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## **Can Trade Policy Support the Next Global Climate Agreement?**

Analyzing the  
International Trade  
and Environment  
Regimes

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CARNEGIE ENDOWMENT

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# Contents

<b>Summary</b>	<b>1</b>
<b>Introduction</b>	<b>1</b>
<b>Views From the Environment and Trade Regimes: Perspectives on Areas of Conflict and Potential Synergy</b>	<b>2</b>
The Environmental View of Environmental Trade Policy	2
The Trade View of Environmental Trade Policy	6
<b>The Evolution of Environmental Trade Policy Within the Environment and Trade Regimes</b>	<b>10</b>
The Past Use of Trade Policy in Multilateral Environmental Agreements	10
Trends Within the WTO Dispute Settlement Mechanism and Rules Negotiations on Environmental Trade Policy	14
<b>Current Trade and Climate Proposals and Policy Options for Further Climate-Related Trade Measures</b>	<b>21</b>
Carbon Tariff Proposals in the European Union and the United States	21
Climate-Related Trade Restrictions and How They Could Work Within the WTO	23
<b>Conclusion</b>	<b>25</b>



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## Summary

The global trade and environment regimes have a rich history of conflicts and synergies that holds important lessons for current initiatives to develop and implement effective national and global climate policy. This paper explores the relationship between the trade and environment regimes and asks how climate negotiators can harness the powerful incentives of international trade to support the next global climate regime.

## Introduction

The European Union recently threatened to impose a carbon tariff on goods produced in countries where greenhouse gas emissions do not meet European standards. Recent climate proposals in the United States have similarly included measures that would require importers of carbon-intensive manufactured goods from nations without comparable climate initiatives to purchase emissions allowances. These proposals have stirred heated debate among trade and climate policy makers. Proponents of freer trade fear that addressing these concerns will lead down the “slippery slope” to protectionism. Many believe that the proposals stem from the concerns of domestic carbon-intensive industry about declining competitiveness as a result of pursuing expensive carbon emission reductions. Climate policy makers, on the other hand, are attracted to the potential of trade measures to reduce the migration of carbon-emitting industries to countries with less stringent climate policies. Trade restrictions limiting the outsourcing of emissions may increase the effectiveness of any national or global climate policy.

The prospect of using carbon tariffs to further climate policy is a new and dramatic manifestation of a long-standing debate on the proper relationship between trade measures and environment policy. The history of this relationship holds important lessons for initiatives to develop effective national and global climate policies. This paper examines that relationship. The first and second sections consider the broad debate on trade and environment policy. The first section examines the structure and objectives of the existing trade and environment regimes to shed light on potential areas of conflict and synergy between the two. The second section reviews examples of trade measures that have supported environment policy. It first looks at how two multilateral environmental agreements employ trade-related measures. It then explores opinion within the World Trade Organization (WTO) toward environmental trade measures by considering WTO jurisprudence on environmental disputes and

current relevant WTO treaty negotiations. This review of the historical relationship between trade and the environment reveals guideposts for the integration of WTO-consistent trade measures into climate policy. The third section explores current proposals for integrating trade-related measures into national climate policy. It considers the history of the relationship between the trade and environment regimes and the guideposts set by the WTO, and it examines the channels through which trade policy can support national climate policy and suggests trade policies that could support global climate initiatives.

## **Views From the Environment and Trade Regimes: Perspectives on Areas of Conflict and Potential Synergy**

Can trade policy be designed to support environmental objectives? Would restricting trade on the basis of environmental concerns undermine fundamental principles of the international trade regime? Does trade increase carbon emissions or cause other types of environmental damage? Do the benefits from increased trade outweigh its possible harmful effects on the environment? These are some of the questions that color the conversation between the global trade and environment communities.

This section details the concerns that environmentalists raise with respect to freer trade and gives an overview of possible ways in which environmentalists could harness the incentive of international trade and the objectives of the trade regime to protect the environment. It then explores the concerns of some trade advocates toward using trade to support environmental objectives and highlights those WTO rules that suggest synergies between trade and environmental objectives.

### **The Environmental View of Environmental Trade Policy**

From the standpoint of environmental advocates, international trade policy could both threaten the environment and create important incentives to protect it. It is useful to examine separately the concerns of the environmental community and the potential synergies between environmental objectives and the multilateral trade regime.

#### **The Concerns**

Trade liberalization has several potential negative effects on the environment. A primary objective of the global trade regime is to increase the volume of global production. This, in turn, may lead to an increased exploitation of natural resources and higher levels of carbon emissions in the production process. Transporting more goods longer distances will also result in the use of more fossil fuels. Conversely, foreign investment and competition may introduce cleaner production methods to developing countries, and the rules of the

international trade regime may require countries to abandon their protection of carbon-intensive industries. The phenomenon of comparative advantage may concentrate certain production in areas where the environmental cost is relatively lower. The evidence is inconclusive on whether open borders increase or decrease global carbon emissions, hurt or help the environment.

Some environmental advocates worry about a “race to the bottom” of environmental standards: Nations that want to attract investment in carbon-intensive industry will lower national environmental standards to lower production costs; firms will escape the high costs of abiding by stringent environmental policies by moving production to these pollution havens and then exporting the goods produced to countries with higher standards; and industries in countries with high standards will suffer a loss or lobby for lower standards. Thus, a structure of comparative advantage that fails to account for the environmental cost of carbon emissions will enable the carbon emitted in the production of goods to leak from countries with high standards to those with low standards.

The differential in environmental standards among countries that trade with each other also leads to emissions leakage through consumption. National climate policies target production-based, rather than consumption-based, emissions. Countries with aggressive national climate policies impose limits on the level of carbon emissions emitted by domestic producers but not on the level of carbon emitted to serve domestic consumers. Consumers in countries with strict carbon policy will often buy carbon-intensive goods imported from developing countries—the production of which resulted in higher levels of carbon emission than would have occurred had the good been produced under stricter domestic carbon policy—because those imported goods are cheaper. When they cannot control the carbon content of imports, national climate policy makers in nations participating in global trade have difficulty limiting the size of their country’s carbon footprint including consumption.

Efforts to measure the level of carbon traded across borders increasingly focus on the carbon “embodied” in international trade. The embodied carbon of a good is the amount of carbon emitted throughout its lifecycle—in its production, transportation, and consumption. A new study finds that international trade embodies approximately 20 percent of global carbon dioxide emissions.<sup>1</sup> This number is increasing. Another study concludes that Norway—a signatory to the Kyoto Protocol, with its carbon dioxide production emissions stabilized at 55 to 57 metric tonnes a year—increased the size of its carbon footprint including consumption by 33 percent from 2001 to 2006.<sup>2</sup> Open borders can undermine national climate policy because they allow countries with stringent environmental standards to outsource their carbon emissions.

### **Potential Synergies**

Even in the face of these concerns, increased international trade, the rules of the multilateral trade regime, and the incentives they present could be harnessed to

support environmental objectives. Another primary objective of the multilateral trade regime is to eliminate trade-distorting practices. Many such practices may also be harmful to the environment; for example, subsidies to the fishing sector may encourage unsustainable fishing practices, agricultural subsidies can support environmentally harmful agricultural production, and tariffs on environmental goods and services can restrict the dissemination of clean technology. The rules of the multilateral trade regime are designed to facilitate the breaking down of these trade-distorting practices. Here, the objectives of the multilateral trade regime may lead to policies that also benefit the environment.

Further, global and national environmental policies could exploit the incentive structure created by countries' desire to access international markets. Increased market access can translate into increased demand for a nation's products and enable it to expand production, income, and welfare. The last half century of the expansion of international trade and the multilateral trade regime, and the concurrent growth in many developing countries, has demonstrated the power of this incentive. Nations have dramatically shifted their national economic and trade policies so that they could be accepted into the WTO and reap the benefits of expanded trade. These same incentives can be harnessed to shape national climate and environmental policies and commitments.

Trade incentives and trade threats have convinced countries to join multilateral environmental agreements (MEAs). Russia, for example, agreed to ratify the Kyoto Protocol in exchange for EU support for its bid to join the WTO in 2004.<sup>3</sup> The Montreal Protocol (discussed in the third section below) employed a multilateral trade threat to encourage developing countries to sign it in 1987.<sup>4</sup> The proposed EU carbon tariff is an example of a unilateral trade threat that could convince the United States and China to cooperate with global climate initiatives—but the success of this threat remains to be seen.

Trade incentives and tools can affect the behavior of firms as well as the climate policy of particular nations. Trade restrictions on environmentally harmful products could encourage firms to reduce their production of those products by shrinking the international market. The Stockholm Convention on Persistent Organic Pollutants, for example, prohibits member countries from importing banned substances unless the import is from another member country and destined for environmentally sound disposal. The aim is to reduce the amount of persistent organic pollutants that firms in both member and nonmember countries supply by systematically reducing the demand for those pollutants.<sup>5</sup>

Trade mechanisms could also appeal to a global firm's need to improve efficiency by enforcing high environmental standards in key markets. Suppose a critical threshold of countries were to enact trade restrictions according to a unified system of stringent environmental standards. If the market that these countries constitute is large enough, global firms will do what is necessary to compete in it. These firms—even if they are making their products in nations that do not adhere to the system of stringent standards—would have to abide

by these standards to sell in this threshold market. Moreover, it is often inefficient for such firms to produce multiple lines of products, intended for distinct markets, that adhere to different environmental standards. Thus, to improve microefficiency, these firms may adopt the stringent environmental standards for all production.

A shift in the behavior of global firms in developing countries could even encourage a change in national environmental standards, just as high energy-efficiency standards in California led to the improvement of these standards throughout the United States. California, the first state to adopt efficiency standards for appliances in 1977, set efficiency standards equivalent to the efficiency of high-performing appliances already on the market and upgraded them throughout the 1980s. As more states followed California's lead, national appliance manufacturers, inconvenienced by diverse efficiency standards across states, joined with efficiency advocates to lobby for a uniform national standard. Thus California's ambitious standards guided the development of a similar national standard.<sup>6</sup> On the international market, firms face different efficiency standards in different countries. Many MEAs seek to harmonize international standards (box 1). The enforcement of high national standards through trade restrictions could act as a similar guiding force on the international stage of efficiency standards, and likewise could provide the impetus for including emissions standards in a multilateral climate agreement.

### **Box 1. Multilateral Environmental Agreements**

Unlike international trade, which is governed by one identifiable multilateral trade regime, MEAs arise to address particular environmental problems. Several organizations, including the United Nations Environment Program and the United Nations Framework Convention on Climate Change, are involved in developing and implementing MEAs.

An estimated 230 MEAs employ a variety of tools to address distinct environmental challenges. Only twenty of these MEAs include trade restrictions. Six MEAs, all of which include trade restrictions and are monitored by the United Nations Environment Program, constitute the core multilateral environmental initiatives. The Convention on International Trade in Endangered Species works to ensure that international trade in endangered species does not further threaten the survival of those species. The Montreal Protocol protects the ozone layer by controlling the production and consumption of ozone-depleting substances. The Basel Convention on Hazardous Wastes controls the system of the transboundary movement, disposal, and management of hazardous wastes. The Rotterdam Convention on Pesticides and Chemicals facilitates the exchange of information on pesticides and chemicals, and works to promote their environmentally sound use. The Cartagena Protocol aims to protect biodiversity from the potential risks posed by living modified organisms resulting from modern biotechnology. Finally, the Stockholm Convention works to protect humanity's health and environment from persistent organic pollutants.

These MEAs are negotiated in separate forums, but they share common principles and characteristics. Each is based upon the principle of “common but differentiated responsibility,” which recognizes that countries contribute to the environmental problem at different levels and enjoy different capacities to address it. Each MEA is driven by and updated according to scientific assessments, and it is carefully tailored to the particular environmental problem at hand. These MEAs have garnered widespread support within the international community, largely because of these common characteristics: They enjoy legitimacy based on scientific investigations, they were developed through transparent and inclusive negotiations, and they recognize that developing countries may have a limited capacity to contribute to the resolution of environmental problems.

The Kyoto Protocol, administered by the United Nations Framework Convention on Climate Change, is the global climate agreement. It aims to reduce greenhouse gas emissions by setting emissions reduction targets for each of its signatories. It shares many of the characteristics listed above. Developed countries have stringent reduction targets, whereas developing countries are not held to specific targets in the first commitment period for the protocol. Members are left to devise national policies that will enable them to meet the protocol's targets. The protocol does not include specific trade-related obligations, but it has established several mechanisms to assist members in meeting their reduction targets. These mechanisms include the Clean Development Mechanism, which allows nations to implement projects in developing countries in exchange for emissions reduction credits, and Joint Implementation, which allows developed nations to work together on projects to reduce emissions.

Numerous critics of the Kyoto Protocol argue that it is ineffective in stemming the risk of global warming. The world's largest polluter, the United States, has not signed the protocol or agreed to limit its carbon emissions. As noted above, the protocol has limited enforcement mechanisms to ensure that its members actually meet their assigned targets. The current commitment period for the protocol expires in 2012, and international climate policy makers are investigating policy tools that can be incorporated into an effective post-2012 climate regime. International trade policy is one of these tools.

### **The Trade View of Environmental Trade Policy**

In considering the trade view of environmental trade policy, it is again useful to examine separately the concerns of the trade community and the potential synergies between the rules of the multilateral trade regime and objectives of environmental advocates.

#### **The Concerns**

Many in the trade community fear that environmental measures incorporated into trade agreements could be exploited for protectionist reasons. The U.S. Trade Representative, Susan Schwab, argues that border tariffs and similar “trade restrictions run the risk of tit-for-tat retaliation and even an all-out trade war where no one wins and everyone loses.”<sup>7</sup> If the United States were to restrict imports from China of goods produced in a more carbon-intensive manner, China could retaliate by closing markets to U.S. goods. Tit-for-tat

policies would cause markets to contract and world economic activity to decline. The WTO website describes this phenomenon as a “self-defeating and destructive drift into protectionism.”<sup>8</sup>

Today’s multilateral trade regime was born, in part, in response to the “beggar-thy-neighbor” policies that contributed to a drastic contraction of international trade between World War I and World War II. Through these policies, nations sought to curb domestic economic depression and unemployment by focusing on domestic production and limiting imports. One example is the United States’ Smoot–Hawley Tariff Act of 1930, which raised the average tariff rate by 20 percent. Within two years, dozens of countries had enacted similar protectionist policies. Between 1929 and 1934, global trade declined by 66 percent. A pillar of the multilateral trade regime is the belief that these tit-for-tat trade policies impeded international cooperation and exacerbated the Great Depression. The General Agreement on Tariffs and Trade (GATT) was negotiated to prevent countries from increasing tariffs and likewise to prevent protectionism from leading to another breakdown in international trade cooperation and a contraction of the global marketplace.

Yet economic opinion has evolved over the past half century. Economists increasingly recognize that government trade interventions are not inherently market distortions; they can be valuable tools for correcting market imperfections and creating missing markets. Economic actors may not consider the true cost of environmental damage. Economist Joseph Stiglitz describes the lack of stringent environmental standards in the United States as a form of subsidy: The U.S. refusal to restrict the emission of carbon dioxide and other greenhouse gases unfairly lowers U.S. manufacturing costs. One of the core objectives of the WTO is to establish a level playing field for its members. A carbon tariff, by offsetting the implicit subsidy given by a lax climate policy, could be seen to support this objective.<sup>9</sup>

### **Potential Synergies**

The GATT and the Marrakesh Accords, the agreement creating the WTO, recognize that policies in pursuit of the primary objectives of the trade regime—open borders and a level playing field—may undermine another principle to which the GATT and the Marrakesh Accords pay lip service: sustainable development. The GATT of 1947 includes an exemption clause, Article XX, which allows members to adopt trade policies that would otherwise be inconsistent with the GATT if such policies protect human, plant, or animal life or health, or protect exhaustible resources.

Since the WTO was established with the Marrakesh Accords in 1995, the WTO Appellate Body, which rules on disputes between WTO members, has become increasingly open to using Article XX to exempt environmental trade measures. However, this exemption article has a limited range of applicability. One question that is central to determining that range is: Can trade restrictions

be enacted against a product based on the process by which that product was made, rather than its physical characteristics? This and other issues related to Article XX's applicability will be discussed in detail in the third section below.

Before the WTO was established, GATT jurisprudence clearly set the precedent that process-based standards were not acceptable justifications for trade restrictions. However, jurisprudence within the WTO has been increasingly open to accepting standards based on process and production methods (see the discussion of the Mexican tuna case in box 3 below). Furthermore, the Marrakesh Accords include two agreements on standards and regulations that—of particular importance—are often interpreted to cover process-based standards: the Agreement on Technical Barriers to Trade (TBT), which addresses technical negotiations and standards, and its counterpart, the Agreement on Sanitary and Phytosanitary (SPS) Measures, which addresses food safety and animal and plant health regulations. These two agreements recognize that member countries can set environmental standards (including those that are process-based) and restrict trade accordingly. They lay out specific directives to ensure that standards do not restrict trade excessively, they call for transparency in establishing and implementing trade measures, and they encourage the international harmonization of standards where possible.<sup>10</sup>

The 1994 Ministerial Decision on Trade and Environment constituted another important treaty-based shift in the international trade regime that could lead to more synergies between trade and the environment.<sup>11</sup> It established the Committee on Trade and Environment (CTE), which has specific mandates to investigate the environmental impact of trade policy and to suggest modifications to trade rules that will most effectively promote sustainable development. The CTE explores the relationship between trade and environment in all areas of the WTO. It reports to and advises the General Council, one of the WTO's highest decision-making bodies and its top rule-making body.

The environmental policy community and scientific community have the needed environmental expertise to be helpful in shaping the CTE's discussion. The United Nations Environment Program works to develop a coordinated position in the environmental policy community on trade-related issues. Such a coordinated position could enable environmental advocates to contribute more to discussions within the CTE. While offering the trade community the advice it seeks in the mandate of the CTE, the environmental community could also help shape the environmental considerations of the trade debate.

The existence of an organization like the CTE with this role and position within the international trade regime may appear to suggest a reconciliation of the concerns of the trade and environmental communities. However, a closer examination may lead to skepticism about the CTE's effectiveness and scope. Within the WTO, the CTE has no direct rule-making power; though it advises the General Council, it cannot directly change the laws of the multilateral trade

regime. This position of the CTE in the WTO's decision-making structure indicates that environmental concerns are subordinated to larger trade issues.<sup>12</sup>

To address the CTE's lack of rule-making power, the CTE Special Session (CTE-SS) was created with the launch of the Doha Round of multilateral trade negotiations. The CTE-SS can change WTO rules on the issues that WTO members have chosen to transfer to it from the CTE. Yet these rules negotiations have moved slowly. Both developed and developing countries are represented at the CTE-SS, but of course each group has different concerns about trade and environmental policy. And though the CTE is open to all WTO members, developed and developing countries have different levels of capacity and access to environmental expertise, and thus have different levels of representation in the CTE.<sup>13</sup>

In summary, the WTO rules regarding standards and regulations—the TBT and SPS agreements—recognize the possibility that members will support domestic environmental standards based on process and production methods by restricting trade in environmentally harmful goods. Further, The WTO preference for internationally agreed-upon standards encourages the climate policy community to focus on consistent international standards. Though much of the work on climate and environment policy must be done within the environmental community, the existing environmental institutions within the WTO—the CTE and CTE-SS—could provide an entry point for environmental leaders to influence the trade and environment debate (box 2).

## **Box 2. The Origins of the World Trade Organization**

The multilateral trade regime grew out of the economic tumult following the Great Depression and World War II. The world's top economists and policy makers envisioned an international economic order built upon three pillars: the World Bank, the International Monetary Fund, and the International Trade Organization (ITO). The ITO would monitor the trade aspects of international economic cooperation. Its objective would be to avoid the proliferation of the "beggar-thy-neighbor" trade policies—that is, trade measures aimed at curing domestic economic depressions and unemployment by encouraging domestic production and limiting imports—that exacerbated the global Great Depression in the 1930s. The fear is that trading partners will retaliate by banning imports from countries that have closed domestic markets. Within the trade policy community, this is considered "tit-for-tat" protectionism, which leads to a contraction of world markets and economic activity. The multilateral trade regime works to avoid this dynamic by increasing international trade cooperation and opening borders among nations.

The United States failed to ratify the ITO Charter, and the ITO never took form. In 1947, twenty-three nations that had been involved in the ITO negotiations developed a provisional treaty—the General Agreement on Tariffs and Trade (GATT)—that established the rules guiding the international trade policies of its signatories. This treaty was the primary institution facilitating international trade cooperation for fifty years. The GATT signatories reduced tariffs, opened borders, and updated the international trade rules through seven rounds of negotiations.

In 1995, the Uruguay Round of multilateral trade negotiations established the World Trade Organization. This organization fills the role of the failed ITO. Its central pillar, the Dispute Settlement Mechanism (DSM), litigates disputes between World Trade Organization members. The multilateral trade regime is dynamic; successive rounds of negotiations update GATT law, and litigation through the DSM sets precedents on how those laws are interpreted.

The multilateral trade regime has five core principles: trade without discrimination, free trade gradually through negotiation, predictability through bound tariff rates and transparency, promoting fair competition, and encouraging development and economic reform. These principles have led to an international trade regime that encourages the use of international standards, prohibits quantitative restrictions on trade, and promotes sustainable development through trade. This regime is commonly referred to as a rules-based system. The GATT determines the written laws of international trade relations, whereas litigation through the DSM establishes common laws. This structure establishes two access points to shape international trade law.

## **The Evolution of Environmental Trade Policy Within the Environment and Trade Regimes**

Although actionable trade measures that could support climate policy are still being developed, interaction between trade policy and environment policy is not new. This section details those situations in which trade and environmental interests have come into contact in an attempt to shed light on how decision makers can navigate the policy options before them without inducing a clash between the two regimes. It first considers the trade-related measures of two MEAs. It then explores WTO jurisprudence regarding unilateral environmental trade restrictions and the current initiatives of the Doha Round to address concerns about trade and the environment.

### **The Past Use of Trade Policy in Multilateral Environmental Agreements**

Each MEA is tailored to the specific environmental challenge it is meant to address; its enforcement mechanisms—trade related or otherwise—are designed to account for the specific characteristics of that challenge. The threat of climate change means that the next global climate regime will need to be significantly different from and broader than existing MEAs. However, the experiences of these MEAs provide valuable lessons for the negotiators of the next global climate agreement.

This subsection highlights two MEAs—the Convention on International Trade in Endangered Species (CITES) and the Montreal Protocol for Ozone Protection—and the mechanisms through which they integrate trade and environmental policies.<sup>14</sup> Many in the environmental community consider these to be two of the most successful MEAs, and trade restrictions are integral to their success. Yet each employs trade restrictions in a slightly different way.

CITES, which entered into force in 1975, regulates trade in endangered species so that it will not further threaten their survival. Trade restrictions form a key component of the treaty; all importing, exporting, re-exporting, and introduction from the sea of species covered by CITES has to be authorized through a licensing system. Three annexes list all the endangered species covered by CITES, categorized according to the level of protection they need.

The Conference of the Parties, the supreme CITES decision-making body, is made up of representatives from all 172 CITES members. This body decides the criteria that determine in which annex a species will be listed; Annex I includes the species in immediate need of protection, Annex II includes the species that are slightly further from extinction, and Annex III includes species that at least one party to CITES protects under national policy. A member adds a species to CITES by proposing and providing scientific justification for the species' inclusion in one of the three annexes during a regular meeting of the Conference of the Parties. All members discuss and vote. The CITES secretariat, together with the Conference of the Parties' Standing Committee, is responsible for gathering scientific findings and suggesting the appropriate trade restrictions to protect all species listed in CITES annexes between regular meetings.<sup>15</sup>

CITES establishes guidelines for its members' national-level enforcement committees on monitoring the treatment of endangered species and enforcing policies that protect endangered species. Individual member states issue import and export permits according to these guidelines. The movement of a specimen of a species listed in Annex I or Annex II requires both an export and an import permit from the involved countries. Annex I permits are issued only in special circumstances, when importing and exporting countries follow strict care and protection guidelines. Annex II permits have less stringent requirements, but they are also issued only when member countries can abide by specific monitoring and protection standards. For species in Annex III, only export permits are required. CITES also establishes quota systems for certain highly endangered species, including the African elephant, the sturgeon, and the leopard. Though species are added to the annexes and subject to quotas based upon their physical characteristics and the level of protection they need, trade permits are issued based upon a country's ability to abide by process-based standards—the monitoring and enforcement practices of the trading countries.

CITES also includes trade restrictions to enforce compliance with this monitoring and enforcement system—restrictions that are applicable to both parties and nonparties. Trade restrictions are rarely enforced against nonparties; instead, the CITES secretariat focuses on working with nonparties to achieve remedial action. The parties to CITES are expected to provide documentation that they are inspecting and enforcing international standards for catching those endangered species that are listed. If these parties do not provide this documentation, they are subject to punishment by the CITES secretariat.<sup>16</sup>

One example of punishment by the CITES secretariat is that of the ban on caviar it enacted in January 2006. In that year, the CITES secretariat delineated the measures sturgeon importers and exporters should implement to address the serious population declines of the Beluga sturgeon—the fish from which Beluga caviar is taken. Exporting countries must adopt a common management plan, prove that their fishing techniques are sustainable, and implement monitoring plans providing details of stock levels. Importing countries must ensure that all imports are from legal sources, establish registration systems for their domestic processing and repackaging plants, and establish rules for labeling repackaged caviar. Virtually all trade in Beluga caviar was banned in 2006 because the five main producers—Azerbaijan, Iran, Kazakhstan, Russia, and Turkmenistan (of which all but Turkmenistan are parties to CITES)—refused to provide adequate information about the sustainability of their sturgeon catches. CITES abandoned the strict bans in January 2007. The secretariat decided that the five main producing countries had improved their monitoring programs and scientific assessments, and it allowed them to sell 96 tons of caviar in 2007 (15 percent below the pre-ban level set in 2005).<sup>17</sup>

Bolstered by scientific research and a multilateral consensus, CITES has enjoyed international credibility for thirty years. Following CITES' successful pattern, more recent MEAs have included similar trade provisions. Thus, the MEAs concerned with hazardous wastes, harmful pesticides and chemicals, persistent organic pollutants, and the perpetuation of harmful biodiversity products have, like CITES, created regulation and standardization systems based on export and import permits to control international trade in these products with the intention of eventually phasing out their production.

The Montreal Protocol, signed in 1987, aims to phase out substances that deplete the atmosphere's ozone layer, specifically chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs). The protocol includes two mandatory trade restrictions. First, trade is banned between signatories and nonsignatories in the substances controlled by the protocol. Second, trade is banned between signatories and nonsignatories of products containing any of the controlled substances, such as refrigerators and air conditioners. This was done, in part, to prevent trade leakage of CFCs and HCFCs. The protocol also allows—but does not require—member countries to ban imports of products produced using controlled substances, such as computers with circuits cleaned using CFCs. This third provision was the most contentious trade-related measure included in the Montreal Protocol.<sup>18</sup>

The Montreal Protocol has a minimum participation clause: It only came into force when enough countries to account for two-thirds of CFC consumption signed it. No country would be required to enforce trade restrictions, and thus risk a significant import-market reduction, until a critical mass of countries enforced them. This made the trade threat credible. Before the trade restrictions were included in the draft of the protocol, several developing countries were

refusing to sign it, jeopardizing its passing. Directly after the inclusion of the trade restrictions, these countries signed it. The negotiators representing these countries revealed to the lead negotiator for the protocol that its trade restrictions were the prime factor motivating their shift in position. These restrictions were implicitly designed to convince developing countries holding out on signing the protocol to participate in the multilateral ozone treaty. Because participation in the protocol was virtually full, these restrictions were never enforced, and no country that was a party to the GATT (or, later, the WTO) has ever issued a complaint against them.<sup>19</sup>

Before including trade restrictions in the Montreal Protocol, the negotiators discussed whether these restrictions complied with international trade rules with the GATT secretariat.<sup>20</sup> The secretariat confirmed that, under Article XX of the GATT, trade restrictions were permissible, if they could be considered necessary to protect human, animal, or plant life or health; or if they are related to the conservation of exhaustible natural resources.<sup>21</sup> Yet after the Montreal Protocol was signed, including its trade restrictions, the GATT secretariat significantly revised its opinion. Despite the fact that no country ever launched a complaint against these restrictions in the GATT or then the WTO, the GATT secretariat issued a statement that these restrictions were unnecessary. It argued that (1) the protocol could have been negotiated to reduce CFCs without including trade restrictions and (2) the protocol's trade restrictions were intended to protect domestic industry. The secretariat argued that these restrictions provided compensation to CFC producers in participating countries by allowing them to receive extra profits from selling the diminishing quantities of CFCs. According to the secretariat, the restrictions discriminated against nonparties. The secretariat's statement, however, neglected to note that CFC-producing industries in participating countries were actually taxed on the extra profits they gained under the protocol.<sup>22</sup> Though the secretariat does not wield the power to make decisions within the international trade regime (contracting parties negotiate the rules, and the dispute settlement panels and Appellate Body determine GATT/WTO jurisprudence), its opinion reveals fears within the trade community about environmental trade measures.

This reaction of the GATT secretariat to the Montreal Protocol's trade restrictions highlights several concerns that resonate today within the trade policy community. First, the secretariat argued that the protocol could have achieved its objectives without including the trade restrictions, underlining the strict "necessity test" to which environmental trade restrictions are held: Trade restrictions are legal only if they are virtually indispensable to the environmental objective of the overarching policy and they are imposed in a way that is as least trade distorting as possible. The most contentious trade restriction—the ability of parties to the protocol to ban trade with nonparties in products produced using CFCs—highlights the concern about standards related to the process and production methods of a good. The GATT secretariat's fear that the trade

restrictions were intended to close domestic markets to nonparty producers and allow CFC producers in signatory countries to reap the benefits underlines the protectionist concern. Although these trade restrictions—intended to avoid free riding—were dubbed “unnecessary” and “protectionist” by the GATT secretariat, they have never been disputed in the GATT or WTO. Further, they contributed to a global ozone treaty that successfully garnered multilateral cooperation.

### **Trends Within the WTO Dispute Settlement Mechanism and Rules Negotiations on Environmental Trade Policy**

To gauge the realistic opportunities for shaping trade policy to support environmental objectives, this subsection examines WTO jurisprudence on unilateral trade restrictions through the Dispute Settlement Mechanism (DSM). It first describes the DSM, the articles of the GATT that are relevant to environmental trade disputes, and DSM jurisprudence with respect to these articles in the context of environmental trade disputes. (Box 3 describes several key environmental trade disputes.) It then discusses the current treaty rules negotiations that are relevant to the concerns of environmentalists. It questions whether these negotiations follow the progressive trend of WTO jurisprudence.

#### **Box 3. The Evolution of WTO Jurisprudence Through Environmental Disputes**

This box reviews four WTO disputes that reveal precedents within the organization regarding exemptions for environmental trade policy from the rules of the multilateral trading system. Environmental trade policy can be exempted from WTO rules under paragraphs b or g of GATT Article XX. Paragraph b exempts trade measures that are necessary to protect human, animal, or plant life or health. Paragraph g exempts trade measures that are related to the conservation of exhaustible natural resources. As the DSM special panels and the WTO Appellate Body consider whether a trade measure meets these qualifications, questions about process-based standards and extraterritoriality often arise. In this way, litigation trends in environmental disputes also reveal WTO precedents on these two important issues. If a trade measure qualifies for exemption under paragraph b or g, the DSM panel then considers whether the measure meets the specifications of the introductory chapter (“chapeau”) of Article XX by looking for embedded discrimination or protectionism. The evolution of litigation in these rulings reveals a DSM that increasingly supports policy space, under paragraphs b and g, for members to enact environmental trade policy. However, the DSM has also set strict guideposts for environmental trade measures on the issues of discrimination and protectionism.

#### **The Mexican Tuna Case, 1994**

The Mexican tuna case of 1994 is often considered the first precedent-setting environmental trade dispute. The United States enacted an import ban against Mexican tuna that were not caught in a dolphin-safe manner. The GATT dispute settlement panel ruled that these U.S. trade restrictions constituted discrimination against similar products and thus were illegal. The panel also decided that because these U.S. trade restrictions aimed to enforce national U.S. standards for tuna-fishing

practices among Mexican fishers, they violated Mexico's national sovereignty. The panel warned that any lenience on either of these issues—enforcing standards based on process and production methods and extraterritoriality—could lead down the “slippery slope” to protectionism and the unilateral imposition of national standards on other countries. Such lenience would undermine the fundamental principles of the multilateral trade regime by decreasing predictability in international trade markets and policy. (Source: WTO Environmental Disputes, [http://www.wto.org/english/tra-top\\_e/envir\\_e/edis00\\_e.htm](http://www.wto.org/english/tra-top_e/envir_e/edis00_e.htm).)

### **The U.S. Gasoline Case, 1995**

The U.S. gasoline dispute in 1995 was the first environmental case decided through the WTO's DSM. Under the U.S. Clean Air Act, the United States prohibited gasoline refiners from selling gasoline that was less clean (below a “refinery baseline”) than the gasoline each refiner sold in 1990. Each domestic refiner established an individual refinery baseline that was equivalent to the quality of gasoline it sold in 1990. Foreign refiners were subject to a refinery baseline set by the U.S. Environmental Protection Agency, which was intended to reflect the average quality of gasoline in 1990. Imports of gasoline below this refinery baseline were banned.

The DSM special panel ruled that this import restriction was not justified under paragraphs b or g of GATT Article XX. In particular, although the panel recognized clean air as an “exhaustible natural resource,” it argued that the refinery baseline was not a measure related to its conservation and thus did not satisfy paragraph g. The Appellate Body overturned this ruling, claiming that the refinery baseline was indeed related to the conservation of clean air and qualified as an exemption under paragraph g. However, the Appellate Body argued that because foreign producers were subject to different standards than domestic producers, the policy was discriminatory and did not meet the qualifications of Article XX's chapeau. With this ruling, the Appellate Body pushed the boundaries of paragraph g, but it continued to hold environmental trade policy to a stringent interpretation of discrimination. (Source: “United States—Standards for Reformulated Gasoline,” Report of the Appellate Body, AB-1996-1, WT/DS2/AB/R, April 29, 1996.)

### **The Shrimp-Turtle Case, 1997**

The 1997 shrimp-turtle case echoed the dynamic of the U.S. gasoline case. Under the U.S. Endangered Species Act, the United States enacted trade restrictions against imports of shrimp caught by trawlers that did not use a turtle-excluder device, intended to protect five species of endangered turtles that migrated through U.S. waters. Though the special panel initially ruled that the trade restriction was not justified under paragraphs b or g of Article XX, the Appellate Body overturned this ruling. It argued that sea turtles could be deemed an “exhaustible natural resource” and that these production-based standards were necessary for their protection. However, the Appellate Body maintained that the United States had discriminated against India, Malaysia, Pakistan, and Thailand in its imposition of the restriction; the United States had provided countries in the Western Hemisphere with financial and technical assistance in starting to use the turtle-excluder devices, but it had not offered equivalent assistance to the plaintiffs.

Through this ruling, the Appellate Body expanded the notion of national territory that was established by the Mexican tuna case. The United States was allowed to enforce these process-based

standards because they protected turtles migrating through U.S. waters. The Appellate Body issued a statement encouraging WTO members to take bilateral, plurilateral, or multilateral action through trade policy to protect the environment. Yet again, the Appellate Body clearly indicated that environmental trade policies cannot discriminate among trading partners. (Source: WTO Environmental Disputes, [http://www.wto.org/english/tratop\\_e/envir\\_e/edis00\\_e.htm](http://www.wto.org/english/tratop_e/envir_e/edis00_e.htm).)

### **The Brazilian Tire Case, 2007**

The 2007 Brazilian tire dispute crystallized the precedent initiated in the U.S. gasoline and shrimp turtle cases. Brazil enacted a ban on importing retreaded tires, which are closer to turning into waste than new tires. The accumulation of waste tires presents health risks, and waste tire fires that generate toxins could ignite and are difficult to put out. The objective of this policy was the “reduction of the risk of waste tire accumulation to the extent possible.” Brazil did not conduct expensive policy and economic analysis to prove that the trade ban was necessary to fulfill this objective; rather, it justified the ban on the basis of logical, deductive reasoning. The Appellate Body accepted this reasoning and found the ban to be justified under paragraph b of Article XX as necessary to fulfill this environmental objective. The Appellate Body ruled, however, that Brazil could not invoke Article XX because, in practice, the import ban discriminated against EU producers. The Brazilian retreaders, citing violations of their fundamental rights, had managed to receive numerous court injunctions that allowed them to bypass this import ban and import retreaded tires from countries and manufacturers of their choosing.

With this ruling, the Appellate Body has clearly announced its support for a WTO member in creating national environmental standards and in enforcing them as the member sees fit. In accepting Brazil’s deductive argument, the Appellate Body has made it easier for developing countries that do not have the funds and expertise necessary to conduct extensive policy analyses to enact environmental trade policies. However, the guidepost for discrimination remains high; discrimination against products based on production standards or physical characteristics will only be legal when it is justified by the same environmental rationale as the trade measure itself. Some argue that this reveals a DSM that encourages environmental action through trade but focuses on blocking protectionism and discrimination: “While trade can and will be unequivocally trumped by good faith nontrade policy measures, at least those catering to key societal interests such as health and the environment (trade seems a distant second), this must happen without discrimination and must not otherwise be abused as a trade policy measure (trade catches up)” (BRIDGES Monthly Digest, February 2008, [http://www.ictsd.org/monthly/bridges/BRIDGES\\_12-1.pdf](http://www.ictsd.org/monthly/bridges/BRIDGES_12-1.pdf)).

### **The Dispute Settlement Mechanism**

The DSM is the central pillar of the WTO. Through it, WTO members challenge other members’ trade policies and—if the policies are ruled inconsistent with WTO law—enact quantifiable punishment by enacting trade penalties. A WTO member can bring a complaint against another member’s trade policy to the DSM if bilateral negotiations prove insufficient to resolve it. The DSM creates a special panel to litigate the dispute, both parties argue their case according to WTO law, and the panel releases an initial ruling. A party dissatisfied with the panel’s ruling appeals to the WTO Appellate Body. This

body consists of seven members, appointed for a maximum of two four-year terms. Three of the seven members hear the appeal and update the special panel's legal interpretation of the GATT. They do not consider new evidence. The case-by-case interpretation of WTO law that results from this dispute settlement process sheds light on the evolving opinions within the WTO toward four common themes that run through trade policy disputes: the question of extraterritoriality, the question of process and production methods,<sup>23</sup> the question of nondiscrimination, and the question of protectionism.

These four themes dominate disputes on environmental trade policy. In pursuing disputes related to these four themes, plaintiffs—that is, those WTO members that are complaining against the environmental trade measures imposed by another member—commonly appeal to GATT Articles I, III, IX, and VIII (discussed below). In these disputes, defendants tend to appeal to GATT Article XX, paragraphs b and g, and to the TBT Agreement (discussed below).

The WTO Appellate Body has recently overturned several rulings of the special panels created to litigate environmental disputes—but it has disagreed only with certain parts of these rulings. The areas of agreement and conflict between the Appellate Body and the special panels are indicative of areas of accord and tension within the larger trade regime. The Appellate Body has tended to agree with the special panels on whether or not an environmental trade policy is discriminatory or protectionist, suggesting that the WTO is united in its firm stance against discrimination and protectionism. Yet the Appellate Body has consistently issued a broader interpretation of Article XX than the special panels with respect to paragraphs b and g. In so doing, it has set a more permissive precedent regarding the questions of process and production methods and of extraterritoriality. Overall, the special panels have tended to uphold the status quo while the Appellate Body's legal interpretations have consistently stretched the boundaries of environmental trade policy.

Among the fundamental provisions of the trading system that the WTO Appellate Body interprets, GATT Articles I and III define and prohibit trade discrimination among and against trading partners. Article I, which defines the most-favored-nation principle, requires that the trade policies of all WTO members award products from every country the same treatment at the border. If a WTO member lowers customs duties on products from one country, it must do so for products from all countries. Once a foreign product has entered the domestic market, Article III ensures that it receives the same treatment as an equivalent domestically produced good. The introductory chapter (“chapeau”) of Article XX stipulates that a trade policy can only qualify for exemption if it does not constitute disguised protectionism or arbitrary or unjustified discrimination.<sup>24</sup>

Many WTO Appellate Body rulings on environmental trade disputes—such as the shrimp-turtle and U.S. gasoline cases discussed in box 3—have found that specific environmental trade measures discriminate against foreign goods

or among trading partners, and that these measures thus do not meet the qualifications for exemption under the chapeau to GATT Article XX. To further complicate the identification of discrimination, Articles I and III do not clearly define “equivalent products.” Many environmental trade policies limit trade in products because they were produced in an environmentally harmful way, such as the EU carbon tariff or the trade ban on goods produced using CFCs suggested in the Montreal Protocol. The question of the legality of trade discrimination based on process and production methods is at the core of many environmental trade debates. The Mexican tuna and shrimp-turtle cases are examples of conflicting rulings on this issue.

Article IX of the GATT prohibits quantitative restrictions on trade, such as bans and quotas. Many trade policies designed to support environmental objectives employ quantitative restrictions—for example, the ban on trade in products containing CFCs under the Montreal Protocol and the issuance of export quotas for endangered species enforced by the CITES secretariat. GATT Article VIII prohibits government subsidies. Some subsidies, such as those to the agricultural and fishing sectors, promote the unsustainable use of natural resources, and many environmentalists believe that they should be eliminated. However, other subsidies, such as those used to promote the adaptation of existing facilities to new environmental technologies and requirements, are beneficial to the environment. Until 1999, these subsidies were considered nonactionable (that is, permitted) under the Agreement on Subsidies and Countervailing Measures. This provision has since expired, and these environmental subsidies are technically inconsistent with multilateral trade law.<sup>25</sup>

Environmental trade measures may violate the laws discussed above. Defendants in WTO cases tend to appeal to Article XX of the GATT or to the TBT and SPS agreements. GATT Article XX, the exemption clause, is the most powerful tool available to defendants concerned with environmental trade policy. This article allows a trade measure to be exempted from GATT law if it is necessary to protect plant, animal, or human life or health (paragraph b); or is related to the conservation of exhaustible resources (paragraph g). However, the chapeau to Article XX stipulates that a trade measure that meets these requirements must meet two further conditions: It cannot constitute disguised protectionism, and it cannot constitute arbitrary or unjustified discrimination among WTO members.

Recent litigation on environmental disputes has revealed that the WTO Appellate Body is increasingly open to qualifying environmental trade measures as necessary to protect plant, animal, or human life or health; or to conserve exhaustible resources. Yet the Appellate Body continues to make a strict interpretation of what constitutes disguised protectionism or discrimination. The result is that very few environmental trade policies pass through the DSM unscathed. This dynamic is evident in the shrimp-turtle, U.S. gasoline, and Brazil tire disputes.

The TBT and SPS agreements set boundaries for WTO members to enforce national environmental standards and regulations through trade policy. These agreements include provisions designed to ensure that related trade policies are not overly trade restrictive. Environmental standards and regulations must be developed through a transparent and scientific process, and quantitative restrictions (bans and quotas) enforcing those standards should be avoided when possible. The agreements encourage the use of international and multilateral, rather than unilateral, environmental standards. Trade advocates are concerned that an ad hoc system of national standards would undermine the WTO's objective of creating a consistent, predictable international trade environment.

“Extraterritoriality” is a concern related to the unilateral imposition of standards; trade policies that in effect hold other nations to domestic standards could be considered to infringe upon their national sovereignty. Recent WTO Appellate Body rulings, notably in the shrimp-turtle case, have expanded the notion of “territory” to allow WTO members to enact trade measures that affect environmental standards in other countries. Jurisprudence has evolved so that questions of extraterritoriality and of process and production methods no longer present absolute roadblocks.

### **Rules Negotiations**

The boundaries defining acceptable environmental trade policy appear to be expanding through dispute settlement jurisprudence. Yet formal treaty negotiations, the products of consensus discussions among all WTO member countries, have produced fewer results. Both the Uruguay Round text and the Doha Round mandate pay lip service to the importance of sustainable development to the multilateral trade regime. However, there has been little tangible progress in negotiations toward trade law that effectively supports environmental trade policy. Though dispute settlement rulings indicate that environmental standards based on production methods are legal, WTO members shy away from mentioning process and production methods in formal discussions, much less writing a provision into the WTO treaty. Because past rounds of rules negotiations have created an organizational structure that includes the Committee on Trade and Environment, at first glance these rounds appear to have been geared to address the issues in the trade and environment conflict. Yet the limited scope of discussions within the CTE suggest otherwise.

Under the Doha Round mandate, the CTE considers three issues, the discussions of which take place in “special sessions.” The first issue is the relationship between the rules of the WTO and the rules of MEAs. Can a WTO member enact trade restrictions, dictated by an MEA, against another WTO member that has also signed the MEA? Can it do so if the other WTO member is not a signatory to the MEA? The answers to these questions are critical to understanding whether trade restrictions in a future climate treaty would be compatible with WTO law. The scope of related discussions within the CTE is limited

to the applicability of WTO rules when both parties involved are signatories to the MEA in question. They thus do not address an issue critical to the trade and environment debate: Can the environmental policy community use trade restrictions to keep nations in line that refuse to sign MEAs?

The second item on the Doha agenda of the CTE is to discuss specific mechanisms of collaboration between the WTO and the MEAs' secretariats. Some forms of cooperation between the two already exist: The CTE holds information sessions for the members of the MEAs' secretariats, and the WTO secretariat collaborates with the MEAs' secretariats to exchange documents and provide technical assistance to developing countries on issues that are important for trade and the environment.

The third item on the CTE's agenda for the Doha Round is to discuss the elimination of tariffs and nontariff barriers on environmental goods and services. This issue, arguably, has seen more progress than the other two items on the CTE's agenda. The elimination of trade barriers is one of the core principles of the multilateral trade regime. This issue has received more attention within CTE discussions, in part, because both the United States and the European Union support liberalization in environmental goods and services. Yet the outlook for multilateral liberalization of trade in environmental goods remains uncertain. Currently, CTE discussions remain in the preliminary stage: they are focused on agreeing upon a method of defining environmental goods and services. Developed countries favor a "list" approach, in which members propose goods and services that are used for environmental purposes to be classified as "environmental." Many developing countries, conversely, support a "project" approach, which would define environmental goods based on their use in environmental projects. Neither approach encourages the inclusion of goods on the basis of whether they were produced in a less environmentally harmful manner. Most WTO members are hesitant to embark upon discussions of process and production methods with respect to environmental goods and services, partly in fear of setting a precedent for introducing this concept to other parts of the WTO treaty negotiations.<sup>26</sup>

Some initiatives within the Doha Round that affect trade-related measures in environmental policy are outside the CTE's mandate. The elimination of subsidies to the fisheries sector is discussed as part of the rules negotiations.<sup>27</sup> These subsidies distort trade and encourage unsustainable fishing practices. At the same time, they are fundamental to the livelihoods of many small fishing communities in developing countries. It is a sensitive issue, and a final decision on the fisheries subsidies requires a consensus. Thus the negotiation process on this issue has been slow. The current rules draft would make many types of subsidies to the fishing sector illegal. Some subsidies would be permitted, but they would need to be linked to an international standard for fisheries management systems. The draft also exempts least developed countries from the ban on subsidies. The "Friends of the Fish"—which include the United

States, Australia, Brazil, and New Zealand—support eliminating these subsidies, whereas large fishing nations, such as Japan and the EU, argue that the subsidies are important to the livelihoods of fishing communities.<sup>28</sup> If the Doha negotiations succeed in eliminating subsidies to the fishing sector, they could lay the groundwork for eliminating other environmentally harmful subsidies. However, any success achieved in the Doha rules negotiations will only come to fruition when the Doha Round concludes.

Through dispute settlement rulings, the multilateral trade regime has become increasingly open to shaping trade policy in such a way as will achieve environmental objectives. Yet treaty negotiations have, to a large extent, failed to incorporate this standpoint into the written laws of the WTO. The evolution of litigation jurisprudence may be a necessary first step toward changing the rulebook of the multilateral trade regime to allow policy space for environmental trade policy. Ultimately, treaty negotiations would be necessary to prevent backsliding in the relationship between the trade and environment regimes.

## **Current Trade and Climate Proposals and Policy Options for Further Climate-Related Trade Measures**

This consideration of the broader debate on trade and the environment sheds light on the discussion of climate policy that currently dominates the environment and trade policy communities. In short, how can trade measures be used to support climate policy in a way that is consistent with the multilateral trade regime? This section discusses current proposals for integrating trade-related measures into national climate policies. It explores the channels through which these measures can bolster climate policies. And in the context of the broader debate on trade and the environment, it discusses additional measures that could be integrated into the next global climate regime.

### **Carbon Tariff Proposals in the European Union and the United States**

The proposals to integrate trade measures into climate policy that have received the most attention in recent months have been the national-level carbon tariff proposal for the European Union and the Lieberman–Warner Bill in the United States Senate. Both these proposals involve unilateral trade measures and have been shelved for the near future.

French president Nicholas Sarkozy first proposed an EU carbon tariff in 2007 as a mechanism to offset the costs to European firms of complying with European climate policy. In January 2008, the European Commission considered including the tariff as a component of its 2008 climate change action plan. This proposal met internal resistance. EU trade commissioner Peter Mandelson spoke out against the carbon tariff, declaring that trade restrictions are “not the way forward” for climate policy. Britain’s energy minister, Malcolm

Wicks, argued that a carbon tariff could be used as a “secret weapon” to bring about the rise of protectionist interests in Europe.<sup>29</sup> The EU action plan was released on January 23 without the proposed carbon tariff. Yet Commission president José Barroso threatened to reconsider the tariff in 2011 if key countries—namely, the United States and China—fail to cooperate with post-Kyoto global climate initiatives.<sup>30</sup>

The Lieberman–Warner Climate Security Act, the climate legislation at the forefront of debate in the United States, also included trade measures. This bill would have required importers of carbon-intensive goods from countries that fail to take “comparable” action against climate change to purchase emissions allowances. The president would decide which countries had taken comparable action on climate change. The bill was pulled from congressional consideration on June 6, 2008.

These EU and U.S. approaches both relied on “border” measures enacted against imports of carbon-intensive goods. Such adjustments could support climate efforts with three mechanisms: (1) by assuaging the competitiveness concerns of domestic carbon-intensive industry, (2) by reducing emissions leakage, and (3) by minimizing free riding. The first mechanism is primarily political; measures to reduce carbon emissions are expensive and will likely meet resistance from those that have to pay the cost if their competitors are not subject to the same requirements. A carbon tariff could be used to garner the support of those necessary constituencies that must incur the costs of emissions reductions.

The second mechanism—reducing emissions leakage—bolsters the environmental effectiveness of climate policy. When carbon-intensive goods and services are free to flow across borders, the carbon emissions reductions achieved in a nation that pursues an aggressive climate policy may “leak” to other countries with less stringent carbon regulation. This nullifies the climate impact of the emissions reductions in the original country. Emissions leakage can occur through several channels: the relocation of production, the restructuring of consumption, or changes in the price of energy. Rather than incur the costs of reducing emissions, carbon-intensive firms may relocate to countries where climate regulations—and thus the cost of abiding by them—are lower. Thus carbon emissions, along with production, simply relocate to nonregulated countries, and carbon-intensive goods are exported to countries with higher emissions standards. Consumers in countries with stringent climate policies may opt to buy those imported goods produced in countries with less stringent climate policies because they are cheaper than goods produced at home. As energy demand decreases in countries with strong climate policies, the price of energy on the global market may decline, and energy consumption in countries without strong energy and climate policies may then increase to meet the demand for cheap, carbon-intensive products. Trade measures have the potential to internalize the environmental costs of carbon emissions in countries that do not impose a financial burden on their own emitters to account for the environmental externalities.

The third mechanism through which border adjustments can support national climate policy is by discouraging free riders. The climate is a global public good; carbon emissions in one country will damage the climate for the rest of the world. Reducing carbon emissions is the most expensive environmental challenge the world faces today; the incentive to reduce emissions must be significant if all countries are to contribute. EU president Barroso's threat to reconsider a carbon tariff in 2011 was designed, in part, to encourage the United States and China to implement strict climate policies and to cooperate with global initiatives.

Trade policy could be a powerful tool in addressing these issues and in creating an incentive structure that will strengthen the global climate regime. Yet multilateral initiatives to develop climate-related trade measures are lacking, and unilateral initiatives to include trade restrictions in national climate policies have some serious limits. For example, if the measures discussed above had been implemented, both the European Union's and the United States' carbon tariffs would have been applied uniformly to goods from offending countries. Efficient and inefficient firms alike in those countries would have been punished. Such a policy mutes the incentive for individual firms in countries with low carbon emissions standards to independently follow more efficient production practices. Additionally, a recent study argues that restricting trade in carbon-intensive products between the United States and countries with less stringent carbon standards would not provide a strong enough incentive to change the carbon-emitting behavior of firms in the less-regulated countries or to induce those countries to join a multilateral climate regime.<sup>31</sup>

Amid concerns about protectionism and skewed incentives to firms in developing countries resulting from these national-level tariff proposals, the trade and environment policy communities appear to be headed for a major clash over climate-related trade measures. Yet this paper's examination of the history of the earlier use of multilateral and unilateral trade measures to support environmental policy suggests that trade measures could be designed to build upon the synergies between the two regimes. Climate policy makers who are aware of the synergies could develop trade-related measures that support climate policy and are consistent with the concerns of the multilateral trade community.

### **Climate-Related Trade Restrictions and How They Could Work Within the WTO**

Some trade maneuvers aiming to protect the environment and combat climate change will indisputably be legal under the laws of the multilateral trade regime, whereas others will meet resistance from the trade policy community.

A core objective of the WTO is to eliminate trade-distorting practices. Because some of these practices are also harmful to the environment, their elimination would be in line with the goals of the environmental regime. For instance, the current Doha Round negotiations aimed at eliminating fisheries subsidies and breaking down barriers to trade in environmental goods and

services are multilateral trade initiatives, born within the trade regime to meet its objective of freer trade, that will have the side effect of benefiting the environment. Trade negotiations aimed at reducing the agricultural subsidies that exacerbate unsustainable farming practices would also fall into this category.

The elimination of trade-distorting practices is the province of trade negotiators, not environmental advocates. Yet the environmental and scientific policy communities can indirectly influence negotiations on the elimination of environmentally harmful trade-distorting practices. They can increase awareness within the trade community of unsustainable practices that are being subsidized by WTO members and encourage further research and development efforts to produce more environmentally sustainable goods and services.

Environmental policy makers can take some trade-related environmental steps independent from trade negotiators. These steps include creating a multilateral climate regime that restricts trade in carbon-intensive products. The restriction of trade based upon production methods is one of the most contentious environmental trade policies within the trade regime. Yet the argument is increasingly being accepted within the trade regime that the environmental impact of a product is an important characteristic for consumers and is therefore relevant to product standards. WTO Director-General Pascal Lamy has committed WTO support to the next global climate treaty: The “WTO tool-box of rules can certainly be leveraged in the fight against climate change, and adapted if governments perceive this to be necessary to better achieve their goals.”<sup>32</sup> Those seeking to strengthen the multilateral environmental regime have the opportunity to capitalize on these openings within the trade regime and to develop a global climate agreement that considers process-based international standards.

It is important to underscore that the stakeholders in the trade regime will be more likely to support those trade-related climate measures that are developed through a *multilateral consensus* rather than through ad hoc national climate policies. The WTO’s objective of predictability and consistency in trade relations would be bolstered by the multilateral consensus on climate trade maneuvers. In the absence of an international climate agreement with specific trade-related obligations, trade-related measures intended to protect the climate are more controversial. Trade restrictions according to production-based standards may be acceptable if established within a transparent international framework, but they will likely be challenged when only part of a particular state’s national climate policy.

Nevertheless, in the absence of global action, many states do enact trade-related measures that support national environmental policy, and many of these measures are not disputed in the multilateral trade DSM. If an environmental trade measure that flouts certain articles of the GATT is challenged in the WTO, it will be exempted under Article XX only if the nation can prove that it is necessary to protect human, plant, or animal life or health, or that it is related to the conservation of exhaustible resources. Even a quantitative restriction,

typically anathema to trade advocates, may be legal if it also fulfills the prerequisites that it is nondiscriminatory and cannot be used for protectionist purposes.

For the goals of the climate regime, however, a quantitative restriction may not be ideal; a system of process-based standards could be more effective in encouraging individual firms to reduce their carbon emissions. Process-based standards will face fewer challenges from the trade community if they are developed transparently and enforced with a system of international efficiency standards rather than quantitative restrictions or bans applied to specific countries.<sup>33</sup> Such a system would allow only the most efficient firms in carbon-intensive industries to export to the global market, thus encouraging efficient practices. A quantitative restriction against China, conversely, would limit exports from even the most efficient Chinese firms in carbon-intensive industries, stifling their incentive to improve efficiency.

Unilateral, process-based trade sanctions that are intended to leverage countries to join multilateral climate initiatives may be more effective when the sanction wielder is engaged with the process of multilateral climate negotiations. The European Union may have the moral standing to enforce unilateral trade measures to support its national climate policy and shape the post-2012 multilateral climate treaty. The United States may not.

## Conclusion

The most effective way to exploit the synergies between the multilateral trade and climate regimes would be to incorporate a multilateral system of efficiency standards into the next global climate treaty. Unilateral trade restrictions may also be warranted to induce cooperation, reduce leakage, and discourage free riding by countries that do not have a coherent climate policy. But unilateral trade restrictions must be employed with care. The WTO's rules will likely allow nondiscriminatory trade restrictions designed to reduce emissions leakage and protect the global climate. But these rules will not condone trade restrictions intended to protect domestic industry.

The world's trade and environment regimes have a rich history of synergies and conflicts; it appears inevitable that climate negotiators will meet the global trade regime as they pursue policy tools that effectively address the threat of climate change. Climate policy makers must emphasize the value of trade mechanisms in controlling emissions leakage—rather than in protecting domestic industry—to abide by the rules of the global trade regime. As climate negotiators work to harness powerful trade incentives, the adaptability of the global trade regime will again be tested.



## Notes

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- 20 This occurred in 1987, before the creation of the WTO. The GATT Secretariat was responsible for overseeing international trade rules.
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- 23 The “extraterritoriality” question is this: Can nations use trade restrictions to enforce strict national environmental standards outside their territory? This could be interpreted as an intrusion on national sovereignty. The PPM debate asks whether trade restrictions should be enforced against goods based on the process by which they were produced, rather than their physical characteristics.
- 24 See <http://www.wto.org>.
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