an eventual global regulatory scheme covering an important sector of worldwide GHG emissions.

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57. *See, e.g.*, UNITED STATES GOVERNMENT, U.S. GEOLOGICAL SURVEY, *Mineral Commodity Summaries, Iron and Steel*, Jan. 2009, *available at* http://minerals.er.usgs.gov/minerals/pubs/commodity/iron_&_steel/mcs-2009-feste.pdf; WORLDWATCH INSTITUTE, *Chinese Steel Production and Consumption Increase Sharply, Affect Economies Globally*, May 17, 2005, *available at* http://www.worldwatch.org/node/114.

58. Not the least of such benefits may be the significant revenue gains of BCA payments to the government.

B. Sovereign Autonomy

Further, consider the merits of such a bottom-up approach from the perspective of popular sovereignty and/or sovereign autonomy. Recall again that so long as a WTO Member's market access-conditioning policy does not discriminate among imports and like domestic products nor among trading partners (I will show in the next Section what such a BCA could look like), and so long as the Party's GHG policies successfully allow it to conform with its obligations under the UNFCCC and any subsidiary agreements, then the State remains free to adopt any policy its sovereign (in many Parties' case, the people) deems appropriate to achieve its goals. Unlike negotiations toward international consensus on a detailed global GHG management scheme, where the delegates who debate the many important issues that arise in this regard are unelected officials generally far removed from public scrutiny and influence, and where the resulting outcome is often presented to a restricted portion of domestic political representatives on an essentially take-it-or-leave-it basis,[59] the WTO-consistent BCA approach would encourage greater public participation and popular sovereignty with respect to the balance of interests necessarily at the heart of all GHG management policy.

It is true that not all Parties to the UNFCCC are democracies.[60] Nevertheless, no matter what kind of constitutional architecture a given State possesses, it will always be the case that a global GHG management strategy which leaves it up to each Party to regulate its own contribution to GHG emissions from global industrial production encourages greater sovereign autonomy—and hence generally involves the participation and influence of a greater portion of people in the relevant society—than a strategy seeking to impose an internationally negotiated consensus on that State's domestic policy from the top down.

C. Economic Efficiency

As discussed above, the eventual establishment of a comprehensive global GHG management regime in furtherance of the object and purpose of the UNFCCC does not necessitate agreement on an ex ante integrated scheme.

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59. There is of course the limited power of amendment through the practice of reservations, but this technique is hardly equivalent to a thorough public debate and opportunity to influence the actual structure of regulatory policy.

60. *See generally* Parties to the Convention and Observer States, http://unfccc.int/parties_and_observers/parties/items/2352.php (last visited November 8, 2009).

Using the destination principle with respect to regulating the internalization of climate costs into the costs of GHG-intensive industrial production—i.e., imposing these costs at point of market entry—facilitates the gradual build-up of an eventually comprehensive global GHG management regime by encouraging each Party to regulate its consumption demands' contribution to causing these emissions, without the fear of emissions leakage or loss of competitiveness. In addition, because such a gradual build-up would facilitate the emergence of best practices through regulatory competition, a fragmented market access-conditioning approach may encourage important efficiency gains by incentivizing competitive experimentation as the global economy gradually reorients itself to internalize climate costs into the cost of industrial production.

A paradigmatic leap of modern economics—evidenced by increasingly common coalitions between arguments from efficiency and arguments from environmental sustainability, and the rise of environmental economics more generally[61]—is that the environmental impact of business enterprise is a significant cost to society, a deadweight on the national economy, and one that must be accounted for in the cost-benefit analyses of economic rationality.[62] Once costs to systemic integrity (whether of the general social fabric or the underlying ecosystem) are recognized as negative externalities, it becomes clear that true economy-wide efficiency—a State's optimal comparative advantage—requires that these costs be internalized into economic decision-making—a recognition that "the path to true productivity [and competitiveness] is one where the goal is zero pollution and 100-percent efficiency."[63]

In fact, researchers have repeatedly confirmed the existence of a positive correlation between high environmental regulatory standards and economic profitability.[64] This is because internalizing the environmental costs into the

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61. *See, e.g.*, NATHANIEL O. KEOHANE & SHEILA M. OLMSTEAD, MARKETS AND THE ENVIRONMENT 2 (Island Press 2007) (arguing that economics provides the appropriate framework for analyzing environmental issues by properly measuring the cost and benefits of policy choices and ultimately choosing the policy that nets the greatest benefit to society as a whole).

62. In the United States, for example, the National Environmental Policy Act, 42 U.S.C. §§ 4321 *et seq.*, ensures that environmental impact is included in federal regulatory cost-benefit analyses.

63. CURTIS MOORE & ALAN MILLER, GREEN GOLD: JAPAN, GERMANY, THE UNITED STATES, AND THE RACE FOR ENVIRONMENTAL TECHNOLOGY 45 (Beacon Press 1994).

64. *See, e.g.*, MOORE & MILLER, GREEN GOLD, *supra* note 63, at 234–35 n.2 (finding a correlation between profitability and environmental performance and a link between profits and social responsibility, exemplified by a 16.7% higher profitability in various measures for firms that were most highly rated in environmental protection, charitable giving, community action, and advancement of women and minorities); *id.* at 75 (discussing an emerging body of evidence supporting a correlation between environmental protection and economic growth, including

cost of production encourages producers to further enhance production efficiency.[65] Accordingly, the more accurately a given regulatory jurisdiction accounts for and distributes the ecosystemic externalities of production (or, conversely, of consumption), the more it positions its regulated entities toward the realization of optimum efficiency and its attendant competitive advantage.[66] Hence "'[t]he nations with the most rigorous requirements often lead in exports of affected products' through reengineering of production methods to produce a better product at less cost."[67]

From this perspective, top-down harmonization of regulatory standards may be unnecessarily stifling.[68] On the same public policy principles that support global market liberalization generally, competition in approaches to public policy may serve to achieve greater net wealth of (global) public benefit: "Exploiting differences in government policies is no less legitimate than exploiting differences in natural endowments."[69]

Stephen Meyer's study that found States with stronger environmental policies consistently outperformed on all economic measures when compared to those states with weaker policies).

65. *See* DAVID VOGEL, TRADING UP: CONSUMER AND ENVIRONMENTAL REGULATION IN A GLOBAL ECONOMY 261 (Harvard University Press, 1995) ("Political jurisdictions which have developed stricter product standards force foreign producers in nations with weaker domestic standards either to design products that meet those standards or sacrifice export markets. This, in turn, encourages those producers to make the investments required to produce these new products as efficiently as possible.").

66. *See* MOORE & MILLER, *supra* note 63, at 44 (stating that experience "demonstrates that technology, innovation, and government policy can overcome resource and regulatory constraints").

67. *See id.* at 44 (quoting Michael Porter, *America's Green Strategy*, SCI. AM. 168 (1991)).

68. *See, e.g.*, Michael Trebilcock & Robert Howse, *Trade Liberalization & Regulatory Diversity: Reconciling Competitive Markets with Competitive Politics*, 6 EUR. J. L. & ECON. 9 (2005) ("[Albert] Breton argues that while the European Union is quite stable, this stability has been acquired by the virtual suppression of intercountry competition through excessive policy harmonization. While the principle of subsidiarity seems intended to address these concerns, it has often proven difficult to give it clear operational content.") (citing ALBERT BRETON, COMPETITIVE GOVERNMENTS 275 (Cambridge University Press 1996) (additional citation omitted); *id.* at 13–14 ("[T]o deny to countries of origin the political ability to set their own environmental policies, in the absence of technological externalities, is to flatly contradict the view of governments, persuasively developed by Breton, as competitive organizations which in the process of competing within and amongst each other enhance the accuracy of demand revelation for public goods and policies."). Trebilcock and Howse argue that "[p]rovided that countries respect the principle of non-discrimination by avoiding the adoption of policies or practices that violate the National Treatment Principle understood as guaranteeing effective equality of competitive opportunities (not outcomes) and do not engage in disguised or unjustifiable forms of discrimination, they should have broad latitude to determine their own (but not other countries') domestic policies." *Id.* at 28.

69. *Id.* at 14.

The concept of 'regulatory competition' generally refers to a situation in which two or more regulatory schemes 'compete' with each other for revenue or other benefit associated with hosting business enterprises within their respective jurisdictions. The idea is sometimes dramatized by the trope of a 'race to the bottom' or 'competition in laxity,' whereby it is theorized that the lack of an effective mechanism for top-down harmonization of minimum standards, combined with the relative ease of exit and relocation increasingly afforded by a progressively more globalized world, is likely to lead to long-term lessening of minimum standards across the board.[70] In fact, however, heterogeneous regulatory schemes have at least just as often led to a 'race to the top' or 'competition in stringency.'[71] This has been particularly the case where the regulatory schemes in question have taken the form of market access restrictions, such as the proposed BCA under consideration here.[72]

Furthermore, as Moore and Miller poignantly show, environmental regulatory competition among different regulatory jurisdictions can also affect long-term competitiveness on an economy-wide scale.[73] To illustrate, Moore and Miller analyze the dramatic shift in competitive relations between the United States, Japan, and Germany that occurred during the 1980s.[74] They report that in 1988, at the time that concerns over rising levels of GHG concentrations in the global atmosphere had lead to the establishment of the IPCC, the U.S. was poised "to establish itself as the unrivaled industrial power of the twenty-first century."[75] Instead, it was surpassed by Japan and Germany.[76] Moore and Miller argue that this was in significant part because Japan and Germany's stringent environmental regulations, by incentivizing economic rationality to take cost to society (in the form of environmental externalities) into account, provided demand for increasingly more efficient technology.[77] In the U.S., powerful sectors prevented the adoption of more

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70. *See, e.g.*, DALE D. MURPHY, THE STRUCTURE OF REGULATORY COMPETITION: CORPORATIONS AND PUBLIC POLICIES IN A GLOBAL ECONOMY 6–8 (Oxford University Press 2004) (discussing 'race to the bottom' and 'competition in laxity').

71. *See, e.g.*, *id.* at 7–8 (discussing 'race to the top' and 'competition in stringency').

72. *See id.* at 8–14 (suggesting that open economies will tend toward more stringent market access restrictions).

73. *See generally* MOORE & MILLER, GREEN GOLD, *supra* note 63 (stating that true economy-wide efficiency requires costs to be internalized with regard to economic decision-making).

74. *See generally id.*

75. *Id.* at 11.

76. *Id.* at 11–14.

77. *See id.* at 4 ("Germany and Japan, as well as virtually all the rest of America's primary

stringent regulatory standards to force the internalization of these externalities.[78] As a result, the U.S. regulatory structure failed to incentivize the readjustment in U.S. industrial infrastructure that would have allowed for an advantageous trading position in a world of finite oil resources and increasing consumer demand for efficiency and environmental sustainability.[79]

Consider again my proposal for a national BCA conceived on the basis of the destination principle, as discussed above. Assume that State A adopts a GHG regulatory policy that places a cap on the total quantity of GHGs allowed to be emitted in the course of production for domestic consumption within a given compliance period—say, three years. Assume—on the basis of a cost-benefit analysis which incorporates inter-related considerations including the average cost and/or revenue of the program to State A per compliance period; the average net costs and/or profits to State A's industries that flow as a result of the regulatory scheme; the scheme's effectiveness at achieving significant reductions in the GHG emissions of domestic production; as well as the scheme's resultant incentive structures for encouraging domestic innovation in efficiency-enhancement and technological development geared toward long-term global demand—that the net benefit of State A's regulatory program is X.[80]

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industrial competitors, have adopted a wide range of policies designed to coax or compel the development and commercialization of technologies, practices, and industries that do their jobs as well or better…while producing less pollution."); *id.* at 21 (stating that Japan's motivations for environmental advancements have been strictly commercial and intended to serve sensitive export markets in order to compete in the world market); *id.* at 23 ("Germany has shown how environmental protection through regulation enhances product development, how technological innovation produces domestic jobs and international competitiveness, and how competitiveness in turn enhances the domestic economy and creates jobs.").

78. *See id.* at 79–81 (listing various factors explaining how and why U.S. corporations have so relentlessly and successfully opposed policies such as those adopted by Japan and Germany).

79. *See id.* at 102–03 (explaining how powerful industry lobbying to a few sectors' advantage—such as U.S. coal, oil, and gas enterprises—may lead to a situation where "policy constitute[s] a huge drain on [the State's] capital, impeding investments toward a more competitive industrial infrastructure").

80. Note that the Waxman-Markey draft would require the President, "in consultation with the [EPA] and other appropriate agencies," to, no later than June 30, 2017, submit to Congress a report on, *inter alia*, "the level of greenhouse gas regulation (including requirements, export tariffs, or other measures adopted to imposed to [sic] reduce greenhouse gas emissions) of particular sectors or subsectors in other developed or developing countries, and the cost of compliance with those regulations, taking into account the distribution of allowances, credits, or rebates." Waxman-Markey Discussion Draft, H.R. 2454, § 414(a)(3). This kind of monitoring of other Parties' climate policy would allow for the conditions for fruitful regulatory competition of the sort described in this section.

Now assume that State B adopts a different GHG regulatory policy within its jurisdiction—for example, a straightforward tax (not through sale of tradable allowances) on every tCO_2e emitted in the course of production for domestic consumption,[81] such that, on a cost-benefit analysis involving similar factors to those used for State A above, the net benefit of State B's regulatory program is (X + 1), whether because it is more cost-effective per tCO_2e-reduction, because it positions State B's industrial infrastructure into more favorable trade relationships given changing global demand, or by some other measure likely to be recognizable by State agents as beneficial to the long-term prosperity and competitiveness of their State. Given this situation, States C and D may be expected to either adopt the existing policy with the greatest net benefits—that of State B—improve upon State A's policy so as to raise its net benefits to at least (X + 2), or experiment with another alternative policy in an effort to gain still greater net benefits. In all cases, the result is a gradual progression toward the adoption of more and more efficient and effective regulatory approaches.

IV. BCA Is in Principle Compatible with Members' Obligations in the WTO

Having argued for the continued relevance of BCA measures despite ongoing attempts to reach international consensus on a global GHG management regime, I will present in this Section a model BCA design that is both suitable to bestow the kinds of BCA advantages argued for above and does not run afoul of WTO Members' legal obligations. Importantly, unlike the kinds of BCA schemes that have been proposed to the U.S. legislature to date, which I will discuss in Section V below, the BCA scheme argued for here would not be designed so as to rest its WTO-compatibility on the GATT's General Exceptions regime under GATT Article XX. Rather than designing a scheme that concedes at the outset a prima facie violations of the GATT, making the restrictive exceptions regime under Article XX dispositive, the BCA scheme that I will argue for in this Section would be designed so as not to violate the GATT in the first place, thus obviating the need for justification analysis.

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81. As the scope of this article is limited to the regulation of GHGs emitted in the course of production, *see supra* Section I, I continue to restrict the analysis to a comparison of regulatory policies whose scope is limited in this way. Nevertheless, the conclusions of this section may apply to arguments in favor of regulatory competition in GHG management more broadly defined. *See* Geert van Calster, *Against Harmonization—Regulatory Competition in Climate Change Law*, 1 CARBON & CLIMATE L. REV. 89 (2008) (arguing for more climate policy competition).

The ultimate purpose of BCA is the preemption of emissions leakage. By effectively reorienting the point of climate cost internalization in GHG-intensive production from the point of production to the point of market entry, a BCA scheme (used in conjunction with a similar cost internalization scheme imposed on domestic producers supplying the national market) ensures that the emissions within its scope of regulation are not offset by the continued presence of non-regulated products in the marketplace. If GHG tons emitted in the course of industrial production were regulated by a national cap and trade scheme coupled with a BCA for imports and exports—that is, if the point of climate cost payment occurs at point of market entry—the problem of emissions leakage does not arise. Because production climate costs are equalized with those of domestic production through fiscal adjustment measures at the border of importing countries, producers face the same costs regardless of the level of GHG regulation in the country of origin.

The structure of the threat of emissions leakage suggests therefore that in an increasingly more globalized world, a UNFCCC Party's contribution to global anthropogenic GHG emissions may be more meaningfully measured not solely by the emissions that natural and juridical persons produce within its territory, but rather by the amount of GHG emissions that consumption by persons within its territory *cause to be produced in the world*. Reorienting the appropriate scope of a Party's regulatory power over GHG-intensive production to focus on domestic *consumption* (of both foreign and home-made GHG-intensive products) is thus in this way essentially a redescription of the environmental integrity objectives behind safeguarding against the threat of emissions leakage.

Consider then that rather than designing BCA measures purely to safeguard the competitive relationship between regulated domestic producers and unregulated foreign producers, BCA designs may be more fruitfully conceived as part of a holistic scheme for regulating domestic GHG consumption[82]—a straightforward application of the destination principle (the

82. The fact that BCAs serve both to retain competitiveness and to preempt emissions leakage is neither surprising nor undesirable. In fact, the coalition between environmentalists and big market players—sometimes metaphorically referred to as the union of Baptists and bootleggers—is characteristic of many defining leaps in large-scale environmental management. Particularly in the context of global GHG emission levels, the environmentalist concern from emissions leakage and the industry concern from loss of competitiveness due to the added cost of a forced private internalization of costs to a pure public good are mirrored sides of the same argument: irrespective of the motivations and principles employed by environmental as opposed to domestic industry lobbyists, both seek to ensure that imported products are also subject to the forced internalization of production's cost to the global climate. Nevertheless, whether the object and purpose of a BCA is conceived in terms of the need to protect the competitive relationship of domestic industry vis-à-vis its foreign competitors, or rather as a

principled understanding that certain costs should be levied at the point of consumption rather than point of origin) for GHGs effectively embodied in GHG-intensive products through having been caused to be emitted in the course of their production.

A. Proposal for BCA Scheme Design

Assume, for example, a cap-and-trade program requiring regulated industries to obtain and retire GHG emissions allowances for each tCO_2e released in the course of a given production period, subject to a nationwide cap on the absolute number of allowances available with respect to the same period, consistent with a number of existing schemes and national proposals. A BCA scheme then seeks to ensure that domestic consumption demands do not inappropriately distort the competitive relationship between domestic and imported covered products in a way that undermines a State's GHG stabilization effort through the threat of emissions leakage. Under my proposal, products that are 'like'[83] products whose production is regulated under the national cap-and-trade legislation would be required to undertake costs essentially equivalent to those imposed on domestic products by the cap-and-trade scheme upon entry into the U.S. market at the U.S. border.

In contradistinction to the kind of country-based BCA proposed in the U.S. legislative drafts discussed in Section V below, my proposal would establish an origin-neutral measure conditioning market-access on the purchase and surrender of GHG allowances equivalent to the (approximate) total tCO_2e emitted in the course of producing the quantity of product seeking entry into the U.S. market. This market-access condition would apply entirely irrespective of country of origin—whether the products seeking access to the U.S. market were

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matter of the realities of the developmental phases of comprehensive, effective and efficient global atmospheric GHG management, may have profound implications for the impact that such BCAs may have on international trade relations and the global environment.

83. The phrase consistently used in recent U.S. legislative drafts is "closely related to a good of the United States that is affected by a requirement of [the U.S. GHG cap enforcement statute]." Lieberman-Warner, H.R. 2454, § 6001(5)(C) (2008); Waxman & Markey Discussion Draft, H.R. 2454, § 411(1)(C); Reps. Rick Boucher & John Dingell, Discussion Draft, H.R. 2454, 111th U.S. Cong. § 781(7)(C) (Oct. 7, 2008). The ACESA (House) refers to "eligible industrial sectors," ACESA (House), *supra* note 47, § 767(c), which are to be designated by EPA rule (to be promulgated by June 30, 2011) on the basis of energy or GHG intensity. *Id.* at § 763(b). I will use the term 'like' for consistency with the General Agreement on Tariffs and Trade (GATT) by which I will mean both 'like' and 'directly competitive or substitutable' products. *See* General Agreement on Tariffs and Trade art. III, Oct. 30, 1947, 61 Stat. A-11, 55 U.N.T.S. 194 [hereinafter GATT].

produced in the U.S. or any foreign country,[84] *all* covered products are essentially taxed with respect to the (approximate) input of GHG-emitting energy into their production. Note that this requirement is not the same as conditioning market-access on production process-based restrictions, under which "[f]oreign producers can use whatever processes they want, and use them with impunity[;] [t]he only thing they cannot do is bring products produced with certain processes into the country."[85] To the contrary, the proposed BCA would not condition market access on any particular production process, but would simply tax the GHG-emitting energy inputted during production.

My proposal is that the requirement that producers of certain covered goods be made to surrender at the end of a given compliance period a quantity of GHG emission permits equivalent to the tons of GHG emitted in the course of production during the same period should be conceived, for purposes of a Member's legal obligations in the WTO, as a tax on the production input of GHG-intensive energy, per unit of production seeking entry to the U.S. market. On this understanding, the general legal mechanism that I have called a BCA scheme may fit within existing structures of international trade law as a legitimate border tax adjustment measure, a regulatory tool recognized by trade law for some time.[86]

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84. Subject to the usual exceptions regarding LDCs and countries determined to be responsible for less than 0.5% of global GHG emissions. All four U.S. drafts that will be considered below, *see infra* Section V, exclude countries of origin that have been designated by the United Nations as least developed countries, as well as those whose total annual GHG emissions are determined not to exceed 0.5% of total GHG emissions worldwide, from being subject to the BCA. *See* Lieberman-Warner, H.R. 2454, §§ 6006(b)(2)(A)(ii), 6006(b)(2)(B); Boucher & Dingell Discussion Draft, *supra* note 83, §§ 786(b)(2)(A)(iii), 786(b)(2)(B); Waxman & Markey Discussion Draft, *supra* note 47, § 416(a)(C); ACESA (House), *supra* note 47, §§ 768(a)(1)(E)(ii)–(iii).

85. Robert Howse & Donald Regan, *The Product/Process Distinction—An Illusory Basis for Disciplining 'Unilateralism' in Trade Policy*, 11 EUR. J. INT'L L. 249, 274 (2000).

86. *See generally* Paul Demaret & Raoul Stewardson, *Border Tax Adjustments under GATT and EC Law and General Implications for Environmental Taxes*, 28 J. WORLD TRADE 5 (1994).

B. Consistency with WTO Member Obligations

1. The Forced Internalization of Climate Costs Through Payments to the Government Is a Tax, Whether Accomplished Through Direct Taxation or a Cap and Trade Program with Auctioned Allowances

The global atmosphere is a pure public good—regardless of anyone's individual contribution to global GHG pollution or abatement effort, the resulting atmospheric GHG concentrations are nevertheless more or less the same for everyone. Because the atmosphere is not divisible into private portions that each individual could live within and pollute or conserve as one wishes—that is, because the atmosphere is a non-excludable resource—no matter what my individualized GHG pollution or abatement effort, I end up with exactly the same concentrations in 'my' atmosphere you do in 'yours.' Because the costs of any GHG pollution are dispersed among everyone in the world, they do not enter my cost-benefit equation when I decide whether to engage in GHG emissions-intensive activity. The problem of excessive GHG concentrations in the global atmosphere—representing significant accrued costs distributed throughout various sectors of global society[87]—occurs because the incremental costs of large scale private GHG emissions (such as industrial production) will almost *never* register in individualized cost-benefit equations, while continuing to accrue to global society as a whole. Public climate policy through GHG management seeks therefore to respond to this situation by ensuring that such incremental climate costs are internalized in the economic decisionmaking of significant GHG emitters by imposing a *price* on every tCO_2e emitted.

While CO_2e cap and trade programs may be preferable for the relative certainty they permit with respect to actual emissions abatement effort, such considerations should not obfuscate the fact that a cap and trade scheme is still structured so as to impose a price—essentially a tax—on every tCO_2e emitted in the course of certain GHG-intensive production. In fact, in a world of complete certainty, a tax on every ton of GHG emitted or a cap on the total amount of GHG emissions allowed and a market in which individual GHG ton permits may be traded would internalize the social costs of GHG emissions into

87. *See, e.g.*, United Kingdom, *Stern Report Review on the Economics of Climate Change*, *Summary of Conclusions*, at vii ("Using the results from formal economic models, the Review estimates that if we don't act, the overall costs and risks of climate change will be equivalent to losing at least 5% of global GDP each year, now and forever. If a wider range of risks and impacts is taken into account, the estimates of damage could rise to 20% of GDP or more.") *available at* http://www.hm-treasury.gov.uk/sternreview_index.htm.

individualized costs of production in exactly the same way.[88] The difference is that with a tax, price certainty is privileged over certainty with respect to total GHG emissions. The price is certain because it equals the tax. Emissions reductions are *un*certain because the costs of abatement may be uncertain, and hence it is uncertain how many entities would choose to pay the tax rather than face higher abatement costs. In the case of a GHG emissions cap-and-trade scheme, on the other hand, the situation is reversed—the emissions reductions are (relatively[89]) certain because they are those set by the cap, while the price of each ton of GHG emitted becomes *un*certain as unexpectedly high costs of abatement may increase demand for, and hence the value of, existing allowances.

Given the uncertainty of GHG abatement costs as we await helpful technological innovation, the use of a tax is preferable when certainty about actual GHG abatement is not immediately necessary, such as when marginal damages from climate change (and hence the marginal benefits from its abatement) are linear—the fixed price (which may be periodically adjusted to approach efficiency, where the marginal cost and benefit of GHG emission are equated) allows for the internalization of GHG emission costs to society at rates that do not overburden the economy, hence providing for optimal social welfare.

On the other hand, despite the same uncertainty with respect to abatement costs, a GHG emissions cap may nevertheless be preferable when certainty about achieving particular abatement levels *is* important, such as when marginal damages from climate change are *not* linear, as when certain levels of GHG concentrations in the global atmosphere may trigger catastrophic global damages.[90] A number of climate change experts have predicted the existence of certain 'tipping points' in the process of climate change—where damage from climate change, rather than following a linear progression, occurs irreversibly and at an increasing rate.[91] One of the better understood of these

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88. Martin L. Weitzman, *Prices vs. Quantities*, 41 REV. ECON. STUDIES 477 (1974). *See also* KEOHANE & OLMSTEAD, *supra* note 61 (providing an overview of relevant economic theories).

89. I say 'relatively' certain because certainty depends above all on the feasibility and actuality of compliance, and because most existing cap-and-trade proposals include some sort of cost-containment mechanism in the event that a cap appears too stringent in the face of extreme costs of abatement, such as an allowance reserve or a 'safety valve.' *See, e.g.*, Henry D. Jacoby & A. Denny Ellerman, *The Safety Valve and Climate Policy*, 32 ENERGY POL'Y 481 (2004).

90. *See generally* Nathaniel O. Keohane, *Cap and Trade, Rehabilitated: Using Tradable Permits to Control U.S. Greenhouse Gases*, 3 REV. ENVTL. ECON. POL'Y 63 (2009); Weitzman, *supra* note 88.

91. *See, e.g.*, Timothy M. Lenton et al., *Tipping Elements in the Earth's Climate System*,

predictions is that of an irreversible meltdown of the Greenland Ice Sheet once global temperature reaches a certain level, causing global sea level to rise by as much as several meters. Other such potential points include the collapse of the Atlantic thermohaline circulation, which carries heat from the tropics to Northern Europe; a significant decrease in Indian summer monsoon precipitation, which is responsible for irrigating food for millions of people; and decreased precipitation in the Amazon and Boreal forests, significantly deteriorating these crucial ecosystems and global carbon sinks.[92]

Accordingly, a cap-and-trade (quantity) approach may be preferable to a direct tax (price) approach with respect to the internalization of climate costs from GHGs emitted in the course of production, even while the essential purpose of both mechanisms remains the same—the imposition of a *price* upon every tCO_2e emitted in the course of GHG-intensive industrial production. For present purposes—that is, the proposal and analysis of a BCA scheme design sufficient to permit a State's effective regulation of GHGs emitted in furtherance of its consumption demands—the legal architecture and specific mechanisms that a particular legislature chooses to achieve this general policy are irrelevant. All that is required in this respect for purposes of the present analysis is that the regulatory policy seeks to impose a price on GHGs emitted by some covered sector(s) of the economy. My argument in this Section is that the imposition of such price, by whatever means (whether through direct tax or cap and trade, or some other alternative) is equivalent, as a matter of WTO law, to a tax on the emission of these GHG tons.

2. BCA as BTA

Because the regulatory purpose of a well-designed BCA, coupled with a national cap-and-trade scheme which initially allocates tCO_2e permits by government auction, is essentially the same as that behind a direct tax levied at point of market entry for GHGs emitted in the course of certain products' production, such BCA may, in principle, be structurally conceived as a

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105 PROC. NAT. ACAD. SCI. 1786 (2008); Lisa Moore, *9 Dangerous "Tipping Elements"* (February 13, 2008 blog post), http://blogs.edf.org/climate411/2008/02/13/tipping_elements/; Alok Jha, *Scientists Warn On Climate Tipping Points*, THE GUARDIAN, Aug. 16, 2007, *available at* http://www.guardian.co.uk/environment/2007/aug/16/climatechange.greenland.

92. *See* Lenton, *supra* note 91; Moore, *supra* note 91; Jha, *supra* note 91. Note that not all tipping points are predicted to lead to catastrophic damages—with "large uncertainty," it is predicted that precipitation in the West African Monsoon could *increase*, leading to greening, where "the societal impact could be very positive—a rare potential benefit of climate change." Moore, *supra* note 91.

legitimate and legal border tax adjustment (BTA) scheme. In 1968, the GATT Contracting Parties established a Working Party to analyze and clarify existing international trade law on BTAs, whose report was subsequently adopted in December 1970 (BTA WP).[93] The BTA WP adopted the OECD definition of taxes: "compulsory, unrequited payments to general government. They are unrequited in the sense that benefits provided by government to taxpayers are not normally in proportion to their payments."[94]

The forced internalization of climate costs into costs of production through mandatory requirements to purchase and retire a number of GHG emission allowances or credits equal to the tons of GHG emitted in the course of a given compliance period easily fits within this broad definition: subtracting the value of GHG allowances distributed to domestic industry at no cost, rather than by governmental auction or through private transactions, the market price of GHG allowances or credits—which is in significant part a function of the stringency of a mandatory cap on total GHG emissions—paid to the government at governmental auctions, in addition to any penalties paid for every ton of GHG emitted in excess of surrendered allowances or credits, are payments to the government.

Are these compulsory payments to the government *unrequited*, or do they confer a benefit provided by the government in proportion to the price paid? One could argue that a governmental program imposing a price on every tCO_2e emitted does not require unrequited payment as in return for payment, the regulated entity receives the right to pollute a quantity of GHG tons precisely in proportion to that paid for. Nevertheless, it is clear that as a matter of public policy, GHG emission allowances should not be conceived as *benefits* in proportion to the payments made to the government in terms of their market price, as it would be inconsistent with the object and purpose and the general spirit of national GHG-capping legislation to construe such an Act as creating beneficial rights to pollute when its long term goals are in fact to drastically reduce or eliminate GHG emissions.[95]

Accordingly, a border scheme that seeks to ensure that imported product prices reflect an internalization of climate costs into their costs of production,

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93. WTO Committee on Trade and Environment, *Note by the Secretariat*: *Taxes and Charges for Environmental Purposes—Border Tax Adjustment*, WT/CTE/W/47, 2 May 1997, at 6 (citing BISD 18S/97) [hereinafter WTO CTE, *BTA*].

94. *Id.*

95. *See also* Matthieu Wemaëre, *Legal Nature of Kyoto Units*, *in* THE KYOTO PROTOCOL AND BEYOND: LEGAL AND POLICY CHALLENGES OF CLIMATE CHANGE 71, 73 (Wybe Th. Douma et al. eds., Cambridge University Press, 2007) (noting that "the Kyoto Protocol does not create any rights to emissions or the atmosphere, but it only creates the right for some Parties to a limited pollution for a defined timeframe").

similar to that enforced upon competitive domestic products may in fact be characterized as a border *tax* adjustment scheme, under the broad definition of taxes used by the BTA WP, for purposes of WTO law.[96]

The BTA WP adopted the following definition of BTA:

> [A]ny fiscal measures which put into effect, in whole or in part, the destination principle (i.e. which enable exported products to be relieved of some or all of the tax charged in the exporting country in respect of similar domestic products sold to consumers on the home market and which enable imported products sold to consumers to be charged with some or all of the tax charged in the importing country in respect of similar domestic products).[97]

Under the destination principle, goods are taxed at the point of consumption.[98] As argued for above, regulating GHGs emitted in the course of certain GHG-intensive industrial production at the point of market entry for final consumption obviates the emissions leakage problem by eliminating the conditions which lead to it. In a domestic GHG management scheme which regulates industrial production on the destination principle, the presence of products not subject to regulatory climate costs is not tolerated. Accordingly,

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96. Note that the Panel's analysis in *United States—Measures Affecting the Importation, Internal Sale and Use of Tobacco*, Report of the Panel, adopted by the Council Oct. 4, 1994, DS44/R, *available at* http://www.sice.oas.org/dispute/gatt/94tobaco.asp [hereinafter *US—Tobacco*], regarding which charges should be analyzed as *taxes* under GATT Art. III:2, and which as *regulations* under Art. III:4, supports this conclusion. In *US—Tobacco*, the penalty provisions that the Panel denied could be analyzed as a tax were emphasized to have lacked any purpose without the underlying regulations that they were meant to enforce. Distinct from that situation, the charge at issue here—the payment of a price for GHG emission—is not subsidiary to any other regulation. Its primary purpose is precisely to obtain payment from certain covered entities.

97. WTO CTE, *BTA*, *supra* note 93, at 6.

98. Demaret & Stewardson, *supra* note 86, at 6 ("According to the destination principle, goods should be taxed only in the country of consumption. In theory, adjustments made pursuant to the destination principle mean that, while each country is able to implement its own domestic taxation regime, products from all countries are able to compete in international trade on the same competitive terms, neither suffering from double taxation, nor deriving an advantage from a more favourable domestic tax regime in their country of origin.").

For historical context on the destination principle, *see id.* at 6 n.6 ("In the degree then in which [domestic] taxes raise the price of corn, a duty should be imposed on its importation ... and a drawback of the same amount should be allowed on the exportation of corn. By means of this duty and this drawback, the trade would be placed on the same footing as if it had never been taxed . . . .") (quoting WORKS AND CORRESPONDENCE OF DAVID RICARDO, Vol. IV (Cambridge University Press) (citing also ADAM SMITH, AN INQUIRY INTO THE NATURE AND CAUSES WEALTH OF NATIONS, Book Four, Ch. IV (Everyman's Library 1991); TAX HARMONIZATION IN THE EUROPEAN COMMUNITY: POLICY ISSUES AND ANALYSIS (George Kopits ed., IMF 1992); JOHN JACKSON, THE WORLD TRADING SYSTEM: LAW AND POLICY OF INTERNATIONAL ECONOMIC RELATIONS (MIT 1989)) (additional citation omitted).

competition is not distorted in favor of unregulated products, unregulated production and its added GHG emissions do not increase as a result, and those GHG tons upon whom the State has chosen to impose a price—those caused to be emitted by its domestic consumption demands—are not offset, and hence are *effectively* regulated.

The BTA WP further concluded that:

> [T]here was convergence of views to the effect that taxes directly levied on products were eligible for tax adjustment. Examples of such taxes comprised specific excise duties, sales taxes and cascade taxes and the tax on value added . . . . Furthermore, the Working Party concluded that there was convergence of views to the effect that certain taxes that were not directly levied on products were not eligible for tax adjustment. Examples of such taxes comprised social security charges whether on employers or employees and payroll taxes.[99]

Accordingly, the adopted BTA WP report emphasized a "convergence of views" that indirect taxes—those levied directly on the product—are eligible for border adjustment, whereas direct taxes—those levied on the producer—are not.[100] However, the BTA WP also reported that, despite convergence of views on the eligibility for border adjustment of most types of taxes—generally falling along this direct/indirect distinction—a divergence of views had nevertheless persisted with respect to the adjustability of other types of taxes, notably including "taxes occultes," where "[t]axes on ... *energy*" were "among the more important taxes" in this category of at the time still uncertain adjustability status.[101]

Importantly, the Agreement on Subsidies and Countervailing Measures (SCM) included in the Uruguay Round Final Act, which binds all WTO Member States, explicitly allows the remission of prior-stage cumulative indirect taxes on inputs "physically incorporated, *energy, fuels and oil used in the production process* and catalysts which are consumed in the course of their use to obtain the exported product."[102] A State's domestic GHG management

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99. WTO CTE, *BTA*, *supra* note 93, at 7.

100. *See* Demaret & Stewardson, *BTA under GATT and EC*, *supra* note 86, at 7 ("In broad terms, one can say that, under both GATT and EC rules, taxes on products (indirect taxes) are eligible for adjustment in accordance with the destination principle, whereas taxes on the producer (direct taxes) are not, in accordance with the origin principle.").

101. *Id.* at 20 (quoting GATT Working Party Report, *Border tax adjustments*, ¶ 9, L/3464 (Dec. 2 1970)) (emphasis added).

102. World Trade Organization, *Agreement on Subsidies and Countervailing Measures, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization*, Annex 1A, Legal Instruments—Results of the Uruguay Round, 33 I.L.M. 1125 (1994) (emphasis added) [hereinafter SCM Agreement]. *See also id*., Annex II n.61 (allowing remission of prior-stage

regime, which mandates the payment of some price for every tCO_2e emitted in the course of GHG-intensive regulated entities' production effort over a given timeframe, is essentially a scheme which imposes a tax upon GHG-intensive *energy* used in the course of certain industrial production: the majority of GHG tons emitted in the course of GHG-intensive production is due to the energy consumed in producing, rather than some other aspect of the production process.[103] Accordingly, were a WTO Member to choose to regulate such GHG emissions on the destination principle—that is, to impose a price upon only those GHG tons attributable to products consumed on the home market—then, under the SCM Agreement, that Member could lawfully remit payment for such quantity of tCO_2e that is proportionate to the portion of total regulated production effort that is exported to be consumed (and presumably regulated) in other markets. Provided that such remission does not exceed the value of the payment initially made, it should not be considered an actionable subsidy under the SCM Agreement. Rather, it should be analyzed under the law of the WTO as part of a legitimate border adjustment scheme for charges that the Member government has chosen to levy at the point of domestic consumption.

The same legal principles that govern the adjustability of consumption taxes with respect to products destined for export also govern the adjustability for those same payments with respect to foreign products entering the home market for consumption. Because, as reported by the BTA WP, "GATT provisions on tax adjustment appl[y] the principle of destination identically to imports and exports,"[104] eligibility for adjustment with respect to the remission of taxes on exports destined for consumption in other markets *ipso facto* translates into eligibility for adjustment in the form of taxes levied on imports seeking access to the U.S. market. As Demaret and Stewardson point out, in addition to the conclusions adopted in the BTA WP's report, there are strong arguments for applying the principles of tax adjustment eligibility identically in respect of both exports and imports:

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cumulative indirect taxes on inputs "that are consumed in the production of the exported product (making normal allowances for waste)"); Demaret & Stewardson, *BTA under GATT and EC*, *supra* note 86, at 29 *n.102*. ("*Guidelines on Consumption of Inputs in the Production Process*, then provides that: 'Inputs consumed in the production process are inputs physically incorporated, energy, fuels and oil used in the production process and catalysts which are consumed in the course of their use to obtain the exported product.' It is not stated how the amount to be remitted for each particular product is to be calculated.").

103. *See* Ernst Worrell et al., *Industrial Energy Efficiency and Climate Change Mitigation*, 2 ENERGY EFFICIENCY 109 (2009) (discussing the potential contribution of industrial energy-efficiency technologies and policies to reduce energy use and greenhouse gas emissions to 2030).

104. Demaret & Stewardson, *BTA under GATT and EC*, *supra* note 86, at 30–31 (quoting GATT Working Party Report, *Border tax adjustments*, ¶ 10, L/3464 (Dec. 2 1970)).

> [T]here is a strong policy argument for considering the rules to be the same in both contexts. If the rules were to differ, then anomalies could arise in the international trading system. Imported products might either end up being a double tax burden, or remain free of the taxes in question, and hence be advantaged as against domestic products, depending on whether the tax adjustment rules for imports are more or less liberal than those applying to exports. One may also make an argument based on the structure of the GATT provisions to the effect that Articles III:1 and III:2 are designed to complement Articles VI:4 and SVI and Note Ad Article XVI so as to minimize the risk of double or no taxation.[105]

Tax adjustability criteria under WTO law is and should therefore be applied identically with respect to adjustments made upon exported and imported products alike. Accordingly, prior-stage cumulative indirect taxes on GHG-intensive energy used in the course of production are equally adjustable with respect to imported products seeking access to a Member's market as they are with respect to products destined for consumption elsewhere. In any case, no textual basis in GATT Article III exists to prohibit such analysis. Provided that the BCA does not otherwise violate a Member's obligations (discussed further below), a BCA of the sort that I have here described may, in principle, be justified as a legitimate BTA scheme under WTO law.[106] As already mentioned, it is important to note that such a BCA does not rest its claim to WTO legality on the narrow grounds for justification under GATT Article XX.

As a GATT Panel noted in *US—Tobacco*, the imposition of a cost upon domestic producers selling on the home market may be subject to border adjustment if the scheme comports with the requirements of GATT Article III, paragraph 2.[107] GATT Article III generally requires that a WTO Member's charges, laws, regulations, and requirements affecting the internal sale of products must not be applied in a protectionist manner.[108] The treaty further

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105. *Id.* at 30–31; *see also id.* at 20 (noting that to "introduce[] a major discrepancy between permissible border tax adjustments on imports and exports, respectively, . . . would have contradicted the economic rationale of ensuring the equality of competitive conditions for goods in international trade, which underlies border tax adjustments") (citing GATT Working Party Report, *Border tax adjustments*, ¶ 9, L/3464 (Dec. 2 1970)).

106. *See* Javier de Cendra, *Can Emissions Trading Schemes be Coupled with Border Tax Adjustments? An Analysis vis-à-vis WTO Law*, 15 REV. EUR. COMMUNITY & INT'L ENVTL. L. 131 (2006) (examining the legal ramifications of introducing a Border Tax Adjustment to emissions trading proposals and considering how to reconcile conflicts that may arise).

107. *US—Tobacco*, *supra* note *96.*

108. *See* GATT, *supra* note 83, art. III:1. *See also* Appellate Body Report, *European Communities—Measures Affecting Asbestos and Asbestos-Containing Products*, ¶ 93, WT/DS135/AB/R (Mar. 12, 2001), [hereinafter *EC—Asbestos*] (noting that the "paragraphs of [GATT] Article III constitute specific expressions of the overarching, 'general principle,' set forth in Article III:1 of the GATT 1994") (citing Appellate Body Report, *Canada—Measures*

specifies that taxes or charges of any kind levied on imports "in excess of those applied, directly or indirectly, to like domestic products" automatically fall within the scope of the prohibition,[109] as does according treatment to imports "less favourable than that accorded to like products of national origin in respect of all laws, regulations and requirements affecting their internal sale . . . ."[110]

Assessing the amount of required adjustment in the amount of GHG emissions per unit of production seeking entry to the market (i.e., the amount and/or price of GHG permits required to be purchased by importers of covered products) may be done in the same way as the assessment is made for domestic producers seeking access to the market: dividing the total tCO_2e emitted during the most recent compliance period by total production volume entered onto the market during the same period provides the number of taxable GHGs per unit of production seeking access to the domestic market for final consumption. If all relevant data in this regard is reliably available, then the assessment is exactly equivalent as to importer and domestic producer. The importer is assessed costs in the amount of GHGs attributable to every unit of production entered into the domestic market for consumption, just the same as a domestic producer, and any bond requirements would accordingly reflect this.

If the importer lacks sufficiently adequate and reliable information, imposing a best available technology (BAT) standard requirement on how the emissions "embodied" in imported products are to be calculated would serve to protect against allegations that the BCA scheme treats imported products "less favorably" than—or that it imposes a charge "in excess of" that levied upon—like domestic products, in violation of GATT Article III. That is, assuming best available emissions-minimizing technology in the production process, the incoming products would be assessed the costs that would be imposed upon like domestic products "embodying" the same number of emissions (in a cap and trade program, the average cost of an emission allowance within the

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Affecting the Export of Civilian Aircraft, ¶153, WT/DS70/AB/R (Aug. 20, 1999)); *see* also *id.* at ¶ 98 (explaining that "the 'general principle' in [GATT] Article III seeks to prevent Members from applying internal taxes and regulations in a manner which affects the competitive relationship, in the marketplace, between the domestic and imported products involved, so as to afford protection to domestic production") (internal emphasis and quotation omitted); *see also* Appellate Body Report, *Japan—Alcoholic Beverages*, WT/DS8/AB/R (Oct. 4, 1996), at 14–15 ("The broad and fundamental purpose of Article III is to avoid protectionism in the application of internal tax and regulatory measures. . . . Toward this end, Article III obliges Members of the WTO to provide equality of competitive conditions for imported products in relation to domestic products.").

109. GATT, *supra* note 83, art. III:2, sentence 1.

110. *Id.*, art. III:4. *See also EC-Asbestos*, *supra* note 108, ¶ 100 ("If there is 'less favourable treatment' of the group of 'like' imported products, there is, conversely, 'protection' of the group of 'like' domestic products.").

relevant sector, multiplied by the number of allowances required to cover the amount of emissions, minus the cost of the allowances that would have been allotted to the domestic producer at no cost).

To the extent that no relevant internationally-agreed standards are available, the BCA-imposing state may employ objective best available technology standards developed by domestic agencies or expert institutions on the basis of transparent and objective evidence regarding the state of industry technology. It will be important, however, to also include a provision necessitating an appreciable market share for any existing technology to alter the best available technology standard in order to avoid a perverse incentive against innovation for fear of lowering the standard and hence helping one's competitors.[111]

As imports would be given the benefit of assuming the least possible amount of emissions embodied in the product, and would hence likely *not* be prejudiced as against the domestic producers, using the BAT standard would help to obviate claims that the BCA is violative of the National Treatment principle embodied in GATT Article III. Further, the BAT standard would also preempt a challenge on the basis of the Most Favored Nation principle in GATT Article I, because *all* countries of origin would either be assessed identically with the domestic producers (given reliably accurate data), or would be assessed on the basis of a best available technology standard for each sector. Finally, using a BAT standard would encourage domestic producers in competition with imports subject to assessment under this standard to seek out these best available technologies to ensure competitive production costs, thus accelerating research and development and technological de-coupling of growth from GHG emissions-intensity.

Some may argue that applying the BAT standard to imported products in this way provides an inappropriate set of incentives to high-emitting foreign producers—that, being assured the BAT standard in any case, little incentive exists for such producers to actually use best available technology to reduce emissions, and that the costs imposed upon such producers by the BCA mechanism upon market entry will not, therefore, accurately represent the actual climate costs imposed by such production. Consider, however, that to the extent that there exist domestic producers who do not already use the best available technology, competition with imported products on the basis of the BAT standard will encourage these producers to employ emission-abating

111. *See* R. Ismer & K. Neuhoff, *Border Tax Adjustments: A Feasible Way to Address Nonparticipation in Emission Trading*, 24 EUR. J. L. & ECON. 137 (2007) (arguing that WTO-compatible Border Tax Adjustments for costs incurred from procuring CO2 emission allowances are a feasible means of effectively reducing leakage).

technology which a significant portion of the market already employs, thereby proportionately lowering global emissions output. Applying the BAT standard to competitive imports would force domestic industry to reorient toward using the best available technologies and to research even better ones in order to increase competitiveness.

To those who would argue that applying this standard to imported products but not to the domestic products for which more accurate data is necessarily available (because mandated by law) unfairly privileges foreign competitors in the home market, recall the arguments made in Section III above that, in the medium to long term, the forced internalization of environmental costs into private costs of production leads inevitably to greater efficiency and hence to more competitive products on the global marketplace.[112]

Finally, recall that the concern of emissions leakage which BCA-type mechanisms seek to obviate arises precisely because a significant portion of high-emitting producers are likely to remain inadequately regulated by the country of origin to achieve UNFCCC objectives, despite ongoing international negotiations in that respect.[113] BCA costs imposed on such products at the point of their entry onto a Party's market for final consumption are therefore much closer in value to the actual climate costs imposed by their production than the regulations imposed on them by the countries of origin which thus far have been often deemed to be inadequate. The use of a BAT standard—to be used, again, only where information about actual GHG emissions per total production volume in the relevant compliance period is not reliably available—serves to assure that WTO Members' BCA measures are not in violation of their obligations under GATT. Consider, by contrast, the kinds of alternative standards that have been proposed as part of U.S. legislative drafts including a

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112. Another argument against the use of a best available technology standard in the way that I propose may be that it raises anew the threat meant to be avoided by using the BCA in the first place. That is, if domestic producers (major domestic GHG emitters) are feared to relocate to jurisdictions that impose lower GHG costs on production if their final products are still allowed access to the U.S. market, then why wouldn't they similarly relocate outside of the U.S. to gain the benefit of having the best available technology standard applied to their products, rather than their actual emissions? The answer is that a balance has to be struck between the threat of emissions leakage in the event of no BCA measures and the threat of a challenge to a BCA scheme on grounds of its being incompatible with GATT Article III and/or Article XX's chapeau, to mitigate which latter I propose that the incentive to relocate given the introduction of a best available technology standard upon market re-entry is a lot lower than the incentive to do so in the face of no BCA at all. Further, relocation requires a certain threshold of expected net benefits, and the BCA costs, even assuming a BAT standard, may be sufficient to prevent this threshold from being reached in enough cases that the effectiveness and environmental integrity of domestic GHG regulation may be sufficiently assured to satisfy the BCA objectives.

113. *See supra* Section II.

BCA measure. As the next Section will show, these proposals—in contrast to the GATT-legal BCA design proposed above—are designed in such a way that they are likely to lead to a challenge in the WTO's Dispute Settlement Body (DSB). Unlike the BCA described above, these proposals appear to rest their WTO legality on the GATT Exceptions regime, as the implementation of their current design is unlikely to survive facial challenge.

To summarize, I have argued that a national cap-and-trade scheme which places an absolute[114] cap on the total permissible quantity of tCO_2e emitted in the course of a given compliance period[115] and then offers an equivalent number of tradable tCO_2e allowances by market auction[116] should be conceived as an internal tax on every tCO_2e emitted in the course of producing certain products. In accordance with a well-designed BCA, just as domestic production within the relevant industrial sectors would be taxed in (roughly) the amount of externality to the global climate effected by their total production within a given compliance period, in the form of total tonnage of GHG emissions (assuming 100% governmental allowance auctioning), so too a similar 'tax' would be imposed on like imported products upon entry into the U.S. market.

V. Analysis of Recent Important Proposals for U.S. BCA

A significant number of legislative proposals for a national climate change response program have been proposed in the U.S. Congress.[117] Four in

114. For the sake of analytical simplicity, I say 'absolute' nation-wide cap. Nevertheless, the analysis is adaptable (though somewhat more complex) to cap-and-trade proposals which include provisions for a 'safety valve' or an 'allowance reserve', which seek to mitigate against the threat of extreme allowance scarcity. *See* Jacoby & Ellerman, *supra* note 89, at 4.

115. Enforcement mechanisms for ensuring that the absolute limit of permissible GHG tons emitted in the course of a given compliance period is not breached are beyond the scope of this paper. It is clear, however, that if penalty fees are assessed for every tCO2e emitted in excess of allowances held, the fees should be designed to exceed the market value of a GHG allowance.

116. *See* Dallas Burtraw et al., *The Effect of Allowance Allocation on the Cost of Carbon Emission Trading*, (Resources for the Future, Discussion Paper No. 01–30, 2001), *available at* http://www.rff.org/documents/RFF-DP-01-30.pdf. (arguing that most economists agree that the most efficient way of allocating individual tCO2e allowances is by government auction.) Although immediate 100% auctioning may, due to powerful industry pressure, be politically unpalatable, most legislative proposals envision a gradual transition toward eventual 100% governmental auctioning of the totality of emissions allowances pertaining to each compliance period. Again, the analysis is somewhat complicated by this political reality (because, in determining the level of border adjustment required, the quantity of allowances allocated to domestic industry at no cost must be taken into account), but is structurally the same.

117. *See* GARY CLYDE HUFBAUER ET AL., GLOBAL WARMING AND THE WORLD TRADING SYSTEM 25-29 (Peterson Institute for International Economics 2009), at Table 1A.2, *Major*

particular have been the subject of significant discussion. These are the Lieberman-Warner bill in the U.S. Senate, which will be considered here on the basis of the version that appears in the Boxer amendment introduced on May 20, 2008;[118] the Boucher-Dingell discussion draft,[119] introduced on October 7, 2008 in the U.S. House of Representatives Energy and Commerce Committee; the Waxman-Markey bill,[120] approved by the same Committee on May 21, 2009; and the American Clean Energy and Security Act, passed in the U.S. House of Representatives on June 26, 2009.[121]

All four drafts would seek to place mandatory quantitative restrictions on the GHG emissions of a number of U.S. industrial sectors in the context of a GHG emissions cap-and-trade scheme; however, each would only do so provided that protections are included to prevent competitive advantage accruing to imports from countries which benefit from low production costs due to a lack of restrictions on GHG emissions.[122] To that end, all four proposals include provisions for the possible establishment of a border adjustment scheme (called the International Reserve Allowance Program, but hereinafter the "BCA") designed to mitigate incentives for emissions leakage, aiming "to ensure, to the maximum extent practicable, that greenhouse gas emissions occurring outside the United States do not undermine the objectives of the United States in addressing global climate change."[123] They envision two different types of relations between the proposed U.S. system and the climate regulatory schemes of other States. On the one hand, the scheme contemplates recognition of certain foreign and international schemes as functionally equivalent. On the other hand, when products seeking access to the U.S. market originate in a State whose climate regulatory program is *not*

Climate Change Bills of the 110th Congress (With Competitiveness Provisions).

118. S. 2191, § 6001(10).

119. Boucher-Dingell Discussion Draft, *supra* note 83.

120. Waxman-Markey Discussion Draft, *supra* note 47.

121. ACESA (House), H.R. 2454, *supra* note 47.

122. In Waxman-Markey and ACESA (House), this is not the primary way of allaying competitiveness concerns; rather, the draft proposes to rebate the costs of compliance to GHG-intensive industry subject to competitiveness concerns, with the BCA provisions serving as a back-up. *See* discussion in this regard in Section I above.

123. *See* S. 2191, at § 6002(2); Boucher-Dingell, *supra* note 83, at § 782(2); Waxman-Markey, *supra* note 47, at § 412(2). This language was replaced in the ACESA (House) by a statement of purpose providing that the BCA is to be established "consistent with international agreements to which the United States is a party, in a manner that minimizes the likelihood of carbon leakage as a result of differences between (A) the direct and indirect costs of complying with [the Act] and (B) the direct and indirect costs, if any, of complying in other countries with [GHG] regulatory programs, requirements, export tariffs, or other measures adopted or imposed to reduce [GHG] emissions." H.R. 2454, at § 768(a)(2).

recognized by the U.S. as functionally equivalent to its own, the scheme would impose U.S. regulatory power upon these foreign products by approximating the level of cost imposed upon the global climate in the course of their production,[124] and assessing such cost at the U.S. border.

A. GATT Article I – "General Most-Favored-Nation Treatment"

The BCA envisioned by the Lieberman-Warner-Boxer and Boucher-Dingell drafts categorizes all foreign states as either covered by or excluded from the scheme's requirements, as designated by a "covered list" and an "excluded list," respectively, which is to be developed and published in the Federal Register prior to the start of each relevant compliance period.[125] The lists are intended to be comprehensive and mutually exclusive: all countries not on the excluded list must appear on the covered list, and vice versa.[126] Accordingly, all countries[127] exporting covered products[128] into the U.S. are to

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124. Although the impetus of the BCA is to equalize the costs imposed on imports with those imposed upon like domestic producers, it may also be conceived as an approximation of the cost of production to the global climatic system, as this is what GHG costs imposed on the domestic producer are themselves intended to approximate.

125. Lieberman-Warner, S. 2191, § 6006(b); Boucher-Dingell, *supra* note 83, § 786(b). Note, however, that in the Lieberman-Warner proposed legislation, the BCA would be required to start a full calendar year earlier than the deadline for publication of the covered and excluded lists in the Federal Register. *Compare* Lieberman-Warner, S. 2191, § 6006(b)(1) *with id.* § 6006(a)(1).

126. Lieberman-Warner, S. 2191, § 6006(b)(3)(B); Boucher-Dingell, *supra* note 83, § 786(b)(3)(B).

127. All four drafts exclude countries of origin that have been designated by the United Nations as least developed countries, as well as those whose total annual GHG emissions are determined not to exceed 0.5% of total GHG emissions worldwide, from being subject to the BCA. *See* Lieberman-Warner, S. 2191, at §§ 6006(b)(2)(A)(ii) & 6006(b)(2)(B); Boucher-Dingell, *supra* note 83, §§ 786(b)(2)(A)(iii) & 786(b)(2)(B); Waxman-Markey, *supra* note 47, § 416(a)(C); ACESA (House), *supra* note 47.

128. The term "covered good" is defined as "a good that (as identified by the [EPA] Administrator by rule) (A) is a primary product [Boucher-Dingell: or manufactured item for consumption]; (B) generates, in the course of the manufacture of the good, a substantial quantity of direct greenhouse gas emissions and indirect greenhouse gas emissions; and (C) is closely related to a good the cost of production of which in the United States is affected by a requirement of [the] Act [Waxman-Markey: closely related to a good of the United States that is affected by a requirement of title VII of the Clean Air Act]." Lieberman-Warner, S. 2191, § 6001(5); Boucher-Dingell, *supra* note 83, § 781(7); Waxman-Markey, *supra* note 47, § 411(1).

"Primary product" is defined as "(A) iron, steel, [Boucher-Dingell; Waxman-Markey: steel mill products (including pipe and tube),] aluminum, cement, bulk [Boucher-Dingell; Waxman-Markey: delete "bulk"] glass [Boucher-Dingell; Waxman-Markey: (including flat, container, and specialty glass and fiberglass)], or paper [House Boucher-Dingell; Waxman-Markey: pulp, paper, chemicals, and industrial ceramics]; or [Boucher-Dingell; Waxman-

be assessed for 'comparability in effect' in terms of their respective GHG regulatory programs, if any[129]—countries that have "taken action comparable to that taken by the United States to limit [their] greenhouse gas emissions"[130] are to be placed on the excluded list, such that products originating in those countries are not subject to adjustment in accordance with the U.S. BCA. An importer from a country that is not on the excluded list but that possesses allowances issued pursuant to a binding emissions cap can submit those to satisfy its adjustment assessment, provided again that the foreign program in accordance with which the allowances were issued "represents a comparable action" to that of the U.S. cap-and-trade program.[131] An importer of a covered

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Markey: "and" replaces "or"] (B) any other manufactured product that (i) is sold in bulk for purposes of further manufacture [Boucher-Dingell; Waxman-Markey: or inclusion in a finished product]; and (ii) generates, in the course of the manufacture of the product, direct greenhouse gas emissions and [Boucher-Dingell; Waxman-Markey: replace "and" with "or"] indirect greenhouse gas emissions that are comparable (on an emissions-per-dollar [Waxman-Markey: emissions-per-output] basis) to emissions generated in the manufacture of products by covered facilities in the industrial sector [Waxman-Markey: the manufacture of products listed in subparagraph (A)]." Lieberman-Warner, S. 2191, § 6001(10); Boucher-Dingell, *supra* note 83, § 781(16); Waxman-Markey, *supra* note 47, § 411(3).

In the Boucher-Dingell draft, the additional term "manufactured item for consumption" in the definition of "covered good" is itself further defined as "any good or product (A) that is not a primary product; (B) that generates, in the course of the manufacture, a substantial quantity of direct greenhouse gas emissions or indirect greenhouse gas emissions, including emissions attributable to the inclusion of a primary product in the manufactured item for consumption; and (C) for which the [newly established International Climate Change] Commission, in consultation with the [EPA] Administrator, determines that the application of an international reserve allowance requirement under [the BCA] to the particular category of goods or products is technically and administratively feasible and necessary to achieve the purposes of this part." Boucher-Dingell, *supra* note 83, § 781(14).

129. Lieberman-Warner, S. 2191, § 6001(2); Boucher-Dingell, *supra* note 83, § 781(4)(A).

130. Lieberman-Warner, S. 2191, § 6006(b)(2)(A)(i); Boucher-Dingell, *supra* note 83, § 786(b)(2)(A)(i).

131. Lieberman-Warner, S. 2191, § 6006(e)(1)(A); Boucher-Dingell, *supra* note 83, § 786(e)(1)(A). Both proposals specify that the determination of comparability for this particular purpose is to be made in the affirmative for "any greenhouse gas regulatory program adopted by a covered foreign country to limit the greenhouse gas emissions of the covered foreign country," Lieberman-Warner, S. 2191, § 6006(e)(1)(B); Boucher-Dingell, *supra* note 76, § 786(e)(1)(B), if it is certified (certification is made by the President in the Lieberman-Warner draft, or the EPA Administrator in the Boucher-Dingell draft. *Id.*) that the program in fact places a quantitative limitation on the GHG emissions of the relevant covered good, that this limitation is subject to an allowance trading system, that the program satisfies relevant enforceability criteria (relevant enforceability criteria are to be established by the President (Lieberman-Warner, S. 2191) or EPA Administrator (Boucher-Dingell, *supra* note 83), i*d.*), and that the program is a "comparable action," as defined by the proposals.

"Comparable action" is defined, in general, as "any greenhouse gas regulatory programs, requirements, and other measures adopted by a foreign country that, in combination, are comparable in effect to actions carried out by the United States [Boucher-Dingell, *supra*

good from a country not on the excluded list that does *not* possess a sufficient number of eligible foreign allowances or credits will be assessed a climate cost adjustment at the U.S. border.[132] Importers falling within this category would be required to purchase and retire an appropriate number of 'international reserve allowances,'[133] drawn from a special reserve set up separately and in addition to the national $_tCO_2e$ cap,[134] at a price and quantity determined in accordance with a methodology to be established by EPA regulation.[135]

In the Waxman-Markey draft, the U.S. BCA would be triggered if the President determines that "direct and indirect compliance costs, as mitigated by [rebates] provided" are causing significant reduction or slowed growth[136] in domestic production or employment, *or* if the President determines that these same compliance costs are causing a significant increase in GHG emissions "by foreign manufacturing facilities that manufacture or produce covered goods and that do not have *greenhouse gas compliance obligations commensurate with those that would apply in the United States*."[137] Once the BCA is thus

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note 83: through Federal, State, and local measures] to limit greenhouse gas emissions [pursuant to relevant determination procedures specified by each proposal] [Lieberman-Warner, S. 2191: taking into consideration the level of economic development of the foreign country]." Lieberman-Warner, S. 2191, § 6001(2); Boucher-Dingell, *supra* note 83, § 781(4). The different requirements in each proposal regarding the comparability determination are discussed more fully below.

132. *See* Lieberman-Warner, S. 2191, § 6006(c) (discussing written declarations); Boucher-Dingell, *supra* note 83, § 786(c) (discussing declarations generally).

133. Lieberman-Warner, S. 2191, § 6006(c)(2)(A); Boucher-Dingell, *supra* note 83, §§ 786(c)(3)(D)(i)–(ii).

134. Lieberman-Warner, S. 2191, § 6006(a)(2); Boucher-Dingell, *supra* note 83, § 786(a)(2).

135. Lieberman-Warner, S. 2191, § 6006(a)(3); Boucher-Dingell, *supra* note 83, § 786(a)(4)(A). Under the Lieberman-Warner draft legislation, the EPA Administrator must establish by rule a methodology for determining the price for each compliance year so as not to exceed the market price of allowances issued for domestic compliance; the price cannot in any case exceed the clearing price for the relevant compliance year established at the most recent domestic auction. Lieberman-Warner, S. 2191, § 6006(a)(3). In the Boucher-Dingell draft legislation, *supra* note 83, the established price-determining methodology must require the EPA to follow the following formula with respect to each day that international reserve allowances are offered for sale: (step 1) Identify "3 leading publicly reported daily price indices for the sale of [domestic] emissions allowances" providing the market clearing price for domestic allowances on the previous day; (step 2) Calculate the arithmetic mean of the prices given by each of the indices identified in step 1; the daily price of international reserve allowances must then equal the result obtained in step 2. Boucher-Dingell, *supra* note 83, § 786(a)(4)(B). The provisions governing the determination of the quantity of required allowances are discussed below.

136. The phrase used is "reduction in existing, or failure to initiate new." Waxman-Markey, *supra* note 47, § 414(b).

137. *Id.* § 414(b)(3) (emphasis added). This part of the triggering mechanism also includes

triggered, "any sector or subsector for which the President made [such] an affirmative finding" would be required to submit an appropriate number of GHG allowances upon entry into the U.S. market, at a price and quantity to be determined by EPA regulation.[138] Similarly, the ACESA (House) includes a BCA-triggering mechanism, pursuant to which BCA would be established in 2018 (unless the President or Congress determines that BCA would not be in the U.S. economic or environmental interest[139]) upon the President's determination that fifteen or more percent of merchandise in certain eligible industrial sector(s)[140] was imported from countries of origin which are either not a party to a multilateral or bilateral emission reduction agreement for that sector to which the U.S. is a party, or are not party to an international agreement (to which the U.S. is also party) mandating "nationally enforceable and economy-wide GHG reduction commitment" which is "at least as stringent as that of the United States," or whose annual energy or GHG intensity for that sector is greater than that for such sector in the U.S.[141]

Accordingly, all four of the most debated U.S. BCA proposals would essentially classify products according to their country of origin—subjecting them to adjustment at the border or not on the basis of a determination regarding *not* their particular production's effect on global atmospheric GHG concentrations but the nature of their country of origin's (or, in the Waxman-Markey and ACESA (House) drafts, a small percentage of all countries of origin) GHG regulatory scheme as a whole. As Professors Howse and Regan point out, country-based restrictions are "presumptively illegal" under the GATT, immediately moving the inquiry to the possibility of justification under the General Exceptions regime of GATT Article XX.[142] The textual

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the requirement that the relevant increase in GHG emissions is "caused by incremental cost increases resulting from compliance with [the national cap-and-trade legislation]." *Id.* § 414(b)(3)(B). However, this requirement is superfluous, given that § 414(b)—the larger paragraph of which sub-paragraph 414(b)(3) is a part—already states that the findings referred to in the listed sub-paragraphs (1) through (3) are relevant only in so far as they find the changes to have been caused by the direct and indirect costs of compliance with the national cap and trade scheme. *Id.* § 414(b).

138. *Id.* § 416(a). The usual exemptions, common to all three legislative drafts considered here, apply: countries identified by the United Nations as least developed countries, as well as those that the President determines are responsible for less than 0.5 percent of total GHG emissions, are exempt. *Id.* § 416(a)(C); *see also* Lieberman-Warner, S. 2191, § 6006(b)(2)(A)(ii); *see also id.* § 6006(b)(2)(B); Boucher-Dingell, *supra* note 83, § 786(b)(2)(A)(iii); *see also id.* § 786(b)(2)(B).

139. ACESA (House), H.R. 2454, § 767(b)(1).

140. *See supra* note 83 for ACESA (House)'s definition of his term.

141. ACESA (House), H.R. 2454, § 767(c).

142. Howse & Regan, *Product/Process*, *supra* note 85, at 270.

justification for this shift is Article I of the General Agreement—"General Most Favored Nation Treatment"[143]—under which "any advantage, favour, privilege or immunity granted by any contracting party to any product originating in or destined for any other country shall be accorded immediately and unconditionally to the like product originating in or destined for the territories of all other contracting parties."[144] The policy justification, based on the GATT's objective purpose,[145] is that "distinctions of nationality are irrelevant to economic efficiency. Products which differ only in their nationality should have the same competitive opportunities."[146]

It is true that the recognition of the functional equivalence of other Members' regulatory regimes is deemed appropriate and encouraged under WTO law in the context of ensuring that basic product quality standards are met by all products entering the market, as governed by the WTO Agreement on Technical Barriers to Trade (TBT).[147] Nevertheless, it should not escape emphasis that the Most Favored Nation principle appears within the very first article of the very first international trade agreement, and that no provision comparable to Article 6 of the TBT exists in the GATT. There is no provision in the General Agreement that allows for the discrimination among products based on their countries of origin when some Members but not others are granted the privilege of having their regulatory regimes considered to be functionally equivalent to that of the importing Member. The only exceptions to Article I of the GATT are the general exceptions that appear in Article XX, discussed below.

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143. GATT, *supra* note 83, art. I:1 ("With respect to customs duties and charges of any kind imposed on or in connection with importation or exportation [...], and with respect to the method of levying such duties and charges, and with respect to all rules and formalities in connection with importation and exportation, and with respect to all matters referred to in paragraphs 2 and 4 of Article III, any advantage, favour, privilege or immunity granted by any contracting party to any product originating in or destined for any other country shall be accorded immediately and unconditionally to the like product originating in or destined for the territories of all other contracting parties.").

144. *Id.*

145. *See* Howse & Regan, *Product/Process*, *supra* note 85, at 265 (arguing that the "objective purpose" of a legal instrument may be determined by "considering its provisions, structure, and political and historical context").

146. *Id.* at 270.

147. *See* WTO, Agreement on Technical Barrier to Trade, Art. 6, *available at* http://www.wto.org/english/tratop_e/tbt_e/tbtagr_e.htm (providing that "Members shall ensure, whenever possible, that results of conformity assessment procedures in other Members are accepted, even when those procedures differ from their own, provided that they are satisfied that those procedures offer an assurance of conformity with applicable technical regulations or standards equivalent to their own procedures.").

Before getting to the general exceptions regime, however, consider that even were the approval of functional equivalence regimes embodied in the TBT to be read into the interpretation of GATT Article I as a matter of treaty interpretation under the Vienna Convention,[148] these legislative proposals for a U.S. BCA, unlike the BCA design proposed in Section IV above, are designed in such a way as to also invite a challenge by affected Members under the national treatment provisions GATT Article III, as discussed in the next subsection.

B. GATT Article III—"National Treatment on Internal Taxation and Regulation"

Existing legislative proposals for a U.S. BCA also leave themselves open to challenge under GATT Article III by countries of origin which fail the comparability determination, whose products are assessed climate adjustment costs in accordance with the BCA design proposed. Recall that GATT Article III generally requires that a Member's charges, laws, regulations, and requirements affecting the internal sale of products must not be applied in a protectionist manner, and that charges imposed on imports "in excess of" those applied on like domestic products or regulations providing "less favorable" treatment to imports than like domestic products fall automatically within the scope of the prohibition.[149]

All four legislative proposals for a U.S. BCA would require the EPA Administrator to establish by regulation a methodology for calculating the quantity of international reserve allowances required for each category of covered good.[150] While the Waxman-Markey and ACESA (House) drafts do not provide any further guidance with respect to what such methodology would look like,[151] the detail provided in this regard by the Lieberman-Warner-Boxer and Boucher-Dingell drafts is instructive in evaluating the proposed BCA's consistency with GATT Article III.

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148. *See* Vienna Convention on the Law of Treaties, Art. 31(3)(c) (stating that international agreements are to be interpreted in light of other relevant agreements entered into by the parties).

149. *See supra* Section IV.

150. Lieberman-Warner, S. 2191, § 6006(d)(1)(A); Boucher-Dingell, *supra* note 83, § 786(d)(1)(A); Waxman-Markey, *supra* note 47, §§ 416(a)(1)(A) & (B); ACESA (House), H.R. 2454, § 768(a)(1)(C).

151. *See generally* Waxman-Markey, *supra* note 47, § 416; ACESA (House), H.R. 2454, § 768.

In the Lieberman-Warner-Boxer draft, the BCA adjustment requirement kicks in only if the country of origin's total GHG emissions attributable to the relevant good during the most recent year for which information is available are greater than that country's emissions attributable to that sector during the baseline established by the Act (an average of the years 2012 through 2014).[152] If the country of origin's relevant sectoral emissions in the most recent year are higher than its baseline, then the per production unit BCA adjustment requirement is to be the number of excessive GHG emissions per unit of good produced in that country, adjusted to take into account the economic development of that country, as well as to take into account the number of domestic allowances provided to the like domestic sector at no cost per unit of domestic production.[153]

In the Boucher-Dingell draft, the methodology to be established by the EPA Administrator to quantify BCA adjustment requirements for covered goods from covered countries would not depend on a baseline threshold. Rather, the per production unit adjustment required is to equal the GHG emissions attributable to the relevant category of good in the covered country during the most recent year, per unit of production during that year, which is to be adjusted to account for the number of allowances the producer would have received at no cost if situated in the U.S. The requirement may also be adjusted "to account for the extent to which" the foreign country "implemented, verified, and enforced" the use of GHG emissions-reducing techniques, technologies, and regulatory programs or requirements.[154]

Under both the Lieberman-Warner-Boxer and the Boucher-Dingell proposals, therefore, importers of covered goods from countries not excluded from BCA participation, by way of a comparability determination or otherwise, would be assessed GHG adjustment requirements based not on individualized calculations regarding the GHGs actually emitted during the import's production, but rather based on a standardized formula using statistical averages of the GHGs emitted in the course of the country of origin's overall production of the relevant category of good during the most recent year for which data are available.[155] Thus, a steel importer from China, for example, no

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152. Lieberman-Warner, S. 2191, § 6001(1). In making this determination, the EPA Administrator is required to rely on the best available relevant data for that period, as well as economic or engineering models or best available information on technology performance levels, to the extent necessary. *Id.* at §§ 6001(1)(A)–(B).

153. Lieberman-Warner, S. 2191, § 6006(d).

154. Boucher-Dingell, *supra* note 83, § 786(d).

155. *See* Lieberman-Warner, S. 2191, § 6006(d) (discussing the quantity of allowances required); Boucher-Dingell, *supra* note 83, § 786(d) (discussing the quantity of allowances required).

matter how innovative at reducing GHG-intensity in its production processes, would be required to buy and retire allowances not in the amount of GHGs actually emitted during that steel's production, but rather in the amount of the *average* GHGs emitted by steel producers, both GHG-efficient and not, in China during the most recent year. A domestic steel producer, on the other hand, would only be required to acquire and retire allowances or credits in the amount of its actual GHG emissions.[156]

Importantly, in *U.S. Gasoline*[157] a WTO Panel[158] examined a Member's obligations under GATT Article III in the context of environmental regulations which similarly sought to assess requirements upon imports which, while ostensibly designed to equalize the requirements for imports with similar requirements on like domestic products, were made on the basis of statistical averages rather than the individual assessment options offered to domestic producers. The U.S. EPA regulations at issue in that case had, inter alia, required stabilization or reduction[159] of gasoline pollutant emissions relative to 1990-levels, allowing domestic refiners[160] who began operations prior to mid-

156. *See* Lieberman-Warner, S. 2191, § 1202 (discussing the compliance obligation); Boucher-Dingell, *supra* note 83, § 712 (discussing the compliance obligation).

157. WTO, *United States—Standards for Reformulated and Conventional Gasoline*, Panel Report, WT/DS2/R, Jan. 29, 1996 [hereinafter *US—Gasoline*, Panel].

158. Although the Panel's analysis with respect to GATT Article XX was later invalidated by the WTO AB, *see United States—Standards for Reformulated and Conventional Gasoline*, AB Report, WT/DS2/AB/R, Apr. 29, 1996 [hereinafter *US—Gasoline*, AB] at 29, its analysis with respect to GATT Article III was not appealed, *see id.* at 9 (noting that the U.S. did not appeal the Panel's findings or rulings with respect to, inter alia, Article III), and hence remains a good indication of the DSB's approach to Article III in the context of environmental regulations.

159. The regulations categorized gasoline according to its final place of sale, requiring "reformulated gasoline" in highly polluted metropolitan areas—with performance specifications of reduced emissions from 1990-levels—and "conventional gasoline," with emissions stabilized at 1990 levels, for other areas. *US—Gasoline*, Panel, *supra* note 157, ¶¶ 2.2–2.4.

160. In fact, some domestic entities—blenders and domestic refiners with limited 1990 operations—were required to follow the same baseline establishment requirements as importers. *Id.* ¶ 6.3. The U.S. had argued that the regulation's distinction between these kinds of domestic entities and imports, on the one hand, and other domestic refiners on the other, "was justified because importers, like domestic refiners with limited 1990 operations and blenders, could not reliably establish their 1990 gasoline quality, lacked consistent sources and quality of gasoline, or had the flexibility to meet a statutory baseline since they were not constrained by refinery equipment and crude supplies." *Id.* ¶ 6.11. Accordingly, the U.S. argued that "the requirements of Article III:4 [were] met because imported gasoline [was] treated similarly to gasoline from *similarly situated* domestic parties. *Id.* (emphasis in original). The Panel rejected this argument, stating that "Article III:4 of the General Agreement deals with the treatment to be accorded to like products; its wording does not allow less favourable treatment dependent on the characteristics of the producer and the nature of the data held by it." *Id.* (citing WTO, *U.S.—Measures Affecting Alcoholic and Malt Beverages*, BISD 39S/206, June 19, 1992, ¶ 5.19

1990 to use 'historic' methods to determine their personalized 1990 baselines, but, fearing a lack of reliable information for foreign emission-levels, requiring importers and blenders using imports to use a statutory baseline, based on average 1990 U.S. gasoline quality.[161] Venezuela, later joined by Brazil, objected to this discrimination.[162] Venezuela and Brazil argued that imported gasoline was "like" U.S. domestic gasoline, and that it received "less favourable" treatment under the contested EPA regulations because, unlike their domestic counterparts, gasoline importers were not allowed to establish their individualized 1990 baselines using secondary or tertiary data.

The Panel considered the various criteria applicable to a determination regarding the likeness of products for purposes of Article III,[163] and concluded

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(rejecting a tax regulation according less favorable treatment to beer on the basis of the size of the producer)). The Panel also noted that accepting the U.S. argument "would mean that the treatment of imported and domestic goods concerned could no longer be assured on the objective basis of their likeness as products. Rather, imported goods would be exposed to a highly subjective and variable treatment according to extraneous factors," and that "[t]his would thereby create great instability and uncertainty in the conditions of competition as between domestic and imported goods in a manner fundamentally inconsistent with the object and purpose of Article III." *Id.* ¶ 6.12.

161. *Id.*

162. Venezuela had actually initiated its complaint under the old GATT system. The U.S. responded by proposing to alter the regulations to allow more flexibility in developing personalized baselines if Venezuela agreed to drop its claim; Venezuela agreed and the U.S. Environmental Protection Agency (EPA) began a public comment period on suggestions for change. However, U.S. environmentalists and domestic refiners (environmental as well as protectionist interests) joined forces in the U.S. Congress to block the EPA from implementing the suggested changes. Taking advantage of the new WTO dispute settlement system (unlike the old GATT system, where Panel reports required unanimous backing in order to be adopted as binding, the WTO system presumes adoption in the absence of unanimous agreement to the contrary), Venezuela re-filed its claim in the WTO. *See* Steve Charnovitz, *The WTO Panel Decision On U.S. Clean Air Act Regulations*, Int'l Env. Rep. No. 5 (March 6, 1996) (discussing Venezuela's legal strategy). The union of environmental and protectionist interests in support of trade restrictions was also a motivating force behind the U.S. legislation challenged in *Shrimp/Turtle*, *United States—Import Prohibition of Certain Shrimp and Shrimp Products*, Appellate Body Report, 12 October 1998, WT/DS58/AB/R. *See Turtle Island Restoration Network v. Evans*, 284 F.3d 1282, 1294 (Fed. Cir. 2002) ("The Senators who spoke in favor [of the bill that became the law at issue in *Shrimp/Turtle*] (none spoke against) feared that American shrimpers would be at a disadvantage competing in the domestic market with foreign shrimpers, who were not burdened with [Turtle Excluding Device] regulations."). A similar union will likely support BCA legislation as well.

163. Specifically, the Panel noted that these various criteria, applied by previous panels, had been summarized in the 1970 *Working Party Report on Border Tax Adjustments*, *see id.*, *supra* note 93, ¶ 18, that these same criteria had been applied by the panel in the 1987 *Japan Alcohol* case in the context of determining likeness for purposes of Article III:2, and that "[t]he Panel considered that those criteria were also applicable to the examination of like products under Article III:4." *US—Gasoline*, Panel, *supra* note 157, ¶ 6.8. *See also EC—Asbestos*, AB Report, *supra* note 108 (examining product likeness under GATT Article III:4 with the help of

that "chemically-identical imported and domestic gasoline by definition have exactly the same physical characteristics, end-uses, tariff classifications, and are perfectly substitutable," and that they are therefore like products under Article III.[164] The Panel then also concluded that imported gasoline was treated less favorably than like domestic gasoline. Importers were unlikely to have sufficient information to establish an individualized baseline[165] and, unlike their domestic counterparts, they were prevented from using secondary or tertiary data to establish (approximated) individualized baselines. Accordingly, "under the baseline establishment methods, imported gasoline was effectively prevented from benefitting from as favourable sales conditions as were afforded domestic gasoline by an individual baseline tied to the producer of a product."[166] Specifically, the Panel pointed out that under the baseline establishment requirements at issue, imported gasoline that could not meet the statutory baseline, but could have met an individualized baseline established according to secondary or tertiary data, would be prevented from market access whereas chemically identical domestic gasoline would not be, and that there was evidence that this had in fact occurred.[167] Accordingly, the EPA regulations were found violative of Article III:4.[168]

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the criteria outlined in the 1970 *Working Party Report on Border Tax Adjustment*, and noting, at ¶ 101, that "[t]he Report of the Working Party of *Border Tax Adjustments* outlined an approach for analyzing 'likeness' that has been followed and developed since by several panels and the Appellate Body").

164. *US—Gasoline*, Panel, *supra* note 157, at ¶ 6.9.

165. *See id.* at ¶ 6.3 ("Importers are also required to use an individual baseline, but only in the case (unlikely, according to the parties to the dispute) that they are able to establish it using Method 1 data.").

166. *Id.* at ¶ 6.16.

167. *See id.* ¶ 6.10.

168. In *US—Gasoline*, the Panel examined a Member's obligations under GATT Art. III:4. The way in which the BCA provisions within the U.S. legislative proposals considered here are currently designed suggests that this is also the paragraph that will be most relevant to their analysis under GATT Art. III. *See* Robert Howse & Antonia Eliason, *Domestic and International Strategies to Address Climate Change: An Overview of the WTO Legal Issues* (2009), at 29 n.37 (noting that in *United States—Measures Affecting the Importation, Internal Sale and Use of Tobacco*, Panel Report, DS44/R, 12 Aug. 1994, ¶ 82, "the adopted GATT panel found that a measure that provided for an assessment or penalty where a certain domestic regulatory requirement was not met by an imported product was an 'internal law, regulation, or requirement' within the meaning of Article III:4, and not a fiscal measure within the meaning of III:2," and that a "proposed application of an 'allowance' requirement to imports," such as may be seen in the current U.S. legislative proposals, is likely to be characterized "not as a tax or charge, . . . but as ancillary to the enforcement or administration of a US regulatory scheme that applies to both domestic and imported products"). However, note that these proposals, contrary to the BCA design argued for in Section IV above, do not appear to be written with the intent of being presented in the WTO as essentially a tax adjustment scheme, to be analyzed under

Arguably, the proposed U.S. legislation described above presents a situation similar to that presented in *US—Gasoline*.[169] As mentioned, under both the Lieberman-Warner-Boxer and Boucher-Dingell proposals, importers of covered goods from covered countries would be assessed GHG adjustment requirements based on standardized formulas using statistical averages of the GHGs emitted in the course of the country of origin's total production of the relevant category of good in the most recent year for which data are available, whereas domestic producers of like products would be assessed costs on the basis of their actual GHG emissions.[170] As a result, on the Panel's analysis in *US—Gasoline*, because importers, unlike their like domestic counterparts, will not be given the opportunity for climate cost assessment on the basis of their products' individualized emissions data, the proposed U.S. BCA is likely to be found in prima facie violation of the national treatment provisions in GATT Article III.

C. GATT Article XX—"General Exceptions"

In the plausible event that the kind of U.S. BCA scheme proposed within the legislative drafts under consideration here is found violative of GATT Article I or III (or any other article), it may nevertheless be defended, if

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paragraph 2 of GATT Article III (prohibition on charges 'in excess of' those imposed on like domestic products).

169. Howse & Eliason argue that "the approach of the Appellate Body in *EC—Asbestos* is sufficiently flexible and sensitive to different kinds of differences between products mattering in different factual and regulatory contexts, and that [BCA-]non-complying imported products could be distinguished as unlike on the basis of the failure to control or internalise environmental externalities in the production process." Howse & Eliason, *supra* note 168, at 29. *See also id.* at 26–27. However, although it is true that the AB in *EC—Asbestos* stated that "in examining the 'likeness' of products, panels must evaluate *all* of the relevant evidence," and that "the health risks associated with a product may be pertinent in an examination of 'likeness' under Article III:4 of the GATT 1994," *EC—Asbestos*, *supra* note 108, ¶ 113 (emphasis original), it also warned that its analysis "is a very narrow one, limited only to the circumstances of this case, and confined to chrysotile asbestos fibres as compared with PCG fibres." *Id.* ¶ 153. The health risks of asbestos, considered in that case to be relevant to the 'likeness' determination, were directly linked to the physical composition of the product at issue. *See id.* ¶ 114 ("In the case of chrysotile asbestos fibres, their molecular structure, chemical composition, and fibrillation capacity are important because the microscopic particles and filaments of chrysotile asbestos fibres are carcinogenic in humans, following inhalation."). Accordingly, it seems too uncertain a stretch of the AB's reasoning to infer from this that the extremely attenuated and uncertain potential health risks associated with the contribution of a good's production process to global atmospheric GHG concentrations could render chemically-identical imported and domestic products "unlike" for Article III:4 purposes.

170. *See supra* notes 157–163 and accompanying text.

properly designed, on the basis of the General Exceptions listed in GATT Article XX. In relevant part to defending a GHG-management-related scheme, Article XX reads:

> Subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade, nothing in this Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures:
>
> . . .
>
> (b) necessary to protect human, animal or plant life or health;
>
> . . .
>
> (g) relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption . . . .[171]

1. Provisional Justification Under XX(b) and XX(g)

Provisional justification of a prima facie violation of GATT Articles I or III under GATT Article XX, subparagraph (b) requires that the measure seeking justification be structured in such a way that it is "necessary to protect human, animal or plant life or health."[172] GATT Article XX(b), although more difficult to invoke than XX(g) because of the 'necessity' requirement, discussed below, may nevertheless be worth arguing, due to the desirability of a finding that BCAs are in fact necessary to protect public and environmental health. Because this would be such a strong finding, it would provide the BCA with a high degree of protection from further challenges on trade liberalization grounds. Also, it would be conceptually more desirable, because it would more accurately reflect the gravity of the need to respond to climate change through BCAs. Rather than merely 'relating to' the conservation of exhaustible natural resources in the context of a justification under XX(g) (discussed below) BCA would be seen to address a fundamental public health concern—emphasizing

171. GATT, *supra* note 83, art. XX.

172. *Id.* art. XX(b).

that the global atmosphere and climate are not just exhaustible natural resources, but the very foundation of public and environmental health.

Availing a given BCA of the GATT Article XX(b) defense, in addition to meeting the requirements of Article XX's chapeau—discussed below[173]—requires two things of the BCA's explicit design: the BCA's policy objective must be the protection of life or health of humans, plants, or animals; and the BCA must actually be 'necessary' to achieve that objective.[174] This latter 'necessity' determination in turn requires a finding that no reasonable less trade-restrictive alternative to the measure at issue exists that the contracting party could reasonably have been expected to employ,[175] and has a sliding threshold, depending on the extent to which the policy objective is a truly important, vital interest.[176]

Although commentators have noted that an Article XX defense for BCAs may be difficult, given that their overt objective is to respond to competitiveness concerns of domestic industry, BCAs are in fact necessary for, and should be designed to serve, a needed response to a crucial health concern. The predicted potential impacts of excessive atmospheric GHG concentrations on human, animal, and plant health range from desertification, to extreme natural disasters, to increased incidents of disease.[177] As already mentioned,

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173. In discussing the specific substantive provisions of GATT Article XX prior to discussing its chapeau requirements, I follow the structure of Art. XX analysis outlined by the WTO AB. *See United States—Import Prohibition of Certain Shrimp and Shrimp Products*, Appellate Body Report, 12 October 1998, WT/DS58/AB/R, ¶ 120 [hereinafter *Shrimp/Turtle*, AB Report] ("The task of interpreting the chapeau so as to prevent the abuse or misuse of the specific exemptions provided for in Article XX is rendered very difficult, if indeed it remains possible at all, where the interpreter . . . has not first identified and examined the specific exception threatened with abuse."); *U.S.—Gasoline*, AB Report, *supra* note 158, at 22 ("The [GATT Art. XX] analysis is . . . two-tiered: first, provisional justification by reason of characterization of the measure under XX(g) [or XX(b)]; second, further appraisal of the same measure under the introductory clauses of Article XX.").

174. *See, e.g.*, *EC—Asbestos*, AB Report, *supra* note 108, ¶¶ 155–175; de Cendra, *Border Tax Adjustments*, *supra* note 106, at 144 n.122.

175. de Cendra, *Border Tax Adjustments*, *supra* note 106, at 144 n. 122; *see also Thailand—Restrictions on Importation of and Internal Taxes on Cigarettes*, BISD 37S/200, 20 Feb. 1990, at ¶ 75 (holding that "import restrictions ... could be considered 'necessary' in terms of Article XX(b) only if there were no alternative measure consistent with the General Agreement, or less inconsistent with it, which [the Member] could reasonably be expected to employ to achieve its health policy objectives").

176. *See Korea—Measures Affecting Imports of Fresh, Chilled and Frozen Beef*, Appellate Body Report, WT/DS161/AB/R, WT/DS169/AB/R, 11 Dec. 2000, at ¶ 162–66 (explaining that "[t]he more vital or important [the] common interests or values" sought to be protected, the lower the threshold for a finding of 'necessity'); Ismer & Neuhoff, *Border Tax Adjustments*, *supra* note 111, at 20.

177. *See* IPCC, FOURTH ASSESSMENT REPORT, *supra* note 3, at 29.

because GHG emissions have global effect irrespective of their actual place of emission, a contracting party may not sufficiently safeguard its population from the impact of climate change by regulating internal emissions, especially when forcing domestic industries to internalize substantial climate costs in their costs of production may simply incentivize producers to relocate to less regulated jurisdictions or otherwise increase production in less regulated jurisdictions, maintaining dangerous emissions levels. Properly designed BCAs are meant to protect against such emissions leakage, and hence arguably have as their object and purpose the assurance that domestic climate response strategies are not rendered ineffective by a continued presence in the marketplace of producers who have simply relocated to avoid GHG regulation. Accordingly, it is imperative that a well-designed BCA clearly state as its policy objective the necessity to protect the integrity of domestic GHG caps against emissions leakage, as the U.S. proposals under consideration here do,[178] rather than focusing on domestic competitiveness concerns.

Nevertheless, given the great uncertainty necessarily involved in any significant response to climate change—from the fundamental uncertainty regarding the exact causal relationship between anthropogenic GHG emission-abatement effort and complex climactic changes, to the uncertainty surrounding the threat of emissions leakage itself—a BCA seeking justification under GATT Article XX(b) may run into difficulties with its 'necessity' requirement. Despite the gravity of risk associated with unchecked climate change,[179] and hence the importance of the BCA's purported objective, these uncertainties in connecting BCAs directly to measurable impacts on public and environmental health may suggest to a WTO Panel and the Appellate Body that perhaps less trade-restrictive alternatives—such as bi- and/or multi-lateral negotiation—may in fact be just as or even more effective at achieving this policy objective than trade-restrictive BCAs.[180] In the event that, as I argued in Section II above, good faith international negotiations do not yield a sufficiently stringent agreed regulatory strategy, less trade-restrictive alternative BCA designs than these GATT-violative proposals are also available—such as the BCA design proposed in Section IV above.

If a GATT XX(b) defense to a BCA found violative of GATT provision is unsuccessful, Article XX(g) may be used to defend the scheme. An Article

178. Lieberman-Warner, S. 3036, § 6002(2); Boucher-Dingell, *supra* note 83, § 782(2); Waxman-Markey, H.R. 2454, § 412(2); ACESA (House), H.R. 2454, 111th U.S. Cong. (2009), § 768(a)(2).

179. *See, e.g.*, Stern Review, *supra* note 87.

180. *See Shrimp/Turtle*, AB Report, *supra* note 173, (noting the presumptive preference for multilateral negotiation of environmental policy, as opposed to unilateral trade restrictions).

XX(g) defense requires that the measure seeking justification be structured such that it "relat[es] to the conservation of exhaustible natural resources," and is "made effective in conjunction with restrictions on domestic production or consumption."[181]

The conservation of global atmosphere—in the sense of maintaining sustainable atmospheric GHG levels—may plausibly be argued to amount to the conservation of an exhaustible natural resource. In *US—Gasoline*, for example, a WTO panel noted that clean air was a natural resource that may be depleted.[182] A well-balanced global atmosphere is therefore similarly a natural resource capable of anthropogenic exhaustion.

The determination of whether a given measure 'relates to' such conservation requires a finding of "substantial relationship" between the measure and the conservative purpose, which is to say that the measure cannot be "merely incidentally or inadvertently aimed at" this objective.[183] Given the substantial quantity of economic analysis supporting the necessity of BCA to a well-functioning and effective national GHG cap,[184] such a relationship arguably exists. *US—Shrimp/Turtle*, for example, dealt with a U.S. measure that restricted market access to shrimp imported from countries that had not instituted and enforced the mandatory use of turtle excluding devices (TEDs) on shrimpers within their respective jurisdictions.[185] Like stabilization of GHG levels in the global atmosphere, conservation of highly migratory sea turtles is impossible if conservation efforts are limited to the jurisdiction of one or even a few countries: just as the atmospheric effect of GHG emissions abated in one country may be offset by increased emissions from an unregulated jurisdiction, the turtle conservation efforts of one State will be similarly neutralized if the highly migratory animals are, due to lack of comparable regulation, subsequently killed within the jurisdiction of another.[186]

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181. GATT, *supra* note 83, art. XX(g).

182. *US—Gasoline*, Panel, *supra* note 157. *See also* de Cendra, *Border Tax Adjustments*, *supra* note 106, at 144 (noting that "[s]everal [WTO] panels have included within the term of 'exhaustible natural resources' animals, gasoline and even clean air").

183. *See, e.g.*, *US—Gasoline*, AB Report, *supra* note 158, ¶¶ 19–20.

184. *See, e.g.*, de Cendra, *Border Tax Adjustments*, *supra* note 106, at 144 (citing O. Maestad, *Efficient Climate Policy with Internationally Mobile Firms*, 19 ENVTL. & RESOURCE ECON. 267 (2001); Y. Dissou, *Cost-Effectiveness of the Performance Standard System to Reduce CO2 Emissions in Canada: A General Equilibrium Analysis*, 27 RESOURCE & ENERGY ECON. 187 (2005); W. Pizer, *The Case for Intensity Targets*, Discussion Paper 05–02 (Resources for the Future, January 2005); D. Demailly & P. Quirion, *The Competitiveness Impact of CO2 Emissions Reduction in the Cement Sector* (COM/ENV/EPOC/CTPA/CFA (2004) final, November 2005).

185. *Shrimp/Turtle*, AB Report, *supra* note 173.

186. *Id.*, First US Submission, ¶ 48.

The AB found that a market access-conditioning measure seeking to protect domestic conservation measures from being rendered ineffective was "in principle, reasonably related to the end[]"[187] of conserving an alocally-concentrated global resource, given that the measure on its face excluded from its scope of applicability countries "certified as having a fishing environment that does not pose a threat of incidental taking of sea turtles in the course of commercial shrimp trawl harvesting,"[188] as well as those certified to have "adopt[ed] a regulatory program that is comparable to that of the United States program and to have a rate of incidental take of sea turtles that is comparable to the average rate of United States' vessels"[189]—that is, given that the measure was explicitly designed to apply only to cases that could actually pose a potential threat to the environmental integrity of the Member's domestic conservation measure.

Analogous to the U.S. regulations at issue in *Shrimp/Turtle*, border adjustment schemes forcing importers' internalization of climate costs are designed to ensure the environmental integrity of domestic climate cost-internalization regulation, by disincentivizing emissions leakage. Accordingly, a well-designed BCA, with a carefully-calibrated scope of application, will be similarly "in principle, reasonably related to the end[]" of ensuring the effective functioning of domestic GHG management.

Finally, the requirement regarding domestic restrictions on production and consumption is simply "a requirement of even-handedness" in imposing restrictions on the production/ consumption of competitive domestic and imported products.[190] As Article XX is a list of exceptions to general GATT obligations, however, this requirement must clearly be less stringent than the national treatment provisions of GATT Article III. Accordingly, Article XX(g) does not require *identical* restrictions on imports and domestic production,[191] and may thus be an available defense in the case of BCAs which seek to avoid costs associated with precisely equivalent border adjustment, and which are

187. *Shrimp/Turtle*, AB Report, *supra* note 173, ¶ 141.

188. *Id.* at ¶ 139.

189. *Id.* at ¶ 140.

190. *US—Gasoline*, AB Report, *supra* note 158, ¶ 20 ("The [last] clause [in GATT Art. XX(g)] 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."). *See also* de Cendra, *Border Tax Adjustments*, *supra* note 106, at 144 n.126 (noting that, "[i]n *US—Shrimp Turtle*, . . . the Appellate Body referred explicitly to 'even-handedness'") (citing J. WIERS, TRADE AND ENVIRONMENT IN THE EC AND WTO—A LEGAL ANALYSIS 190 (Europa Law Publishing, 2002)).

191. *US—Gasoline*, AB Report, *supra* note 158, ¶ 22; de Cendra, *Border Tax Adjustments*, *supra* note 106, at 144.

consequently found to violate the strict national treatment provisions of GATT Article III. Again, just as the regulations at issue in *Shrimp/Turtle*—which, like the proposed BCA, were ostensibly structured to apply to importers the same kinds of restrictions which were generally applied on domestic shrimpers[192]—a BCA may in principle be seen as enough of an even-handed measure to pass muster for provisional justification under Article XX(g).

2. Consistency with XX Chapeau

Satisfying the elements of Article XX(b) or XX(g) is nevertheless insufficient to avail a Member State of a full GATT Article XX defense,[193] whose chapeau additionally requires that the challenged measure must neither be "applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail," nor constitute a "disguised restriction on international trade."[194] As the AB noted in *Shrimp/Turtle*, the chapeau to GATT Article XX should be analyzed and applied as an expression of the principle of good faith, which generally controls the exercise of legal rights.[195]

When evaluating a contracting party's unilateral trade-restrictive measure claiming exemption under Article XX, the WTO AB has considered a number of factors in striking the balance between a public policy exception and the overall systemic integrity required by Article XX's chapeau. In considering a party's attempt to influence through trade another member's policy regarding a migratory or global resource—such as the conservation of migratory sea turtles or GHG concentrations in the global atmosphere—failure to engage in serious negotiations prior to taking unilateral action, a differential treatment toward certain parties as compared with others, or strict inflexibility regarding the types of measures another party may use to achieve the desired objective, are all considerations that have counted against global public-policy related trade-restrictions in determining their compatibility with Article XX's chapeau.[196] Accordingly, trade-restrictive global GHG management policy schemes such as national BCAs should be carefully designed to manifest a reasonable and

192. *US—Gasoline*, AB Report, *supra* note 158, ¶ 144.

193. *See, e.g.*, *Shrimp/Turtle*, AB Report, *supra* note 173, ¶ 157 (noting that "the ultimate availability of the [GATT Article XX] exception is subject to the compliance by the invoking Member with the requirements of the chapeau").

194. GATT, *supra* note 83, art. XX.

195. *Shrimp/Turtle*, AB Report, *supra* note 173, ¶ 158.

196. *Id.* ¶ 168; *see also* Ismer & Neuhoff, *Border Tax Adjustments*, *supra* note 111, at 22.

transparent sensitivity to the specificity of circumstances within and sovereign autonomy of other WTO contracting parties (recall the arguments from sovereign autonomy in favor of the BCA design argued for in Section III:B above).[197]

In the BCA context, it has been argued that to avoid conflict with Article XX's chapeau, states "should accept removing BTA when a foreign member can justify that it has adopted a climate programme comparable in effectiveness to the domestic one vis-à-vis the relevant sectors."[198] As outlined above, this is the strategy adopted by the most important pending U.S. legislative proposals. I have argued instead for a reorientation of GHG management policy in the context of industrial production so as to impose climate costs on *all* such products seeking entry to the market, regardless of country of origin, and to rebate such costs to all such products destined for consumption elsewhere, on the understanding that climate costs may be imposed at the border of their destination (provided that these costs do not exceed similar climate costs imposed on like products produced and consumed in those countries). In this Section, I will argue why the country-based approach of the current U.S. BCA scheme design proposals is a less desirable alternative—a prima facie violation of U.S. legal obligations under the GATT, and a design whose application is likely to prove difficult to justify under the justification requirements of Article XX's chapeau.

Importantly, all but one of the drafts under consideration here explicitly conceive foreign regulatory 'comparability' in terms of comparability "in effect,"[199] an explicit reference to the *Shrimp/Turtle* dispute, where the WTO's

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197. *See* Howse & Eliason, *supra* note 168, at 33 ("Policy choices that are reasonable, transparent and objective taking into account the situations of different countries, and based on sound regulation and science, will not violate the conditions of the chapeau [to GATT Article XX] . . . . [U]nder the [AB] approach in *Shrimp/Turtle*, the question will be the extent to which the scheme provides flexibility to achieve the environmental objectives in question through approaches that may . . . differ from the US approach but may be more appropriate to the conditions in the exporting country."); de Cendra, *Border Tax Adjustments*, *supra* note 106, at 145 ("The BTA should be designed in such a manner that allows for sufficient flexibility to take into account the specific conditions prevailing in any country, which does not mean that it has to take into account the specific conditions of every country.").

198. de Cendra, *Border Tax Adjustments*, *supra* note 106, at 145 (citing *United States—Import Prohibition of Certain Shrimp and Shrimp Products, Recourse to Article 21.5 of the DSU by Malaysia*, Appellate Body Report, ¶ 144, WT/DS58/AB/RW (Oct. 22, 2001)).

199. *See* Boucher-Dingell, *supra* note 83, § 781(4)(A) (defining "comparable action" generally as those foreign regulatory measures or schemes that "are comparable in effect to actions carried out by the United States"); *id.* § 783(b)(2)(B)(i) (expressing U.S. negotiating policy to encourage comparability in terms of "comparab[ility] in effect"); Warner-Lieberman, S. 2191, 110th Cong. § 6001(2) (defining "comparable action" in terms of "comparab[ility] in effect"). The ACESA (House), *supra* note 47, appears to conceive comparability in terms of

AB concluded that a U.S. measure conditioning market access on environmental regulatory comparability determinations, while violative of U.S. obligations under the GATT,[200] may be justified under the GATT's exceptions regime if comparability is determined on the basis of "a requirement that the U.S. and foreign programmes be 'comparable in effectiveness.'"[201] I will argue that despite this explicit reference to WTO jurisprudence on the face of the U.S. statutory proposals, the actual implementation of this standard, as interpreted by the AB in *Shrimp/Turtle*, may be significantly more complex than a simple analogy to the eventual resolution of the *Shrimp/Turtle* dispute would suggest.

In the *Shrimp/Turtle* WTO dispute, four shrimp-exporting States from the Indian Ocean[202] challenged a U.S. measure[203] ("Section 609") conditioning market access to imported shrimp on their having been harvested with commercial fishing technology which does not adversely affect sea turtles.[204] Despite considerable flexibility on the face of Section 609's implementation guidelines—foreign turtle conservation schemes were to be certified as exempt from the embargo if they were "comparable" to the U.S. conservation effort[205]—in practice, competent U.S. authorities recognized only those foreign

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either a state's participation in an international or bilateral GHG management regime, requiring that state to undertake GHG reductions quantitatively comparable to those required of the U.S., or else in terms of annual energy or GHG intensity. See American Clean Energy and Security Act, H.R. 2454, 111th Cong. § 768(c); see also *id.* at § 763(b)(2)(A)(ii) (defining energy/GHG intensity).

200. Section 609 *prohibited* market access if certain conditions were not met, and was thus properly analyzed under GATT Article XI (prohibition of quantitative restrictions), whereas a BCA measure merely imposes a *cost* to market access when certain conditions are not met and would thus be properly analyzed under GATT Article III (national treatment). The structure of the market access restriction, and the analysis of a justification under Article XX for its GATT-violative aspect(s), is otherwise the same.

201. *Import Prohibition of Certain Shrimp and Shrimp Products, Recourse to Article 21.5 of the DSU by Malaysia*, Appellate Body Report, ¶ 141, WT/DS58/AB/RW (Oct. 22, 2001) (quoting the Panel's interpretation of the AB's conclusions in the original *Shrimp/Turtle* dispute, which noted that "the Appellate Body ... accepted—at least implicitly—that a requirement that the U.S. and foreign programmes be 'comparable in effectiveness' would be compatible with the obligations of the United States under the chapeau of Article XX," and concluded that "if, *in practice*, the implementing measure provides for 'comparable effectiveness,' the finding of the Appellate Body in terms of lack of flexibility will have been addressed") (emphasis original); *id.* ¶ 144 ("We ... agree with the conclusion of the Panel on 'comparable effectiveness.'").

202. The challenging States were India, Pakistan, Thailand, and Malaysia. *See Shrimp/Turtle*, AB Report, *supra* note 173, ¶ 1.

203. Pub.L.No. 101-162, § 609, 103 Stat. 988, 1037-38 (1989), codified at 16 U.S.C. § 1537.

204. *See Shrimp/Turtle*, AB Report, *supra* note 173, ¶ 138.

205. *See Revised Notice of Guidelines for Determining Comparability of Foreign*

programs which were substantively *the same* as that of the U.S.[206] Unsurprisingly, the U.S. believed that its particular regulatory scheme (mandating all shrimpers to use turtle-excluding devices) was the most appropriate regulatory response.[207]

As mentioned, the Panel established to hear the dispute concluded Section 609 to be a violation of Article XI of the GATT, the prohibition on quantitative import restrictions,[208] a finding which the U.S. did not appeal.[209] The Panel also concluded that the measure did not qualify for exemption under GATT Article XX.[210] On appeal of this legal issue, the AB reversed the Panel in finding that, on its face, the measure *did* qualify for provisional exemption under GATT Article XX(g)—relating to the conservation of exhaustible natural resources. However, the AB concluded that the measure nevertheless failed to satisfy the conditions necessary to avail itself of a GATT Article XX exemption, because the manner in which it was actually *applied* was inconsistent with that Article's chapeau.[211]

Although the U.S. measure at issue in *Shrimp/Turtle* was ostensibly designed so as to exclude from its scope of application cases which do not threaten the effectiveness of the U.S. domestic conservation program, including through comparability certifications—entitling it to provisional justification under the GATT general exceptions regime—the manner in which the comparability determinations were actually undertaken by the U.S. were held to constitute 'unjustifiable discrimination between countries where the same conditions prevail.'[212] Specifically, it was found that the competent U.S. government officials, in determining whether particular batches of incoming shrimp were not harvested so as to pose a threat to sea turtles, and therefore should be granted U.S. market access, did not actually undertake a context-specific investigation. Instead, the U.S. authorities were found to have undertaken a formalistic examination into whether the shrimps' country of

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Programs for the Protection of Sea Turtles in Shrimp Trawl Fishing Operations, 61 Fed. Reg. 17342 (Apr. 19, 1996) [hereinafter 1996 Guidelines].

206. *See Shrimp/Turtle*, AB Report, *supra* note 173, ¶ 161.

207. The U.S. required the use of turtle-excluding devices in all shrimp trawl nets under its jurisdiction following a 1990 U.S. National Academy of Sciences report on sea turtles finding that any lesser regulation is insufficient to ensure adequate sea turtle conservation. *Shrimp/Turtle*, First U.S. Submission, ¶ 39.

208. *Shrimp/Turtle*, AB Report, *supra* note 173, ¶ 7. *See also* GATT, *supra* note 83, art. XI.

209. *Shrimp/Turtle*, AB Report, *supra* note 173, ¶ 98.

210. *Id.* ¶ 7.

211. *Id.* ¶ 176.

212. *Id.*

origin had mandated and enforced a regulatory program that is essentially the same as that required of domestic shrimpers within the U.S. The AB found this to have been unacceptable:

> [I]t is not acceptable, in international trade relations, for one WTO Member to use an economic embargo to *require* other Members to adopt essentially the same comprehensive regulatory program, to achieve a certain policy goal, as that in force within that Member's territory, *without* taking into consideration different conditions which may occur in the territories of those other Members.[213]

Further, the fact that *individual importers* were not given the opportunity to show that their particular shrimp were not harvested in a way harmful to sea turtles—that is, that market access was granted or denied on a country-wide basis—was similarly unacceptable:

> [The fact that] shrimp caught using methods identical to those employed in the United States have been excluded from the United States market solely because they have been caught in waters of countries that have not been certified by the United States [...] is difficult to reconcile with the declared policy objective of protecting and conserving sea turtles.[214]

These aspects of the way in which the provisionally-justified measure had been *applied* were both seen to contribute to the AB's conclusion that the measure failed to qualify for GATT Article XX justification for having been applied in a manner that constituted unjustifiable[215] as well as arbitrary[216] discrimination, contrary to Article XX's chapeau. The AB's analysis essentially states that if a Member is going to violate its legal obligations under

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213. *Id.* ¶ 164 (emphasis original).

214. *Id.* ¶ 165 (emphasis original). It is important to note that the AB found the requirement of country-wide regulations as a condition for market access to be impermissible without a provision allowing for individual exemption, despite the arguable environmental necessity of requiring countries as a whole to enforce turtle-protective measures: because turtles migrate, the use of turtle excluding devices ("TEDs") as a conservation measure must be comprehensive to be effective. As was argued in the litigation that followed the implementation of the new U.S. guidelines, which gave market access to Brazilian and Australian shrimpers despite their countries' lack of a comprehensively-enforced TED system, "the use of TEDs in [Brazil's northern fishery] only saves these migratory turtles so that they can die in Brazil's southern fishery, where no TEDs are used," and guidelines allowing for the importation of shrimp on a shipment-by-shipment basis negates any incentive that countries like Brazil had been given under section 609 to establish and enforce TED requirements for all shrimping vessels within their jurisdictions, to ensure that migrating sea turtles don't end up dead in shrimp nets within their waters. *See Turtle Island Restoration Network v. Mallett*, 110 F. Supp. 2d 1005, 1015 (Ct. Int'l Trade 2000).

215. *Shrimp/Turtle*, AB Report, *supra* note 173, ¶ 176.

216. *Id.* ¶ 177.

the GATT with a measure that is provisionally justified by being carefully tailored to affect *only* those products whose regulation is necessary to safeguard the integrity of domestic environmental programs, then that Member bears the burden of actually *applying* that measure so as to in fact only target those products. Consider the implications of this analysis in the context of the BCA designs discussed in this Section.

First, none of these drafts offer individual importers a fair opportunity to show that, although the country in which the products were produced has failed the U.S. comparability determination, the actual costs to the climate from the production of the *particular* products seeking market entry is *less* than the average cost to the climate from similar production in that country of origin. Rather, the Lieberman-Warner-Boxer and Boucher-Dingell drafts (Waxman-Markey provides *no* guidance about how adjustment value is to be determined, other than that it is to be promulgated by the EPA) both provide for the adjustment value for climate costs assessed at the border to be a function of statistical averages regarding the country of origin.[217] Of course, the scheme may be easily amended to provide for individualized assessments in cases where all relevant information is made available by the importer and is reasonably reliable (as in the BCA proposal argued for in Section IV above). Nevertheless, the concern is precisely the availability and reliability of individualized GHG emissions information for foreign producers.

Because self-reported emissions data from a country that does not mandate independently verified emissions monitoring (or does not effectively enforce such requirements, or where claims of compliance are otherwise unreliable) may be difficult to verify, an effective BCA scheme must provide in that event for a standardized methodology for arriving at an appropriate approximation of the tCO_2e actually embodied in (for having been caused to be emitted in the course of producing) the products seeking market entry. One major difference between the BCA design argued for in Section IV above and the design proposals discussed in the U.S. Congress is the standard that is used for this purpose. Recall my argument in Section IV for the use of a best available technology standard—that evaluating the amount of tCO_2e embodied in a given production unit on the presumption that the most emissions-minimizing technology presently in use by some minimum percentage of the market was used (when reliable information at to exact emissions cannot be made available by the importer) would preempt challenge to the BCA under GATT Article III, accelerate reorientation toward a low-GHG domestic economy, and encourage

217. *See supra* notes 157–163 and accompanying text.

more efficient and hence more competitive domestic production in the long term.

In the BCA proposals under consideration in this Section, on the other hand, the requisite adjustment value for such imports is calculated on the basis of sectoral emissions and total production volume statistics in the country of origin as a whole, adjusted to take into account the country's relevant regulatory responses and economic development.[218] The latter proviso may also apply to initial country comparability determinations,[219] and is an important attempt to bring sensitivity to the different contexts of different countries of origin into the scheme design. Nevertheless, under the AB's analysis in *Shrimp/Turtle*, because this BCA architecture is likely to present a prima facie violation of GATT Article III under *US—Gasoline*,[220] and because the rationale for justifying this violation is, like the rationale behind Section 609 in *Shrimp/Turtle*, to protect the integrity of domestic environmental regulations (i.e. to protect against emissions leakage), the scheme must be applied in such a way that only those products that actually pose such a threat are affected. It would seem at least plausible that, in the complexity of such an undertaking, some WTO Members may find themselves to hold legitimate claims that the BCA's scope of application is not so carefully tailored as to apply *only* to those States, and *only* to those individual imports, which may actually contribute to the threat of emissions leakage from the U.S.

It is true that the WTO Dispute Settlement Body eventually satisfied itself that the U.S. had brought its application of Section 609 into conformity with its GATT obligations, in the context of which the AB generally concluded 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.'"[221] In fact, however, the

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218. *See supra* notes 157–163 and accompanying text.

219. It is explicitly mentioned in this regard by the Lieberman-Warner-Boxer bill, at § 6001(2). It is left out of the Boucher-Dingell draft, and *no* guidance with respect to how the comparability determination is to be made (other than that it is the President who is to make it) is given by the Waxman-Markey bill.

220. *See supra* notes 158–170.

221. *Shrimp/Turtle–Article 21.5*, AB Report, *supra* note 201, ¶ 144 (emphasis added). Actions taken by the U.S. to bring Section 609 into conformity with its WTO obligations, as requested by the WTO's Dispute Settlement Body, were subsequently examined by the Panel and AB in response to a challenge brought by Malaysia under DSU Article 21.5. Neither party challenged the Panel's findings that, given the AB's report in the original *Shrimp/Turtle* action, the statutory language of Section 609, which remained unchanged, still constituted a violation of GATT Article XI, but also still qualified for provisional justification under GATT Article XX(g). The substantive dispute between the parties was whether the way in which the U.S. now applied Section 609 satisfied the requirements of Article XX's chapeau. *Id.*¶ 80.

language of "comparable in effectiveness" appeared identically in the U.S. implementation guidelines originally challenged in the *Shrimp/Turtle* dispute, just as in the revised guidelines in accordance with which application of Section 609 was eventually found to be consistent with GATT Article XX's chapeau.[222] Hence, although the U.S. BCA proposals appear to have been written with the AB's report in *Shrimp/Turtle* in mind,[223] the mere inclusion of 'comparability in effectiveness' provisions will not per se guarantee consistency with Article XX's chapeau—trade-restrictive measures based on regulatory comparability determinations will be eligible for exemption under GATT Article XX only if "*in practice*, the implementing measure provides for 'comparable effectiveness.'"[224]

In evaluating the U.S.'s actions subsequent to its initial report, the AB did not actually have opportunity to address and evaluate the way in which the U.S. was, *in practice*, conducting comparability evaluations on the basis of "comparab[ility] in effectiveness."[225] As may be seen from the AB's report in the challenge brought against U.S. implementation effort—and in particular from the U.S.'s implementation status reports, which served as the basis for its evaluation—rather than broadly implementing a regime based on unilateral "comparab[ility] in effectiveness" determinations, the U.S. had focused its efforts primarily on negotiating with the Member States who had initially complained in *Shrimp/Turtle*.[226] The U.S. status reports primarily emphasized

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222. *Compare* Revised Notice of Guidelines for Determining Comparability of Foreign Programs for the Protection of Sea Turtles in Shrimp Trawl Fishing Operations, 61 Fed. Reg. 17,342, 17,342 (Apr. 19, 1996), *with* Revised Guidelines for the Implementation of Section 609 of Public Law 101-162 Relating to the Protection of Sea Turtles in Shrimp Trawl Fishing Operations, 64 Fed. Reg. 36,946, 36,950 (July 8, 1999) [hereinafter 1998 Revised Guidelines].

223. *Compare* Boucher-Dingell, *supra* notes 83 and 199, at 217–18 (discussing "comparable action"), *with Shrimp/Turtle–Article 21.5*, AB Report, *supra* note 201, ¶ 144 (discussing "comparable in effectiveness").

224. *Shrimp/Turtle–Article 21.5*, AB Report, *supra* note 201, ¶ 141.

225. *Id.*

226. The U.S. submitted five implementation status reports between July 1999, when its revised implementation guidelines went into effect, and January 2000, chronicling the first six months of Section 609's functional equivalence regime's operation under the new implementation guidelines, U.S. Department of State, *Revised Guidelines for the Implementation of Section 609 of Public Law 101-162 Relating to the Protection of Sea Turtles in Shrimp Trawl Fishing Operations*, 64 Fed. Reg. 36,946, 36,949–52 (July 8, 1999); *Shrimp/Turtle*, Status Report by the United States, T/DS58/15, add. 1–4. The reports also inform the WTO DSB that, within this six month period, a fishery in Southern Australia was deemed to warrant the status of comparable effectiveness; a team from Thailand was invited to the U.S. for a training session in the use of TEDs; and a U.S. team was dispatched to Pakistan to evaluate that government's sea turtle conservation program for comparable effectiveness. *Id.* However, the primary emphasis of the reports is clearly the ongoing U.S. efforts to negotiate a regional agreement on turtle mortality in the course of commercial shrimping effort in the Indian

the U.S.'s participation in the negotiation of a regional agreement with "several governments in the Indian Ocean Region,"[227] and the AB emphasized that the U.S.'s revised implementation of Section 609 "is justified under Article XX of the GATT 1994 as long as . . . the ongoing serious good faith efforts to reach [this] multilateral agreement[] remain satisfied."[228] These ongoing negotiations were the primary focus of U.S. effort to implement the DSB's recommendation in the *Shrimp/Turtle* dispute,[229] and were primarily responsible for satisfying the DSB that the U.S. had brought its acts into conformity with the original *Shrimp/Turtle* report.

Accordingly, the difficulties originally encountered by the U.S. in applying the functional equivalence recognition component of its scheme were not necessarily overcome in order to implement the AB's original *Shrimp/Turtle* report. Rather, the U.S. achieved conformity with its WTO obligations, as requested by the DSB after the *Shrimp/Turtle* case, by extensively negotiating with the complaining parties in that case, not by making its *unilateral* equivalence recognition procedures more flexible and fair. The fact that the language with respect to "comparability in effectiveness" determinations was identical in both the original and the revised guidelines serves to further support the conclusion that the ultimate resolution of the *Shrimp/Turtle* dispute neither consisted of the addition of these words to the guidelines, nor necessarily serves to protect measures conditioning market access on "comparability in effect" determinations.

The *Shrimp/Turtle* dispute is not the only example where 'comparability in effect' determinations have proven difficult. Similar issues arise in the context of existing mutual recognition ("MR") regimes,[230] and indeed a border adjustment regime centralized around determinations of foreign regulatory functional equivalence,[231] such as the proposed U.S. BCA discussed above, can

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Ocean.

227. *See Shrimp/Turtle*, Status Report by the United States, WT/DS58/15, Jul. 15, 1999, at 2. *See also id.*, adds. 1, 3, 4.

228. *Shrimp/Turtle–Article 21.5*, AB Report, *supra* note 201, ¶ 153(b).

229. *See* United States Government, National Oceanic and Atmospheric Administration, South-East Asian Marine Turtle Memorandum of Understanding (IOSEA), *available at* http://www.nmfs.noaa.gov/pr/species/turtles/iosea.htm#background.

230. *See, e.g.*, THE PRINCIPLE OF MUTUAL RECOGNITION IN THE EUROPEAN INTEGRATION PROCESS (Fiorella Kostoris Padua Schioppa ed., 2005).

231. *See* Joseph H. H. Weiler, *Mutual Recognition, Functional Equivalence and Harmonization in the Evolution of the European Common Market and the WTO*, *in* MUTUAL RECOGNITION 25, *supra* note 230. *See also* Kalypso Nicolaidis, *Globalization with Human Faces: Managed Mutual Recognition and the Free Movement of Professionals*, *in* MUTUAL RECOGNITION 129, 133, *supra* note 230 ("Formally, mutual recognition can be defined as a contractual norm between governments—or bodies with delegated authority—mandating the

be characterized as essentially requiring a "managed unilateral mutual recognition regime,"[232] where a host state compares the qualifications of foreign GHG regulatory programs to its own, "and where the competent authorities are to assess some level of equivalence according to unilaterally determined criteria."[233]

Further, the AB's reasoning in *Shrimp/Turtle* implies that in order for the proposed U.S. BCA to qualify for exemption under GATT Article XX, it would require a comparability regime operating on principles much like those underlying the conception of MR regimes. If an imported product, such as a particular batch of shrimp or a particular batch of steel, in fact meets the (turtle- or GHG-) conservation objectives of the importing state regulatory regime, then a border scheme seeking justification under XX(g) which does not allow sufficient flexibility to exempt such products from its scope is by definition unnecessarily restrictive.[234]

Importantly, however, the MR doctrine, originally a doctrine of European integration,[235] has itself encountered a number of relevant application difficulties, notwithstanding many contextual aspects favorable to its development that are furthermore unique to the

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transfer of regulatory authority from the host country (or jurisdiction) where a transaction takes place, to the home country (or jurisdiction) from which a product, a person, a service or a firm originate (jurisdictions are generally sovereign states but they can also be sub-national units in federal entities).").

232. *See* Nicolaidis, *Managed Mutual Recognition*, *supra* note 231, at 132 (describing unilateral recognition in the context of professional services, and explaining that "[t]his involves comparing the qualifications acquired by a professional in a home state with those required in a host state where the professional requests recognition, and where the competent authorities are to assess some level of equivalence according to unilaterally determined criteria"). By analogy, in the U.S. BCA (under both proposals), a U.S. agency would "compar[e] the qualifications [of a GHG allowance/credit] acquired . . . in a home state with those required [of such allowances/credits] in a host state where [the foreign allowances/credits] request[] recognition, and where the competent authorities are to assess some level of equivalence according to unilaterally determined criteria."

233. *Id.*

234. As Professor Weiler explains, "[the principle of mutual recognition or functional equivalence] is but a banal doctrinal manifestation of the principle of necessity which is also a pillar of GATT jurisprudence. If an imported product meets the safety or other *objectives* of the importing state regulatory regime but does so by adopting a different set of technical standards which are not authorized by the importing state regulation—how could they ever claim that it is *necessary* to exclude that import from the national market? And if they cannot so claim, how could they justify the exclusion under the Justification regime of Article XX GATT?" Weiler, *Mutual Recognition*, *supra* note 231, at 59 (emphasis original).

235. *See, e.g.*, Nicolaidis, *Managed Mutual Recognition*, *supra* note 231, at 135 (noting the "formal invention of mutual recognition" with the Treaty of Rome).

European experience,[236] and so not easily generalizable to overall global trade relations.[237] Jacques Pekmans notes, for example, that "the reliance on MR in the EU is greatly facilitated by the forceful treaty principle of free movement, a principle that does not exist and cannot be expected in international trade law or in economic regionalism elsewhere," and that this principle of free movement, combined with the fact that "a supranational ECJ is neither present in the WTO regime nor in other regional trade regimes . . . makes it doubtful whether MR, with all its profound consequences, can be exported to world trade or other trade blocks."[238]

It is therefore instructive that even within the EU, mutual recognition regimes have proven to involve significant cost and administrative complexity.[239] Indeed, a "deep scepticism amongst economic agents in markets about MR"[240] continues to persist. Further, the complexity of implementing MR regimes truly based on functional equivalence has itself necessitated a gradual and hierarchically top-down negotiating process to facilitate their establishment.[241] Indeed

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236. *See* Alfonso Mattera, *The Principle of Mutual Recognition and Respect for National, Regional and Local Identities and Traditions*, *in* MUTUAL RECOGNITION 1, 11, *supra* note 230 (noting that the Member States of the European Union, "in spite of their different traditions and legislations, have common cultural and scientific roots and belong to the same Community, which is held together by links stemming from a common-body legislation, common institutions and a supranational jurisdiction within which rulings apply to all states").

237. *See also* Trebilcock & Howse, *Regulatory Diversity*, *supra* note 68, at 9–10 ("[D]eep economic integration amongst nation states is typically predicated either on the existence of a hegemonic power with the ability to impress its will on other smaller and weaker states (the U.S. in the immediate post-War years), or willingness amongst member-states to cede substantial aspects of their domestic political sovereignty to supranational political institutions—a willingness that for the most part is likely to be conditional on a reasonably egalitarian distribution of political influence and a common interest in overarching political objectives (in the case of Europe, the mitigation of conflicts that had devastated the continent militarily and economically over the first half of this century). *Neither of these conditions is likely to apply in the foreseeable future elsewhere either with respect to other regional trading blocs or with respect to the multilateral system at large.*") (citing MICHAEL TREBILCOCK & ROBERT HOWSE, THE REGULATION OF INTERNATIONAL TRADE 502–503 (Routledge 1995)).

238. Jacques Pelkmans, *Mutual Recognition in Goods and Services: An Economic Perspective*, *in* MUTUAL RECOGNITION 85, 88, *supra* note 230 (citation omitted).

239. *See id.* at 103 ("Mutual recognition turns out to have fairly high information, transaction and compliance costs.").

240. *Id.* at 105. *See also* Nicolaidis, *Managed Mutual Recognition*, *supra* note 231, at 140 (noting that professional bodies in the EU would "prefer[] to set criteria for equivalence on their own to be translated into sectoral [EU] Directives rather than leaving such assessment to the 'arbitrary' decisions of 'state bureaucrats'").

241. *See* Nicolaidis, *Managed Mutual Recognition*, *supra* note 231, at 174 ("[G]enerally,

Pelkmans's explicit "aim is to have the reader understand that MR can only flourish in a well-defined and hierarchical legal regime,"[242] a highly prohibitive requirement in most international relations, but particularly in the context of a bottom-up strategy for developing comprehensive global GHG management.

Importantly, no comparability in effect determinations of the sort envisioned by the legislative proposals considered here have *ever* been successfully implemented in the context of regulatory GHG emissions programs, despite increasing and widespread arguments for the desirability of linking GHG emissions allowance trading markets from different regulatory jurisdictions.[243] Consider for instance the fact that the E.U.'s Emissions Trading Scheme (ETS)—the most sophisticated example of a regional GHG emissions regulatory scheme—does not grant the national administrative agencies responsible for its implementation authority to engage in the type of direct comparability determinations that are envisioned in the U.S. proposals: While the E.U. ETS allows for linkage with the Kyoto Protocol's Clean Development Mechanism (CDM),[244] the Linking Directive directs relevant national agencies not to evaluate incoming credits for comparability, but rather simply to accept "[a]ll CERs [Certified Emissions Reductions] and ERUs [Emissions Reduction Units] that are issued and may be used in accordance with the UNFCCC and the Kyoto Protocol and the subsequent decisions adopted thereunder."[245] Although the original E.U. ETS Directive encouraged the Member States to conclude agreements with parties in Kyoto Protocol's Annex B for the mutual recognition of GHG emission allowances,[246] and although such agreements were further encouraged by the Linking Directive

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MRAs [mutual recognition agreements] will likely follow from two prior steps: (a) adoption of framework agreements calling for MRAs; and (b) the crafting of detailed work programmes, roadmaps and guidelines for designing MRAs which can provide a precious basis for learning from precedents."). *See also* Pelkmans, *Mutual Recognition*, *supra* note 238, at 106 (noting the crucial role played by the EU's 98/34 Committee in the EU MR regime).

242. *Id.*

243. *See, e.g.*, JUDSON JAFFE AND ROBERT N. STAVINS, INTERNATIONAL EMISSIONS TRADING ASSOCIATION, LINKING TRADABLE PERMIT SYSTEMS FOR GREENHOUSE GAS EMISSIONS: OPPORTUNITIES, IMPLICATIONS AND CHALLENGES (2007).

244. *See* EU Parliament & Council, Directive 2004/101/EC, *Amending Directive 2003/87/EC Establishing a Scheme for Greenhouse Gas Emission Allowance Trading within the Community, in Respect of the Kyoto Protocol's Project Mechanisms*, Oct. 27, 2004.

245. *Id.* ¶ 2. However, the directive explicitly excepts credits generated by nuclear facilities or from land use, land use change, or forestry activities. *Id.*

246. EU Parliament & Council, Directive 2003/87/EC, *Establishing a Scheme for Greenhouse Gas Emission Allowance Trading within the Community and amending Council Directive 96/61/EC*, 13 Oct. 2003, at Art. 25.

with States that have mandatory cap-and-trade policies but may not be Kyoto parties,[247] no such procedures have actually been established. Even in the experimental private sector, although the Chicago Climate Exchange technically has procedures in place for accepting CDM-issued units into its regulatory system, these procedures have never actually been used.[248]

Although, as mentioned above, at least three of the four most prevalent U.S. BCA proposals appear to have been written with the AB's report in *Shrimp/Turtle* in mind,[249] operationalizing its "comparable in effectiveness" provisions is likely to prove difficult. As shown by the *Shrimp/Turtle* dispute itself, it is much easier to conclude that a foreign regulatory scheme which is substantively identical to that of an importing State satisfies the equivalence condition, than it is to reach that conclusion about a substantively different regulatory scheme that is nevertheless 'comparable in effectiveness.'[250] Consider, for example, the fact that Section 609 was based on a report from the National Academy of Sciences, which had recommended the regulatory response employed by the U.S. government, presenting this regulatory response as the most effective of the turtle-conservation alternatives.[251] It is unsurprising, therefore, that U.S. competent authorities had found it difficult to assess as 'comparable' any foreign regulatory schemes but those that were substantively very similar to those employed by the U.S., resulting in the withholding of affirmative comparability assessments from any foreign regulatory scheme which was not essentially substantively identical to its own regulatory scheme—a violation of Article XX's chapeau.[252]

The proposals for a U.S. BCA currently included in the Lieberman-Warner-Boxer, Boucher-Dingell, and Waxman-Markey drafts all envision a border measure which, like Section 609, conditions market access on the basis of a product's *country of origin* satisfying a 'comparability in effect' determination with respect to its internal GHG regulatory regime. Given the inherent difficulties in determining a truly substantively different regulatory

247. EU Linking Directive, *supra* note 244, at preambular (18).

248. *See* Erik Haites, Margaree Consultants Inc., Toronto, *Linking Trading Agreements*, Designing Climate Change Policy, University of Southern California, Los Angeles, May 21, 2008, *available at* http://www.usc.edu/research/private/docs/initiatives/future_fuels/Haites.pdf, at 8.

249. *Compare* Boucher-Dingell, *supra* notes 83 and 199, at 217–18 (discussing "comparable action"), *with Shrimp/Turtle–Article 21.5*, AB Report, *supra* note 201, ¶ 144 (discussing "comparable in effectiveness").

250. *See* Pelkmans, *Mutual Recognition*, *supra* note 238, at 124 (noting "the lack of clarity about the [comparable] 'effects'" aspect of mutual recognition regimes).

251. *See supra* note 207.

252. *See Shrimp/Turtle*, AB Report, *supra* note 173, ¶ 164–65.

program to be 'comparably effective,' taking into account the contextual differences among all the WTO Member States, it is not implausible that some Members may hold legitimate claims that the BCA's discrimination on the basis of country of origin—a prima facie violation of GATT Articles I and III—is unjustifiable under Article XX's chapeau.

Given the specific facts resolving the *Shrimp/Turtle* dispute—in particular the negotiation of a regional agreement with the complaining parties—reliance on 'comparability in effect' on the basis of that case is unwarranted and dangerous. In the global GHG management context, many more Member States would potentially be affected than the four challengers in *Shrimp/Turtle*. Given that BCA schemes are necessary precisely because no overarching global regime exists that would impose comparably effective GHG abatement effort obligations on all GHG-emitting States,[253] a similar strategy to that used in *Shrimp/Turtle*—that is, negotiating the details of an appropriate climate change regulatory response with all affected parties—is presumed to have been unsuccessful, as otherwise the need for (though perhaps not the desirability of[254]) BCA would have been obviated. Accordingly, it is likely that current formulations for a draft U.S. BCA will place the U.S. legislation in unnecessary tension with U.S. legal obligations under the GATT, violating the most-favored-nation principle of GATT Article I and national treatment principle of GATT Article III and, in relying on 'comparability in effect' determinations, choosing an unnecessarily difficult route to justification under Article XX.[255]

VI. Conclusion

The world appears on a steady course toward an eventually comprehensive network of GHG management, and any such future climate regime will undoubtedly have numerous impacts on international trade. As the one

253. *See supra* Section II.

254. *See supra* Section III for arguments supporting the desirability of BCA regardless of the success of international agreements.

255. Because I argue that the proposed U.S. BCA, as it is currently envisioned in the drafts under consideration here, is set up so as to be vulnerable under the unjustifiable discrimination prong of GATT Article XX's chapeau, I do not get into the other two prongs of analysis under the chapeau. Importantly, however, to avoid a conflict with Article XX's chapeau under the 'disguised restriction' prong, it is imperative also that the BCA be designed and structured as a focused response to a serious threat to the integrity of national GHG abatement effort through highly probable emissions leakage. *See* de Cendra, *Border Tax Adjustments*, *supra* note 106, at 145 ("... to avoid the BTA from being considered a 'disguised restriction', it is necessary that its design, architecture and structure show clearly that it is not introduced to achieve trade-restrictive objectives.") (citing *EC-Asbestos*, Panel, *supra* note 108, at ¶ 8.236).

hundred and ninety-two States party to the UNFCCC continue to work toward consensus regarding an international agreement on global GHG management to succeed the Kyoto Protocol, the possibility remains clear that consensus among the major emitters and economic powers may not be reached or, more likely still, that the price of ex ante top-down consensus may be a failure to commit to the level of stringency in global GHG-regulation that, given IPCC projections and recommendations, may be required to achieve the objective of UNFCCC Article 2. It is therefore advisable for the UNFCCC parties to devise an architecture for climate response that will facilitate rather than obstruct interactions of mutual support between the international climate and international trade regimes.

In this paper, I have argued that the use of BCA measures, in conjunction with national cap-and-trade schemes which allocate capped tradable allowances by government auction, may not only be justified as a matter of world trade law, but may also offer unique benefits for the development of economically efficient and environmentally effective global GHG management. Although the most recent important legislative proposals in the U.S. Congress regarding a national GHG regulatory scheme all include provisions which fall within the definition of what I have here termed BCA, I have argued that they place the U.S. legislation in unnecessary tension with U.S. legal obligations under the GATT, and that an alternative—origin-neutral—design structure should instead be employed.

Rather than the comparability-centered BCA favored by current U.S. legislative proposals, a BCA designed on the basis of an understanding that the levying of climate costs associated with GHGs emitted in the course of production should be regulated at the point of consumption, in accordance with the destination principle, would both engender greater beneficial regulatory competition and place less strain upon a WTO Member's legal obligations than current U.S. BCA proposals.[256] Conditioning market access for certain domestic *and* imported GHG-intensive goods on the purchase of GHG allowances for every GHG-ton emitted in the course of production may provide an important mechanism to facilitate a response to the global threat of rising GHG emission levels, encouraging the gradual establishment of a transborder administrative regime for coordinating the appropriate levels of cost

256. Recall again the criticism of recent trends toward the omission of BCA altogether in favor of rebates to sectors affected by international competition—such an approach undermines the entire purpose of climate-cost internalizing national GHG schemes and is, in any case, unnecessary given that, as argued above, BCA can be designed in such a way as to withstand challenges of protectionism.

distribution necessary to eventually steer the globe toward both a well-functioning climate and a well-functioning economy.

In sum, I have argued that the difficulties at the heart of current proposals for a U.S. BCA place an unnecessary strain on international trade relations and unnecessarily conflict with U.S. obligations as a Member State in the WTO, that a more elegant option exists under WTO law, and that this alternative conception of BCA objectives and design will also be more likely to lead to both greater international cooperation in GHG management and greater objective GHG abatement effort, by creating better conditions of possibility for fruitful regulatory competition.