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Sizing Up the WTO: Trade-Environment Conflict and the Kyoto Protocol

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An earlier version of this article was submitted as part of a Graduate Diploma in International Law at the University of Melbourne, Australia. I would like to thank Professor Martin Davies, Martijn Wilder and Andrew Mitchell for their kind assistance in the preparation of this article. The views expressed herein, and any errors, are mine.

SIZING UP THE WTO: TRADE-ENVIRONMENT CONFLICT AND THE KYOTO PROTOCOL

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I. INTRODUCTION

The international community increasingly acknowledges the state of the environment as a global concern. Few environmental

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issues relate exclusively to individual states, and even those that relate superficially to one region are more likely to be recognized today as indirectly affecting the people of the world as a whole.[1] An acute public awareness of the significance of international trade in the context of the environment is also apparent. In December 1999, the violent protests in Seattle during the third Ministerial Conference of the World Trade Organization (WTO)[2] exemplified the growing disquiet over the unresolved conflict between trade and environment. Tension also exists at the level of public international law, as multilateral environmental agreements (MEAs) increasingly rely on restrictive trade measures to achieve their goals, despite the uncertainty as to whether such measures contravene WTO obligations. No easy solution is in sight.

The multilateral efforts to combat climate change through the United Nations Framework Convention on Climate Change (FCCC)[3] and more recently, its Kyoto Protocol,[4] provide an extraordinary opportunity to examine the trade-environment conflict. The greenhouse gas emissions trading regime foreshadowed in the Kyoto Protocol will bring into sharp relief the use of trade in environmental conservation against the background of the WTO and the General Agreement on Tariffs and Trade (GATT).[5] The regime has the potential to affect global industry dramatically and, if successful, to make a positive contribution towards resolving the problem of climate change. It is timely, and necessary, to examine these issues because the details of the emissions trading regime will be reexamined at the Sixth Session of the Conference of the Parties to the FCCC in November 2000.

This article begins by examining the interrelationship between trade liberalization and environment, then moves on to consider the specific conflict between the GATT and trade measures in MEAs.

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1. For example, the protection of natural forests in one country provides global benefits. *See* Raúl Sáez, *The Case of a Renewable Natural Resource: Timber Extraction and Trade*, *in* THE ENVIRONMENT AND INTERNATIONAL TRADE NEGOTIATIONS: DEVELOPING COUNTRY STAKES 13, 29 (Diana Tussie ed., 2000). *See also* James Cameron & Jonathan Robinson, *The Use of Trade Provisions in International Environmental Agreements and Their Compatibility with the GATT*, 2 Y.B. INT'L ENVTL. L. 3, 14-15 (1991).

2. *See generally* Agreement Establishing the World Trade Organization, 33 I.L.M. 1125 (1994) [hereinafter Establishing WTO].

3. *See* United Nations Framework Convention on Climate Change, *opened for signature* June 4, 1992, 31 I.L.M. 849 (entered into force Mar. 21, 1994) [hereinafter FCCC].

4. *See* Kyoto Protocol to the United Nations Framework Convention on Climate Change, *opened for signature* Mar. 16, 1998, U.N. Doc. FCCC/CP/1997/L.7/Add. 1 [hereinafter Kyoto Protocol].

5. *See* General Agreement on Tariffs and Trade, 55 U.N.T.S. 187 (1947) [hereinafter GATT].

This conflict can arguably be resolved by the applying of general rules regarding overlapping and inconsistent treaties, or by relying on the exemptions in Article XX of the GATT. This article looks at the practical outcomes of GATT/WTO challenges to two trade-related environmental measures imposed by the United States (U.S.) to assess the utility of Article XX from the perspective of environmentalists. It then turns to the case of carbon emissions, and the steps taken to date towards achieving a global response to the threat of climate change. The article concludes with an analysis of several trade-environment issues that should be addressed in implementing the Kyoto Protocol.

II. TRADE-ENVIRONMENT CONFLICT

If trade were responsible for environmental degradation, then presumably those countries that trade the least, such as Ethiopia and Sudan, would have the best environments. We know that is not the case. Trade creates wealth, and wealth cleans up the environment."[6]

Liberalization of international trade and conservation of the environment form a more complex relationship than perhaps suggested by the above quotation. On the one hand, free trade may improve the environment by:

> (a) increasing real income and standard of living, so that there are more resources available for dedication to the environment (to actually improve the environment, these resources must be so dedicated);[7]
> (b) reducing population growth through the higher education, that comes with higher incomes;
> (c) reducing waste through efficiency gains of competition and economies of scale;
> (d) encouraging intergovernmental cooperation on matters regarding the environment;[8] and
> (e) providing access to technology for dealing with waste.[9]

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6. Marino Marcich, *Trade and Environment: What Conflict?*, 31 LAW & POL'Y INT'L BUS. 917, 920 (2000).

7. *See* DUNCAN BRACK ET AL., INTERNATIONAL TRADE AND CLIMATE CHANGE POLICIES 9 (2000).

8. *See* M. RAFIQUL ISLAM, INTERNATIONAL TRADE LAW 398 (1999).

9. *See* Diana Tussie, *Introduction* to THE ENVIRONMENT AND INTERNATIONAL TRADE NEGOTIATIONS: DEVELOPING COUNTRY STAKES, *supra* note 1, at 2.

The assumption that free trade leads to efficiency and the optimal use of resources holds true under conditions of perfect competition and an undistorted market. However, *laissez faire* policies may be inappropriate where these conditions are not met.[10] According to economic theory, producers will make economically efficient decisions if all the costs and benefits of production are "internalized," i.e., they form part of each producer's cost-benefit analysis. If some of the costs are not borne by the producer or are "externalized," then the producer's self-interest may not coincide with the community's interest. In a market setting, it is often argued that the costs of environmental degradation are externalized.[11] When producers pollute, they are either made to pay nothing, or to pay less for the pollution than its cost to the community. In either case, they fail to incorporate pollution fully into their cost-benefit analysis. This inefficiency leads producers to over-pollute.

Because of these market failures,[12] free trade may damage the environment by:

> (a) increasing energy consumption, farming and wastage by lowering prices and increasing demand;
> (b) increasing pollution and the risk of environmental accidents by facilitating movement of environmentally hazardous materials;[13] and
> (c) accelerating the overuse of natural resources.[14]

The theory of comparative advantage suggests that countries should specialize in producing those goods and services that they can produce most efficiently: "in other words, to maximize output from a given input of resources, which is a movement in the direction of environmental sustainability."[15] However, allowing

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10. *See* ALISTAIR ULPH, TRADE AND THE ENVIRONMENT 5 (1999).

11. *See* BRACK ET AL., *supra* note 7, at 9. *See also* PETER UIMONEN & JOHN WHALLEY, ENVIRONMENTAL ISSUES IN THE NEW WORLD TRADING SYSTEM 11-12 (1997).

12. *See* HÅKAN NORDSTRÖM & SCOTT VAUGHAN, TRADE AND ENVIRONMENT, WTO: SPECIAL STUDIES 4, 13 (1999).

13. *See* ISLAM, *supra* note 8, at 398. *See also* Richard Steinberg, *Trade-Environment Negotiations in the EU, NAFTA, and WTO: Regional Trajectories of Rule Development*, 91 AM. J. INT'L L. 231, 234 (1997).

14. *See* Tussie, *supra* note 9, at 2. *See also* Thomas Schoenbaum, *International Trade and Protection of the Environment: the Continuing Search for Reconciliation*, 91 AM. J. INT'L L. 268, 280 (1997).

15. BRACK ET AL., *supra* note 7, at 8. *See also* Duncan Brack, *Trade and Environment: Conflict or Compatibility?*, *in* TRADE, INVESTMENT AND THE ENVIRONMENT: PROCEEDINGS OF THE ROYAL INSTITUTE OF INTERNATIONAL AFFAIRS CONFERENCE 1 (Halina Ward & Duncan Brack eds., 1998).

comparative advantage to flourish cannot by itself resolve environmental concerns, since even if a country produces something more efficiently than the rest of the world, it may form part of an inherently more polluting industry. This means that local pollution problems will simply be relocated to countries that have a comparative advantage in such industries. Generally, these are countries of the South, because of their lower environmental standards generated by lower incomes.[16]

III. GATT/WTO v. MULTILATERAL ENVIRONMENTAL AGREEMENTS

A. Principles of the GATT/WTO

The conflict between trade and environment is perhaps best demonstrated by the overlapping regimes of the GATT and the WTO on the one hand, and MEAs (agreements between three or more states to protect the environment) on the other.

The WTO has 142 member countries, who collectively account for the vast majority of the world's trade.[17] The aim of the GATT/WTO is trade liberalization, based on three core principles:[18]

> (a) most-favored nation - Article I states that any privilege granted to one member state must be granted to other member states;
> (b) national treatment - Article III requires that foreign goods imported into a member state be treated in the same manner as goods produced domestically in that state; and
> (c) prohibition on import/export restrictions - Article XI prohibits quantitative restrictions on imports or exports, such as a ban on imports from a particular country or a measure that has the effect of preventing or limiting such imports (e.g., quotas, import licenses).[19]

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16. *See* NORDSTRÖM & VAUGHAN, *supra* note 12, at 29-31. *See also* UIMONEN & WHALLEY, *supra* note 11, at 31.

17. *See* Helen Loose, *Trade Versus the Environment*, ENVTL. FIN., July-Aug. 2000, at 27. This figure is correct as of July 26, 2001, according to the WTO website at <http://www.wto.org>.

18. *See* Ryan L. Winter, Comment, *Reconciling the GATT and WTO with Multilateral Environmental Agreements: Can We Have Our Cake and Eat it Too?*, 11 COLUM. J. INT'L ENVTL. L. & POL'Y 223, 227-28 (2000).

19. *See* GATT, *supra* note 5, arts. I, III, XI. *See also* Winter, *supra* note 18, at 228.

B. Trade Measures in MEAs

MEAs potentially infringe the core principles of the GATT/WTO by using restrictive trade measures for a range of purposes, for example, to:

> (a) control trade that causes environmental harm, e.g., trade in endangered species;
> (b) protect states from environmentally harmful substances, e.g., hazardous wastes; or
> (c) support agreements to protect the global commons, e.g., agreements to decrease the use of ozone-depleting substances.[20]

While only a relatively small proportion of existing MEAs contain trade measures,[21] in several cases the use of trade measures is central to the success and enforceability of the MEA - protection of the environment cannot occur in these cases without trade leverage.[22] Three of the most important MEAs containing trade measures are:

> (a) the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)[23] which contains import/export controls on particular endangered species and limited regulations on trade with non-parties. Rather than using trade measures that are merely incidental to other environmental protection measures, "CITES is the only convention which seeks to protect wildlife solely by the regulation of international trade;"[24]

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20. *See id.* at 230-31. *See also* Cameron & Robinson, *supra* note 1, at 4-6.

21. *See* Martijn Wilder, Multilateral Environmental Agreements and International Trade: The Use of Quotas as a Trade Measure Under the Convention on International Trade in Endangered Species of Wild Flora and Fauna, paper presented at Australian Centre for Environmental Law Conference, Defending The Environment, at 4 (Sept. 21-22, 1996). *See also* Rubens Ricupero, *Trade and Environment: Strengthening Complementarities and Reducing Conflicts, in* TRADE, ENVIRONMENT, AND THE MILLENNIUM 23, 28-29 (Gary Sampson & W. Bradnee Chambers eds., 1999).

22. *See* Richard Parker, *The Use and Abuse of Trade Leverage to Protect the Global Commons: What We Can Learn from the Tuna-Dolphin Conflict*, 12 GEO. INT'L ENVTL. L. REV. 1, 104-05 (1999).

23. *See* Convention on International Trade in Endangered Species of Wild Fauna and Flora, *opened for signature* Mar. 3, 1973, 993 U.N.T.S. 243, 12 I.L.M. 1085 (entered into force July 1, 1974).

24. Cameron & Robinson, *supra* note 1, at 4.

(b) the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal[25] which provides for prohibitions on imports of hazardous wastes from non-parties; and
(c) the Montreal Protocol on Substances that Deplete the Ozone Layer[26] which similarly restricts imports and exports of controlled substances from or to non-parties.

C. Reconciling Conflicting Treaties

Where an environmental trade measure imposed as part of an MEA is inconsistent with a substantive provision of the GATT, and does not fall within any relevant exceptions,[27] the question arises whether the GATT or the MEA prevails to the extent of the inconsistency. Assuming that the two entities in question are party to both the GATT/WTO and the MEA, Article 30 of the Vienna Convention on the Law of Treaties[28] provides that the later treaty prevails. The strict application of this rule could lead to problems, in that it could arguably invalidate MEAs (or parts of them) that became binding before 1994. "The Vienna Convention's hard-and-fast rule is difficult to reconcile with the expectations of nations party to two arguably conflicting treaties. If enforced to resolve trade and environment conflicts the Convention rule will invalidate longstanding international environmental law that required over thirty years of intensive negotiations to develop."[29]

Article 30 of the Vienna Convention potentially conflicts with the rules of *lex specialis* (specific treaties should override general treaties on the same subject matter)[30] and *pacta sunta servanda* (treaties properly concluded are to be observed).[31] It is also unclear how to apply Article 30 to an amended treaty, i.e. whether the relevant priority date is the original date on which the treaty came into force

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25. *See* Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, *opened for signature* Mar. 22, 1989, 28 I.L.M. 649 (entered into force May 5, 1992) [hereinafter Basel Convention].

26. *See* Montreal Protocol on Substances that Deplete the Ozone Layer, *opened for signature* Sept. 16, 1987, 26 I.L.M. 1541 (entered into force Jan. 1, 1989) [hereinafter Montreal Protocol].

27. *See, e.g.*, art. XX, discussed *infra* Part III.

28. *See* Vienna Convention on the Law of Treaties, *opened for signature* May 23, 1969, 1155 U.N.T.S. 331, 8 I.L.M. 679 (entered into force Jan. 27, 1980).

29. Winter, *supra* note 18, at 237.

30. *See* Cameron & Robinson, *supra* note 1, at 18.

31. *See* BUTTERWORTHS CONCISE AUSTRALIAN LEGAL DICTIONARY 292 (Peter E. Nygh & Peter Butt eds., 1997).

or the later date on which it came into force as amended.[32] This is particularly relevant to the GATT, which is constantly evolving.[33]

The requirements of Article 30 of the Vienna Convention are more straightforward when one treaty binds both the relevant parties, while a conflicting treaty binds only one. This would be the case if, for example, two disputing states were both party to the GATT/WTO but only one was party to an MEA containing trade measures inconsistent with the GATT. Conversely, both states might be party to the MEA and only one party to the GATT/WTO. In that case, the treaty to which all relevant states are bound prevails. In the case of trade-environment disputes, this is likely to be the GATT/WTO, since it is has more signatories than most MEAs.[34] However, it would be disheartening if the only way to ensure the enforceability of trade-related environmental measures in MEAs were to gather greater numerical support than that found at the level of the GATT/WTO. Given the global nature of many environmental problems, multilateral action by a consensus of as many countries as possible is, naturally, preferred. Nevertheless, many nations consider that they cannot wait for such a consensus to build, and that it is imperative to use trade measures now to protect the environment.

Aside from the Vienna Convention and other general rules for reconciling conflicting treaties, there is a normative argument that a higher category of conventional international law operates in particular circumstances to override other conventions. Where a multilateral treaty comes into force in order to address "a problem of universal concern"[35] for the benefit of the world community, it may take on a special character and thereby take precedence over other treaties concerning different subject matter. For example, a group of states entered the Montreal Protocol to address the depletion of the ozone layer in the interest of the people of the world as a whole and as a matter of urgency. On that basis, the Montreal Protocol could be regarded as superior to any inconsistent provisions of the GATT.[36] However, this argument is unlikely to persuade a GATT/WTO

32. *See* Winter, *supra* note 18, at 237-38.

33. *Cf.* Schoenbaum, *supra* note 14, at 282-83.

34. *See* Winter, *supra* note 18, at 238.

35. A. McNair, LAW OF TREATIES 256 (1961) (cited in Cameron & Robinson, *supra* note 1, at 17).

36. *See* Cameron & Robinson, *supra* note 1, at 17.

dispute settlement panel, given their tendency to favor trade over environmental concerns, as discussed further below.[37]

IV. ARTICLE XX AS A SOLUTION TO THE CONFLICT

A. The Terms of Article XX

As discussed in Part III above, the underlying objectives of the GATT/WTO appear to conflict directly with the protection of the environment by MEAs through the use of trade measures.[38] Nevertheless, the preamble to the Agreement Establishing the World Trade Organization specifically refers to the "objective of sustainable development."[39] In addition, Article XX of the GATT makes some concessions to trade-related environmental measures, albeit without using the word "environment." Article XX provides that trade measures that would otherwise be unlawful under the GATT are permitted if they are:

- necessary to protect human, animal or plant life or health (Art XX(b)); or
- relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption (Art XX(g)),

provided that they are not applied in a manner that would constitute:

- a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail; or
- a disguised restriction on international trade.[40]

The latter two requirements are found in the preamble to Article XX - its "chapeau." Only if a dispute settlement body finds that a trade measure falls within Article XX(b) or XX(g) will it then assess

37. *See infra* Part III(C).
38. *See* Winter, *supra* note 18, at 233-34.
39. Establishing WTO, *supra* note 2, preamble (1994).
40. *See* GATT, *supra* note 5, art. XX.

the measure under the chapeau of Article XX.[41] On its face, Article XX seems to provide comfort to environmentalists and recognition of the effects that trade may have on the environment. However, it raises several problems, largely because its broad terms can be subject to widely differing interpretations.

B. Construing Article XX

In practice, when GATT/WTO dispute settlement bodies have heard disputes relating to conflicting environmental and free trade concerns, they have narrowly construed Article XX and free trade has won out.[42] Such bodies have construed the word "necessary" in Article XX(b) such that a measure is not necessary if a different measure that is least inconsistent with the GATT (i.e. that is least restrictive to trade) could reasonably be employed.[43] They have also construed the words "relating to" in Article XX(g) in a narrow fashion. For a measure to be exempted under Article XX(g) it must be "primarily aimed at" conservation, in view of both its purpose and its effect.[44] An alternative, less stringent test is that the environmental trade measure must be "directly connected" with the relevant conservation policy.[45] However, this alternative test is not yet generally accepted. A measure falling within Article XX(g) must also be "even-handed" in the sense of applying to domestic as well as imported products, or applying alongside similar restrictions on domestic products.

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41. Appellate Body Report, United States - Import Prohibition of Certain Shrimp and Shrimp Products, WTO Doc WT/DS58/AB/R ¶ 118-20 (1998) [hereinafter Shrimp, Appellate Report]. *See also* the discussion in Petros C. Mavroidis, *Trade and Environment after the Shrimps-Turtles Litigation*, 34 J. WORLD TRADE 73, 83 (2000).

42. *See, e.g.*, Panel Report on Thailand - Restrictions on Importation of and Internal Taxes on Cigarettes, GATT Doc DS10/R (1990); Panel Report on United States - Restrictions on Imports of Tuna, 30 I.L.M. 1594 (1991) [hereinafter Tuna-Dolphin I]; Panel Report on United States - Restrictions on Imports of Tuna, 33 I.L.M. 842 (1994) [hereinafter Tuna-Dolphin II]; Panel Report on United States - Taxes on Automobiles, GATT Doc DS31/R (1994); Panel and Appellate Body Reports on United States - Standards for Reformulated and Conventional Gasoline, 35 I.L.M. 603 (1996); Panel Report on United States - Import Prohibition of Certain Shrimp and Shrimp Products, WTO Doc WT/DS58/R (1998) [hereinafter Shrimp, Panel Report]; Shrimp, Appellate Report, *supra* note 41; Panel Report on Japan - Measures Affecting Agricultural Products, WTO Doc WT/DS76/R (1998). *See also Working Group on Environmental Measures and International Trade, GATT, Trade and the Environment*, GATT Doc 1529 (Feb. 13, 1992).

43. *See, e.g.*, Panel Report on Thailand, *supra* note 42; ISLAM, *supra* note 8, at 402; Lakshman Guruswamy, *The Promise of the United Nations Convention on the Law of the Sea: Justice in Trade and Environment Disputes*, 25 ECOLOGY L.Q. 189, 201 (1998).

44. Panel Report on United States - Taxes on Automobiles, *supra* note 42.

45. Shrimp, Appellate Report, *supra* note 41, ¶ 140; Mavroidis, *supra* note 41, at 84-85.

Some GATT/WTO panels have also introduced a jurisdictional element to Articles XX(b) and XX(g), which further limits their scope. According to these panels, environmental measures will not fall within the exceptions unless they are aimed at protecting animals or conserving exhaustible natural resources *in the state taking the measures* rather than in any other state or in the world generally.[46] For example, MEAs commonly require that states not import specimens of particular endangered species unless the specimens have "been caught legally in the state of export, or . . . the exporting state has determined that the export will not be detrimental to the survival of the species."[47] Such conditions are intended to protect endangered species in the exporting state, rather than in the importing state (the state that is applying the condition of import). If tested, these conditions could well be found to contravene the GATT. The link to territorial jurisdiction may also mean that MEAs designed to protect the earth's atmosphere would also not fall within Article XX.[48]

GATT/WTO dispute settlement bodes have also interpreted the Article XX chapeau to limit the application of environmental trade measures. The chapeau is designed to balance the rights of states parties under the substantive provisions of the GATT with those of states parties to invoke exceptions under Article XX.[49] The wide discretion given to the GATT/WTO dispute settlement bodies in deciding the "balance" required by the chapeau is demonstrated by its decidedly vague terms. According to the chapeau, discrimination between countries where the same conditions prevail is acceptable, provided that the discriminatory measures are not "arbitrary" or "unjustifiable."[50] An assessment of whether discrimination is arbitrary or unjustifiable will depend, of course, on the assessor's views about trade, the environment and how best to deal with the conflict between them.

Under the Basel Convention, parties must prohibit imports of hazardous waste from non-parties,[51] even though equally hazardous waste may be imported from parties to that convention. This trade restriction could be seen as "arbitrary."[52] However, a party to the

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46. *See* Tuna-Dolphin I, *supra* note 42, ¶¶ 3.43, 5.27, 5.31. *Cf.* Tuna-Dolphin II, *supra* note 42, ¶¶ 5.20, 5.33.

47. Cameron & Robinson, *supra* note 1, at 11.

48. *See id.* at 14.

49. *See* Shrimp, Appellate Report, *supra* note 41, ¶ 156.

50. *See* GATT, *supra* note 5, art. XX.

51. Basel Convention, *supra* note 25, art. 4.5.

52. Cameron & Robinson, *supra* note 1, at 13.

Basel Convention could argue that the restriction is justifiable because it is necessary to encourage participation in the convention and thus to protect the environment through preventing spillage and unsafe waste disposal. The justification for imposing the trade restriction is the need to protect the environment. When framed this way, it becomes apparent that the chapeau simply brings the two concerns of trade and environment head to head, and does little to solve the conflict between them.

The question of whether the "same conditions prevail" in two countries for the purposes of the chapeau is also difficult to answer. Cameron refers to the condition under CITES that an export license will not be granted to a state to export specimens of particular species unless the importing state has an import permit, which is in turn conditional on the importing state being satisfied that the specimen will not be used for primarily commercial purposes.[53] This would constitute discrimination (in that the exporting state will export to one state but not another) unless it can be said that different conditions prevail in the two states wishing to import, because the imported specimen will be used for primarily commercial purposes in one state but not another.[54]

C. *Learning from Tuna, Dolphin, Shrimp and Turtles*

Two GATT panels[55] heard disputes regarding the U.S. prohibition on importing tuna from states whose fishing practices involved high levels of incidental dolphin taking. Section 101(a)(2)(B) of the U.S. *Marine Mammal Protection Act* (MMPA)[56] banned the importation of yellowfin tuna harvested with purse-seine nets in the Eastern Tropical Pacific Ocean unless the Secretary of Commerce determined that:

> (a) the government of the exporting country had a program regulating the incidental taking of marine mammals (e.g., dolphins) comparable to that of the U.S.; and

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53. *See id.*

54. *See id.* at 10.

55. *See* Tuna-Dolphin I, *supra* note 42; Tuna-Dolphin II, *supra* note 42.

56. *See* Marine Mammal Protection Act of 1972, Pub. L. No. 92-522, 86 Stat. 1027 (codified as amended at 16 U.S.C. §§ 1361-1421h. (2000)).

> (b) the average rate of incidental taking of such mammals by vessels of that country was comparable to that of U.S. vessels.

In 1991, an embargo imposed by the U.S. government on yellowfin tuna imports from Mexico went into effect, restricting such imports until positive findings were made regarding compliance with the above standards.[57] Mexico challenged the embargo. In Tuna-Dolphin I, the GATT panel held the import prohibition inconsistent with Article XI of the GATT[58] and not saved by Article XX.[59] The panel reasoned that Articles XX(b) and (g) could not be interpreted in such a way as to enable the U.S. to deny other parties' trade rights under the GATT, unless those parties adopted the same life or health protection policies as the U.S.[60] However, the GATT Council never adopted the panel's report. The U.S. and Mexico reached agreement independently in relation to tuna fishing.[61]

In Tuna-Dolphin II, a second GATT panel considered a challenge by the European Community to the secondary embargo under the MMPA on imports from countries that traded in tuna with primary countries subject to embargo.[62] Like the panel in Tuna-Dolphin I, the Tuna-Dolphin II panel considered that Article XX did not enable parties to force their trading partners to adopt conservation policies identical to their own.[63] Again, the GATT Council did not adopt the panel report.

A similar factual situation arose in the Shrimp-Turtle case.[64] India, Malaysia, Pakistan and Thailand challenged a U.S. prohibition on the importation of certain shrimp and shrimp products harvested with commercial fishing technology that might adversely affect sea turtles.[65] The ban did not apply to shrimp from harvesting nations that were certified by the U.S. Certification depended on the harvesting nation:

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57. *See* Tuna Dolphin I, *supra* note 42, ¶ 2.7.
58. *See id.* ¶ 5.18.
59. *See id.* ¶¶ 5.22-5.34.
60. *See id.* ¶¶ 5.29, 5.4.
61. *See* Parker, *supra* note 22, at 46-49.
62. *See* Tuna Dolphin II, *supra* note 42, at 844-45.
63. *See id.* at 894-95.
64. *See* Shrimp, Panel Report, *supra* note 42; Shrimp, Appellate Report, *supra* note 41.
65. *See* Conservation of Sea Turtles; Importation of Shrimp, Pub. L. No. 101-162, tit.VI, § 609, 103, Stat. 1037 (1989); 16 U.S.C. § 1537 (2000).

> (a) having a fishing environment that did not pose a threat of incidental taking of sea turtles in the course of shrimp harvesting;
> (b) providing documentary evidence of the adoption of a regulatory program governing such incidental taking that was comparable to that of the U.S.; and
> (c) having vessels with an average rate of such incidental taking comparable to that of U.S. vessels.[66]

The WTO panel held that the import ban was inconsistent with Article XI of the GATT and not justified under Article XX.[67] On appeal, the Appellate Body held that the measure was provisionally justified under Article XX(g) but failed to meet the requirements of the chapeau.[68] While the Appellate Body's decision showed a greater concern for the environment and recognition of the role of trade measures in environmental conservation than previous decisions,[69] it was merely a step in the right direction rather than a solution to the trade-environment conflict.[70]

D. Is Article XX Enough?

The tendency for free trade to triumph over environmental measures under the GATT/WTO regime, despite Article XX, may reflect the fundamental philosophy that in the longer term, free trade will be beneficial to the environment. Therefore, restrictive trade measures for environmental purposes are unwarranted. This philosophy is likely to be sustained by the predominance of trade-focused GATT/WTO panel members.[71] The GATT/WTO's consistent denial of the validity of environmental trade measures suggests that international trade law, as laid down by the GATT/WTO, may not provide the best basis for assessing MEAs and

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66. *See id.*

67. *See* Shrimp, Panel Report, *supra* note 42, ¶ 8.1.

68. *See* Shrimp, Appellate Report, *supra* note 41, ¶ 187.

69. *See* Marcich, *supra* note 6, at 917; Bruce Neuling, *The Shrimp-Turtle Case: Implications for Article XX of GATT and the Trade and Environment Debate*, 22 LOY. L.A. INT'L & COMP. L. REV. 1, 46 (1999).

70. *See* Mavroidis, *supra* note 41, at 73, 87; Winter, *supra* note 18, at 243; Duncan Brack, *Environmental Treaties and Trade: Multilateral Environmental Agreements and the Multilateral Trading System*, *in* TRADE, ENVIRONMENT, AND THE MILLENNIUM, *supra* note 21, at 271, 288.

71. *See* Wilder, *supra* note 21, at 3; Brack, *Environmental Treaties*, *supra* note 70, at 288-89. *See also* ERNST-ULRICH PETERSMANN, INTERNATIONAL AND EUROPEAN TRADE AND ENVIRONMENTAL LAW AFTER THE URUGUAY ROUND 91-92 (1995).

resolving trade-environment disputes.[72] Brotmann suggests that a preferable approach would be to create a specific body to deal with trade-environment disputes, since the existing system is designed to handle trade issues, and the jurisdiction of the Committee on Trade and Environment is limited.[73] However, it is significant that the measures challenged to date have been *unilaterally* imposed rather than required under an MEA. Bilateral or multilateral negotiations at least allow a more democratic process and an attempt at realizing shared goals.[74] An environmental trade measure under an MEA is more likely to survive scrutiny under the GATT/WTO,[75] at least as it concerns parties to the MEA.[76]

Despite the difficulties with using Article XX of the GATT to resolve the trade-environment conflict, as recently as July 2000 opinion was divided in the international community as to whether changes needed to be made at all. At an information session held by the Committee on Trade and Environment with MEAs, Switzerland called for an interpretative clarification of conflicts between the GATT/WTO and trade-related measures in MEAs, and was supported by Canada, the European Community, Hungary, Iceland, Japan and Norway. In contrast, Australia, New Zealand and the U.S. suggested that such clarification was unnecessary, as the GATT/WTO provided a sufficient framework already. Hong Kong, China, India, Brazil, Malaysia and Pakistan took a similar view.[77]

V. THE CASE OF CARBON EMISSIONS

A. Greenhouse Gases and Global Warming

Global warming appears to derive from the burning of fossil fuels and the emission of greenhouse gases (GHGs)[78] including

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72. *See* Cameron & Robinson, *supra* note 1, at 3; Winter, *supra* note 18, at 251-53; Jacob Werksman, *Greenhouse Gas Emissions Trading and the WTO*, 8 REV. EUR. COMMUNITY & INT'L ENVTL. L. 251, 261 (1999); Brack, *Environmental Treaties, supra* note 70, at 289.

73. *See* Matthew Brotmann, *The Clash Between the WTO and the ESA: Drowning a Turtle to Eat a Shrimp*, 16 PACE ENVTL. L. REV. 321, 333, 351 (1999).

74. *See* Winter, *supra* note 18, at 234-35.

75. *See* Shrimp, Appellate Report, *supra* note 41, ¶¶ 169-71; BRACK ET AL., *supra* note 7, at 16.

76. *See* Brack, *Environmental Treaties, supra* note 70, at 285.

77. WTO Secretariat, *Trade and Environment Bulletin: CTE Holds Information Session with MEAs and Addresses the Relationship Between the WTO and MEAs, the Export of Domestically Prohibited Goods, the TRIPs Agreement and Fisheries Subsidies*, Press Release, PRESS/TE/033 (July 10, 2000).

78. The most important gases are carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O).

carbon dioxide into the atmosphere, e.g., in power plants, automobiles, and energy-intensive processing industries.[79] It poses the threat of rising sea levels,[80] hurricanes, storms and dramatic changes to climatic patterns to low-lying countries.[81] These climatic changes will indirectly impact other areas, leading to such harms as wildlife degradation and an increase in human diseases.[82] Although uncertainty and debate continue in scientific circles about the effects of GHGs on the atmosphere and the phenomenon of global warming,[83] measures to prevent or reverse global warming are desirable based on the "precautionary principle." This principle states that where there is a threat of serious or irreversible environmental damage, uncertainty regarding the causes or risks does not justify the failure to implement measures to anticipate or prevent the damage.[84]

The global ownership of and responsibility for the earth's atmosphere has been captured in such phrases as "common property," "common heritage," "common concern"[85] and "common interest."[86] Where shared resources (such as the earth's atmosphere) are limited and expendable (or capable of suffering irreversible damage), principles of equitable utilization arise.[87] To the extent that one country's use of these resources will limit or prevent their use by other countries, the interests of those other countries should be considered. These resources cannot be placed under the sovereignty

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79. *See* NORDSTRÖM & VAUGHAN, *supra* note 12, at 18.

80. *See* David Freestone, *International Law and Sea Level Rise, in* INTERNATIONAL LAW AND GLOBAL CLIMATE CHANGE 109, 115-17 (Robin Churchill & David Freestone eds., 1991) (a particular concern for low-lying countries).

81. BRACK ET AL., *supra* note 7, at 2-4; NORDSTRÖM & VAUGHAN, *supra* note 12, at 18.

82. *See generally* Michael Bowman, *Global Warming and the International Legal Protection of Wildlife, in* INTERNATIONAL LAW AND GLOBAL CLIMATE CHANGE, *supra* note 80, at 127.

83. *See* Patricia Birnie, *Introduction* to INTERNATIONAL LAW AND GLOBAL CLIMATE CHANGE, *supra* note 80, at 1; Cameron Hepburn & Chester Brown, *Privatising the Commons? A Global Greenhouse Emissions Trading Regime at COP-6*, 19 AUSTL. MINING & PETRO. L.J. 157, 158 (2000).

84. *See generally* James Cameron, *The Precautionary Principle, in* TRADE, ENVIRONMENT, AND THE MILLENNIUM, *supra* note 21, at 239; David Freestone, *The Precautionary Principle, in* INTERNATIONAL LAW AND GLOBAL CLIMATE CHANGE, *supra* note 80, at 21-22. *See also* Alexandre Kiss, *The Protection of Environmental Interests of the World Community Through International Environmental Law, in* ENFORCING ENVIRONMENTAL STANDARDS: ECONOMIC MECHANISMS AS VIABLE MEANS? 1, 6-7 (Rüdiger Wolfrum ed., 1996).

85. *See* Alan E. Boyle, *International Law and the Protection of the Global Atmosphere: Concepts, Categories and Principles, in* INTERNATIONAL LAW AND GLOBAL CLIMATE CHANGE, *supra* note 80, at 7, 9-13.

86 *See* Peter-Tobias Stoll, *The International Environmental Law of Cooperation, in* ENFORCING ENVIRONMENTAL STANDARDS: ECONOMIC MECHANISMS AS A VIABLE MEANS?, *supra* note 84, at 39, 55.

87. *See id.* at 58-59.

of a particular country, so a cooperative solution is needed.[88] "There is hardly any field of international relations, where the necessity to cooperate is so obvious as is true for international environmental matters."[89] As well as legal measures, this may encompass scientific, technical, technological and financial cooperation.[90]

A global response (or as close to it as possible) is also required to avoid the problem of free riding. Without such a response, any given country is likely to lack the incentive to reduce its emissions for fear of losing competitiveness without sufficient returns. If one country maintains existing levels of emissions while others reduce theirs, the first country will still reap the benefits of lower emissions on a global scale.[91] At the same time, if particular countries do not participate in the global response, there is a risk that energy-intensive industries will relocate to those countries, undermining the attempt to reduce emissions and causing a "carbon leakage" problem.[92]

B. Convention on Climate Change

The United Nations Framework Convention on Climate Change[93] was adopted in Rio de Janeiro and signed by 154 countries in 1992. The FCCC is directed at stabilizing GHG concentrations in the atmosphere[94] in order to address global warming, on the basis that it may adversely affect natural ecosystems and humankind.[95] Under Article 3 of the FCCC, the parties recognize that the status of different country parties means that climate change should be dealt with "on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities."[96] All parties commit to steps such as the development of inventories of their GHG emissions[97] and promotion of sustainable management,[98]

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88. *See id.* at 60-61.
89. *Id.* at 39.
90. *See id.* at 72-81.
91. *See* NORDSTRÖM & VAUGHAN, *supra* note 12, at 18-19; Richard Eckaus, *Laissez Faire or Nationalization and Collective Control of the Global Commons*, *in* TRADE, INNOVATION, ENVIRONMENT 283, 293-94 (Carlo Carraro ed., 1994).
92. *See* NORDSTRÖM & VAUGHAN, *supra* note 12, at 20. *Cf.* BRACK, *Conflict or Compatibility*, *supra* note 15, at 50.
93. *See* FCCC, *supra* note 3, preamble.
94. *See id.* art. 2.
95. *See id.* preamble.
96. *Id.* art. 3.
97. *See id.* art. 4.1(a).
98. *See id.* art. 4.1(d).

but developed country parties take the lead in combating climate change.[99]

The parties listed in Annex I of the FCCC (including Austria, Canada, Denmark, the European Economic Community, France, Germany, Japan, New Zealand, the Russian Federation, the United Kingdom and the U.S.) specifically commit to, inter alia:

> (a) adopt national policies and take measures to mitigate climate change by limiting anthropogenic emissions of GHGs and protecting and enhancing GHG sinks (being processes, activities or mechanisms that remove a GHG, aerosol or precursor of GHG from the atmosphere[100]) and reservoirs (being components of the climate system where a GHG or its precursor is stored[101]);[102] and
> (b) communicate detailed information on the policies and measures adopted with the aim of returning individually or jointly to their 1990 levels of these anthropogenic emissions by the year 2000.[103]

The parties listed in Annex II (including many of the parties listed in Annex I, plus Australia) agree to provide financial resources to meet the costs of developing country parties in satisfying their inventory and reporting obligations under Article 12 and implementing measures required by Article 4.1.[104] The FCCC also provides for: research and systematic observation;[105] education, training and public awareness;[106] a financial mechanism for provision of funds as a grant or concession, including technology transfer;[107] and a dispute resolution mechanism.[108]

The Conference of the Parties established by Article 7 of the FCCC regularly reviews the implementation of the FCCC, and the subsidiary body for scientific and technological advice established by Article 9 provides the Conference of the Parties with timely

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99. *See id.* arts. 3.1, 4.2(a).
100. *See id.* art. 1.8.
101. *See id.* art. 1.7.
102. *See id.* art. 4.2(a).
103. *See id.* art. 4.2(a-b).
104. *See id.* art. 4.3.
105. *See id.* art. 5.
106. *See id.* art. 6.
107. *See id.* art. 6.
108. *See id.* art. 14.

information and relevant advice. A second subsidiary body for implementation established by Article 10 assists the Conference of the Parties in the assessment and review of the implementation of the FCCC. Within a few years of adoption of the FCCC, it became clear that most Annex I parties would fail to meet their target emissions levels.[109]

C. *Kyoto Protocol*

The Third Session of the Conference of the Parties to the FCCC (COP-3) unanimously adopted the Kyoto Protocol to the FCCC in December 1997. It will come into force on the 90th day after the date on which at least 55 parties to the FCCC including Annex I, parties that together accounted for at least 55% of the total carbon dioxide emissions emanating from Annex I parties in 1990, have deposited their instruments of ratification, acceptance, approval or accession.[110] Unlike the FCCC, the Kyoto Protocol imposes legally binding obligations on the parties, and on the whole represents a more practical approach to GHGs.[111] It also recognizes the importance of research and development, requiring Annex I parties to investigate new and renewable forms of energy, carbon dioxide sequestration technologies, and advanced and innovative environmentally sound technologies.[112]

The Kyoto Protocol imposes individual caps on emissions for Annex I parties, averaging 5.2% below the relevant party's emission levels in 1990. The caps range from 92% of 1990 levels, for the European Community, the United Kingdom and many other countries to 108% and 110% of 1990 levels, for Australia and Iceland respectively per year.[113] Parties are to ensure that they do not exceed their "assigned amounts" (being five times the yearly cap) for the commitment period 2008 to 2012, individually or jointly,[114] and that they make demonstrable progress towards achieving these goals by 2005.[115] The interim period is designed to give governments and the private sector time to develop environmentally friendly technology and replace equipment as required.

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109. *See* Paul E. Hagen et al., *International Environmental Law*, 32 INT'L LAW. 515, 517 (1998); BRACK ET AL., *supra* note 7, at 5.

110. *See id.* art. 15.

111. *See id.* Annex A (applying to carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorobarbons (PFCs) and sulphur hexafluoride (SF_6)).

112. *See id.* art. 2.1(a)(iv).

113. *See id.* Annex B.

114. *See id.* art. 3.1.

115. *See id.* art. 3.2.

Article 4.2(a) of the FCCC allows Annex I countries to implement emissions reduction policies and measures "jointly with other Parties." This provision sowed the seeds for the Kyoto Protocol's three flexibility mechanisms,[116] which are designed to assist parties in complying with the capping system by lowering the costs of compliance.[117] These mechanisms are joint implementation, the clean development mechanism, and emissions trading. They are key factors in the task of enabling and ensuring compliance, and in achieving the goal of GHG stabilization with the participation of developed and developing countries. "These mechanisms have the potential to spur a vast global competitive market in cost-effective emissions reduction opportunities, energizing innovation in processes and technologies as investors and entrepreneurs compete to deliver better and cheaper ways of reducing GHG emissions."[118]

The three flexibility mechanisms operate as follows:

Joint implementation - under Article 3 of the Kyoto Protocol, projects that reduce emissions or enhance removal of emissions by sinks may be used to offset emissions and are taken into account in assessing a party's performance against its assigned amount. For example, a newly planted forest acts as a sink by absorbing CO_2 from the atmosphere.[119] Annex I parties may trade emissions reduction units (ERUs) arising from such products with other Annex I parties under Article 6, provided that:[120]

> (a) the project is approved by the parties involved;
> (b) the project reduces emissions or enhances removals by sinks in addition to any reduction or enhancement that would otherwise occur;
> (c) the party acquiring the ERUs complies with its obligations under Articles 5 (regarding mechanisms for calculating anthropogenic emissions and their removal by sinks) and 7 (regarding inventory and reporting); and

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116. *See* Peter Cameron, *From Principles to Practice: the Kyoto Protocol*, 18 J. ENERGY & NAT. RESOURCES L. 1, 6 (2000).

117. *See* JAMES CAMERON ET AL., IMPROVING COMPLIANCE WITH INTERNATIONAL ENVIRONMENTAL LAW 97, 231 (1996).

118. Hagen et al., *supra* note 109, at 518.

119. *See* Cameron, *supra* note 116, at 7.

120. *See* Kyoto Protocol, *supra* note 4, art. 6.1.

(d) the party acquiring the ERUs also undertakes domestic actions to meet its commitments under Article 3.[121]

Where a party transfers ERUs to another party, the transferring party subtracts the ERUs from its assigned amount,[122] reducing its allowable emissions. The party acquiring the ERUs adds them to its assigned amount, increasing its allowable emissions. [123]

Clean development mechanism - Article 12 of the Kyoto Protocol establishes a clean development mechanism to assist non-Annex I parties in achieving sustainable development, and Annex I parties in complying with their Article 3 commitments. This mechanism enables Annex I parties to fund emission reducing projects in the territories of non-Annex I parties, such that developing states are involved in the emission reduction process without having caps imposed on their emissions.

Projects forming part of the clean development mechanism must be voluntarily undertaken by both parties, and involve "real, measurable, and long-term benefits related to the mitigation of climate change."[124] They must also be certified by operational entities designated by the Conference of the Parties to the FCCC.[125] The developing party hosting the project benefits from the reduction of emissions using funds and/or technology that might not otherwise be available to it. This is particularly important given the predicted increase in developing countries' emissions in the coming years. The Annex I party benefits because it can use the certified emission reductions (CERs) derived from the project to increase its assigned emissions amount, and achieving these reductions in developing countries (e.g., through a subsidiary) may be cheaper than doing so in the home country.

Unlike ERUs, CERs obtained between 2000 and 2008 can be used to achieve compliance in the period 2008 to 2012.[126] In addition, Article 12 lacks the requirement found in Article 6 that the party acquiring CERs be in compliance with Articles 5 and 7. This means that, theoretically at least, it should be easier to benefit from and

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121. *See id.* art. 6.1(d).
122. *See id.* art. 3.11.
123. *See id.* art. 3.10.
124. *Id.* art. 12.5(a-b).
125. *See id.* art. 22.5.
126. *See id.* art. 22.10.

trade in CERs than in ERUs. This difference may have the effect of encouraging developed countries to assist and collaborate with developing countries. However, it could also create problems for trade in ERUs and CERs, if they are regarded as "like products," which should therefore be treated equivalently, under the GATT.[127]

Emissions trading - the Kyoto Protocol provides for trading in emissions or ERUs between the developed parties listed in Annex B. The transfer of ERUs affects assigned amounts in the same way as transfer of ERUs under Article 7 joint implementation schemes.[128] The relevant provision is Article 17:

> The Conference of the Parties shall define the relevant principles, modalities, rules and guidelines, in particular for verification, reporting and accountability for emissions trading. The Parties included in Annex B may participate in emissions trading for the purposes of fulfilling their commitments under Article 3. Any such trading shall be supplemental to domestic actions for the purpose of meeting quantified emission limitation and reduction commitments under that Article.[129].

Although Article 17 is extremely broad, and includes little detail as to how the emissions trading system will work, it is significant that it *requires* the Conference of the Parties to set up such a system. The Kyoto Protocol thus mandates emissions trading, and this is one of its most important features in relation to the trade-environment conflict.

D. Buenos Aires Plan of Action

In November 1998, the FCCC adopted the Buenos Aires Plan of Action (BAPA) at the Fourth Session of the Conference of the Parties to the FCCC (COP-4).[130] The BAPA incorporates a two-year deadline in preparation for the Kyoto Protocol's entry into force. The two-year process is reaching an end, following the Fifth Session of the

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127. *See* BRACK ET AL., *supra* note 7, at 121-22.

128. *See* Kyoto Protocol, *supra* note 4, art. 3.10(11).

129. *Id.* art. 17.

130. Report of the Conference of the Parties on its Fourth Session, FCCC, 4th Sess., U.N. Doc. FCCC/CP/1998/16/Add. 1, 4 (1999).

Conference of the Parties (COP-5) in Bonn in late 1999[131] and the twelfth sessions of the subsidiary bodies (SB-12) of the FCCC in Bonn in June 2000.[132] The process will culminate during the Sixth Session of the Conference of the Parties (COP-6), November 13-14, 2000 in The Hague. In anticipation of the Kyoto Protocol being implemented, some governments and governmental bodies have already begun to take steps to comply with it, and several companies are taking action themselves to achieve emissions reductions.[133] This may increase the impact of the Kyoto Protocol regardless of whether it is ratified. In the meantime, it is worth examining some of the trade issues that should be taken into account at COP-6 in determining the details for the Kyoto Protocol's flexibility mechanisms.

VI. FLESHING OUT THE KYOTO PROTOCOL

A. Trading of Emissions Credits/Allowances

Emissions trading should enable developed countries and private entities to pay for the right to produce more emissions, and to seek out the cheapest CERs and ERUs. It should therefore lower the global cost of reducing emissions levels in the long term.[134] However, the impact of emissions trading on global equity and efficiency will be critically dependent on the precise structure of the trading system. Several precedents for such a system in domestic jurisdictions, particularly in the U.S., already exist. The *International Rules for Greenhouse Gas Emissions Trading,* prepared by the United Nations Conference on Trade and Development (UNCTAD), identify two broad forms of such trading systems:[135]

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131. *See* Report of the Conference of the Parties on its Fifth Session, FCCC, 5th Sess., U.N. Doc. FCCC/CP/1999/6, 21 (1999). *See also* INT'L INSTITUTE FOR SUSTAINABLE DEV., EARTH NEGOTIATIONS BULLETIN: SUMMARY OF THE FIFTH CONFERENCE OF THE PARTIES TO THE UNFCCC (NOV. 8, 1999), *available at* <http://www.iisd.ca/climate/ cop5/> (copy on file with author).

132. *See* Report of the Subsidiary Body for Implementation on its Twelfth Session, FCCC, 12th Sess., U.N. Doc. FCCC/SBI/2000/5 (2000); Report of the Subsidiary Body for Scientific and Technological Advice on its Twelfth Session, FCCC, 12th Sess., U.N. Doc. FCCC/SBSTA/2000/5 (2000). *See also* INT'L INSTITUTE FOR SUSTAINABLE DEV., EARTH NEGOTIATIONS BULLETIN: SUMMARY OF THE TWELFTH SESSION OF THE SUBSIDIARY BODIES OF THE UNFCCC (JUNE 19, 2000), *available at* <http://www.iisd.ca/climate/ sb12/> (copy on file with author).

133. For example, General Motors, BP Amoco, Monsanto, Shell, DuPont; Cameron, *supra* note 117, at 2-3, 12-13. *See also* Loose, *supra* note 17, at 29.

134. *See* David M. Driesen, *Choosing Environmental Instruments in a Transnational Context*, 27 ECOLOGY L.Q. 1, 8 (2000).

135. *See* Hepburn & Brown, *supra* note 83, at 167-69 (discussing these two types of trading systems).

> (a) Credit trading, under which parties may trade excess emission reductions above specified targets. This type of system tends to focus on specific emission reducing projects. The amount of any excess is determined at the end of the particular commitment period, and parties can then trade credits or bank them for use in a later period. Operation of credit trading systems to date has not been wholly successful.[136]
>
> (b) Allowance trading, under which parties are authorized to generate specific levels of emissions, and may trade these authorizations or allowances. As the authorized emission levels are set, there is more certainty as to the desired outcome, and greater focus on that outcome,[137] than in a credit trading system. There may also be fewer transaction costs, since the allowances are centrally determined at the commencement of the period, whereas credits under a credit trading system must be individually approved as they are generated. The trading occurs during the commitment period and the allowances expire at the end of the period.[138]

The emissions trading envisaged by the Kyoto Protocol is at the level of sovereign government parties. However, trading within the private sector is likely to take place in parallel. While references are made to the private sector ("legal entities" and "private and/or public entities") in other Articles of the Kyoto Protocol,[139] there is no such mention in Article 17, which governs emissions trading.[140] Nevertheless, it is generally accepted among Annex I countries that private entities may participate in such trading with the approval of the relevant party.[141] Thus, a party might allocate allowances or credits to private domestic entities, who could then use the allowances or credits (and surrender them to the domestic

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136. *See id.* at 168.
137. *See id.*
138. *Id.*
139. *See* Kyoto Protocol, *supra* note 4, arts. 6.3, 12.9.
140. *See id.* art. 17.
141. *See* Werksman, *supra* note 72, at 253; Hepburn & Brown, *supra* note 83, at 169-70; BRACK ET AL., *supra* note 7, at 117.

government) or trade them with other private entities within the same country. An extension of such private trading could involve two or more parties recognizing each other's allowances or credits, such that the parties themselves could trade in them and private entities from each jurisdiction could also trade in them. A party could also trade with another party's private entities, even if the first party had not established a domestic trading regime.[142]

One advantage of the involvement of private entities in emissions trading is that these entities have the best information in determining whether to invest in energy-efficient technology or maintain emissions levels by buying credits and allowances. Another advantage is that the number of participants would be dramatically increased, removing liquidity problems with the emissions trading market.[143]

The way in which a country structures its emissions trading, domestically and with other countries, could involve contravention of the GATT. For example, given that the Kyoto Protocol provides only for trading between Annex I parties, it is quite likely that countries may restrict trading in emissions allowances and credits by not recognizing such allowances and credits where issued by non-parties or by non-Annex I countries.[144] To ensure it is able to meet its obligations under the Kyoto Protocol and that its energy industries do not suffer, an Annex I country might limit the number of credits and allowances that can be exported. Conversely, to ensure its industries make real attempts to reduce emissions, it might limit the number of credits and allowances that can be imported.[145]

These measures could contravene the GATT or the General Agreement on Trade in Services (GATS) if emissions credits and allowances are classified as "products" or "services," (neither term is defined). Werksman considers that tariff schedules, international rules on customs classifications, and common sense indicate that GATT/WTO members see products as tangible goods. Emissions credits and allowances may be commodities, as they will have a market value and be tradable internationally, but they are unlikely to be regarded as products. The text of the WTO agreements and GATT/WTO practice similarly suggest that emissions credits and allowances do not constitute services for the purpose of the GATS.

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142. *See* Werksman, *supra* note 72, at 253.
143. *See* Hepburn & Brown, *supra* note 83, at 170.
144. *See* Werksman, *supra* note 72, at 255.
145. *See id.*

While they might be regarded as "negotiable instruments" for the purposes of the GATS financial services agreement,[146] at most this could prevent GATT/WTO members from limiting imports of credits and allowances, but not from denying the validity of such imports or from distinguishing between imports from different countries.[147]

B. Impacts on Other Trade

Werksman suggests that even though emissions allowances (or, presumably, credits) could not themselves be regarded as products or services under the WTO, design choices in the emissions trading system will likely affect other such products and services.[148] In particular, competition in relation to energy and fossil fuel products is likely to be influenced by emissions trading. These are the industries that will seek allocations of emissions credits and allowances from their governments. Parties could allocate credits and allowances using the "grandfathering" approach, i.e., proportionate to past emissions levels of the relevant enterprise or industry, as applies to the Kyoto Protocol in determining assigned amounts for Annex I parties. Alternatively, they could simply auction credits and allowances to the highest bidder.[149] In either case, care would need to be taken to ensure that the allocation of credits and allowances was not discriminatory against foreign competitors in contravention of the WTO's Agreement on Subsidies and Countervailing Measures.[150]

Products or services that are created using fossil fuels but that do not involve any emissions when they are purchased or used may also be affected by placing restrictions on emissions. Electricity, for example, may be created using large amounts of fossil fuels, and exported, even though the importer generates no emissions in using the electricity. If parties seek to discriminate between electricity created using environmentally friendly methods rather than carbon-intensive methods,[151] this may result in discrimination between imported products based on process and production methods

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146. *See* BRACK ET AL., *supra* note 7, at 119-20.

147. *See* Werksman, *supra* note 72, at 256-57. *Cf.* Loose, *supra* note 17, at 28.

148. *See* Werksman, *supra* note 72, at 252, 255.

149. *See id.* at 257.

150. *See id.* at 258-59. *See also* Loose, *supra* note 17, at 28; BRACK ET AL., *supra* note 7, at 120-21.

151. For example, by requiring credits and allowances for environmentally-friendly methods of electricity but not carbon-intensive methods of electricity.

(PPMs), which may contravene the GATT.[152] Such discrimination is analogous to the U.S. measures that distinguished between tuna and shrimp caught using methods that reduced incidental catch of dolphin and turtle respectively and other methods. As discussed above, these measures were denounced by the GATT/WTO dispute resolution bodies.[153] The problem with PPMs is that the reference to "like product" in Article III of the GATT offers little flexibility. Strictly speaking, discriminating between two products on the basis of how they were produced involves discriminating between like products. However, there is some suggestion from recent WTO panel jurisprudence that the WTO will not always necessarily view PPMs as contravening the GATT.[154]

Once credits and allowances are allocated, the point at which they must be surrendered will be a key determinant of whether contravention of WTO rules occurs. If credits and allowances must be surrendered "upstream," at the point where fossil fuels are imported, and the number of credits and allowances is limited, this will effectively impose a quantitative restriction on the import of fossil fuel products in violation of Article XI of the GATT.[155] If credits and allowances must be surrendered further along the chain from extraction to emission, upstream but at the point of delivery or sale of fossil fuel products, potential contraventions of the Most Favored Nation and national treatment principles of the GATT arise. For example, even if credits and allowances are allocated by open auction, access must remain open and non-discriminatory throughout the commitment period. To comply with the national treatment principle, parties must treat energy products of foreign new entrants in a manner similar to established domestic products. In the case of credit or allowance scarcity, parties may need to favor such foreign entities over domestic entities.[156] Werksman concludes that credits and allowances should preferably be surrendered downstream, at the point of actual emission, in order to minimize potential conflicts with the GATT/WTO.[157] Under this methodology, all allocations will be to industries regarded as domestic, irrespective of the source of the fossil fuels used.

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152. *See* Werksman, *supra* note 72, at 260.

153. *See supra* Part IV(C). *See also* Schoenbaum, *supra* note 14, at 288-89.

154. *See* BRACK ET AL., *supra* note 7, at 15; Magda Shahin, *Trade and Environment: How Real Is the Debate?*, *in* TRADE, ENVIRONMENT, AND THE MILLENNIUM, *supra* note 21, at 35, 46.

155. *See* Werksman, *supra* note 72, at 258.

156. *See id.*

157. *See id.* at 259.

Aside from making choices regarding the allocation and surrender of emissions credits and allowances, Annex I parties might attempt to encourage their industries to reduce emissions by imposing carbon or energy taxes on activities that consume high amounts of fossil fuels or emit high amounts of GHGs.[158] To address any consequent diminution in global competitiveness of affected industries[159] (e.g., electricity producers, products that cause GHG emissions),[160] these parties might also seek to impose domestic subsidies, rebates or exemptions, revenue recycling mechanisms, or border tax adjustments on imported products of this kind.[161] There are various problems with these measures. For example, exemptions from energy taxes for particular industries reduce the incentive for those industries to invest in more energy efficient technology and, of course, reduce the revenue raised from such taxes.[162] This revenue could otherwise be used for environmental purposes. Revenue recycling (e.g., returning the revenue from the energy tax back into the economy by reducing other corporate taxes)[163] risks paying industry for technology investments it would have made anyway.[164] In addition, these kinds of measures could well contravene the GATT.[165]

Another way in which the Kyoto Protocol raises potential trade implications is in connection with enforcement. Three factors may induce non-compliance: lack of will, lack of diligence, and lack of resources.[166] The latter is the key problem, particularly for developing countries, in the context of environmental protection. In order to encourage parties to comply, and non-parties to participate, trade measures may be incorporated into the emissions trading system.[167] The aim of these measures would be to ensure that the benefits of compliance outweigh the benefits of non-compliance - the paradigm of rational opportunism suggests that if this is not the case,

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158. *See* BRACK ET AL., *supra* note 7, at 59-70.

159. *See id.* at 71.

160. *See id.* at 10.

161. *See* Loose, *supra* note 17, at 28-29; BRACK ET AL., *supra* note 7, at 73-81.

162. *See* BRACK ET AL., *supra* note 7, at 73.

163. *See id.* at 74.

164. *See id.* at 74-75.

165. *See id.* at 89. *See also* Zen Makuch, *The World Trade Organization and The General Agreement on Tariffs and Trade, in* GREENING INTERNATIONAL INSTITUTIONS 94, 103 (Jacob Werksman ed., 1996).

166. *See* Michael Bothe, *The Evaluation of Enforcement Mechanisms in International Environmental Law: An Overview, in* ENFORCING ENVIRONMENTAL STANDARDS: ECONOMIC MECHANISMS AS VIABLE MEANS?, *supra* note 84, at 13, 17.

167. *See* BRACK ET AL., *supra* note 7, at 132-40.

compliance will not be achieved.[168] Trade measures would also help address the difficulties created by the fact that governments consent to be bound by the Kyoto Protocol and accept obligations under it, while private entities are generally responsible for producing GHG emissions.[169]

Assuming that some of the trade measures described above do contravene substantive provisions of the GATT, the next question is whether they can be excused under Article XX. A critical feature of applying Article XX(b) of the GATT to trade measures adopted in connection with emission reductions under the Kyoto Protocol will be determining whether these measures are *necessary* to fulfill the objective of reducing emissions. Some parties may view such measures as vital to achieving the goals of the Kyoto Protocol, while others would prefer a fluid and unrestricted market in emissions credits and allowances and related products and services.[170] Unless the parties to the Kyoto Protocol reach clear agreement on which approach should prevail, WTO dispute resolution bodies will be left to impose their own views on what is required to achieve these environmental policy objectives. Similarly, a clear understanding of the measures allowed according to the Conference of the Parties will assist parties in justifying trade measures taken for the purposes of the chapeau of Article XX.

C. North and South: Implications for Developing Countries

The complexity of the relationship between trade and environment is exacerbated by the different effects that trade may have on the environment in developed and developing countries.[171] Northern countries consume far more natural resources per capita than Southern countries, and generate most of the world's pollution and waste.[172] Northern countries have already exploited most of their resources[173] and tend to advocate more stringent environmental

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168. *See* Gebhard Kirchgässner & Ernst Mohr, *Trade Restrictions as Viable Means of Enforcing Compliance with International Environmental Law: An Economic Assessment, in* ENFORCING ENVIRONMENTAL STANDARDS: ECONOMIC MECHANISMS AS VIABLE MEANS?, *supra* note 84, at 199, 203.

169. *See* Bothe, *supra* note 166, at 18.

170. *See* Werksman, *supra* note 72, at 260.

171. *See* Graciela Gutman, *Agriculture and the Environment in Developing Countries: The Challenge of Trade Liberalization, in* THE ENVIRONMENT AND INTERNATIONAL TRADE NEGOTIATIONS: DEVELOPING COUNTRY STAKES, *supra* note 1, at 33.

172. *See* ISLAM, *supra* note 8, at 410.

173. *See* Martin Davies, *Just (Don't) Do It: Ethics and International Trade*, 21 MELBOURNE U. L. REV. 601, 603 (1997).

standards.[174] They also typically have the financial, technological and political power to dictate and implement these standards.[175] In contrast, in trying to catch up with Northern countries, Southern countries may be inclined to relax environmental policy.[176] For these countries, poverty, famine and debt are more pressing concerns than the environment.[177] An insistence by the North that they impose environmental standards as stringent as those of developed countries may look suspiciously like "eco-imperialism" to the South.[178]

> Richer countries tend to adopt more stringent environmental standards and regulations than poorer countries. And richer countries tend to be more powerful in trade negotiations than poorer countries . . . [T]he richer, greener states have used their power to exert environment-friendly pressure on international trade-environment rules, coercing poorer countries into accepting greener rules . . . .[179]

Thus, on one view, the pursuance of free trade restricts the ability of developed nations to "act unilaterally to further [their] goals; be they economic, political or environmental."[180]

Tussie distinguishes the Northern or "green" agenda, which is concerned with climate change, bio-diversity, deforestation and fisheries issues, from the Southern or "brown" agenda, which is concerned with drinking water, poverty alleviation, trade, market access and the need for technology transfer and greater flows of development assistance.[181] She notes that Northern countries highlight the needs of future generations, whereas Southern countries are more concerned with alleviating poverty, reducing debt and dealing with growing populations in the immediate future.[182] This difference in the broad environmental agenda of North and South is reflected in attitudes towards particular

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174. *See* Winter, *supra* note 18, at 232.
175. *See* ISLAM, *supra* note 8, at 410.
176. *See* Winter, *supra* note 18, at 232.
177. *See* ISLAM, *supra* note 8, at 410.
178. *See* UIMONEN & WHALLEY, *supra* note 11, at 67.
179. Steinberg, *supra* note 13, at 232-33.
180. Brotmann, *supra* note 73, at 323.
181. *See* Tussie, *supra* note 9, at 2.
182. *See id.* at 2-3. *See also* ANITA HALVORSSEN, EQUALITY AMONG UNEQUALS IN INTERNATIONAL ENVIRONMENTAL LAW: DIFFERENTIAL TREATMENT FOR DEVELOPING COUNTRIES 5 (1999).

environmental resources. For example, Islam states that developed countries consider endangered species in need of protection, whereas poor countries may value such species as an exploitative resource.[183] The developed country response focuses on sustaining the environment in the long term; the developing country response focuses on staying alive now.

The preamble to the FCCC specifically notes:

> that the largest share of historical and current global emissions of greenhouse gases has originated in developed countries, that per capita emissions in developing countries are still relatively low and that the share of global emissions originating in developing countries will grow to meet their social and development needs . . . .[184]

Against this background, the obligations of developing countries to reduce GHG emissions under the Kyoto Protocol are limited or non-existent. This seems only fair in a general sense - those who generated the emissions should be responsible for cleaning them up.[185] Another way of formulating this argument is to say that even before the Kyoto Protocol established assigned amounts for particular countries, equity set quotas, and the developed world has already used up its quota.[186]

To participate fully in emissions trading and reduction, developing countries require the assistance of Annex I countries through technology transfers and financial aid.[187] They lack the independent resources to implement adjustments to production methods and monitor and enforce higher environmental standards.[188] If developed countries impose restrictive trade measures in the name of environmental protection without

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183. *See* ISLAM, *supra* note 8, at 409.

184. *See* FCCC, *supra* note 3, preamble. *See also* Christine Batruch, *"Hot Air" as Precedent for Developing Countries? Equity Considerations*, 17 UCLA J. ENVTL. L. & POL'Y 45, 56 (1998).

185. Paul Harris, *Common But Differentiated Responsibility: The Kyoto Protocol and United States Policy*, 7 N.Y.U. ENVTL. L. J. 27, 28-31 (1999). *See also* Schoenbaum, *supra* note 14, at 295-96 (discussing the "polluter pays principle"); Eckaus, *supra* note 91, at 286; Peter Slinn, *Development Issues: The International Law of Development and Global Climate Change*, *in* INTERNATIONAL LAW AND GLOBAL CLIMATE CHANGE, *supra* note 80, at 75, 78.

186. *See* Eckaus, *supra* note 91, at 290.

187. *See* Cameron, *supra* note 116, at 15.

188. *See* Veena Jha & René Vossenaar, *Breaking the Deadlock: A Positive Agenda on Trade, Environment, and Development?*, *in* TRADE, ENVIRONMENT, AND THE MILLENNIUM, *supra* note 21, at 65, 76-77.

providing support to developing countries, the environmental objectives risk being thwarted.[189] Effectively, developed countries will need to subsidize developing country compliance with emissions reduction targets once they are established.[190] This is a form of international affirmative action:

> Affirmative action in this context, points to a kind of historic, causal-related injustice because developing countries have not had the same socio-economic benefits as the developed countries that over-exploited the global environment, yet they are expected to share the burden of controls on economic development that may have a negative impact on the environment.[191]

Developed countries may be regarded as having a *duty* to provide development assistance to developing countries, and to make reparation for the damage done to the environment to date through the emission of GHGs.[192] The type and extent of assistance required will depend on the particular circumstances of the developing country, including its population and geography.[193] If developing countries do not eventually commit to emissions reduction targets, or are unable to meet them, the world will suffer as a whole because of the likely impact on global warming. However, the developing countries will suffer most.[194] They have the least resources to combat or adapt to climate changes and the most people to account for. They also tend to occupy regions that are already hotter and drier than those occupied by developed countries,[195] and to be more dependent on natural resources and systems.[196]

For countries such as Russia and the Ukraine, the assigned amount under the Kyoto Protocol fails to take into account the decline in emissions that has resulted from their economic downturn.[197] Thus, although the assigned amount may be 100% of that country's 1990 emission levels, the country's decline in

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189. *See id.* at 77.
190. *See* HALVORSSEN, *supra* note 182, at 4.
191. *Id.* at 28.
192. *See* Slinn, *supra* note 185, at 80-83.
193. *See* HALVORSSEN, *supra* note 182, at 6.
194. *See* BRACK ET AL., *supra* note 7, at 31; Harris, *supra* note 185, at 47-48.
195. *See* BRACK ET AL., *supra* note 7, at 31.
196. *See* Slinn, *supra* note 185, at 77.
197. *See* Batruch, *supra* note 184, at 46.

emissions since 1990 means that, even without any emission reducing efforts or technology, the actual emission levels in the commitment period are likely to be only 70% of 1990 levels. This surplus allocation (of around 30%) is known as "hot air" – the difference between the assigned amount and the likely level of emissions in the absence of climate related policies and measures.[198] The existence and extent of any hot air will depend, in part on the relevant countries' economic performance and recovery, before and during the commitment period. Some commentators argue that there may be no hot air at all.[199] However, these countries certainly have the potential to increase instead of decreasing their emissions between 2000 and 2008, while complying with the Kyoto Protocol. Alternatively, they could trade their hot air to developed countries, who could thus effectively buy their way out of emissions reduction targets.[200] This could have serious implications for the objectives of the FCCC, particularly if developing countries refer to this as a precedent for how their own emissions should be dealt with as they increase.[201]

By 2010, developing countries are likely to have become the major producers of GHGs.[202] This poses a problem for the long term success of the Kyoto Protocol in reducing GHG emissions overall, unless additional or amended obligations are imposed on developing countries. An important change would be to allow developing countries to participate in emissions trading under Article 17 of the Kyoto Protocol. This could address problems of industry relocating to developing countries with fewer restrictions on emissions than Annex I countries,[203] and could also enable developing countries to "generate hard currency income."[204] However, developing countries will face difficult decisions in engaging in emissions trading, particularly if it occurs at the level of private entities.[205] Initially, given the immediacy of many of these countries' problems, the temptation would be to sell credits and allowances to the highest bidder, securing much needed funds. As their development demands higher emissions levels, and assuming assigned amounts

198. *See* Michael Grubb, *International Emissions Trading under the Kyoto Protocol: Core Issues in Implementation*, 7 REV. EUR. COMMUNITY & INT'L ENVTL. L. 140, 142 (1998).

199. *See* Batruch, *supra* note 184, n.10, 54-55.

200. *See* Driesen, *supra* note 134, at 11-12.

201. *See generally* Batruch, *supra* note 184.

202. *See* Cameron, *supra* note 116, at 6.

203. *Cf.* BRACK ET AL., *supra* note 7, at 9-10.

204. Cameron, *supra* note 116, at 9.

205. *See* Hepburn & Brown, *supra* note 83, at 172.

are determined for developing countries, they might find themselves lacking sufficient credits and allowances. If forced to purchase credits and allowances from developed countries or their private entities, possibly even "buying back" those they had sold themselves,[206] the price could be prohibitive.[207] Unless a mechanism is included in the trading system to account for the different economies and standards of wealth among the Kyoto Protocol parties, the system could prevent the development of the countries that need it most.

At present, a "grandfathering" approach is taken in the Kyoto Protocol to determine assigned amounts for Annex I countries, relying on a calculation of the emissions levels for that country in 1990. Since developed countries had the highest levels at that time, this approach gives them an advantage. Although assigning equal per capita levels of emissions for all countries would have made it much harder for some countries to comply than others, and would have created more hot air, it would also have avoided giving preferential treatment to countries with high emissions levels, and removed the incentive for developing countries to increase their emissions to benefit from the same treatment if and when they are assigned limited emission amounts. At the same time, it would in fact have favored the developing world to the extent that its population is larger than that of the developed world.[208] A third approach would have been to establish emission quotas proportional to GDP: "[t]his criterion posits that all production should be required to be equally clean in terms of emissions, wherever it takes place."[209] However, this approach fails to take into account the greater responsibility of developed countries for the emissions to date, and the financial difficulties that developing countries would face in ensuring their industries obtained and relied on environmentally friendly technologies.[210]

D. Preparing for a Challenge

As discussed above, the Kyoto Protocol raises several different trade implications and potential challenges to the GATT/WTO. The protocol itself recognizes the possibility of such challenges in

206. *See id.*
207. *See* Driesen, *supra* note 134, at 12.
208. *See* Batruch, *supra* note 184, at 64.
209. *Id.* at 63.
210. *See id.*

requiring Annex I parties to implement the relevant environmental policies and measures "in such a way as to minimize adverse effects . . . on international trade."[211] Of course, the Kyoto Protocol's challenges may never be formally realized. If the U.S. fails to ratify it, it may be very difficult to get sufficient numbers of developed countries together for the Kyoto Protocol to come into force. Ironically, while the U.S. was the first developed country to ratify the FCCC, it may be the last to ratify the Kyoto Protocol, if it ever does.[212] Lobbying by the energy industry may account for this apparent change of heart,[213] and the outcome of COP-6 may determine the extent to which such lobbying continues. If the emissions trading regime is sufficiently flexible and offers the U.S. the opportunity to comply with Article 3 of the Kyoto Protocol without making major domestic changes or emissions reductions, the U.S. may be more likely to ratify.

Assuming that the Kyoto Protocol does come into force, the issue of whether emissions trading under the Kyoto Protocol will contravene the GATT is one thing. Practically speaking, the issue of whether such trading will ever be challenged at the GATT/WTO level is quite another. Perhaps the forces that have so far protected other MEAs from challenge will continue to keep the conflict from erupting. However, several aspects of the Kyoto Protocol distinguish it from other MEAs: "no MEA has had the potential to impact so many sectors of the economy, so many economic interests and such high volumes of trade in products and services, as does the climate change regime."[214] At the same time, the Kyoto Protocol may not attract as many members as other MEAs containing trade measures, such as the Montreal Protocol, CITES, and the Basel Convention.[215] This may remove the apparent reluctance of GATT/WTO parties to challenge trade measures in MEAs,[216] and increase the likelihood of a dispute regarding the Kyoto Protocol being brought to the level of the GATT/WTO.

In particular, disputes are likely to arise concerning the rules on emissions trading under the Kyoto Protocol, no matter how well designed or carefully worded they may be. This is especially due to the impact on sovereign and commercial interests that will

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211. Kyoto Protocol, *supra* note 4, art. 2.3.
212. *See* Cameron, *supra* note 116, at 11.
213. *See id.* at 11-12.
214. Werksman, *supra* note 72, at 252.
215. *See supra* Part II(B).
216. *See* Werksman, *supra* note 72, at 261.

necessarily result from rewarding climate-friendly behavior.[217] In order to deal with such disputes, and take the opportunity to clarify the limits of such trading, a dispute resolution mechanism specific to the Kyoto Protocol should be established. As discussed above, to date GATT/WTO dispute resolution bodies have shown themselves to be more concerned with principles of free trade than with protecting the environment. A new body is needed to balance the conflict between trade and environment in the context of the Kyoto Protocol. This is perhaps even more important than in the case of other environmental trade measure disputes, due to the large numbers of parties involved, and the relative urgency of addressing global warming.

VII. CONCLUSION

Trade-related environmental measures play a key role in several MEAs. The importance of resolving the conflict between such measures and the GATT/WTO cannot be overstated. It is clear that Article XX of the GATT alone is insufficient to resolve the trade-environment conflict in the near future. Its terms are too ambiguous and its interpretation to date too one-sided. In addition, although GATT/WTO jurisprudence is creeping towards a more environmentally friendly stance, WTO dispute settlement panels are ill-equipped to deal with the conflict at present. While it may be argued that there is an implicit, informal understanding that parties to an MEA will not challenge any of its trade measures under the GATT/WTO, or that such measures are exempt from the GATT/WTO,[218] the parties concerned would be wise to demand more certainty than this.

One way to achieve greater certainty would be to amend the GATT.[219] Another would be to create a separate WTO agreement on MEAs.[220] The trade-environment conflict is coming to a head. At the very least, the Sixth Session of the Conference of the Parties to the FCCC should give the matter serious consideration at The Hague in November in particularizing the flexibility mechanisms of the Kyoto Protocol. Preferably, measures that could potentially breach the GATT or other WTO rules but that are agreed to be acceptable

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217. *See id.*

218. *See* Wilder, *supra* note 21, at 4-5.

219. Cameron & Robinson, *supra* note 1, at 18-30; Winter, *supra* note 18, at 248-49; Schoenbaum, *supra* note 14, at 283-84; Brack, *Environmental Treaties*, *supra* note 70, at 293-96.

220. BRACK ET AL., *supra* note 7, at 20.

should be specifically identified as such. In addition, a separate dispute resolution body with environmental expertise as well as trade knowledge should be established to hear disputes arising under the Kyoto Protocol, and potentially other MEAs. Finally, careful analysis of the likely changes in the levels of emissions of developing countries and countries in transition to a market economy should also be conducted in structuring the emissions trading system.

If the Conference fails to consider the free trade implications in determining the mechanisms for implementing the Kyoto Protocol, there is a real risk of a GATT/WTO challenge being brought against these mechanisms. At best, this will create uncertainty and unnecessary costs in time and money. At worst, it will prove lethal to the system of emission credits, allowances and trading, and the chance of winding back the clock on global warming will be squandered.

VIII. POSTSCRIPT

Since the time of writing, several significant events have taken place in relation to the Kyoto Protocol. In November 2000, negotiations in the Hague during the Sixth Conference of the Parties to the FCCC were suspended when the negotiators (particularly, the U.S. and the European Union countries) failed to reach agreement on key political issues, including the international emissions trading system and the treatment of carbon sinks.[221] Subsequently, in March 2001, President Bush announced that the U.S. was abandoning the Kyoto Protocol.[222]

The withdrawal of the U.S. created grave doubts about the future of the Kyoto Protocol, given the U.S.'s substantial contribution to global emissions and the requirement for the Kyoto Protocol's entry into force that Annex I parties together accounting for 55% of carbon dioxide emissions consent to be bound by it.[223] Nevertheless, the Conference of the Parties to the FCCC resumed talks in Bonn in July 2001[224] and, after lengthy negotiations, adopted a text on the implementation of the Buenos Aires Plan of Action[225] that should

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221. Press Release, FCCC Secretariat, Climate Change Talks Suspended: Negotiations to Resume During 2001(Nov. 25, 2000).

222. *Breakthrough in Bonn?*, ECONOMIST, July 23, 2001.

223. *See supra* Part IV(C) for the details of this requirement.

224. Press Release, FCCC Secretariat, Climate Talks Formally Resumed in Bonn (July 26, 2001).

225. *See supra* Part IV (D).

enable parties to begin ratifying the Kyoto Protocol and, ultimately, its entry into force.[226]

The Spokesman for United Nations Secretary-General Kofi Annan stated that the agreements reached in Bonn "provide a solid political basis for the Johannesburg Summit in September 2002."[227] The involvement of states such as Japan and Canada will be crucial in bringing the Kyoto Protocol into force, given the absence of the U.S.

The Seventh Session of the Conference of the Parties to the FCCC will take place in Marrakech from October 29, 2001 to November 9, 2001, and at that time detailed decisions on the text of the Kyoto Protocol and its implementation are to be finalized and formally adopted.[228] Doubts remain as to how successful the Kyoto Protocol can be without the U.S., with compromises being made to obtain the support of other industrialized countries. However, it is also important to remember that if the Kyoto Protocol is to achieve its environmental goals it must not only enter into force, but must also be capable of enforcement without interfering with other international obligations of the parties. This means that in the final states of drafting and negotiation of the Kyoto Protocol, the parties to the FCCC should pay close attention to the implications for free trade of the emissions trading regime, as discussed in this article.

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226. FCCC, *Review of the Implementation of Commitments and of Other Provisions of the Convention: Preparations for the First Session of the Conference of the Parties Serving as the Meeting of the Parties to the Kyoto Protocol (Decision 8/CP.4), Decision 5/CP.6*, U.N. Doc. FCCC/CP/2001/L.7, July 24, 2001.

227. Statement by Spokesman for the Secretary-General, *Secretary-General Welcomes Bonn Agreements on Emission Limitation*, SG/SM/7898, ENV/DEV/595, July 23, 2001.

228. Press Release, FCCC Secretariat, Bonn Decisions Promise to Speed Action on Climate Change (July 27, 2001).