Reconciling Trade and the Environment in the World Trade Organization

Peter Morici

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PETER MORICI

Peter Morici is a Professor of International Business at the University of Maryland and an adjunct Senior Fellow at the Economic Strategy Institute. Previously, he served as director of economics at the U.S. International Trade Commission, vice president of the National Policy Association, and professor of economics at the University of Maine.

One of the nation's leading experts on international economics, industrial policy and international commercial agreements, Dr. Morici is the author of eighteen books and monographs, including Labor Standards in the Global Trading System, Antitrust in the Global Trading System: Reconciling U.S., Japanese and EU Approaches; Setting U.S. Goals for WTO Negotiations, and Trade Talks with Mexico: A Time for Realism. He has published widely in leading public policy and business journals such as Foreign Policy, International Economy, Regulation, and the Harvard Business Review. He has offered public lectures and taught at conferences and institutes at over 100 institutions, and his views have been featured on CBS News, Reuters Financial Network, Bloomberg News, National Public Broadcasting, and on national networks in Latin America, Europe and Asia.

Morici holds a Ph.D. in economics from the State University of New York at Albany.
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Introduction and Summary

At the 2001 Ministerial Meeting in Doha, members of the World Trade Organization (WTO) agreed to launch a new round of multilateral trade negotiations. The relationship between WTO rules and the trade obligations set out in international environmental agreements was included on the formal negotiating agenda, and the Committee on Trade and the Environment (CTE) will continue its work on the broader effects of environmental measures on market access. In addition, member governments reaffirmed their position that labor standards are best addressed by the International Labor Organization (ILO).

In the United States, the place of environmental goals and labor standards in trade agreements has been controversial. President Clinton was unable to obtain fast-track authority for WTO negotiations or to conclude other trade agreements, in part, because of deep divisions in the Congress about the treatment of environment and labor by trade agreements. Similar considerations are delaying approval of negotiating authority for President Bush.

Many champions of trade liberalization believe the focus of the WTO should be primarily limited to commerce -- namely trade, industrial policy, foreign investment, and intellectual property issues. They would prefer to leave protection of the environment and workers to institutions created for those purposes -- in particular, the United Nations Environment Program (UNEP), the secretariats of multilateral environmental agreements (MEAs) and the ILO.

Some advocates of freer trade share concerns with government officials in many developing countries that environmental and labor agreements in the WTO could limit these countries’ ability to exploit their comparative advantages, thereby giving such agreements a more protectionist, as opposed to liberalizing, character. At the same time, many advocates of stronger international environmental regulations view the WTO as indifferent or hostile toward their concerns, and some advocate a general exception for environmental measures from WTO rules.
Central to various groups’ concerns are the tradeoffs among policies that promote economic growth and conservation. These play out in the international arena as tradeoffs between measures aimed at ensuring unencumbered trade and protecting the global commons.

For domestic issues, national legislatures write laws that implicitly choose from among combinations of growth and conservation, incomes and health risks, jobs and aesthetics, and so forth. When the requirements of environmental law are in dispute, the courts mediate disputes.

In the international arena, however, no legislature balances the competing goals of promoting prosperity and preserving the commons. Instead, parallel and independent bodies of public international law have emerged, based on formal agreements, custom, judicial decisions, and other sources of public international law that place obligations on the behavior of sovereign states. One body promotes trade, the other the protection of the global commons, and no forum has been designated to mediate the competing claims each places on governments.

The purpose of this study is to examine why and how the WTO should participate in balancing the goals of promoting international trade and protecting the global commons. Among its findings are:

WTO participation in environmental issues is already a practical fact and not a theoretical proposition; this has been the inevitable outcome of recent trends in the international economy and law.

WTO participation can simultaneously promote trade based on comparative advantages and the wise management of the global commons. The prudent interpretation and enforcement of existing trade rules can

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1 Public international law refers to those rules and norms that regulate the conduct of states and other entities with international personalities, whereas private international law is that part of states’ domestic law used to resolve conflicts of jurisdiction regarding private persons. For example, WTO rules are "public" law in that they regulate the conduct of signatory governments (their specific acts, and the laws and regulations they enforce) but place no direct requirements on the actions of private individuals.
promote both economic efficiency and public welfare, with the latter defined by democratic government processes. WTO participation can best be directed by a multilateral agreement establishing principles for qualifying environmental measures for exceptions to WTO rules.

The WTO and International Environmental Law

Over the past three decades, governments have created a vast web of MEAs. In 1999, the UNEP catalogued 238 MEAs, and many of these complement WTO efforts to promote trade based on comparative advantage. For example, proper fisheries management helps ensure that international market prices reflect social costs – the sum of private costs and the costs of externalities.

However, CTE has identified 22 MEAs that require or cause governments to implement trade measures that may violate their WTO obligations.²

International law provides rules for dealing with conflicts among treaties. For example, when states are party to two treaties, the treaty later in time prevails.³ However, most WTO members would not likely welcome an Appellate Body ruling that restrictions on trade in African elephant ivory are WTO illegal because the 1994 General Agreement on Tariffs in Trade (GATT) was implemented after the Convention on International Trade in Endangered Species (CITES).

Generally, the WTO has avoided relying on such principles. The 1996 Singapore Ministerial Meeting endorsed the CTE finding that members may bring to the WTO disputes concerning MEA-related trade measures; however, when all parties to a dispute are participants in an

² The WTO has identified 27 MEAs containing trade-related measures, whose parties have adopted trade measures, or containing provisions with possible consequences for trade. Of these, 22 have been implemented. See WTO 2000, p. 39.

³ The application of this principle must be informed by the principle that a general treaty does not supercede a more specific treaty. See text at footnote 166.
MEAs, it would be preferable to resolve their dispute through procedures provided by the MEA.

Unfortunately, this is not always practical, because the requirements of MEAs regarding trade measures are often imprecise, MEAs may impose new conditions on participants without their consent (conditions based on majority and not consensus decision-making), and MEAs do not have the kind of well-developed judicial mechanism that has emerged in the WTO. For example, in 1997, Zimbabwe applied for compensation in the WTO for loss of ivory markets when African elephants were listed as an endangered species by CITES.4

Also, not all parties to an environmentally-related trade dispute may be participants in the relevant MEA, and governments implementing MEA-related trade measures may rely on other sources of international law to justify their actions. A complainant that is not party to the relevant MEA may believe it will get a fairer hearing in the WTO than through the MEA. For example, measures taken against Korea to encourage its participation in the Montreal Protocol could have resulted in such a dispute.5

Similarly, a nation may take unilateral action to protect a resource in the global commons, relying on various sources of international law. This was at the origin of the WTO decision in Shrimp-Turtle, in which the United States was permitted to embargo shrimp caught without sea-turtle excluding devices.6

Shrimp-Turtle, the Zimbabwe ivory compensation claim, and other cases7 illustrate that governments will bring their grievances to the WTO if they believe it best qualified to address their claims, and both developed and developing countries have acknowledged its competence.

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4 See footnote 170.
5 See text at footnote 118.
6 See text and sources at footnotes 154 - 160.
7 For example, Tuna I and Tuna II. See text and sources at 145 and 146.
The Significance of *Shrimp-Turtle*

*Shrimp-Turtle* is also significant because it represents a fundamental shift in how WTO jurisprudence may be expected to regard international environmental law and the impacts of environmental measures on trade.

GATT rules require that governments treat products from each member no less favorably than like products from other members (the most-favored-nation principle) and like domestic products (the national-treatment principle). Generally, quantitative restrictions are prohibited. Governments may impose regulations on imports comparable to those imposed on domestic goods regarding their physical characteristics and performance, but not regarding how products are produced, if those methods have no effect on product characteristics or performance. In GATT parlance, imports may not be regulated or barred on the basis of unincorporated production processes and methods (PPMs).

GATT Article XX provides exceptions for measures: (b)“necessary to protect human, animal or plant life or health,” and (g) “relating to the conservation of exhaustible resources...made effective in conjunction with restrictions on domestic consumption and production.” Historically, dispute settlement panels have not permitted members to invoke these exceptions for measures that regulate unincorporated PPMs to protect the environment or to accomplish other social policy objectives.\(^8\) Hence, governments have been able to regulate how imports affect their domestic environment (e.g., emissions standards for cars) but not how imports are produced or how they may affect the environment beyond their jurisdiction (e.g., the pollution created in the manufacture of imported steel).

In *Shrimp-Turtle*, the Appellate Body completed a transition in dispute settlement reasoning that, if sustained, would permit members to invoke Articles XX(b) or (g) to impose conditions on imports’ unincorporated PPMs to accomplish environmental objectives both outside their jurisdiction and in the global commons, and perhaps to achieve other social objectives. The Appellate Body relied on the language in the Preamble to the Agreement Establishing the WTO (hereafter, Preamble), which recognized sustainable development, and imported into WTO

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\(^8\) Notably, *Belgium Family Allowances, Tuna I* and *Tuna II*. See text and sources at 57, 149 and 152.
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jurisprudence provisions of international environmental law, including the Rio Declaration, Agenda 21 and CITES. 9

The traditional GATT approach to Article XX – not permitting governments exceptions for measures aimed at influencing government policies beyond their jurisdictions – enjoyed strong justification in modern international economics. This approach to policy is important for ensuring that WTO rules are applied to encourage trade based on comparative advantage and not as an instrument of protection; however, the merits of this argument are dependent on whether the environmental effects of industrial activity are largely domestic. 10

In recent decades, increasing congestion and industrial activity have transformed certain pollution and resource depletion problems from domestic into international problems. When industrial activity harms a resource in the global commons, economic analysis indicates that policies that reach beyond national boundaries are appropriate. This ensures that market prices reflect social costs, that trade is based on comparative advantage, and that public welfare, as defined by governments, is best served. The apparent shift in WTO policy in Shrimp-Turtle is strongly consistent with this reasoning, and it should be formalized through a WTO Agreement on Trade and the Environment to ensure its continued application.

Overview of the Study

Chapters 1, 2 and 3 survey the WTO system and the principal provisions that may affect environmental policies; international environmental law; and multilateral environmental agreements with trade provisions. Chapter 4 examines areas of conflict between environmental measures and WTO rules, and how the interpretation of WTO rules has evolved to address those conflicts. Chapters 5 and 6 examine what economics has to say about how Article XX should be applied to environmental measures and be embodied in a WTO agreement.

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9 See text and sources at footnotes 154-160.

10 See text at footnote 172.
WTO Rules and Environmental Measures

The WTO administers a system of agreements: GATT 1994 and supplemental agreements for trade in goods, the General Agreement on Trade in Services (GATS), and the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS).

All of these are informed by the principles established in GATT 1947 and interpretations through dispute settlement decisions. These include the most-favored-nation and national-treatment principles, which together constitute the nondiscrimination obligation. Also, the agreements emphasize predictability and transparency – tariffs are bound, most quotas and export subsidies are prohibited, and many other industrial policies are regulated.

Health, safety and environmental regulations may create unintended barriers to trade by causing producers to meet differing requirements across jurisdictions, and may purposefully discriminate against imports by imposing arbitrary conditions more easily met by domestic producers. The Agreement on Sanitary and Phytosanitary Measures (commonly referred to as SPS) and Agreement on Technical Barriers to Trade (TBT) require that measures be based on sound science and risk assessment, administered according to certain norms of transparency, and no more trade restrictive than necessary to accomplish their objectives. Both agreements create strong incentives to adopt standards suggested by international regulatory bodies.

The WTO Agreement on Subsidies and Countervailing Measures (SCM) exempts subsidies up to twenty percent of nonrecurring expenses to retrofit facilities to meet new regulations. The Agreement on Agriculture exempts payments for environmental programs from commitments to reduce support programs.

International Environmental Law

The 1972 UN Conference on the Human Environment in Stockholm marked the starting point for international environmental law as a separate body of law. It resulted in the creation of UNEP and influenced the negotiation of MEAs addressing water and air pollution,

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The 1992 UN Earth Summit resulted in the Rio Declaration, which expresses the responsibility of states to preserve and protect the environment, and contains prescriptions environmentalists would like recognized as customary law binding the actions of states.

Since Rio, every major multilateral convention, including the Agreement Establishing the WTO, has recognized the importance of sustainable development. The Appellate Body has relied on this reference to import public international environmental law into its jurisprudence.12

This said, Principle 12 of the Rio Declaration recognizes important WTO goals and places specific obligations on environmental measures affecting trade:

Trade policy measures for environmental purposes should not constitute a means of arbitrary or unjustifiable discrimination or disguised restriction on international trade. Unilateral actions to deal with environmental challenges outside the jurisdiction of the importing country should be avoided. Environmental measures addressing transboundary or global environmental problems should, as far as possible, be based on international consensus.

The words “arbitrary or unjustifiable discrimination” and “disguised restriction” are taken directly from the chapeau of GATT Article XX, and the Appellate Body applies these words to assess whether environmental measures falling within the definitions of Article XX(b) and (g) strike a proper balance between environmental objectives and the rights of members under other provisions of the GATT.

Furthermore, Rio Delegation Principle 16 recognizes that environmental policies should promote the internalization of environmental costs (the polluter should pay), and Principle 11 recognizes that certain policies adopted by developed countries may impose inappropriate

12 See text and sources at footnotes 31 and 53 – 55.
economic and social costs if adopted by developing countries. Policies based on these principles are among those central to ensuring that trade is based on comparative advantages.

**Conflicts Between Environmental Measures and WTO Obligations**

Environmental measures may be divided among those implemented to address domestic problems, unilateral measures taken to protect the global commons, and multilateral measures to address an international problem.

**Measures to Protect the Domestic Environment**

Even if a domestic regulation treats imports no less favorably than domestic products, it must be based on sound science. In *Hormones*, the Appellate Body found the EU import ban on meat from hormone-treated cattle was inconsistent with SPS because it was not based on adequate scientific evidence and risk assessment.\(^\text{13}\)

Neither SPS nor TBT strongly embrace the precautionary principle. TBT could be used to challenge, for example, EU labeling rules for genetically modified foods.

**Unilateral Measures to Protect the International Environment**

As noted, WTO members historically have not been permitted to impose conditions on imports’ unincorporated PPMs; however, in *Shrimp-Turtle*, the United States has been permitted to embargo shrimp caught without sea-turtle excluding devices in order to effect an environmental policy objective outside its jurisdiction. The Appellate Body and subsequent panel decisions cited that all parties to the dispute, through CITES, have adopted the policy that sea turtles should be protected; sea turtles are highly migratory and none of the parties may claim exclusive ownership of them; and the United States has sought to negotiate agreements to protect sea turtles.

\(^\text{13}\) See text and source at footnote 142.
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The Appellate Body did not endorse unilateral action, and it made clear that WTO members do not now enjoy a blanket Article XX exception for measures to accomplish environmental objectives outside their jurisdiction. Rather, the decision opened the door to such measures when an international consensus has been reached regarding a conservation goal, measures applied beyond national jurisdictions are necessary to accomplish these goals, and the government taking action earnestly seeks an international agreement on these measures.

In addition, to qualify under XX(b), measures must be necessary – e.g., no more inconsistent with GATT obligations than required to achieve their objective. To qualify under XX(g), they must be related to the conservation of a renewable resource and be taken in conjunction with domestic measures – e.g., bear a close and genuine relationship between means and ends, and be evenhanded in their treatment of imports from various sources and domestic products.

Furthermore, these measures must meet the requirements of the chapeau of Article XX: they must not constitute an arbitrary, unjustifiable or disguised barrier to trade. According to the Appellate Body this requires “locating and marking out a line of equilibrium between the right of a Member to invoke an exception under Article XX and the rights of other Members under varying substantive provisions (e.g., Article XI) of GATT 1994.” This line is not fixed and unchanging but, rather, varies with the facts of the case.

Multilateral Measures to Protect the International Environment

Several MEAs have required trade measures that may violate WTO rules. For example, the Montreal Protocol, which requires parties not to trade in ozone depleting substances (ODS) with nonparticipating states, violates the most-favored-nation principle. Moreover, trade embargoes have been imposed for noncompliance under the Montreal Protocol, CITES and several other MEAs, thus violating WTO prohibitions against quantitative restrictions.
It would be imprudent to speculate how the Appellate Body would rule on a complaint emerging from an MEA. If respondents sought shelter under Article XX(b) or (g), the reasoning in *Shrimp-Turtle* and other panel reports indicate the following questions would be relevant:

Does the measure directly address a transboundary issue widely recognized by the international community? Has the complainant participated in this consensus?

Does the measure meet the requirements of paragraphs XX(b) or (g), and the chapeau of Article XX? For example, is it necessary? Is it directly related to the conservation goal and does it treat imported and domestic products evenhandedly?

If both the complainant and respondent are parties to the MEA:

Does the MEA provide some latitude in crafting the measure? If so, does the MEA provide for an alternative measure or policy that is less inconsistent with WTO obligations?

**A WTO Agreement on Trade and the Environment**

According to modern welfare and international economics, a market economy achieves an optimal combination of income and environmental well-being when it is open to trade and when prices reflect social costs. Hence, welfare is maximized by policies that internalize emission and resource-depletion costs – i.e., the polluter pays, and resources are priced at their marginal social cost.

Generally, addressing an international environmental problem entails negotiating an agreement or reaching a consensus by other means, here denoted by an MEA. This would include a consensus about the

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14 An MEA is only one of several ways relevant states may accomplish consensus about goals and means. For example, consensus may be reflected through the administrative decisions of a regional economic group or have origins in customary law. Here the term MEA is used to denote both formal MEAs and other mechanisms. In the end, WTO panels and the Appellate Body will have to determine when mechanisms, other than formal MEAs, have established consensus.
nature of the problem (depletion of the ozone layer), its causes (the release of ODS into the atmosphere), and perhaps specific joint actions to correct it (national schedules to phase out production and consumption of ODS). The measures implemented may affect trade only among participants in the consensus (regulations on trade in ODS among participants), or with nonparticipants (prohibitions on trade in ODS with nonparticipants).

For the WTO, the issue will often boil down to this: When should the WTO grant an Article XX exception to measures taken pursuant to an MEA? Similarly, when should similar exceptions be granted under GATS, TRIPS, SPS, TBT, or other agreements?

The question is phrased here in terms of GATT Article XX. To ensure that WTO treatment of environmental measures permits governments to pursue optimum economic and environmental policies, the following principles should guide the application of Article XX:

Prices for tradable goods should include the costs of environmental externalities.

The values societies assign to environmental externalities are affected by geography, culture and income levels. For domestic problems, national governments are most competent to assign values to externalities.

When environmental problems have a transnational dimension, international agreements among governments are the best means to assign values. Measures to implement and enforce these agreements should be the least trade-restrictive necessary to accomplish their objectives.

International environmental problems are identified by consensus among affected parties about the nature of the problem and the goals to be accomplished.

These principles are strongly consonant with Principles 11, 12 and 16 of the Rio Declaration; the goals of the WTO, especially as expressed in the Preamble and the 1996 report of the CTE endorsed by the Singapore Ministerial Meeting; and the prescriptions of modern international and welfare economics.
Measures to Protect the Domestic Environment

When governments impose emission and conservation regulations, they require that market prices more adequately reflect social costs. For wholly domestic problems, permitting countries with higher compliance costs to impose their regulatory regimes on countries with lower compliance costs – for example, through cost equalizing tariffs on products made in environmentally less-costly ways, or by otherwise regulating imports’ unincorporated PPMs – would subvert the comparative advantage of the exporter. However, when governments relax environmental regulations for export or import-competing industries, these preferences constitute a subsidy.

When there is no international consensus that a resource in the global commons is threatened, WTO members should not be granted Article XX exceptions for measures that regulate imports’ unincorporated PPMs or otherwise seek to impose their environmental policies on other members. However, the failure to enforce environmental regulations in an export or import-competing industry should be recognized as a subsidy, and applicable WTO rules should apply.

Measures Taken Pursuant to a Consensus about Goals and Measures

When an MEA or other mechanism accomplishes a consensus about an international environmental problem, including the measures necessary to address it, the prices of tradable goods and patterns of trade that result from compliance with the MEA best reflect social costs and comparative advantages, and also promote public welfare – specifically, the optimal combinations of income and environmental well-being, as defined by governments.

When an MEA includes the participation of all governments whose trade may be affected, WTO dispute settlement panels should give measures taken to implement or enforce the MEA most-favorable consideration under Article XX. If the MEA provides options to accomplish its objectives, measures selected may regulate imports’ unincorporated PPMs but should be the least trade-restrictive available. If the MEA does not specify the exact characteristics of trade measures, those selected may regulate unincorporated PPMs but should otherwise meet the conditions of XX(b) or (g). In either case, measures should not pose an

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arbitrary, unjustifiable or disguised barrier to trade, as required by both the Rio Declaration and the chapeau of Article XX.

**Measures Taken Pursuant to a Consensus about Goals but Not Measures**

Many times a complete consensus about goals and measures is not possible. If the complainant and respondent in a dispute are both participants in an MEA establishing goals but not measures, WTO dispute settlement panels should give measures taken by individual governments pursuant to MEA goals reasonable consideration under Article XX. Measures selected should be the least trade-restrictive available to accomplish their objectives and may include those that regulate imports’ unincorporated PPMs; however, these should otherwise meet the conditions of XX(b) or (g) and should not pose arbitrary, unjustifiable or disguised barriers to trade, as required by both the Rio Declaration and the chapeau of Article XX.

Regarding the latter, respondents should be required to demonstrate that they have sought complainants’ participation and have offered to the latter flexibility in implementing relevant technologies and assistance, each appropriate to the cost of the technology and the development circumstances of the complainants.
Chapter 1:
International Trade and Environmental Law

International trade law and international environmental law are branches of public international law. Like other branches of public law, they have emerged more or less independently of one another and without adequate attention to how the requirements each places on governments may conflict or how tradeoffs among their competing goals should be addressed when such conflicts emerge.

In some measure, owing to differences in their purposes, age and origins, the two bodies of law have quite different personalities. For example, the WTO agreements seek to reduce barriers to trade in goods and services and primarily deal with how member governments treat one another’s products and firms; whereas international environmental law seeks to protect resources in the global commons and often prescribes how governments should regulate private behavior. International trade agreements took on their modern form before international civil society had coalesced and placed almost sole emphasis on negotiations among sovereigns to enforce obligations and resolve disputes; whereas international environmental agreements, generally being products of the 1970s and later decades, place much greater emphasis on private monitoring and direct participation by nongovernmental organizations (NGOs).

This chapter is devoted to a brief review of WTO international trade law, customary and conventional international environmental law, and a comparison of some key characteristics of the two systems.

The WTO System

The WTO administers a system of agreements. The GATT provides the general framework for trade in goods by placing negotiated ceilings ("bindings") on tariffs and establishing obligations regarding other government practices that may directly discriminate against imports or promote exports (e.g., quotas and export credits). Tariff bindings have been lowered through eight rounds of multilateral trade negotiations, and the
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Tokyo Round (1973-1979) and Uruguay Round (1986-1994) resulted in supplemental agreements that address other areas of government practice that may importantly affect trade in goods.

The Agreements

The Agreement Establishing the World Trade Organization is fairly brief. It contains a preamble stating its goals and sixteen articles establishing its scope, functions, structure, relationship to other organizations, secretariat, legal status, decision-making principles, membership, methods for amendment, admission/withdrawal of members, and so forth. Annexes to this agreement contain most of the substantive provisions.

Annex 1A contains the agreements addressing multilateral trade in goods. GATT 1994 imports into the WTO: GATT 1947, prior decisions adopted by the GATT contracting parties, Uruguay Round understandings regarding the interpretation of six GATT articles, and schedules of tariff bindings. This annex also includes Agreements on Agriculture, Textiles and Clothing, Sanitary and Phytosanitary Measures, Technical Barriers to Trade, Trade Related Investment Measures, Antidumping Measures, Customs Valuation, Preshipment Inspection, Rules of Origin, Import Licensing, Subsidies and Countervailing Measures, and Safeguards.

Annex 1B contains the GATS, which extends GATT disciplines to trade in services, and Annexes on Air Transport Services, Financial Services, Maritime Transport Services, and Telecommunications.

Annex 1C contains TRIPS, which establishes rules for the treatment of foreign patents, copyrights, trade secrets, and trademarks, in part, by importing the important requirements of several preexisting international intellectual-property agreements – most notably, the Berne, Paris and Rome Conventions and the Treaty on Intellectual Property in Respect of Integrated Circuits.15

Annexes 2 and 3 contain the Dispute Settlement Understanding (DSU) and the Trade Policy Review Mechanism. Annex 4 contains four plurilateral agreements, including agreements on Trade in Civil Aircraft and Government Procurement, as well as the International Dairy Agreement and the International Bovine Meat Agreement.

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Principles

Several principles, initially established in GATT 1948, inspire the requirements of all the agreements.

First, nondiscrimination – trade should be without discrimination. According to the most-favored-nation principle, WTO members should treat the goods and services of each member no less favorably than the like goods and services of any other member. For example, goods and services produced in two different member countries may not be subject to different tariffs or regulatory requirements. In addition, according to the national-treatment principle, members may not impose internal taxes or charges, or apply laws, regulations and requirements that afford foreign goods and services less favorable treatment than like domestic products.

The concept of like products is very important but not defined in WTO texts. Instead, its meaning has been articulated over time by dispute settlement panels. In layman’s terms, like goods have come to mean goods that are not necessarily identical but are close substitutes and competitive with one another. Therefore, German cars must be treated no less favorably than Japanese or American cars by U.S. emissions laws or fuel efficiency requirements.

This concept applies to the objective physical characteristics of goods, including their performance and impact on the environment in the hands of consumers. Likeness is not determined by methods of production that do not affect the final characteristics or performance of products – unincorporated PPMs. This is to say that steel is steel, regardless of whether it is made in a modern, clean mill or an old, polluting mill.

Another guiding principle is that trade should be freer and more predictable. Tariffs and other regulatory barriers that impede trade should be reduced through negotiations, and businesses and governments should be confident that trade barriers will not be raised. Most tariffs and market-opening commitments are “bound” in the WTO.

Also, WTO rules are framed to prohibit or discourage domestic policies that may artificially advantage domestic products and exports. Examples include the regulation of various export and domestic-production subsidies, preferences in government procurement for domestic products, and dumping products below cost in order to gain market share abroad.
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Further, trade should be more beneficial for developing countries. Developing countries have been permitted to maintain higher tariffs, accorded more time to adjust their policies, and given greater flexibility and special privileges in nontariff agreements.¹⁶

Treatment of Social Issues

Generally, WTO rules focus on commercial issues – in particular, government policies that may affect international trade in goods and services, investment policies that directly affect this trade, and the international protection of intellectual property. The agreements do address product regulations and standards, but they do not say a great deal about the social objectives of national governments, except to note, for example, that promoting “sustainable development” and “raising standards of living” are among the goals of WTO agreements.

The Agreement on Sanitary and Phytosanitary Measures and the Agreement on Technical Barriers to Trade (commonly referred to as SPS and TBT, respectively) recognize the rights of governments to set mandatory regulations and voluntary standards to protect health, safety and the environment, and to protect their citizens from deceptive business practices. Together with the GATT and GATS, SPS and TBT require that regulations and standards treat foreign goods and domestic goods equitably (nondiscrimination), be based on sound science and risk assessment, exhibit consistent tolerance for risk across regulatory areas, as well as being transparent and no more trade-restrictive than necessary.

GATT Article XX does permit limited derogations from nondiscrimination and other obligations imposed by the GATT for ten categories of government policies. Two of these are directly related to the environment. Article XX(b) cites measures “necessary to protect human, animal or plant life or health,” and XX(g) cites measures “relating to the conservation of exhaustible resources...made effective in conjunction with restrictions on domestic production and consumption.” Exhaustible resources have been defined by dispute settlement panels and the Appellate Body to include renewable resources, such as endangered species.

Until recently, these provisions had been interpreted to permit governments to regulate imports that may harm the environment within

¹⁶ WTO 1997a, p. 1.5.
their jurisdiction by virtue of their physical characteristics or performance. Governments were not permitted to regulate imports on the grounds that their manner of production affected the environment where they were made. For this reason, WTO rules have prohibited import measures that shield domestic producers from competition with foreign producers who enjoy a cost advantage owing to lower environmental standards.

Related to this, many MEAs prescribe or require policy measures and trade actions to protect the global commons. For example, the Montreal Protocol restricts trade in substances that deplete the ozone layer among its participating countries, and prohibits trade in these products with nonparticipating countries. On their face, the former is a violation of GATT Article XI, which prohibits quantitative restrictions, and the latter violates Article I, which establishes the most-favored-nation principle.

In 1996, the Committee on Trade and the Environment (CTE) indicated WTO rules would likely permit members to exclude imports pursuant to the requirements of an MEA if the MEA provided for such measures and both the restricting and offending countries were parties to the agreement. It further stated that disputes regarding such trade measures should be resolved by the mechanisms established through the MEAs.17

The 1998 Appellate Body’s Shrimp-Turtle decision appears to have opened the door to permitting WTO members to restrict imports on the basis of how they are made, and to apply MEA trade measures to nonparticipating countries. Specifically, it permitted the United States to exclude shrimp from India and several other Asian nations on the basis of the environmental harm caused by the manner in which shrimp were caught, and without having a shrimp harvesting agreement with these states.

In Shrimp-Turtle, the Appellate Body noted several circumstances that qualified the U.S. action for an exception under Article XX, but it cautioned that the circumstances where an exception may be warranted are not fixed and unchanging but, rather, they are particular to the situation and need to be evaluated case-by-case.18 Consequently, it would appear that the Appellate Body is willing to revisit the issues of members restricting imports on the basis of the environmental effects of how goods are made, and of WTO members imposing MEA trade measures on nonparticipants.

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17 WTO 1996, para. 174(iv) and 178.
18 See text and sources at footnotes 155 and 157.
The trade and environment debate is often framed in terms of whether the WTO should be engaged in environmental issues. This is patently wrongheaded. The WTO is already deeply engaged in environmental issues, and, absent a Trade and Environment Agreement or consensus within the CTE to guide the Appellate Body, the latter will have to make decisions if disputes are brought to it.

Inevitably, participants in MEAs may believe that their WTO rights have been violated. For example, their exports may be limited by an MEA beyond what was envisioned when the MEA was negotiated, or their exports may be limited beyond what is necessary to achieve the objectives of the MEA.

As discussed below, MEAs have neither the case law nor the kind of well-developed dispute settlement mechanisms that have evolved in the WTO. WTO members are entitled to bring complaints to the WTO Dispute Settlement Body regarding harm to their WTO rights emerging from actions taken pursuant to MEAs, and some may choose to do so because of the lack of a better forum.

International Environmental Law

Although national laws to combat specific pollutants or protect particular forests or bodies of water date back to the Middle Ages,\textsuperscript{19} comprehensive national legislation only began to appear in the United States in the 1960s.\textsuperscript{20} When 113 governments met in Stockholm for the United Nations Conference on the Human Environment in 1972, “only a handful had extensive environmental laws.”\textsuperscript{21}

\textsuperscript{19} Kiss and Shelton, p. 3.

\textsuperscript{20} Prior to 1955, air pollution regulation in the United States was completely in the hands of the states. In that year, the Congress passed the Air Pollution Control Act, which gave assistance to the states. The 1967 Air Quality Act established a federal regulatory program. In 1972, the Clean Water Act and Safe Drinking Water Act were passed.

\textsuperscript{21} Weiss and Jackson, p. 10.
Stockholm Conference

The Stockholm Conference is generally viewed as the starting point for international environmental law as a separate body of international law.\textsuperscript{22} Prior to the 1933 London Convention Relative to the Preservation of Fauna and Flora in their Natural State (which applied mostly to colonial areas in Africa) and the 1940 Convention on Nature Protection and Wild-Life Preservation in the Western Hemisphere, most international agreements focused on conservation for economic purposes – for example, limiting the harvest of fish, seals or whales.

Subsequently, states began to recognize the importance of protecting natural resources more generally. For example, the 1954 International Convention for the Prevention of Pollution of the Sea by Oil was a first step in this direction, and environmental concerns increasingly appeared in general international-treaty texts.\textsuperscript{23}

The Stockholm Conference brought together delegations from governments, intergovernmental organizations and NGOs. It is most noteworthy for the texts approved during its closing plenary session, among which was the Declaration of the United Nations Conference on the Human Environment, containing 26 principles and an Action Plan, containing 109 recommendations.

Principle 1 of the Stockholm Declaration states:

Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being, and he bears a solemn responsibility to protect and improve the environment for present and future generations…

Along with other statements in the document, some environmentally-minded legal scholars view this clause as establishing “a fundamental link between environmental protection and human rights.”\textsuperscript{24} However, others caution that “This [language] falls short of declaring a

\textsuperscript{22} Malanczuk, p. 241.
\textsuperscript{23} Kiss and Shelton, pp. 63-64.
\textsuperscript{24} Kiss and Shelton, p. 61.
clear right to a healthy environment, nor has such a right yet been recognized in international law.\textsuperscript{25} It is fair to say that the right to a healthy environment, and the obligation of states to provide it, has not achieved the status of a human right in the same sense as the four core labor standards.\textsuperscript{26}

The Stockholm Declaration also recognized other important goals policymakers must balance when addressing environmental concerns. For example, Principles 8 and 11 recognize economic development needs:

Economic and social development is essential for ensuring a favorable living and working environment for man and for creating conditions on earth that are necessary for the improvement of the quality of life.

The environmental policies of all States should enhance and not adversely affect the present or future development potential of developing countries, nor should they hamper the attainment of better living conditions for all, and appropriate steps should be taken by States and international organizations with a view to reaching agreement on meeting the possible national and international economic consequences resulting from the application of environmental measures.

Principle 21 restates a basic norm in customary international law that states are responsible for public and private actions that damage the environment beyond their jurisdiction:\textsuperscript{27}

\begin{itemize}
\item \textsuperscript{25} Hunter, Salzman and Zaelke, p. 287.
\item \textsuperscript{26} Regarding labor standards, see text at footnote 182.
\item \textsuperscript{27} In 1941, the Trail Smelter arbitration between the United States and Canada established the principle that no state may knowingly allow its territory to be used in a manner that would cause serious harm by emissions to the territory of another state or the properties of persons therein -- UN Reports of International Arbitral Awards, vol. 3, p. 1911.
\end{itemize}

This principle was confirmed by subsequent decisions, and in 1996, stated in more general terms by the International Court of Justice:

The existence of the general obligation of states to ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control is
States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that the activities within their jurisdiction or control do not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction.

The Action Plan initiated a global environmental assessment program, known as Earth Watch, and helped shape the United Nations Environment Program (UNEP). The latter, created at Stockholm, serves as the primary UN organ with general authority regarding the environment, and has influenced the evolution of MEAs.

During the 1970s, agreements were negotiated that addressed first-generation issues, such as water and air pollution, wildlife conservation and habitat protection. Among these were several conventions facilitated by the International Maritime Organization addressing marine pollution, and the 1973 creation of CITES. In the 1980s and 1990s, attention turned to second-generation “environmental issues involving more complex and global processes inextricably connected with developmental issues.” The resulting agreements required more difficult consensus-building processes, and among these were the 1985 Vienna Convention on the Ozone Layer, the 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, and the 1992 Convention on Global Climate Change.28

After Stockholm, environmental considerations were included in several important, more general international documents. For example, the 1974 UN Charter of Economic Rights and Duties of States proclaims that states are responsible for protecting, preserving and managing the environment for future generations.

In 1983, the UN General Assembly created the World Commission on Environment and Development, often called the Brundtland

now part of the corpus of international law relating to the environment.

See Malančuk, pp. 246.

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Commission. Its 1987 report, Our Common Future, popularized the term “sustainable development,” and its definition remains the most famous: “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” Furthermore, its activities ultimately led to the Rio Conference.²⁰

Rio Conference

In 1992, the UN sponsored the Earth Summit in Rio de Janeiro, which attracted 115 heads of state, delegates from 178 nations, and 1400 NGOs. The conference generated five major documents: the Rio Declaration on Environment and Development (the modern version of the Stockholm Declaration); Agenda 21; the Convention on Biological Diversity; the Convention on Global Climate Change; and the Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests.

The Rio Declaration, like the Stockholm Declaration, expresses the responsibility of states to preserve and protect the environment, and to balance economic development and environmental values. In contrast to the Stockholm Convention, it employs more of the language of the modern environmental movement (e.g., sustainable development, precaution) as well as prescriptions environmentalists would like to see recognized as customary international law binding the actions of states. For example, environmental legal experts Kiss and Shelton conclude:

Several principles of the [Rio] Declaration, such as public participation, the prior assessment of environmental impacts, precaution, notification of emergencies, and prior information and consultations on projects potentially affecting the environment of other states have been included in numerous binding and non-binding international instruments since Rio and constitute emerging customary law rules.³⁰

²⁰ Kiss and Shelton, p. 70-71, and Hunter, Salzman and Zaelke, pp. 290-293.

³⁰ Kiss and Shelton, p. 73.

Further, the Convention on Biological Diversity, which has 180 parties but not the United States, states:

The provisions of this Convention shall not affect the rights and obligations of any Contracting Party deriving from any existing
Since Rio, every major convention concerning multilateral cooperation, including the 1994 Agreement Establishing the WTO, includes environmental protection as a goal, and

Areas of international law that developed during earlier periods are now evolving in new directions because of the insistence they take environmental considerations into account. 31

This said, the 1980s and 1990s also witnessed an increasing awareness among governments of the importance of markets and less-encumbered trade for fostering healthy patterns of growth and development. In part, this was the consequence of failed attempts at state-managed development in Eastern Europe and Latin America during the early post-World War II decades. This was also responsible for privatization movements in developing countries and Europe, as well as the creation of the World Trade Organization and various regional free-trade arrangements, including the North American Free Trade Agreement, MERCOSUR, and agreements between the EU and several Latin American countries.

Significantly, just as the Agreement Establishing the WTO recognized the fundamental goal of the Rio Declaration (sustainable development), the Rio Declaration recognized the fundamental goal of the WTO. Principle 12 declares:

States should cooperate to promote a supportive and open international economic system that would lead to economic growth and sustainable development in all countries, to better address the problems of environmental degradation. Trade policy measures for environmental purposes should not constitute a means of arbitrary or unjustifiable discrimination or disguised restriction on international trade. Unilateral actions to deal with environmental challenges outside the jurisdiction of the importing country should be avoided. Environmental international agreement, except where the exercise of those rights and obligations would cause a serious damage or threat to biological diversity.

31 Kiss and Shelton, p. 73.
measures addressing transboundary or global environmental problems should, as far as possible, be based on international consensus.

As noted earlier, the WTO has identified 22 active MEAs with possible consequences for trade. These may be viewed as efforts to achieve the kind of consensus envisioned by Principle 12. However, the phrases “constitute a means of arbitrary or unjustifiable discrimination” and “disguised restriction on international trade” are taken directly from the chapeau of GATT Article XX. The Appellate Body applies these words in assessing whether policies falling within the definitions of Article XX(b) and (g) strike a proper balance between environmental objectives and the rights of members under other provisions of GATT.

These words relate not to the objective of a measure but to how efficaciously and fairly it is applied. Were measures taken pursuant to an MEA to be challenged in the WTO, the Rio Declaration establishes an expectation in public international environmental law that the WTO would apply these standards.

In addition, the Rio Declaration recognizes certain principles that are central to defining environmental policies that accomplish their legitimate objectives without unduly burdening trade and growth. Principle 16, for example, states that the import polluter should pay the costs:

National authorities should endeavor to promote the internalization of environmental costs, taking into account the approach that the polluter should, in principle, bear the cost of pollution…

Moreover, Principle 11 recognizes that appropriate environmental standards will vary with geography and stage of development:

States shall enact effective environmental legislation. Environmental standards, management objectives and priorities should reflect the environmental and development context to which they apply. Standards applied by some countries may be inappropriate and of unwarranted economic and social cost to other countries, in particular developing countries. Policies based on these principles are among those central to ensuring that trade is based on comparative advantages.
Contrasting International Trade Law and Environmental Law

International trade law and international environmental law have developed in parallel, but generally separate, contexts. Consequently, they have distinctive characteristics and perspectives that are relevant to understanding the conflicts between them and the problems associated with resolving them.

First, the WTO agreements, secretariat and dispute settlement system provide a consolidated system of rules, administration and enforcement for government policies affecting international trade.\textsuperscript{32} Most importantly, with the entry of China and Taiwan, every major trading nation will be a member, and all will be required to participate in the GATT, GATS, TRIPS, DSU, and all other agreements (except for the four plurilateral agreements).\textsuperscript{33}

In contrast, international environmental law has no unifying agreement but, rather, separate and, sometimes, overlapping ones. Each has its own monitoring and reporting systems.\textsuperscript{34}

Second, WTO agreements create a system of public international law in the classic or positivist sense. The WTO presumes the primacy of sovereign national governments and assigns no legal personality to private actors. These agreements create a reciprocal exchange of market access benefits, akin to contractual obligations in municipal law, among sovereign governments. The obligations members accept are a function of the benefits they receive. In fact, the 1947 text of the GATT referred to its signatories not as “members” but as “contracting parties.”

\textsuperscript{32} Regional agreements, such as the trade aspects of the Treaty of Rome and the North American Free Trade Agreement, do place additional requirements on member governments. These generally extend (deepen), and often have anticipated (broadened), WTO obligations. WTO rules require that regional trade rules be consistent with WTO obligations to nonmembers, and are subject to WTO review.

\textsuperscript{33} These are the Annex 4 Agreements on Government Procurement, Trade in Civil Aircraft and Information Technology, International Dairy Agreement, and International Bovine Meat Agreement.

\textsuperscript{34} Weiss and Jackson, p. 11.
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In contrast, many provisions of MEAs create obligations for states that are seen as more in the common interest of the international community, and are not based merely on receipt of reciprocal benefits. Such formulations of international obligations are consistent with more recent trends in public international law. That is, sovereign states have certain obligations to the international community for which they receive no reciprocal benefit— for example, the obligation not to commit or permit genocide or slavery, or in the case of the environment, not to commit acts or tolerate actions within their jurisdictions that may harm the environment beyond their jurisdiction.

Third, although the WTO does periodically review the policies and practices of member states affecting trade, it depends primarily on members to bring complaints about other members through its dispute settlement process, in order to ensure compliance with its rules. Essentially, members complain when they believe they are being denied a contracted benefit by another member.35

To resolve these complaints, the WTO has evolved an elaborate jurisprudence to encourage compliance with its rules. Specifically, WTO members acting collectively, through the dispute settlement process, seek to persuade members to terminate or amend policies and practices that violate specific WTO obligations (an import quota on automobiles) or that may frustrate the commercial benefits expected from a WTO obligation (subsidies to automakers who formerly enjoyed tariff protection).

35 The WTO dispute settlement is applicable when a member believes a benefit accruing to it under an agreement has been nullified or impaired, or the attainment of any objective has been impaired as the consequence of:

1) the failure of another member to carry out its obligations under the agreement (a violation complaint);

2) the application by another member of any measure, whether or not it conflicts with the provisions of an agreement (a nonviolation complaint); or

3) the existence of any other situation (situation complaints).

Private actions and structures might lend themselves to situation complaints. However, no GATT or WTO panel has ever ruled on one, and new, strengthened WTO dispute settlement rules do not apply to situation complaints. Rather, old GATT rules, which require complete consensus, would apply.

See WTO 1997b, p. 78.
WTO enforcement powers are limited. If an offending member fails to remedy a policy or practice to the satisfaction of a dispute settlement panel, the panel may authorize the complainant to raise tariffs on a comparable amount of imports originating from the offending member's territory. Upon the finding of an infraction, offending members may delay the imposition of these tariffs while they seek to negotiate a remedy. There is no provision for compensation of past harm or punitive damages. Nevertheless, this process has generally been effective in persuading member states eventually to withdraw or amend policies and practices found to violate WTO agreements. This reflects the significant investment members have in a rules-based international trading system, and their recognition that the benefits all countries derive from the WTO would be lost if members did not play by the rules.

Also important, the findings of dispute settlement panels have given more precise meaning to the somewhat general language of many WTO agreements, as well as guidance to governments about what behavior is consistent with their obligations. Since the WTO agreements were implemented in 1995, the use of this process has increased fourfold, and 234 complaints (180 of which involve distinct matters) had been notified as of July 13, 2001.

For their part, MEAs place a much greater emphasis on noncoercive or noncontentious compliance mechanisms and procedures, such as country reporting and independent verification systems:

The objective is to prevent any violation of an environmental norm and to assure its respect and promotion. Control mechanisms are considered primarily forums for observing the behavior of the parties and only secondly as a means of resolving conflicts through discussion and negotiation. They are considerably different from the judicial institutions and procedures that have developed in other fields of international law.

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36 See GAO 2000.


38 Weiss and Jackson, p. 19.

39 Kiss and Shelton, p. 589.
This often entails significant participation by NGOs:

A major issue in designing reporting systems concerns the methods for critically examining the contents of state reports and follow-up. Experience indicates that the role of nongovernmental organizations is often crucial to the effectiveness of the procedure.40

In MEAs, formal dispute settlement has generally been much less important. Though many agreements contain formal procedures, disputes are often resolved through less formal consultation, negotiation or mediation procedures.

This contrast between the WTO and MEAs may reflect the fact that WTO disputes generally emerge when one member acts in a way that denies another member or several members a contracted benefit. Breaches of MEAs often entail harming the benefits all members expect to obtain from an agreement – the preservation or restoration of an asset in the global commons.

Also, compliance with MEAs may require governments to act in ways that are administratively, economically and politically much more difficult or burdensome than removing a tariff, suspending a subsidy or rewriting a regulation that discriminates against imports. Consider, for example, regulatory regimes to eliminate the production and imports of chlorofluorocarbons for use in air conditioning, aerosols, styrofoam, and refrigerators.

Weiss and Jackson argue that less formal procedures enable parties “to develop compliance strategies appropriate for the conditions of the particular violating party.” They recognize that as MEAs move into areas that involve bilateral exchanges of assets and liabilities, such as emissions trading, “more formal dispute resolution procedures may become appropriate.”41 Moreover, trade measures have been taken pursuant to some MEAs to foster their goals, encourage nonmembers to participate, and to penalize members that have not complied with their obligations.

40 Kiss and Shelton, p. 590.
41 Weiss and Jackson, p. 21.
Fourth, private citizens and NGOs have not directly participated in WTO negotiations or dispute settlements. The inherently cloistered nature of the regime is rooted in its older, positivist GATT tradition and its place in the Bretton Woods system. The latter was a set of institutions created by the Allied governments after World War II to foster economic security and international economic interdependence, as a stalwart against renewed hostilities.

International environmental processes are younger and have origins more rooted in civil society. Hence, they are more open to public scrutiny and active participation by NGOs.\(^\text{x}\)\(^2\) For its part, the environmental community considers this more democratic – akin to citizens petitioning their legislatures – and an important counterweight to industrial interests.\(^\text{x}\)\(^3\) However, the trade community can counter: Who elects these activists to represent the public?

Fifth, the WTO operates in the present tense. Dispute settlement panels mete out sanctions in proportion to current harm, with no consideration given to past damages or even damages incurred after a complaint has been filed. It is difficult to get satisfaction from a dispute settlement panel for benefits bestowed by discontinued government policies, even if these continue to advantage competitors. It is highly unlikely that a dispute settlement panel would disallow government policies for the harm they might do to foreign competitors in the future.

In contrast, the precautionary principle has played an increasingly prominent role in environmental policy. Principle 15 of the Rio Declaration states:

In order to protect the environment, the precautionary principle should be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost effective measures to prevent environmental degradation.

\(^42\) Weiss and Jackson, p. 14.

\(^43\) Kiss and Shelton, pp. 133-138, and Hunter, Salzman and Zaelke, pp. 422-434.
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Essentially, the principle, where applied:

shifts the burden of scientific proof necessary for triggering policy responses from those who support prohibiting or reducing potentially offending activities to those who want to continue the activity.\textsuperscript{44}

Since the principle began appearing in international legal instruments in the 1980s, it has experienced a meteoric rise in international law.\textsuperscript{45} For example, it has found its way into international agreements to protect the marine environment and to combat freshwater and air pollution, as well as the 1992 UN Framework on Global Climate Change, amendments to the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer, and the 1992 Convention on Biological Diversity.\textsuperscript{46}

Generally, where WTO agreements interact with environmental measures, most notably SPS and TBT, they require that product regulations and standards be based on sound science and risk assessment. The potential for conflict between WTO members with regulations and standards based on the precautionary principle and members whose exports may be excluded or disadvantaged is obvious.

The precautionary principle is incorporated into the 1992 Maastricht Treaty on the European Union:

Community policy on the environment shall aim at a high level of prevention….It shall be based on the precautionary principle and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at the source and that the polluter shall pay.\textsuperscript{47}

\textsuperscript{44} Hunter, Salzman and Zaelke, p. 360.

\textsuperscript{45} James Cameron, “The Precautionary Principle in International Law,” in O’Riordan, Cameron and Jordan, p. 113.

\textsuperscript{46} Kiss and Shelton, pp. 452, 454, 465-466, 411, 414, 501, and 514, Hunter, Salzman and Zaelke, pp. 360-361.

\textsuperscript{47} Maastricht Treaty, Article 130.
This principle is important in EU approaches to genetically modified organisms\textsuperscript{48} and in its trade dispute with the United States and other countries regarding hormone-treated beef.\textsuperscript{49}

\textsuperscript{48} Kiss and Shelton, p. 381.

\textsuperscript{49} Cameron, op. cit., pp. 136-138.
Chapter 2:
WTO Rules and Environmental Measures

Many provisions of WTO agreements potentially interact with environmental policies. Some agreements impose obligations on WTO members that may conflict with domestic environmental policies or with actions members are required to take in compliance with MEAs. In this regard, among the most significant are the Preamble; GATT articles establishing nondiscrimination, regulating quantitative restrictions on exports and imports, and establishing general exceptions to GATT obligations; and SPS and TBT. Other important provisions may be found in the GATS, TRIPS, SCM, and the Agreement on Agriculture.

Preamble to the Agreement Establishing the WTO

Historically, GATT members saw the GATT, and supporting agreements, solely as the establishment of reciprocal benefits in commercial relations among sovereign states. Initially, the agreement addressed the treatment of imports at the border – e.g., tariffs, customs administration, quotas, and emergency balance of payments measures – as well as export subsidies and national treatment of foreign goods in domestic markets.

Only in 1966 were articles added to the GATT that directly addressed trade and development.50 At the conclusion of the Tokyo Round (1973-1979), supplemental agreements were added to the GATT framework that more directly penetrated the management of domestic markets – e.g., the agreements on technical barriers and product standards and on subsidies that were antecedents to SPS, TBT and SCM negotiated in the Uruguay Round.

In 1971, as a result of preparations for the Stockholm Conference, the GATT Secretariat prepared a study entitled Industrial Pollution Control and International Trade. This study focused on the implications of environmental protection policies on international trade, and reflected concerns that these

50 Articles XXXVI, XXXVII and XXXVIII, which comprise Part IV: Trade and Development, became effective in June 1966.
policies could create new barriers to trade.\textsuperscript{51} Following this study, the members formed the GATT Group on Environmental Measures and International Trade (EMIT). This group became active in the early 1990s, and at the 1994 Marrakesh Ministerial Meeting establishing the WTO, the members authorized the creation of the current CTE.\textsuperscript{52}

Prior to the founding of the WTO in 1995, dispute settlement panels were disinclined to give much weight to environmental and other social policy considerations in determining how trade and domestic policies should be crafted for members to comply with GATT nondiscrimination obligations. However, reflecting the trend in international agreements, the Preamble makes specific reference to the need to balance the trade and economic objectives of the GATT, GATS, TRIPS and other WTO agreements on the one hand, and environmental policy considerations on the other. The opening paragraphs of the Preamble to the Agreement Establishing the World Trade Organization state:

The \textit{Parties} to this Agreement,

\textit{Recognizing} that their relations in the field of trade and economic endeavor should be conducted with a view to raising standards of living, ensuring full employment and a large and steadily growing volume of real income and effective demand, and expanding the production of and trade in goods and services, while allowing for the optimal use of the world's resources in accordance with the objective of sustainable development, seeking both to protect and preserve the environment and to enhance the means for doing so in a manner consistent with their respective needs and concerns at different levels of economic development.\textsuperscript{53}

\textsuperscript{51} WTO 1999.

\textsuperscript{52} The CTE\textsuperscript{4} made its first major statement in 1996 – WTO 1996.

\textsuperscript{53} Also at the Marrakesh meeting, the ministers signed a Decision on Trade and the Environment, which states:

There should not be, nor need be, any policy contradiction between upholding and safeguarding an open, non-discriminatory and equitable multilateral trading system on the one hand, and acting for the protection of the environment, and the promotion of sustainable development on the other.
By virtue of these references to sustainable development and environmental goals in the Preamble, the Appellate Body in the 1998 Shrimp-Turtle decision determined that the negotiators of the WTO Agreement were fully aware of the importance and legitimacy of environmental protection as a goal for national and international policy. They concluded that GATT and all other WTO agreements:

…must be read by a treaty interpreter in the light of contemporary concerns of the community of nations about the protection and conservation of the environment.⁵⁴

As this preambular language reflects the intentions of negotiators of the WTO Agreement, we believe it must add colour, texture and shading to our interpretation of the agreements annexed to the WTO Agreement, in this case, the GATT 1994.⁵⁵

These words have the potential fundamentally to change how WTO members may act to balance their obligations with regard to nondiscrimination and environmental protection.

GATT

Articles I and III: Nondiscrimination

Articles I and III establish the most-favored-nation (MFN) and the national-treatment principles, which together create the nondiscrimination obligation for like products.

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⁵⁵ Shrimp-Turtle, para. 153.
Reconciling Trade and the Environment

Most-Favored-Nation Principle

Article I requires members to treat products from any member country no less favorably than they treat like products from any other country:

With respect to customs duties and charges of any kind imposed on or in connection with importation and exportation… any advantage, favour, privilege or immunity granted by any contracting party to any product originating in or destined for any other country shall be accorded immediately and unconditionally to the like product originating in or destined for the territories of all other contracting parties.

For the purposes of assessing the interaction between WTO rules and environmental enforcement, three characteristics of the MFN principle, as it has been interpreted, are particularly important.

First, MFN is unconditional. Members may not apply conditions to MFN treatment other than WTO membership. For example, members may not discriminate among imports based on the economic or social policies pursued in their country of origin.

In the 1952 Belgium Family Allowances, Belgium levied a charge on imports purchased by public bodies, and exempted from these charges goods originating in countries with family allowance systems similar to its own. The GATT dispute settlement panel found this practice could not be reconciled with Articles I and III.

Second, MFN applies to individual products, and no balancing among products or countries is permitted. Hence a government cannot unilaterally choose to discriminate against product A from country X owing to an economic or environmental policy consideration, for example, and

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56 These countries were Luxembourg, the Netherlands, France, Italy, Sweden, and the United Kingdom.

57 Belgium Family Allowances, Report adopted by the CONTACTING PARTIES, G/32 – 1S/59, 7 November 1952, para. 4.
compensate with better-than-MFN treatment for product B from country X.\footnote{58}

Third, the GATT and WTO have never adopted a definition of what constitutes a “like” product. It is particular to each situation and evaluated on a case-by-case basis. Generally, panels have confined tests of likeness to physical characteristics and have not permitted rules that base likeness on production processes and methods that are not reflected in the properties of the final product (unincorporated PPMs).

Van Calster has argued that it may be possible to stretch the concept of physical characteristics to include some unincorporated PPMs:

It is important to point out that whilst GATT Panels overall have indeed relied on physically incorporated characteristics only, the 1970 BTA [Border Tax Adjustment] Working Party Report in fact includes references to characteristics which may relate to unincorporated PPMs. This is the case, for instance, for “consumer’s tastes and habits.” In the context of the Tuna-Dolphin reports, for instance, one could argue that the US consumers do distinguish between tuna products, based on their dolphin-(un)friendliness.\footnote{59}

However, this opinion is not a widely embraced.

**National-Treatment Principle**

Article III establishes the *national-treatment* principle, which complements the MFN principle. It requires each member to treat other members’ products no less favorably than it treats like domestic products, once they have been subjected to the appropriate WTO-consistent MFN tariffs and border measures and they enter domestic channels of commerce. Article III.2 states:

> The products of the territory of any contracting party imported into the territory of any other contracting party shall not be subject, directly or indirectly, to internal taxes

\footnote{58}{WTO 1995, p. 35 and Van Calster, p. 37.}

\footnote{59}{Van Calster, p. 41.}
or other internal charges of any kind in excess of those applied, directly or indirectly, to like domestic products.

Article III.4 states:

The products of the territory of any contracting party imported into the territory of any other contracting party shall be accorded treatment no less favourable than that accorded to like products of national origin in respect of all laws, regulations and requirements affecting their internal sales, offering for sale, purchase, transportation, distribution, or use.

Three characteristics of GATT national treatment are important. First, equal treatment for foreign goods is a minimum standard. Differential treatment—i.e., according imports more favorable treatment—may be necessary to ensure treatment no less favorable than that received by domestic products.

Second, national treatment is required for nonfiscal, as well as fiscal, measures. The terms “all laws, regulations and requirements” are quite comprehensive.

Third, like Article I, the concept of a like product has been interpreted by panels to include the physical characteristics of products but not unincorporated PPMs.

**Border Tax Adjustments**

Closely related to the national treatment requirements are GATT rules regarding border tax adjustments (BTAs). Essentially, BTAs are refunds or forgiveness of taxes and other charges on exported products; as well as taxes and charges levied on imported products, in addition to tariffs and other entry fees, equal to similar taxes assessed on like domestic products. For example, the U.S. tax on distilled spirits is rebated on exported Kentucky Bourbon, and a comparable levy is assessed on imported Scotch.

The purpose of such adjustments is to ensure that like imported and domestic products compete on equal fiscal footing once WTO-consistent tariffs and customs fees have been paid on imported products and enter domestic channels of commerce. Inappropriately computing
rebates on exports and levies on imports can result in subsides on exports and hidden tariffs on imports. How BTAs should be computed is addressed by GATT Article XVI, the Agreement on SCM for exports, and Article II.2(a) for imports. The latter states:

Nothing in this Article shall prevent any contracting party from imposing at any time on the importation of any product:

(a) a charge equivalent to an internal tax imposed consistently with the provisions of paragraph 2 of Article III in respect of the like domestic product or in respect of an article from which the imported product has been manufactured or produced in whole or in part.

As currently interpreted, these provisions permit BTAs for taxes and charges directly levied on products – for example, excise taxes and value-added taxes. They do not permit adjustments for taxes on factors of production – for example, payroll taxes and corporate income taxes. Generally, these provisions do not appear to permit members to impose BTAs on products based on unincorporated ingredients. For example, were the United States to impose a tax on carbon dioxide emissions in manufacturing, it could not impose a similar tax on imported manufactures based on carbon dioxide emissions.

By this interpretation, BTAs would not be permitted on a general energy or a carbon tax imposed, for example, to achieve emissions goals prescribed by the Kyoto Protocol. Even so, Van Calster believes that SCM may permit border tax adjustments on exports for an energy tax, however, many other analysts do not share this view. For example, Brack writes:

…it would appear that BTAs relating to production processes are only allowable if they are applied to inputs that are physically incorporated. They appear not to be allowable if the input is not present in the final product –

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60 See Van Calster, pp. 433-434.
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which is the case for energy consumed and carbon emitted during the production process.61

Article XI: Quantitative Restrictions

Article XI.1 prohibits quantitative restrictions:

No prohibitions or restrictions other than duties, taxes or other charges, whether made effective through quotas, import or export licenses or other measures, shall be instituted or maintained by any contracting party on the importation of any product of the territory of any other contracting party or on the exportation or sale for export of any product destined for the territory of any other contracting party.

Apart from some exceptions enumerated in Article XI.2,62 this language establishes a fairly comprehensive restriction on quantitative measures, and does not leave much, if any, room to take into account the particular economic or social policies of an exporter or importer when establishing import or export measures.63

Article XX: General Exceptions

Article XX lays out the general exceptions to GATT disciplines, with items (b) and (g) speaking directly to health, safety and the environment. Article XX reads:

Subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade, nothing in this

61 Brack, Grubb and Windram, p. 87.

62 Article XI.2 provides for exceptions necessary to relieve shortages of food or other products essential to the exporter, to enforce product technical regulations and standards, and to implement agricultural price and supply management programs.

Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures:

(b) necessary to protect human, animal and plant life or health

(g) relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production and consumption

The Appellate Body requires that three questions be answered affirmatively in order for a measure to qualify for an Article XX exception under paragraphs (b) and (g):

Does the measure(s) violate a specific provision of the GATT?

If yes, does the measure meet the requirements of paragraph (b) or (g)? Is it necessary to protect health? Does it relate to the conservation of an exhaustible natural resource?

If yes, for either (b) or (g), does the measure meet the requirements of the chapeau? In particular, does the measure constitute an arbitrary discrimination, an unjustifiable discrimination or a disguised restriction on international trade?

Four aspects of these tests are important for the purposes of this study. First, for the purposes of applying paragraph XX(g), dispute settlement panels and the Appellate Body have been fairly liberal in defining exhaustible resources to include renewable resources, such as clean air or the stock of salmon. For example, the Appellate Body found in Shrimp-Turtle that endangered species, such as sea turtles, are renewable resources.

Second, members may not exclude a foreign product that domestic or other foreign firms are free to sell. For example, in Thai Cigarettes, Thailand excluded U.S. cigarettes from its market to reduce cigarette consumption for public health reasons, but Thai firms were permitted to

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64 Van Calster, p. 78.

65 Shrimp-Turtle, para. 127-134.
continue selling cigarettes domestically and excise taxes were imposed on these cigarettes. The dispute settlement panel found that the import ban violated Article XI and was not justified under Article XX (b). If Thailand wanted to reduce cigarette consumption, it could have instituted policies that treated foreign and domestic manufacturers equally.\[^{66}\]

Similarly, members may not impose more difficult standards than are applied to domestic products. In *Reformulated Gasoline*, the Environmental Protection Agency permitted only gasoline of specified cleanliness (reformulated gasoline) to be sold in the most polluted areas of the country; in other areas, it permitted gasoline no dirtier than what was sold in 1990. It required domestic firms to establish individual baselines for each refinery in operation for at least six months in 1990. The Agency established a statutory baseline, representing the national average for 1990, and assigned it to gasoline made by domestic refineries not in operation in 1990, and all imported gasoline.

By assigning the national baseline to foreign refineries that exported to the United States in 1990, the regulation imposed a higher standard of cleanliness on foreign refiners than was applied to some competing domestic refineries. The Appellate Body found that differential baseline treatment between domestic and foreign producers in operation in 1990 could not be justified on technical grounds and constituted “unjustifiable discrimination” and a “disguised restriction on international trade.”\[^{67}\]

Third, Article XX(b) and (g) does not permit members an exception for a measure that discriminates among foreign suppliers or between domestic and foreign suppliers merely because it supports a domestic health or conservation objective. In laymen’s terms, to qualify for an Article XX exception, discriminatory measures should do the least harm to trade — they should be the least inconsistent available for achieving their stated objective.

Paragraph (b) requires that discriminatory measures be “necessary.” The presence of this word has caused dispute settlement panels to ask


whether other measures are available that would be consistent, or less inconsistent, with GATT obligations than the measure in question. For example, in *Thai Cigarettes*, the panel suggested, for the purposes of reducing cigarette consumption, an advertising ban on all cigarettes would be less GATT-inconsistent.\(^6^8\)

Although paragraph (g) does not require that the discriminatory measure be necessary, it does require that the measure “relate to” the conservation of exhaustible natural resources. The Appellate Body in *Shrimp-Turtle* found the U.S. measures at issue related to the conservation of sea turtles because of the “close and genuine relationship between ends and means.”\(^6^9\)

Article XX(g) also requires that the discriminatory measure be “made effective in conjunction with restrictions on domestic production and consumption.” This requires a certain “even handedness” in the treatment of foreign and domestic products.\(^7^0\) Identical treatment is not required, because, where treatment is identical, it is unlikely there would be discrimination in the first place or a need to invoke Article XX.\(^7^1\)

Taken together, requiring discriminatory measures to exhibit both a “close and genuine relationship between ends and means” and “even handedness” to qualify for an Article XX(g) exception comes very close in the layman’s eye to the necessity requirement imposed by Article XX(b).

Fourth, members historically have been permitted to exclude foreign products whose physical or performance characteristics may threaten the domestic environment, but members have not been able to exclude foreign products made in ways that threaten the environment beyond their jurisdictions. For example, the United States may ban imports of cars that do not meet U.S. emission standards, but it may not ban imports of steel made in foreign mills that do not meet emission standards for U.S. steel mills. Hence, members could restrict imports on the basis of their physical characteristics but not on the basis of unincorporated PPMs.

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\(^6^8\) *Thai Cigarettes*, para. 78. See also Van Calster, p. 74.

\(^6^9\) *Shrimp-Turtle*, para 136-141.

\(^7^0\) *Reformulated Gasoline*, p. 19.

\(^7^1\) Van Calster, pp. 77-78.
However, in *Shrimp-Turtle*, the Appellate Body, referencing the sustainable development language in the Preamble to the WTO Agreement, appears to have opened the door to restrictions on imports made in ways that harm the global commons beyond the jurisdiction of the importing country. It found that the U.S. policy – banning imports of shrimp from countries that permit harvesting techniques that do not protect sea turtles as effectively as the methods required of U.S. fishermen – could fall within the scope of XX(g). However, the U.S. application of the policy violated the chapeau of Article XX by being more rigid than necessary to achieve the level of turtle protection required by U.S. regulations, and imposed arbitrary and unjustifiable discrimination.72

The United States subsequently modified its application of the regulation without altering its most essential effect – excluding imports of shrimp caught in ways that do not protect sea turtles as effectively as U.S. techniques. In June 2001, responding to a petition filed by Malaysia, the original panel found that the United States had adequately addressed the objections of the Appellate Body and let the embargo stand.73 The United States now embargoes certain shrimp on the basis of how they are caught outside its territorial jurisdiction.

**Agreement on Sanitary and Phytosanitary Measures**

National governments impose regulatory measures to protect health, safety and the environment; improve public safety; safeguard businesses and consumers from deceptive practices; and achieve other public purposes. Even when these measures treat competing foreign and domestic products equally, they affect trade by, for example, barring products that do not meet national requirements and imposing compliance costs on foreign producers who must demonstrate that their products meet regulatory requirements.

Although some impact on trade is inevitable, regulators can unnecessarily raise costs and discourage trade by imposing differences in national requirements that are unnecessary for accomplishing their underlying policy goals; imposing opaque, nontransparent requirements, or

72 *Shrimp-Turtle*, para. 147-184.

73 See text and source at footnote 160.
onerous and costly compliance procedures; or artfully defining regulations in ways that favor characteristics unique to, or more prevalent in, domestic products but having little or nothing to do with underlying regulatory goals. SPS and TBT directly address these issues.

SPS applies to measures that:

- protect human and animal health from risks arising from additives, contaminants, toxins, or disease-causing organisms;
- protect human life from animal- or plant-carried diseases;
- protect animal or plant life from pests, diseases, or disease-causing organisms; and
- prevent or limit other damage from the entry, establishment or spread of pests.

TBT addresses measures not addressed by SPS that protect the environment, animals or plants, consumers and businesses, or that serve other public purposes by regulating or recommending the physical or performance characteristics of products.

Before SPS and TBT, measures protecting human, animal and plant life and health were subject to GATT Articles I, III, XI, and XX, and the 1979 Agreement on Technical Barriers to Trade. Generally, regulations could not be challenged under these agreements if they treated foreign products no less favorably than like domestic or other foreign products.

SPS seeks to reduce the cost of producing for multiple markets by encouraging harmonization of measures across national markets and by discouraging governments from imposing measures and erecting certification regimes that intentionally or unintentionally pose unnecessary barriers to trade.

Key Provisions

SPS Article 2 affirms the right of WTO members to maintain “sanitary and phytosanitary measures necessary for the protection of
human, animal or plant life or health.”

However, it requires that measures directly or indirectly affecting trade be based on scientific principles and sufficient scientific evidence, and that these measures not create disguised barriers to trade:

Members shall ensure that any sanitary or phytosanitary measure is applied only to the extent necessary to protect human, animal or plant life or health, is based on scientific principles, and is not maintained without sufficient scientific evidence…

Members shall ensure that their sanitary and phytosanitary measures do not arbitrarily or unjustifiably discriminate between Members where identical or similar conditions prevail, including between their territory and that of other Members. Sanitary and phytosanitary measures shall not be applied in a manner which constitutes a disguised restriction on international trade.

Article 5 requires members to: “ensure that measures are no more trade-restrictive than required to achieve their appropriate level of sanitary and phytosanitary protection, taking into account economic and technical feasibility.” A measure is presumed to meet this requirement if it conforms with the appropriate international standard (discussed below), “unless there is another measure, reasonably available taking into account technical and economic feasibility, that achieves the appropriate level of sanitary and phytosanitary protection and is significantly less trade restrictive.”

Article 5 requires that measures be based on risk assessment and that governments exhibit consistency in the levels of risk they tolerate in comparable situations:

Members shall ensure that their sanitary and phytosanitary measures are based on an assessment, as appropriate to the circumstances, of the risks to human, animal or plant life

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74 SPS, Article 2.1.
75 SPS, Article 2.2.
76 SPS, Article 2.3.
77 SPS, Article 5.6 and footnote 3.
or health, taking into account risk assessment techniques
developed by the relevant risk assessment body.\textsuperscript{78}

With the objective of achieving consistency in the
appropriate level of sanitary and phytosanitary protection
against risks…each Member shall avoid arbitrary or
unjustifiable distinctions in the levels it considers to be
appropriate in different situations, if such distinctions
result in discrimination or disguised restriction on
international trade.\textsuperscript{79}

Similarly, Article 2 requires consistency in the treatment of
products made in different countries:

Members shall ensure that… measures do not arbitrarily or
unjustifiably discriminate between Members where
identical or similar conditions prevail, including between
their own territory and that of other members.\textsuperscript{80}

In addition, when determining the appropriate level of protection,
members should “take into account the objective of minimizing negative
trade effects,”\textsuperscript{81} and when assessing risks, they should take into account
economic factors, including “the relative cost effectiveness of alternative
approaches to limiting risk.”\textsuperscript{82}

Annex B, which is integral to the agreement, imposes strong
transparency requirements. It requires members to publish regulations
promptly, allow adequate time and opportunity for foreign suppliers to
comment on proposed regulations, and establish one point of inquiry
“responsible for the provision of answers to all reasonable questions from
interested Members as well as the provision of relevant documents…”\textsuperscript{83}

\textsuperscript{78} SPS, Article 5.1.
\textsuperscript{79} SPS, Article 5.5.
\textsuperscript{80} SPS, Article 2.3.
\textsuperscript{81} SPS, Article 5.4.
\textsuperscript{82} SPS, Article 5.3.
\textsuperscript{83} SPS, Annex B.3.
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Article 3 fosters harmonization. In particular, measures that conform to the “standards, guidelines or recommendations [of the bodies listed below] shall be deemed to be necessary… and presumed to be consistent with the relevant provisions of this agreement and of GATT 1994.”

Food: the Food and Agriculture Organization (FAO) and the World Health Organization (WHO) Codex Alimentarius Commission

Animal health: International Animal Health Organization (Office International des Epizooties)

Plant health: the FAO’s Secretariat for the International Plant Protection Convention

Members may apply higher or different requirements if there is a scientific justification.84 However, Annex B imposes special notification and consultation requirements and, therefore, higher standards of transparency for proposed regulations that are not substantially the same as international standards, guidelines or recommendations, or where an international norm does not exist.85

The agreement further requires members to accept the equivalency of other members’ different measures if they achieve the same objective:

Members shall accept the sanitary and phytosanitary measures of other Members as equivalent, even if these measures differ from their own or from those used by other Members trading in the same product, if the exporting Member objectively demonstrates to the importing Member that its measures achieve the importing Member’s appropriate level of sanitary and phytosanitary protection.86

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84 SPS, Article 3.3.
85 SPS, Annex B. 5.
86 SPS, Article 4.1.
When scientific evidence is insufficient to support a measure, Article 5.7 permits members to apply provisional measures based on:

pertinent information, including that from the relevant international organization as well as from sanitary and phytosanitary measures applied by other Members. In such circumstances, Members shall seek to obtain the additional information necessary for a more objective assessment of risk and review the sanitary or phytosanitary measure accordingly within a reasonable period of time.\textsuperscript{87}

The WTO dispute settlement panel in the 1998 EU beef hormones case found reflection of the precautionary principle in this provision.\textsuperscript{88} However, in \textit{Hormones}, the EU ban was not a provisional regulation.

\textbf{Consequences for Environmental Protection}

SPS has four sets of consequences for environmental protection. First, it imposes substantial requirements that member governments base sanitary and phytosanitary measures on scientific principles and evidence, undertake risk assessment, apply consistent levels of risk protection across comparable regulatory situations, adhere to norms of transparency, accept the equivalency of equally effective foreign measures, and adopt measures that are not more trade-restrictive than necessary to accomplish their objectives. Together, these place the WTO in the position of determining whether sanitary and phytosanitary measures, when not those prescribed by international standard-setting bodies, impose unnecessary burdens on trade.

Second, by presuming that the standards, guidelines and recommendations established by the Codex Alimentarius Commission, the Office International des Epizooties, and the framework of the International Plant Protection Convention meet the abovementioned requirements, SPS assigns considerable status to the norms established by these organizations, and imposes costs on governments that seek to exceed or differ from these norms. This may not be as alarming as it sounds. Most WTO members participate in these organizations, and the standards that are developed

\textsuperscript{87} SPS, Article 5.7.

come from leading scientists and government experts in the appropriate fields, not the WTO or trade experts.  

Third, the agreement appears to restrict the use of precautionary measures by requiring members, when faced with insufficient scientific evidence, to rely on provisional measures and to seek additional information for a more objective assessment of risk within a reasonable period.

Fourth, the coverage of the agreement may not extend to certain issues. As defined in Annex A, the Agreement on Sanitary and Phytosanitary Measures applies to pests (insects); diseases, disease-carrying organisms, and disease-causing organisms; and additives, contaminants, toxins or disease-causing organisms in human and animal food. As Charnovitz observes: “protection against insecticide in fruit is covered by SPS because that is a contaminant. But protection against bio-engineering in fruit might not be covered by SPS because genetic modification is not a risk listed in the above categories.” If this view held up in dispute settlement, the United States would not be able to challenge certain European restrictions on imports of genetically modified organisms under SPS.

**Agreement on Technical Barriers to Trade**

TBT applies to technical regulations and standards – including packaging, marking and labeling requirements – and to conformity procedures for assessment of compliance with these regulations. The agreement applies to measures not covered by SPS.

The agreement defines technical regulations as mandatory requirements and standards as voluntary norms. It recognizes that multiple technical requirements across countries can create unnecessary barriers to

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89 WTO 1998a, p. 3.


91 Briefly, the agreement defines regulations as mandatory requirements as these apply to a product, process or production method, and standards as non-mandatory requirements. Conformity assessments are any procedure used, directly or indirectly, to determine that technical regulations and standards have been fulfilled.
trade and it encourages international harmonization to lower costs for producers selling in multiple country markets.

**Key Provisions**

The agreement recognizes that no country should be prevented from implementing measures for the protection of human, animal or plant health or the environment, or for the prevention of deceptive practices, at the levels it considers appropriate.

Article 2.1 restates the basic GATT requirement that technical regulations be applied subject to the principles of nondiscrimination – i.e., national treatment and MFN:

Members shall ensure that in respect of technical regulations, products imported from the territory of any Member shall be accorded treatment no less favourable than that accorded to like products of national origin and to like products originating in any other country.

Article 2.2 requires that technical regulations imposed by governments\(^2\) shall not restrict trade more than necessary and must be based on scientific evidence:

For this purpose, technical regulations shall not be more trade restrictive than necessary to fulfill a legitimate objective, taking account of the risk non-fulfillment would create… In assessing such risks, relevant elements of consideration are, *inter alia*: available scientific evidence,

\(^2\) The requirements enumerated in Article 2 apply to the regulations imposed by central governments. Members’ governments are required to take reasonable measures to ensure that local governments and nongovernmental bodies also comply:

Members are fully responsible under this Agreement for the observance of all provisions of Article 2. Members shall formulate and implement positive measures and mechanisms in support of the observance of provisions of Article 2 by other than central government.

TBT, Article 3.5.
related processing technology or intended end-uses of products.

Further, Article 2 requires members to publish all technical regulations\(^3\) and, when introducing new regulations, to allow producers in other exporting countries adequate time to adapt production processes to new requirements.\(^4\)

Where technical regulations are required and international standards are available, “Members shall use them,” except when such standards would be ineffective or inappropriate to fulfill the legitimate objectives pursued. Reasons for not conforming to international standards, for example, may include “fundamental climatic or geographic factors or fundamental technological problems.”\(^5\) Where an international standard is applied, “it shall be rebuttably presumed not to create an unnecessary obstacle to international trade.”\(^6\)

Whenever a relevant international standard does not exist or a technical regulation is not defined in accordance with the relevant international standard, the agreement imposes strong transparency conditions for the writing and adoption of regulations. When members intend to introduce a nonconforming regulation, the agreement requires them to publish notice and notify other members through the WTO Secretariat; specify the products to be covered, the objectives and rationale; and, upon request of other members, identify the parts of the regulation that, in substance, deviate from relevant international standards, allow other members reasonable time for comment, and respond to other members’ comments.\(^7\)

Members are required to give positive consideration to accepting the equivalency of the technical regulations of other members, even if these differ from their own, provided they are satisfied that these adequately fulfill the objectives of their own regulations.\(^8\)

\(^3\) TBT, Article 2.11.
\(^4\) TBT, Article 2.12.
\(^5\) TBT, Article 2.4.
\(^6\) TBT, Article 2.5.
\(^7\) TBT, Article 2.9.
\(^8\) TBT, Article 2.7.
Most of the principles established by the agreement for technical regulations and assessment procedures are prescribed for standards through a Code of Good Practice. Article 4.1 states:

Members shall ensure that their central government standardizing bodies accept and comply with the Code. They shall take such reasonable measures as may be available to them to ensure that local government and nongovernmental standardizing bodies within their territories accept and comply with the Code of Good Practice.

Article 5 requires that conformity assessment procedures for regulations and standards applied by governments\(^{99}\) treat foreign products no less favorably than like domestic products, not create unnecessary barriers to trade, and be applied expeditiously. When international standards exist for conformity procedures, members are required to use them, except where such standards would be inappropriate – for instance, owing to fundamental climatic or geographic factors. When an international standard is not applied or does not exist, higher standards of transparency and reporting are required. Article 6 encourages members to accept the results of conformity assessments of other members.

**Consequences for Environmental Protection**

TBT has three sets of consequences for environmental protection. First, it requires member governments to base regulations on risk assessment and available scientific evidence, adhere to certain rules of transparency, give positive consideration to accepting the equivalency of foreign regulations, and adopt regulations that are not more trade-restrictive than required. Together, these place the WTO in the position of determining whether measures, when not those prescribed by international standard-setting bodies, impose unnecessary burdens on trade.

\(^{99}\) The requirements, enumerated in Articles 5 and 6, apply to central governments. With some exceptions regarding notification, Articles 7 and 8 require members to take such reasonable measures as may be available to ensure that local governmental and nongovernmental bodies adhere to the requirements of Articles 5 and 6.
Second, by presuming that the standards, guidelines and recommendations of international bodies meet the abovementioned requirements, the agreement assigns considerable status to the norms established by these organizations, and creates new reporting costs for governments seeking to exceed or differ from them. As with SPS, this may not be as alarming as it sounds, but the question remains: how much of a burden do these extra reporting requirements impose?

In 1998, there were 2140 notifications made to the WTO Secretariat under various agreements. Of these, 648 notifications fell under TBT, and fifteen percent of these had an environmental component. The principal reasons offered for diverging from international standards included waste management; energy efficiency; providing for environmental management systems; eco-taxes; and soil, water and air pollution.\textsuperscript{100}

Third, TBT may open the door to the challenging of labeling regimes (both mandatory and voluntary) that address how products are made rather than their specific performance and physical characteristics. For example, it may create opportunities to challenge EU labeling requirements for foods containing genetically modified materials, and also life-cycle labels on plastics.\textsuperscript{101}

The applicability of TBT to eco-labeling has been discussed in the WTO Committee on Trade and Environment and the Committee on Technical Barriers to Trade. To the extent that labels designate product characteristics that affect product performance, they are likely covered by the agreement.

Some developing countries have taken the view that labels describing nonproduct-related PPMs are prohibited by the agreement, while other members have said they are consistent with the agreement. On the one hand, it can easily be argued that such labels engender discrimination among like products, particularly among products that perform the same functions but are made by somewhat different processes. Permitting

\textsuperscript{100} Sampson, p. 73.

\textsuperscript{101} For discussions of the relevant issues, see Arthur E. Appleton, “Environmental Labelling Schemes: WTO Law and Developing Country Implications,” and Doaa Abdel Motaal, “The Agreement on Technical Barriers to Trade, the Committee on Trade and Environment, and Eco-labelling,” both in Sampson and Chambers, pp. 195-221 and 223-235.
members to require such labels puts the WTO on the slippery slope of permitting discrimination on the basis of unincorporated PPMs. On the other hand, it can be argued that labels that merely give consumers information are not particularly trade-restrictive:

Despite the fact that labeling may result in consumers choosing not to purchase certain products based on the information provided…such product discrimination is indirect and, for many people (particularly those in the developed world), well within what they would view as necessary for informed decision-making and consumer choice.\(^\text{102}\)

Choosing between these conflicting positions raises fundamental questions, such as: Do measures requiring information about how like products are made, and permitting consumers to make informed choices, unnecessarily burden trade? Does denying access to such information undermine competition to make products more healthy or more environmentally friendly? How do education programs by bodies establishing or advocating such regulations and standards color our answers to these questions?

Also, one should consider whether the answers to these questions depend on whether a principle of conventional or customary international law applies. For example, other things remaining the same, are mandatory or voluntary labels affecting consumer decisions more defensible if they certify that a carpet is made without child or forced labor but less defensible if they certify that a carpet is made with recycled material?

In *Shrimp-Turtle*, the Appellate Body did reference the fact that all the participants in the dispute were participants in the Convention on Trade in Endangered Species, and the Convention includes sea turtles on its list of endangered species.\(^\text{103}\)


\(^{103}\) See text at footnote 155.
Other WTO Agreements

Article II of GATS and Article 4 of TRIPS establish the MFN principle for trade in services and the treatment of foreign intellectual property. Article XVII of GATS and Article 3 of TRIPS similarly establish the principle of national treatment.

Article XIV of GATS contains general exceptions comparable to Article XX of GATT. The two articles’ chapeaus are identical, and GATS XIV(b) permits members to take measures necessary to protect human, animal and plant life and health.

Articles 27.2 and 27.3 of TRIPS permit members to make certain inventions ineligible for patents for the purposes of protecting human, animal and plant life or health or to avoid serious prejudice to the environment.

As young agreements, GATS and TRIPS do not have a history of panel and Appellate Body decisions with regard to the meaning of terms such as like products and the conditions required for invoking exceptions; however, the principles established and evolving through dispute settlement for GATT would likely influence panels under comparable circumstances in disputes under GATS and TRIPS.

SCM exempts assistance to adapt existing facilities to new environmental laws and regulations, provided it is a one-time (nonrecurring) expense and is limited to twenty percent of the cost of adaptation.\(^\text{104}\)

The Agreement on Agriculture exempts direct payments under environmental programs from members’ commitments to reduce agriculture support programs. To be eligible, payments must be part of “a clearly defined environmental or conservation program and be dependent on the fulfillment of specific conditions under the government program,” and payments “shall be limited to the extra cost or loss of income involved in complying with the government program.”\(^\text{105}\)

\(^{104}\) SCM, Article 8.2(c).

\(^{105}\) Agreement on Agriculture, Annex 12.
Chapter 3: Multilateral Environmental Agreements

At least 238 MEAs are now in place and, of these, the WTO Secretariat has identified 22 with potential trade policy implications. Many of these agreements protect specific groups and classes of flora and fauna (e.g., endangered species and animals and plants in transport) while others facilitate the joint management of resources taken in the global commons (e.g., tuna harvesting), and still others focus on broader environmental problems (e.g., the protection of the ozone layer and control of greenhouse gases).

Trade measures may include regulations on exports and/or imports. These may include outright prohibitions or bans on trade, quotas, and various licensing and registration schemes. These measures may be applied in a nondiscriminatory way or they may discriminate against particular trading partners. Trade measures may have one of several motivations:

International trade may expand or create markets that encourage over-exploitation of resources. Limiting or eliminating trade may assist national efforts to enforce limits on harvesting or to eliminate poaching — for example, restrictions on international trade in elephant ivory.

The resources in question are highly migratory or are domiciled or harvested in the global commons — for example, sea turtles, tuna, and the ozone layer. Trade measures may be necessary to enforce prohibitions or limits on the taking or use of these natural resources; encourage compliance by members who fail to fulfill their obligations under the agreement; or encourage nonmembers or free riders to comply with, or become participants in, the regime. For example, the Montreal Protocol prohibits members from importing ozone-depleting substances, as well as products containing these substances, from nonparticipants.

106 See source at footnote 22.
In contrast, encouraging certain types of trade may ease the economic burden of achieving conservation and environmental protection goals. For example, CITES encourages trade of animals raised in captivity, and the Framework Convention on Global Climate Change envisions emissions trading that may encourage the least costly geographic distribution of emission reduction efforts and reduce burdens on economic growth.

Even when taken under the auspices of international agreement, trade measures that support environmental goals often conflict with the requirements of GATT and other WTO agreements, and may not qualify for one of the general exceptions provided by these agreements. This said, no complaint concerning a trade measure taken pursuant to an MEA has ever been brought before a GATT or WTO dispute settlement panel,\textsuperscript{107} and in recent years, the WTO Secretariat and Appellate Body have expressed increasingly benign views toward trade measures if undertaken within the context of an international environmental regime where the affected parties are all members.\textsuperscript{108} The thorniest problems may lie in resolving conflicts emerging from actions taken by WTO members participating in an MEA that adversely affect the commercial interests of other WTO members who are not participants in the MEA.

This chapter examines the major aims and trade provisions of five agreements: CITES, the Montreal Protocol, the Basel Convention, the Cartagena Protocol, and the Kyoto Protocol.

\textbf{Convention on International Trade in Endangered Species of Wild Fauna and Flora}

CITES was negotiated in 1973, came into force in 1975, and currently has 154 parties. It aims to limit international markets for endangered species by specifically regulating and restricting certain kinds of trade. Briefly, the Convention divides the species it covers into three groups:

\textsuperscript{107} Zimbabwe did initiate a process concerning African ivory in June 1997 that later became moot. See text at footnote 170.

\textsuperscript{108} WTO 1996, para. 174(iv) and \textit{Shrimp-Turtle}, para. 132 and 135.
Appendix I lists animals and plants threatened with extinction;

Appendix II lists animals and plants that could become endangered unless trade is regulated; and

Appendix III lists animals and plants protected by individual participants that have requested assistance from other parties to the agreement.

For Appendix I species, both an export and an import permit are required. Governments in exporting countries may grant permits only when they have determined that the export will not be detrimental to the survival of the species; the specimen has not been obtained in violation of laws that protect fauna and flora; the specimen will be prepared and shipped so as to minimize risk of injury, damage or cruel treatment; and an appropriate permit has been granted by the importing country. Governments in importing countries may grant permits only when they have determined that the import will not be for purposes detrimental to survival of the species, the recipient of the import is prepared suitably to house and care for the specimen, and the import will not be used for commercial purposes.\(^9\)

Appendix II and III species only require export permits, but importing countries may not accept listed specimens without an export permit.\(^10\) In this way, the customs authorities in importing countries assist the enforcement of conservation laws and regulations in exporting countries.

To implement these measures, many participating states have established annual export quotas.

Trade is prohibited with nonparties except where a nonparty provides documentation “which substantially conforms with the requirements” of the Convention. The purposes are to encourage nonparties to join the Convention, and to restrict the potential for nonparties to become transit countries for illegal trade.\(^11\)

\(^9\) CITES, Article III.2 and III.4.
\(^10\) CITES, Article IV.2 and IV.4.
Reconciling Trade and the Environment

In several cases, the Standing Committee has recommended that all parties implement stricter domestic measures (read: trade sanctions) against those parties found to be in persistent noncompliance with the requirements of the Convention. This has included the United Arab Emirates (1985-1990), Thailand (1991-1992) and Italy (1992-1993). This procedure has also been used against nonparties that have refused to provide comparable documents to those required by the Convention, including El Salvador (1986-1987) and Equatorial Guinea (1988-1992), which later became parties to the Convention. Other countries have come into compliance with, or have joined, the Convention after unilateral sanctions were applied by the United States (against Singapore) and the EU (against Indonesia).112

Montreal Protocol on Substances that Deplete the Ozone Layer

The Montreal Protocol to the 1985 Vienna Convention on the Protection of the Ozone Layer was negotiated in 1987, implemented in 1989, and currently has 122 parties. It seeks to phase out and eliminate the use of Ozone Depleting Substances (ODS), principally chlorofluorocarbons (CFCs).

ODS emissions can occur both as a consequence of their use in products, ODS-containing products such as air conditioners, and their use in the production of certain other products, noncontaining products such as electronic components. Moreover, ODS emissions have the same effect on the earth’s protective ozone layer regardless of the location where they are emitted.

Therefore, in order to be successful, a regime to phase out the incorporation of ODS in products and the use of ODS in production processes must be nearly universal. To prevent the flight of production to nonparticipating parties, the Montreal Protocol envisioned limits on trade with nonmembers of ODS, ODS-containing products, and noncontaining products using ODS in their production process. In addition, the

framework provided that nonparties in compliance with the Protocol be treated as parties (i.e., participants). 113

Through the Protocol, parties established limits on national levels of consumption, which was defined as production plus imports less exports. In addition, bans were placed on imports and exports of ODS from nonparticipants, and bans were placed on imports from nonparticipants of the following ODS-containing products: automobile and truck air conditioners; domestic and commercial refrigeration and air-conditioning/heat pump equipment; aerosol products (except medical aerosols); portable fire extinguishers; insulation boards, panels and pipe covers; and prepolymers.114

Initially, participants considered a ban on imports from nonparticipants of products made with, but not containing, ODS. However, the process of tracking such products would have been prohibitively expensive, and nonparticipants were few and not very industrially developed when the idea was dropped. Consequently, the ban on products made with, but not containing, ODS was determined not to be worth the cost.115

These provisions are intended to encourage all countries to participate by denying nonparticipants access to ODS supplies and markets for ODS and ODS-related products, and to prevent the migration of ODS production to nonparticipating countries.116 Initially, China and Korea expanded CFC production but acceded to the Protocol when they recognized the disadvantages of being shut out of industrial–country markets.117 According to an OECD analysis:

The Republic of Korea is perhaps the best example. Domestic ODS production was growing, from 36 per cent of consumption in 1989 to 53 per cent in 1990, and self-sufficiency could probably have been attained. Also, initial estimates of the adaptation costs were much higher than

113 Montreal Protocol, Article 4.
114 Brack 1996, pp. 45-47.
the amount of funds expected to be made available under the Multilateral Fund. However, Korea had a large and growing export-oriented electronics industry, producing exports valued at $13.5 billion in 1989. Trade provisions of the Protocol threatened access to main markets of the U.S. and Europe. Korea ultimately acceded to the Protocol in 1992.118

To encourage compliance, the 1990 London Amendment created a Multilateral Fund to assist developing countries, and as of 2000, industrialized countries had contributed more than $1 billion.119 Technical assistance, information on new technologies, training, and demonstration projects are also made available through the fund.

An Implementation Committee was established in 1990 to accept and report on submissions received from one or more parties or from the Secretariat acting on its own initiative. Countries found in noncompliance could be excluded from trade in ODS and products made with ODS.

Noncompliance procedures are nonconfrontational, conciliatory and cooperative. Their aim is to help offending countries achieve compliance. However, the potential for loss of financial assistance and trade measures provides an important underpinning for this process.120

In 1997, in response to persistent noncompliance with phase-out schedules by Russia and other economies in transition, a ban was placed on Russian exports of used, recycled or reclaimed substances. In addition, in 1997, participants were required to begin licensing all exports and imports to ensure the integrity of global information on ODS trade and to curb illegal trade.121

118 OECD 1997c, p. 34.
Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal

In the 1980s, industrialized countries tightened environmental regulations, and hazardous waste disposal costs rose. This motivated the shipment of waste to developing countries and Eastern Europe. In reaction, the Basel Agreement was negotiated in 1989, came into force in 1992, and currently has 148 parties. Categories of waste covered by the Convention include toxic, poisonous, explosive, corrosive, flammable, eco-toxic, and infectious materials.\textsuperscript{122}

The central objective of the Convention is to encourage the “environmentally sound management” of waste through an integrated life-cycle approach. This involves strong controls from the generation of waste through storage, transport, recycling, and final disposal. A central principle of the regime is that hazardous waste is best dealt with as close to the source as possible, and control of transboundary shipments has been the primary objective of participants.\textsuperscript{123}

Under the Convention, transboundary shipments of waste require prior written notification by the state of export to the state of import, and the latter’s prior consent. Each shipment of waste requires a movement document, and shipments without such documents are to be made illegal under national law. The Convention requires governments to prohibit a shipment if they believe the waste will not be properly managed at its destination, and it permits governments to prohibit imports.\textsuperscript{124} No category of waste covered by the Convention may be exported to states that are not parties to the Convention, unless the nonparty is a participant in another convention providing similar protections.\textsuperscript{125}

In addition to these efforts, the Convention requires participants to submit information each year about their generation and movement of


\textsuperscript{123} Ibid.

\textsuperscript{124} Basel Convention, Article 4.

\textsuperscript{125} Basel Convention, Articles 4 and 11.
waste, and the Secretariat offers technical assistance to developing countries through Regional Centers in Eastern Europe, China, India, Southeast Asia, Latin America, and the Caribbean.

Article 20 provides for the settlement of disputes among participants regarding interpretation or compliance through “negotiation or any other peaceful means of their choice.” If this fails, the parties to a dispute may agree to accept an arbitration procedure set out in Annex VI or to submit the dispute to the International Court of Justice.

From the outset, there were pressures to go further. In the 1991 Bamako Convention, African countries agreed to prohibit all imports from non-participating parties, and adopted a notification-and-consent procedure for transboundary movements of waste among parties. The Lome Convention bans all shipments of hazardous waste from the EU to African, Caribbean and Pacific developing countries.  

In 1995, the Ban Amendment to the Basel Convention was negotiated, prohibiting all hazardous waste exports for final disposal and recycling from Annex VII countries (members of the OECD, EU and Liechtenstein) to non-Annex VII countries. This amendment has not yet received the necessary number of ratifications to come into force.

The United States signed the Basel Convention but has not ratified it. A particular concern in Congress is the treatment of recyclable materials. After the Ban Amendment, efforts to ratify the Convention in Congress ceased.

**Cartagena Protocol on Biosafety**

Negotiated in 2000, the Cartagena Protocol is a protocol to the 1992 Convention on Biological Diversity. It will come into force when ratified by fifty governments. The purpose of the protocol would be to ensure adequate protection in the transfer, handling and use of living modified organisms (LMOs) resulting from biotechnology, organisms that

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126 Brack 1999, op. cit., p. 278.

may adversely affect conservation and the sustainable use of biological diversity.  

For the initial transboundary introduction of an LMO into the environment of a party, the exporting party would be required to notify and obtain the prior informed consent of the importing party. The decision of the importing party shall be taken in accordance with risk assessment undertaken in a “scientifically sound manner,” but “the lack of scientific knowledge or scientific consensus should not necessarily be interpreted as indicating a particular level of risk, an absence of risk, or an acceptance of risk.”

Two aspects of this agreement are particularly important. First, the agreement clearly embraces the precautionary principle. It provides broader latitude to exclude LMOs through risk assessment than do SPS or TBT.

Second, like CITES, the Montreal Protocol, and the Basel Convention, it would require parties to encourage nonparties to adhere to the requirements of the Convention. Unlike these three prior agreements, however, it would not require parties to refrain from trade in covered products with nonparties.

Article 34 stipulates that the first Conference of Parties shall establish cooperative procedures and institutional mechanisms to encourage compliance and to address cases of noncompliance. Disputes would be settled in accordance with procedures set out in Article 27 of the Convention on Biological Diversity. The latter provides for initial efforts through negotiations and mediation. If these fail, the parties may choose arbitration or refer the dispute to the International Court of Justice.

UN Framework Convention on Global Climate Change and the Kyoto Protocol

The UN Framework Convention on Global Climate Change was negotiated in 1992, went into force in 1994, and has 178 parties. Its objectives were to stabilize greenhouse gas concentrations in the

129 Cartagena Protocol, Article 15.1.
130 Cartagena Protocol, Annex III.4
atmosphere and prevent dangerous anthropogenic interference with the
earth’s climate system. It encouraged developed countries to take the lead
by reducing greenhouse emissions to 1990 levels by the year 2000 and to
report on their efforts to achieve these voluntary goals.

In the years following the ratification, it became apparent that
voluntary measures were not working. This led to the Kyoto Protocol,
which was negotiated in 1997 but has not yet come into force. The Protocol
would require developed countries to reduce average anthropogenic
greenhouse gas emissions between 2008 and 2012 to 95 percent of 1990
levels. Required reductions vary by country, and the targets for the United
States, EU and Japan are 93, 92 and 98 percent, respectively.

The Protocol has attracted opposition in the United States, in part
because it requires no emissions reductions by developing countries such as
India, China and Brazil, or even very advanced industrializing countries
such as Korea. President Bush has indicated he will not submit the Protocol
to the Senate for ratification. To enter into force, the Protocol must be
ratified by 55 percent of the parties to the Convention, including
industrialized countries accounting for 55 percent of that group’s carbon
dioxide emissions.\textsuperscript{131} Other industrial countries may choose to go forward
without the United States.

Whether the Protocol is ever implemented, modified to address
U.S. concerns or replaced by another agreement, certain characteristics of
the Protocol would likely be replicated in any regime that emerges. These
include national targets and emissions trading, and how these are
implemented could have important implications for trade.

First, how nations choose to achieve emissions targets is crucial to
the international trading regime. If national governments rely on taxation of
energy use, standards for PPMs, and reduced subsidies for pollution-
intensive activities, interaction with WTO rules would likely center on
measures taken to buffer domestic industries from the international
competitive consequences of these policies. For example, border-tax
adjustments for energy, or carbon-use taxes, or import regulations on
nonconforming products, if applied to unincorporated PPMs, could violate
WTO rules.\textsuperscript{132}

\textsuperscript{131} Kyoto Protocol, Article 25.1.

\textsuperscript{132} See text at footnotes 60 -61.
If national governments rely instead on a system of emissions permits, other issues would emerge. For example, if some national governments rely on auctions and others simply give permits away through allocation rules, prospects are high that firms operating under the auction regime would complain that foreign firms who did not pay for permits enjoyed subsidies actionable under SCM. These issues become even murkier if some governments sell emissions permits but set prices by nonauction methods. Suffice it to say, the whole process of allocating emissions permits, if not pursued by auction, offers all governments opportunities implicitly to subsidize, or excessively tax, pollution-intensive activities to the detriment or benefit of rival firms in other countries. This could lead to petitions for countervailing duties as permitted by SCM and pleas for border-tax adjustments.

Second, the Protocol would allow industrialized countries that overshoot their emission-reduction targets to sell emission units to other industrialized countries. Similarly, industrialized countries could obtain emission units by financing emission-reduction projects in developing countries. This regime would create markets for emission units. The market for these units would likely fall under GATS disciplines, because these units would have many of the characteristics of financial instruments. This said, the manner in which national governments allocate these credits to polluting industries again raises questions about the impacts on competitiveness and the potential for conflicts with WTO rules.

**Other Agreements**

Many other agreements either employ trade measures or could result in measures affecting trade. GATT, WTO and the United States International Trade Commission have catalogued these, among which are the 1966 International Convention for the Conservation of Atlantic Tunas (ICCAT), the 1980 Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR), and the 1946 International Convention for the Regulation of Whaling.

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133 Brack, Grubb and Windram, pp. 119-121.

Through ICCAT, 31 contracting parties seek to manage populations of 30 species of Atlantic tuna to achieve the maximum sustainable yield.

ICCAT has employed a wide range of tools, including catch quotas, size limits, closed areas and seasons, and gear restrictions. As with most efforts to manage renewable resources in the global commons, it is important to obtain the cooperation of all major participants in harvesting, and also to constrain free riders, and ICCAT has employed trade measures to serve these objectives.

The Convention language does not directly provide for trade measures, but resolutions taken by ICCAT have contained them. For example, a 1994 resolution to ensure the effectiveness of a conservation program recommended that “Contracting Parties take nondiscriminatory trade restrictive measures, consistent with international obligations on blue fin tuna products.” Also, import bans were imposed on nonmembers Belize and Honduras in 1997 and on Panama in 1998, in order to obtain their cooperation.135 To remove these restrictions, Honduras and Panama joined the Convention in 1998 and 2001, respectively.136

The 1980 CCAMLR seeks to conserve all living organisms in the Antarctic region. It does not prohibit harvesting but requires that harvesting be conducted in accordance with conservation principles set out in Article II. The Convention has only 29 contracting parties. Among the conservation measures adopted under the Convention is a requirement that contracting parties deny landing or transshipment of fish from the vessel of a noncontracting party:

sighted engaging in fishing activities within the Convention Area, and therefore presumed to be undermining the effectiveness of CCAMLR Conservation Measures, unless the vessel has been inspected by authorized Contracting Party officials and can establish that the fish were caught outside the Convention Area or in compliance with all


relevant CCAMLR Conservation Measures and
requirements under the Convention.\textsuperscript{137}

The 1946 International Convention for the Regulation of Whaling
was negotiated by 15 whaling countries. It was later joined by many
nonwhaling countries, and currently has 42 signatories.

The original objective was to conserve and manage the whale
population but, in 1986, the International Whaling Commission set the
quota for commercial whaling at zero,\textsuperscript{138} and it has not lifted this ban.
Norway lodged a reservation to the moratorium and is not formally bound
by it. Iceland withdrew from the Commission in 1992. Japan, Norway, Peru
and the former Soviet Union have lodged formal objections to the
moratorium, and Japan has captured whales for scientific research purposes
as is permitted by the Convention.

The Commission has few enforcement powers but has symbolically
condemned Norway and Japan for whaling activities. In 1986, the
Commission recommended that products obtained from whales taken for
scientific research purposes “should be utilized primarily for local
consumption,” meaning they should not be exported. U.S. threats of trade
sanctions have reduced the number of whales taken by Norway and Japan.
However, these sanctions could result in a WTO complaint.\textsuperscript{139}

\textsuperscript{137} WTO 2000, p. 11.

\textsuperscript{138} Limited catch quotas have been permitted for aboriginal subsistence
communities in Arctic areas.

\textsuperscript{139} Woodrow Wilson Center for Scholars, “International Convention for the
Also, International Whaling Commission web site,
Chapter 4:
Conflicts between Environmental Measures and WTO Obligations

Regulations and standards implemented to protect the environment may conflict with WTO obligations. This includes those having wholly domestic purposes and those reflecting broader concern for the global commons. For the purposes of this study, these may be divided into three broad categories:

Domestic Measures
  Product Characteristics and Performance Requirements
  Production Processes
  - Incentives to Adopt Certain Processes (Subsidies)
  - Unincorporated PPMs

Unilateral Measures to Protect the International Environment

Multilateral Measures to Protect the International Environment

Measures to Protect the Domestic Environment

WTO members may enact whatever measures they wish to protect the domestic environment, but if the measures affect competition between domestic and imported products, or among imported products in their domestic market, they are subject to the requirements of GATT Articles I, III and XI, SPS and TBT, and other relevant WTO provisions. These measures may be divided into two general categories: (1) regulations and standards affecting product characteristics and performance, and (2) measures affecting the way products are made but not their physical characteristics or performance (subsidies and unincorporated PPMs).
Product Characteristics

Generally, members may establish requirements for product characteristics and performance – e.g., safety glass and mileage requirements for motor vehicles. However, to be WTO consistent, these measures must treat foreign products no less favorably than domestic products, be based on sound science, and restrict trade no more than is necessary to achieve their objectives.

As noted earlier in *Thai Cigarettes and Reformulated Gasoline*, panels found domestic regulations intended to address genuine health and environmental purposes inconsistent with the GATT because they treated foreign products less favorably than domestic products.\(^{140}\)

In *United States – Taxes on Automobiles*, a GATT panel found that the United States did not violate Article III.2 by imposing a luxury tax on cars sold over $30,000 and a gas guzzler tax on cars attaining less than 22.5 miles per gallon. In addition, the United States required manufacturers to obtain a fleet average of at least 27.5 miles per gallon and to qualify their imported and domestic fleets separately. The latter discouraged imports by prohibiting makers of large cars in the United States from offsetting these with smaller, imported cars in fleet averaging.

The GATT panel found that separate accounting for imported and domestic cars violated Article III.4 and could not be justified under Article XX(g), because this requirement was not primarily aimed at conserving resources. It concluded that a fleet averaging requirement could be consistent with the GATT if it did not distinguish between imported and domestically produced cars.\(^{141}\)

Even if domestic regulations and standards treat foreign and domestic products equally, the SPS and TBT require that they not restrict trade more than is necessary and that they be based on risk assessment and scientific evidence. In *Hormones*, the Appellate Body upheld the panel finding that the EU import ban on meat and meat products from cattle treated with growth hormones was inconsistent with Article 5.1 of the SPS Agreement because it was not based on risk assessment. In doing so, it

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\(^{140}\) See text and sources at footnotes 66 and 67.

stressed that risk assessments be based on sound science as required by Article 2.2.\(^{142}\)

Absent suitable scientific evidence, members may take temporary measures, but what standards will be applied to the application of the precautionary principle – e.g., level of irreversible risk and preliminary evidence – has not yet been adequately clarified.

**Production Processes**

Members may impose whatever requirements they wish on how products are made, in order to protect their domestic environment – for example, emissions requirements for steel mills or treating cattle with growth hormones. Such regulations often raise production costs, and if domestic regulations are more costly than those imposed in other countries, these may encourage imports, discourage exports, and motivate domestic firms to move production abroad. Theoretically, to discourage the loss of industry, governments may:

- subsidize domestic production to level the playing field – potentially the most comprehensive solution, in that it can restore the domestic industry to its preregulatory competitive position;

- subsidize exports only – almost as effective for export-oriented industries, because it can level the playing field in foreign markets; or

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\(^{142}\) Article 2.2 of the SPS Agreement reads:

Members shall ensure that any sanitary and phytosanitary measure is applied only to the extent necessary to protect human, animal and plant life or health, is based on scientific principles… (emphasis added in the Appellate Body report)

The Appellate body stated:

…Articles 2.2 and 5.1 should constantly be read together. Article 2.2 informs Article 5.1: the elements that define the basic obligation set out in Article 2.2 impart meaning to Article 5.1.

See *Hormones*, para. 180.
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require competing imported products to be made by the same, or comparable, methods as domestic products.

As discussed in Chapter 5, economists have historically viewed differences in national environmental and conservation regulations as being determined by local absorptive capacities and endowments, culture and income levels. Hence, they have viewed differences in production costs imposed by regulations as elements of comparative advantage, and measures to offset these cost differences as trade distortions.

The merits of this reasoning are strongly affected by whether the effects of domestic pollution and resource depletion are wholly local or have consequences for the global commons. Suffice it to say, however, GATT and WTO rules and their interpretation by dispute settlement panels have often been consonant with this reasoning. This subject may be divided into two sets of issues: subsidies and the product vs. process distinction in WTO rules.

Subsidies

Nonagricultural subsidies are governed by GATT Article XVI and SCM. Export subsidies are prohibited, and domestic production subsidies may be subject to countervailing duties if they cause injury to the domestic industry of an importing country, and they may be actionable under dispute settlement if they adversely affect the exports of a competitor in a third country market.

Two points are noteworthy. First, up to twenty percent of the cost of retrofitting existing facilities to meet new environmental regulations is exempt from these disciplines.

Second, adverse-effects-in-third-country-markets cases are tough to win. Hence, domestic subsidies for environmental measures in an exporting industry, though actionable, will likely only draw a response from a trading partner under WTO rules if this aid, summed with other aid to the industry, is large enough to attract a countervailing duty suit in an importing country. Consequently, modest environmental subsidies in import-competing industries are unlikely to attract much attention.

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The Agreement on Agriculture does permit subsidies that compensate for the cost of meeting the requirements of environmental and conservation programs.\textsuperscript{143}

**Product vs. Process Distinctions**

GATT and WTO panels have interpreted MFN and national-treatment rules to permit members to distinguish among imported products on the basis of their physical characteristics but not on the basis of unincorporated PPMs. Often, this is referred to as the product vs. process distinction.\textsuperscript{144}

The origins of this distinction date back to *Belgium Family Allowances*. It has been supported by the reasoning that permitting differential treatment of imports on the basis of social policy in their country of origin would open the door to discrimination on the basis of innumerable differences among national policies, which could completely undermine nondiscrimination in the GATT and WTO.

In the 1991 *Tuna Dolphin* case (*Tuna I*), the United States required fishermen under its jurisdiction (e.g., U.S. flag vessels) taking tuna within the eastern tropical Pacific to implement specific measures to limit the incidental killing of dolphins. In addition, it imposed an embargo on nations that did not impose a similar regulatory regime on their fleets, and imposed an embargo on Mexican tuna. The panel found:

\ldots Article III:4 calls for a comparison of the treatment of imported tuna as a product with that of domestic tuna. Regulations governing the taking of dolphins incidental to the taking of tuna could not possibly affect tuna as a product. Article III:4 therefore obliges the United States to accord treatment to Mexican tuna no less favourable than that accorded to United States tuna, whether or not the incidental taking of dolphins corresponds to that of United States vessels.\textsuperscript{145}

\textsuperscript{143} See text at footnote 105.

\textsuperscript{144} For example, see Weiss and Jackson, pp. 32-34.

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In the 1994 Tuna Dolphin case (Tuna II), the panel similarly found that U.S. import embargoes based on the way tuna were caught violated Article III.4. This said, the opinion regarding the potential for the extraterritorial application of unincorporated PPMs under Articles XX(b) and XX(g) in Tuna II was somewhat different than Tuna I. It began a shift in panel reasoning, which was continued in Shrimp-Turtle, that may ultimately permit members to craft regulations that distinguish among products on the basis of how they are made if these regulations are directed at protecting the global commons.

Unilateral Measures to Protect the International Environment

In Tuna I, the United States argued that Article XX applied because dolphins roam the seas and, therefore, are common resources within the jurisdiction of no one GATT member. In particular, the United States argued that Article XX(b) applied because no alternative measure was available or had been proposed that could reasonably be expected to protect the lives and health of dolphins; and Article XX(g) applied because, without conservation measures, a common natural resource would be exhausted, and without restrictions on imports, regulations on domestic production would be ineffective.

Examining the negotiating history of Article XX(b) and the text of XX(g), the panel found that the United States could not rely on these general exceptions, that members could only invoke these exceptions for measures that protect health and the environment and conserve exhaustible resources within their own jurisdictions. It further stated:

The panel considered that if the broad interpretation of Article XX(b) suggested by the United States were accepted, each contracting party could unilaterally determine the life or health protection policies from which other contracting parties could not deviate without jeopardizing their rights under the General Agreement.


147 Tuna I, para. 3.32, 3.33 and 3.49.

148 Tuna I, para. 5.25, 5.26, 5.30 and 5.31.
The General Agreement would then no longer constitute a multilateral framework for trade among all contracting parties but would provide legal security only in respect of trade between a limited number of contracting parties with identical internal regulations.

The panel considered that if the extrajurisdictional interpretation of Article XX(g) suggested by the United States were accepted, each contracting party could unilaterally determine the conservation policies from which other contracting parties could not deviate without jeopardizing their rights under the General Agreement. The considerations that led the Panel to reject an extrajurisdictional application of Article XX(b) therefore apply also to Article XX(g).  

In *Tuna II*, the United States argued that there was no requirement in Article XX(g) for the resources in question to be within the territorial jurisdiction of the country taking the conservation measures. The panel stated that it:

...could see no valid reason supporting the conclusion that the provisions of Article XX(g) apply only to policies related to the conservation of exhaustible resources located within the territory of the contracting party invoking the restrictions. ...the policy to conserve dolphins in the eastern tropical Pacific, which the United States pursued within its jurisdiction over its nationals and vessels, fell within the range of policies covered by Article XX(g).  

The panel found a U.S. embargo of tuna taken by foreign fleets that did not employ U.S. prescribed methods could fall within the Article XX(g) exception. The panel stated that, if Artcle XX were interpreted to permit members to take trade measures to implement conservation policies within their own jurisdiction, the basic objectives of the GATT would be maintained; however, if it were interpreted to permit members to force other

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149 *Tuna I*, para. 5.27 and 5.32.
150 *Tuna II*, para. 5.11.
151 *Tuna II*, para. 5.20
members to change policies within their jurisdiction, the balance of rights and obligations under the GATT would be seriously impaired.\textsuperscript{152}

The United States similarly sought to invoke Article XX(b) to justify its embargoes, and the panel applied essentially the same reasoning to reject this claim.\textsuperscript{153}

In \textit{Shrimp-Turtle}, the United States embargoed shrimp from countries that did not enter into an arrangement to employ turtle excluding devices (TEDs) in waters where these animals were at risk from shrimping, and it again sought to invoke Article XX(g). In remarks preliminary to its assessment of the applicability of XX(g), the Appellate Body stated:

\begin{quote}
\ldots conditioning access to a Member’s domestic market on whether exporting members comply with, or adopt, a policy or policies unilaterally prescribed by the importing Member may, to some degree or other, be a common aspect of measures falling within the scope of one or another of the exceptions (a) to (j) of Article XX.\textsuperscript{154}
\end{quote}

Assessing the U.S. claim that its embargo falls within XX(g), the Appellate Body found:

Sea turtles are an exhaustible resource. After noting the WTO preamble reference to sustainable development, it noted that CITES includes sea turtles on its list of species threatened with extinction, sea turtles are highly migratory animals, and none of the parties to the dispute claims exclusive ownership of sea turtles.

The U.S. embargo relates to the conservation of this exhaustible resource. It noted protecting sea turtles was a policy shared by all participants and third parties to the dispute; TEDs are an effective means for protecting sea turtles; and the U.S. policy only applied to shrimp taken where there is a likelihood of intercepting sea turtles.

\textsuperscript{152} \textit{Tuna II}, para. 5.26 and 5.27.

\textsuperscript{153} \textit{Tuna II}, para. 5.38 and 5.39.

\textsuperscript{154} \textit{Shrimp-Turtle}, para. 121.
The U.S. measure was made effective in conjunction with restrictions on domestic production and consumption. The Appellate Body noted the United States employs monetary sanctions and civil penalties to ensure use of TEDs by fishing vessels within its jurisdiction.¹⁵⁵

Finding the U.S. measure consistent with paragraph (g) of Article XX, the Appellate Body then analyzed whether the application of this measure was consistent with the requirements of the chapeau of Article XX. Such consistency requires that the measure must not be applied so as to constitute:

an arbitrary discrimination between countries where the same conditions prevail,

an unjustifiable discrimination between countries where the same conditions prevail, or

a disguised restriction on trade.

Prefacing its analysis, the Appellate Body noted that Article XX must be read in the context of the WTO preambular language regarding sustainable development and further noted specific reference to the Rio Declaration and Agenda 21 in the 1994 WTO Decision on Trade and the Environment. Turning to the chapeau, specifically, it noted that its requirements embody:

the recognition on the part of WTO members of the need to maintain a balance of rights and obligations between the right of a Member to invoke one or another of the exceptions of Article XX, specified in paragraphs (a) to (j), on the one hand, and the substantive rights of the other members under GATT 1994, on the other hand. Exercise by one Member of its right to invoke an exception, such as Article XX(g), if abused or misused, will, to that extent, erode or render naught the substantive treaty rights... of other Members.¹⁵⁶

¹⁵⁵ Shrimp-Turtle, para. 125-145.
¹⁵⁶ Shrimp-Turtle, para. 156.
The task of implementing and applying the chapeau is, hence, essentially the delicate one of locating and marking out a line of equilibrium between the right of a Member to invoke an exception under Article XX and the rights of other Members under varying substantive provisions (e.g., Article XI) of the GATT 1994, so that neither of the competing rights will cancel out the other and thereby distort or nullify or impair the balance of rights and obligations constructed by Members themselves in that Agreement. The location of the line of equilibrium, as expressed in the chapeau, is not fixed and unchanging; the line moves as the kind and shape of the measures at stake vary and as the facts making up specific cases differ.\textsuperscript{157}

The Appellate Body found that the U.S. measure as applied constituted an unjustifiable discrimination among trading partners. Among other things, the relevant U.S. statute and regulation required that all shrimp trawlers operating where there is a likelihood of intercepting sea turtles employ TEDs comparable in effectiveness to those used in the United States; however, as actually applied, the U.S. regulatory program required foreign governments to require their fleets to adopt essentially the same methods:

it is not acceptable, in international trade relations, for one WTO Member to use an economic embargo to require other Members to adopt essentially the same regulatory program, to achieve a certain policy goal, as that in force within that Member’s territory, without taking into consideration different conditions which may occur in the territories of those other Member countries.\textsuperscript{158}

In addition, the Appellate Body cited the failure of the United States to engage the complainants in serious across-the-board negotiations to conclude a bilateral or multilateral agreement, as encouraged by Principle 12 of the Rio Declaration, Paragraph 2.22(i) of Agenda 21, Article 5 of the Convention on Biological Diversity, the Convention on the Conservation of Migratory Species of Wild Animals, and the Report of the WTO CTE

\textsuperscript{157} \textit{Shrimp-Turtle}, para. 159.

\textsuperscript{158} \textit{Shrimp-Turtle}, para., 164.
endorsed by WTO members at the 1998 Singapore Ministerial Conference.\footnote{Shrimp-Turtle, para., 166-168.}

Further, it noted that the United States did engage five Latin American countries in negotiations – Brazil, Costa Rica, Mexico, Nicaragua, and Venezuela – but it did not engage the complainants – India, Pakistan, Thailand, and Malaysia.

For these and other reasons, the Appellate Body found that the U.S. regulation provisionally qualified under paragraph (g) of Article XX, but as applied, was an unjustifiable and an arbitrary discrimination among shrimp exporting countries seeking access to the U.S. market. Having disqualified the U.S. measure on these counts, it did not examine whether it was a disguised barrier to trade.

Subsequently, the United States revised the application of the regulation to meet the Appellate Body’s objections without altering its most essential effect – excluding imports of shrimp caught in ways that do not protect sea turtles as effectively as the U.S. regime. In addition, it engaged Asian trading partners in negotiations to create a multilateral regime.

Malaysia objected to the continued U.S. embargo and petitioned the Dispute Settlement Body for relief. The original panel reviewed the changes in the U.S. application of its regulation, and in 2001, it found that it had adequately addressed the objections of the Appellate Body and let the embargo stand.\footnote{United States – Import Prohibition of Certain Shrimp and Shrimp Products, Recourse to article 21.5 by Malaysia, Report of the Panel, WT/DSS8/RW, 15 June 2001, para. 6.1.}

The United States now excludes shrimp from certain nations on the basis of how they are caught (read: on the basis of unincorporated PPMs) outside its territorial jurisdiction.
Multilateral Measures to Protect the International Environment

Trade measures taken pursuant to MEAs often conflict with WTO obligations. For example, the Montreal Protocol ban on trade in ODS with nonparticipants violates GATT Article I when nonparticipants are also WTO members. This section briefly enumerates conflicts between MEAs described above and WTO obligations.¹⁶¹ This is followed by a discussion of how the WTO is approaching these conflicts, and the principles that would likely come into play if a trade action taken pursuant to an MEA resulted in a formal WTO dispute settlement process.

Conflicting Provisions

Most conflicts between trade measures taken pursuant to MEAs described in this chapter and WTO rules center on GATT Articles I, III, and XI, and the SPS, TBT and SCM agreements.

Article I

Article I requires that, for exports and imports, “any advantage, favor or immunity granted any contracting party” must also be accorded “all other contracting parties.” CITES, the Montreal Protocol and the Basel Convention require their parties not to trade in some goods with nonparties unless alternative arrangements are made to conform nonparties’ practices to the essential requirements of their regimes. Conditioning trade among parties and nonparties to compliance with specific environmental policies, or any other set of social or economic policies, is inconsistent with Article I as interpreted since Belgium Family Allowances.

CITES prohibits trade in Appendix I species for commercial purposes if specimens are taken from wild habitats but permits trade in these species if specimens are raised in captivity. This could raise a “like product” issue under Article I.¹⁶²

¹⁶¹ Detailed treatments regarding CITES, Basel, and Montreal Protocol are provided in OECD 1998, and Housman, et. al.

The Ban Amendment to the Basel Convention, if implemented, would discriminate against developing countries and potentially harm their waste disposal and recycling industries. It could also discriminate against industrialized countries if those choosing not to participate in its regime were subject to trade measures by participants.

The denial of landing and transshipment rights to fishing vessels sighted in the Antarctic region and registered under the flag of a nonparty to the CCAMLR, the various trade measures endorsed by ICCAT to protect tuna, and threatened trade sanctions against Norway and Japan for unauthorized whaling also conflict with Article I. Similarly, if parties to the Cartagena Protocol choose not to accept imports of LMOs from noncooperating parties, they would likely violate Article I.

**Article III**

Article III requires that foreign products be accorded no less favorable treatment than like domestic products in taxation and regulation. Various forms of domestic taxes and regulations have been employed by parties to the Montreal Protocol to accomplish their phase-out of consumption and production of ODS. If applied differentially to imports and domestic products, these could violate Article III.¹⁶³

Much the same could be said of prospective emissions standards for products intended to meet emissions targets set by the Kyoto Protocol. The U.S. experience in *Automobiles* illustrates some of the kinds of problems that may emerge.

**Article XI**

Article XI prohibits quantitative restrictions on exports and imports. CITES restrictions on exports of endangered species for commercial purposes, as well as the export quotas imposed by various countries, are inconsistent with Article XI. Similarly, import and export bans on ODS imposed by participants in the Montreal Protocol conflict with Article XI obligations, as did import embargoes imposed through ICCAT on Belize, Honduras and Panama. Ban Amendment restrictions on exports to developing countries would similarly conflict with Article XI.

¹⁶³ OECD 1998, p. 34.
Some Issues under Other WTO Provisions

Were parties to the Cartagena Protocol to apply the precautionary principle and restrict imports of LMOs on the basis of inadequate scientific information, it would violate either the SPS or TBT, depending on which agreement was found to apply to genetically modified organisms.\footnote{See text at footnote 130.}

BTAs intended to neutralize the international competitive effects of energy taxes, carbon taxes, or other fiscal measures aimed at meeting emissions targets in the Kyoto protocol could run afoul of GATT Article XVI (Subsidies), Article II (Schedule of Concessions) and SCM. Similarly, emissions permits could be allocated in ways that subject them to challenges under SCM.\footnote{See text and sources at footnotes 61 and 132.}

The WTO Approach to Conflicts with MEAs

It is not surprising that governments write conflicting obligations into treaties. They do much the same in domestic law, as conflicts often emerge from honest efforts to balance competing public objectives and provide equity. When competing claims emerge, courts are often asked to resolve them. If the public is unhappy with the resolution, it can write new law through its legislature.

Diplomats and legislatures write provisions into treaties and laws without recognizing the full gravity of their potential effects. For example, it is likely that a significant number of WTO members did not anticipate the far-reaching consequences for the interpretation of Article XX that emerged in \textit{Shrimp-Turtle} due to the mentioning of sustainable development in the preamble of the WTO Agreement. Had they anticipated these consequences, it is reasonable to conjecture that many developing countries, some of whom opposed the United States in \textit{Shrimp-Turtle}, would have sought to enter conditioning language at the time the preamble was drafted.

International law prescribes rules for dealing with conflicts among treaties. Essentially, when states are party to two treaties, the treaty later in time prevails. This conforms to the principle \textit{lex posterior derogat priori} – the
law later in time prevails. However, two other principles have to be considered: *lex posterior generalis non derogat priori speciali* – a later, more general law does not repeal an earlier, more specific law; and *lex specialis derogat legi generali* – more specialized law prevails over more general law.166

However, relying on these principles alone is fraught with peril. If two laws impose conflicting requirements to achieve separate public purposes, and a court determines the obligations of one trump the other, opportunities may be lost to balance the objectives of both laws. In particular, the opportunity may be lost to achieve most of what each law intended. In domestic law, legislatures can move fairly quickly to address such circumstances, but in international law, where cultures collide and consensus is required, corrective action may take decades to accomplish. Suppose the WTO dispute settlement panel, relying on the fact that GATT 1994 came later in time than the Montreal Protocol, determined the latter’s trade measures were illegal. Where would that leave the global trading community?

Generally, the WTO has avoided relying on these principles. Through the work of the CTE, members have wrestled with the conflicts between WTO and MEA obligations and recognized the need to balance their sometimes competing objectives. At the 1996 Singapore Ministerial Meeting, WTO members endorsed the following CTE recommendation:

The CTE endorses and supports multilateral solutions based on international cooperation and consensus as the best and most effective way for governments to tackle environmental problems of a transboundary or global nature. WTO Agreements and multilateral environmental agreements (MEAs) are representative of efforts of the international community to pursue shared goals, and in the development of a mutually supportive relationship between them, due respect must be afforded to both.167

In *Shrimp-Turtle*, the Appellate Body reiterated this recommendation and recognized the coequal status of MEAs and WTO agreements. By relying extensively on the former to reach aspects of its

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166 Malanczuk, p. 56.

findings, it essentially imported public international environmental law into WTO jurisprudence.

In addition, at the 1996 Singapore Ministerial Conference, WTO members also endorsed the CTE finding that members do have a right to bring to the WTO dispute settlement process conflicts arising from trade measures applied pursuant to MEAs; however, it would be preferable to resolve those disputes through procedures provided by the MEAs:

While WTO Members have the right to bring disputes to the WTO dispute settlement mechanism, if a dispute arises between WTO Members, Parties to an MEA, over the use of trade measures they are applying between themselves pursuant to the MEA, they should consider trying to resolve it through the dispute settlement mechanisms available under the MEA. Improved compliance mechanisms and dispute settlement mechanisms available in MEAs would encourage resolution of any such disputes within the MEA.168

No trade action taken pursuant to a major MEA has resulted in a formal dispute settlement proceeding in the WTO. One motivation is the desire of WTO members not to undermine environmental treaties they have ratified.169 However, it should be recognized that, generally, MEAs have not established dispute settlement processes capable of providing claimants with remedies as effectively as does the WTO dispute settlement process. The WTO Appellate Body has demonstrated a willingness and capacity to address the competing trade and environmental objectives, and claimants with a grievance, be they individuals or sovereign states, will seek out the forums most capable of addressing their claims.

Regarding the latter, Zimbabwe is a member of both CITES (since 1980) and the WTO (since 1995). Yet, in January 1997, Zimbabwe applied for compensation in the WTO for loss of international ivory markets when African elephants were listed in Appendix I of CITES. The case became moot in June 1997, when the CITES Conference agreed to limited trade in ivory stockpiles.170

It would be imprudent to speculate how a conflict emerging from an MEA would be resolved, either by a WTO panel and the Appellate Body, the International Court of Justice, or some other arbitration mechanism. Respondents would likely seek shelter for their actions under Article XX(b) or (g), as the United States did in Tuna I, Tuna II and Shrimp-Turtle. The reasoning in Shrimp-Turtle indicates that the following issues would be relevant:

Are both the complainant and the respondent parties to the MEA, as well as to the WTO?

If only the respondent were a party to the MEA, the case could look much like a unilateral action discussed above, and its resolution would likely turn on principles from Tuna II and Shrimp-Turtle. Important in this context would be:

What is the relationship between the objective of the trade measure and customary and conventional international law? Does the trade measure directly address a transboundary or global environmental issue, and is its objective widely recognized by the international community? Has the complainant participated in this consensus? In Shrimp-Turtle, the U.S. measure supported the preservation of a highly migratory species (sea turtles) that was recognized by both complainants and the respondent to be threatened through their participation in CITES.

Does the trade measure meet the requirements of paragraphs XX(b) or (g), and the chapeau of Article XX? For example, is the measure necessary? Is another measure available that is less inconsistent with WTO obligations? Does it relate to the conservation objective? Is it even-handed in its treatment of imported and domestic products?
If both the complainant and respondent are parties to the MEA, does the MEA provide some latitude in crafting the trade measure? Is an alternative measure available that satisfies both the requirements of the MEA and the WTO? If not, is another measure available that is less inconsistent with WTO obligations?

The latter set of questions is consequential, because many MEAs offer members latitude in how they apply trade measures. For example, CITES stipulates that nothing in the Convention restricts the right of parties to adopt stricter measures than those required by the Convention to achieve its objectives. Similarly, the Montreal Protocol states that members may take more stringent measures than required by the agreement. Parties to these MEAs “could therefore potentially differ on whether a ‘stricter domestic measure’ is appropriate.”

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171 OECD 1998, p. 32.
Chapter 5:
Economics and the Changing Approach of the WTO

The WTO is at a critical juncture. It faces the difficult task of reconciling the rights and obligations that its agreements, and those of international environmental law, place on member governments. This is part of a more generalized challenge the WTO faces, as its goals and rules increasingly complement and conflict with those of other international regimes.

Historically, the GATT considered its function limited to trade and sought to avoid reconciling its rules with those of parallel systems of public international law. However, three sets of factors increasingly draw the WTO into this task:

the ever greater consequences global commerce has for domestic economic, environmental and social conditions;

the extension of WTO rules into nontrade areas of domestic policymaking, such as product health and safety regulations; and

the increasing likelihood the WTO will become the forum of choice for governments seeking relief from the commercial burdens imposed by environmentally motivated trade measures.

The Traditional GATT Approach

The traditional GATT approach to conflicts with parallel international regimes had sound economic foundations. It was implicitly premised on the notion that domestic markets for goods, labor, capital, and environmental resources could be regulated independently to reflect differing national preferences – for example, in regard to product safety, income redistribution, intellectual property protection and environmental quality.
Dispute settlement panels and working parties interpreted and applied GATT rules for the treatment of foreign goods by domestic fiscal and regulatory regimes to ensure equitable treatment for foreign goods (MFN and national treatment), and also to ensure that no member sought to force its internal regime (government policies, practices, methods, and outcomes) on another member as a condition for asserting its GATT rights. For the issues explored in this study, the definition and enforcement of these principles were the essential outcomes of panel findings from *Belgium Family Allowances* through *Tuna I* and *Tuna II*.

This approach had important foundations in modern economics. Formally articulated in 1919, the Heckscher-Ohlin model of global commerce assumes that certain factors of production are immobile among national economies. These are generally presumed to be most labor, certain capital, and all natural resources. Factor immobility results in separate national markets for goods and factors. National comparative advantages are defined by differences in the national prices for tradable goods, and are determined by differences in national factor endowments, consumer preferences, and fiscal and regulatory regimes. International trade connects these separate national markets, and through the resulting price arbitrage, trade encourages specialization across countries based on their comparative advantage. Such specialization results in the more efficient use of labor, capital and natural resources, and raises national incomes.

Generally, GATT rules for the treatment of foreign goods by national fiscal and regulatory regimes are consistent with the theory of international economics that derived from Heckscher-Ohlin. For example, according to modern international trade theory, tariffs are less trade-distorting than quotas, and GATT Article XI seeks to eliminate quotas in favor of tariffs. Similarly, subsidies are more effective than tariffs when governments seek to compensate for externalities and market failures, and WTO rules bind tariffs but permit governments to raise and lower production and regional development subsidies, without penalty, to the extent they do not adversely affect the industries of other members.

Historically, economists have viewed environmental resources as national or local resources and the effects of pollution and resource depletion as largely national or local in scope. Moreover, they have reasoned that government-imposed emission standards and conservation measures

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172 Heckscher and Ohlin.
are determined by objective geographic conditions and consumer preferences expressed through political processes. For example, some societies may have lower emissions standards owing to greater absorptive capacities of their geography, higher cultural tolerance for pollution, or lower incomes.

By this reasoning, differences in national emissions and conservation standards, and the pollution abatement and resource costs they impose on industry, are components of national comparative advantage. Therefore, pollution abatement and conservation standards should be set domestically, not internationally. To do otherwise would impose efficiency-reducing burdens on countries with high absorptive capacities and abundant natural resources, and would impede attainment of income-maximizing patterns of trade and specialization.

In defense of economics, this view was largely mirrored in international environmental law until the Stockholm Conference. Specifically, customary law addressed conservation and harm to the environment as an internal matter. A claim for compensation could emerge when harm to the environment in one jurisdiction caused damage in another state – this was the essential outcome in *Trail Smelter* – but pollution and resource depletion were not treated as conditions requiring concerted international regulation or imposing general obligations on sovereign states. The focus of international environmental agreements prior to the 1972 Stockholm Conference was limited to dealing with economic resources beyond national jurisdictions – for example, fish, seals and whales – where overuse of resources beyond sovereign jurisdiction compelled international cooperation.  

**The Internationalization of Regulation and the WTO**

Over the last several decades, pressures have mounted to increase international cooperation and coordination in the regulation of national markets.

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173 See footnote 27.
174 See text and source at footnote 23.
First, while globalized production and marketing often create opportunities for significant economies of scale and scope, national differences in product regulations and standards, licensing requirements, and intellectual property systems can pose unnecessary obstacles to building world-scale enterprises. Consequently, smaller countries that want to maintain the competitiveness of their export industries face pressures to conform their regulatory regimes to those of larger trading partners. They ultimately confront tradeoffs between harm to some otherwise competitive domestic enterprises and constraints on their ability to shape regulations to local needs.

Second, globalized production and marketing make difficult the independent regulation of domestic markets for labor, capital and natural resources. For example, other things being equal, weaker protection of workers’ rights or emissions standards in one country can lure investment from other countries with stronger, costlier regulations. As a result, even the larger developed countries can be faced with the dilemma of relaxing necessary protections for workers and the environment or losing industry and jobs.

Moreover, population pressures, congestion, and the increasing scale of industrial activity have transformed certain domestic pollution and resource-exhaustion issues, once local in scope, into transnational issues and problems of the global commons.175

Finally, globalization has resulted in the rapid transmission of disease and pests. Governments simply must cooperate and set common protocols in some areas to ensure that these are contained as effectively as possible.

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175 For example, in the early industrial age, fossil fuel pollution created problems in steel-making cities and urban centers relying on coal for heat. With the growth of global industry and the widening reliance on fossil fuels to light homes, to power manufacturing and to provide transportation, locally-focused emission controls do not adequately address certain forms of transboundary air and water pollution, such as acid rain and global warming. Much the same may be said about endangered species – over-fishing and marine pollution began largely as an inland and coastal waterway problem, and then became a more global phenomenon with the wider search for resources, better navigation and ocean harvesting technologies, petroleum-powered diesels, and the oil trade.
In a succession of policy areas once deemed squarely within the bounds of domestic sovereignty and beyond the legitimate scope of international regulation, governments have determined they can no longer regulate effectively without the cooperation of other governments. They have responded by creating or strengthening a myriad of international regimes that coexist with the WTO.

Some of these institutions are fairly new, having emerged after the three Bretton Woods institutions (i.e., the GATT, World Bank and IMF), while others may predate World War II but have been strengthened or have become the focus of more intense activity in recent decades:

World Intellectual Property Organization (WIPO, 1970)

International standard-setting bodies: Codex Alimentarius Commission (1963), Office International des Epizooties (1924), and Secretariat for the International Plant Protection Convention (1972)

OECD legal instruments on investment: Code of Liberalization of Capital Movements (1961), Code of Current Invisible Operations (1961), and the Declaration on International Investment and Multinational Enterprises (1976); as well as U.S. bilateral investment treaties with 44 countries (earliest agreement, 1988) and NAFTA Chapter 11

International Labor Organization (1917)

Various cooperative efforts in antitrust: United Nations Committee on Trade and Development Rules for the Control of Restrictive Trade Practices (1980); OECD Recommendations Concerning Cooperation Between Member Countries on Anticompetitive Practices Affecting International Trade (1967); and subsequent bilateral and regional agreements creating regional enforcement zones in the United States/Canada, EU/Europe, and Australia/New Zealand

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176 Morici 2000, pp. 112-115, and Director-General IV – Competition.
Reconciling Trade and the Environment

Stockholm Declaration and UNEP (1972), Rio Declaration and Agenda 21 (1992), and various multilateral environmental agreements that emerged after the Stockholm and Rio Conferences, such as CITES, the Montreal Protocol, Basel Convention, and the Convention on Global Climate Change.

In creating and refining these regimes, national governments have faced the challenge of balancing the benefits of autonomy in meeting local needs with the benefits that international cooperation in regulation may offer. Across areas of regulation, the characteristics of these tradeoffs vary considerably. International regimes differ in the amount of harmonization they impose, the scope and intensity of government participation they accomplish, and their enforcement powers.

Some aspects of these regimes promote the objectives of the WTO, while others have the potential to impede them. As pressures have emerged for the WTO to address the international trade consequences of these regimes, the response of the WTO has been by no means uniform.

Intellectual Property Rights

In the areas of intellectual property protection and product regulations and standards, the Uruguay Round Codes essentially imported international patent and copyright agreements into WTO law.

In TRIPS, it was possible to adopt the requirements of the various international conventions. Their prescriptions for the treatment of foreign intellectual property were broadly regarded as consistent with the requirements of fair and equitable treatment and efficient global markets for intellectual property and capital. Prior to TRIPS, basic problems with the WIPO system centered on four areas. The various intellectual property conventions did not:

- establish adequate standards in certain new or unresolved areas – e.g., designs of integrated circuits, geographic indicators for wine and spirits, and fixing certain periods for patent protection;
- establish standards for national enforcement – e.g., rights of intellectual property owners to civil remedies and due
process, and the obligations of national governments to
make certain forms of infringement criminal offenses;

establish adequate means to resolve disputes when one
party was harmed by another’s noncompliance; and

enjoy near-universal participation.

TRIPS and the Agreement Establishing the WTO remedied these
by importing important elements of several international conventions
administered by the WIPO (e.g., the Paris, Berne and Rome Conventions,
and the Treaty on Intellectual Property in Respect of Integrated Circuits)
and expanding on these where they were deemed by negotiators to be
inadequate; establishing standards for national administration and
enforcement, including the rights of foreign firms and individuals within
national civil-litigation systems, and criminal status for certain offenses;
providing the WTO dispute settlement process to resolve complaints about
noncompliance; and requiring all WTO members to participate in TRIPS.

TRIPS rules apply to the treatment of intellectual property owned
by foreign persons, not by nationals. However, it is difficult to have a
system that provides strong protections for foreign-owned intellectual
property without providing the same for domestically-owned property.
Hence, TRIPS creates strong pressures for harmonization of important
aspects of intellectual property law and enforcement among states.

Product Regulations and Standards

SPS and TBT create strong incentives for governments to adopt
internationally recognized standards. In particular, they presume domestic
regulations patterned after these standards meet WTO rules limiting
unnecessary barriers to trade. Then they require governments establishing
regulations varying from these international standards to adhere to more
stringent requirements for transparency, and to be prepared to demonstrate
that these regulations are based on sound science and risk assessment,
exhibit tolerance for risk consistent with other domestic areas of regulation,
and are no more trade-restrictive than necessary.177

177 See texts at footnotes 84 - 86 and 95 - 98.
Investment

Regarding investment, labor standards, antitrust, and the environment, substantial disagreement prevails within the polities of principal WTO members and among WTO members about what the international rules should be, or at least how much power international bodies should have to enforce them. This precludes the WTO from simply importing into its law relevant aspects of the regimes listed above and applying its dispute settlement apparatus.

The Agreement on Trade Related Investment Measures (TRIMS) is limited. Essentially, it prohibits governments from imposing import-substitution and export performance requirements on foreign-owned enterprises. For covered services, GATS provides foreign enterprises wider rights of establishment and operation as may be required to participate in member markets. However, for goods producers, GATT and other WTO agreements provide few additional protections.

U.S. bilateral investment treaties and NAFTA Chapter 11, which was modeled after these treaties, provide good models for a WTO regime. However, Chapter 11 provisions have been employed to challenge environmental regulations in all three NAFTA countries. Particularly troublesome to environmentalists are the protections against expropriation, which may require compensation for “regulatory takings.” Also, organized labor in the United States and Canada is concerned that increasing the rights of multinational corporations may accelerate the flight of jobs to locations where workers’ rights and environmental standards are lower.

Regarding regulatory takings, Chapter 11 permits foreign investors to assert claims for compensation of the kind the property rights movement has sought to establish in the United States but has not yet been successful in accomplishing to their satisfaction. Efforts to amend Chapter 11, either directly or through the language of a successor WTO agreement, could be impeded by this movement, but its strength is untested. Also,

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crafting language in an international agreement that protects foreign firms from expropriation without protecting them from veiled confiscation through regulation will prove challenging.

This said, the failure of the OECD to conclude a multilateral investment agreement in 1998 may be attributed, in part, to concerns among environmentalists engendered by Chapter 11, and these concerns likely will have to be addressed if an investment agreement is to be negotiated in the WTO. Similarly, an investment agreement is much more likely to be acceptable to organized labor if it is negotiated alongside agreements addressing labor rights and environmental concerns.

**Labor Standards**

Four core labor standards have achieved nearly universal recognition among sovereign states, as witnessed by the broad participation in the 1948 UN Declaration on Human Rights and the 1998 ILO Declaration on Fundamental Principles and Rights at Work and its surveillance program. These four standards are:

- prohibition of exploitive forms of child labor,
- prohibition of forced labor,
- prohibition of discrimination in employment, and
- freedom of association and the right to collective bargaining.

Given the constraints imposed by culture and by levels of development on government resources and the practical reach of the state, governments differ substantially in the methods they deem appropriate to guarantee labor rights and in the priority they afford these rights relative to other human rights. When assessing the potential for enforcement of these ILO-protected core workers' rights through the WTO, these are important distinctions.

For example, the United States and EU provide strong protections for freedom of association and the right to collective bargaining. However, U.S. and European industrial-labor-relations laws differ substantially, in part

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182 This section is based on Morici 2001.

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reflecting differences between common and civil law traditions and their basic approaches to industrial policy, market regulation and competition policies.

ILO Conventions protecting the right to collective bargaining and freedom of association lay down specific means – requirements for national regulation – largely consistent with European law. The United States and many other countries would find the requirements of these ILO Conventions difficult to adopt domestically, even though they pursue their basic objectives through comparably effective means. Consequently, although the United States and several other countries have not ratified the ILO Conventions, they participate in ILO processes intended to support the principles these Conventions uphold. In these and other areas, the WTO could not simply import ILO law.

Regarding the priority assigned to the core labor standards, it should be kept in mind that these rights are four from among many human rights addressed by the UN system, which include civil and political rights (e.g., prohibition of slavery, and freedom of religion, movement, expression, and peaceful assembly) and certain economic, cultural and social rights (e.g., the right to an adequate standard of living, an education, fair working conditions, and participation in the cultural life of the community).

UN members are not obligated to respect these in an absolute sense. Rather, the UN Charter pledges members to promote them, and members have assumed significant latitude in choosing which rights receive more weight (consider the relative importance assigned to economic security and civil rights by the former Soviet Union and some Asian states) and the speed with which they attain full protection of these rights. This, in part, explains the willingness of developing countries like India and China to participate in ILO activities but their reluctance to subject their enforcement of these rights to a WTO regime that may punish noncompliance with trade sanctions.

Hence, a WTO regime could be crafted that articulates the four core rights as goals, and could permit members not to import products made by workers who are not protected as required by the principles underlying the ILO core conventions. However, it could not be used as an instrument to require domestic enforcement, as prescribed by ILO Conventions.
Antitrust

Antitrust statutes in all four of the major enforcement regions (U.S.-Canada, Europe, Australia-New Zealand, and Japan) are quite similar in their general objectives.183 However, enforcement authorities differ substantially in the practices and priorities they assign to pursuing specific violations.

For example, agreements in restraint of trade, such as price fixing and market allocation agreements, are outlawed everywhere, but Japan, certain European countries and the United States have differed considerably in the kind and number of exemptions they have granted, how energetically they have rooted out nonexempt cartels, and the punishments they have meted out to offenders. Regarding definitions of monopolies and abuse, Japanese and European laws set lower market share thresholds and offer more latitude to regulate prices in the presence of market power than does U.S. law. EU authorities more aggressively regulate vertical arrangements than do the U.S. authorities.

Generally, antitrust authorities pursue the effects doctrine: if an anticompetitive action has effects in their home market, they assume jurisdiction and apply their law. The United States has prosecuted cartels whose principals were based, and who produced, outside the United States and were not pursued by their domestic authorities. The EU Commission has demanded conditions to approve, and has disallowed, U.S. company mergers previously approved by U.S. authorities. Japanese law has recently been modified to provide for the review of foreign mergers.

U.S. businesses often complain that restrictive business practices limit their access to export markets, while these practices go unaddressed by foreign enforcement authorities. WTO agreements only establish rules for limited classes of restrictive business practices: dumping, certain practices of government-sanctioned monopolies in the services sector, discriminatory conduct by private standard-setting bodies, and abusive licensing practices for intellectual property.184

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183 This section is based on Morici 2000.

184 The failure of member governments to discipline other restrictive business practices could be addressed through the WTO nullification and impairment provisions by bringing a “nonviolation complaint.” However, in such cases, complainants face a much higher standard of proof than in cases involving direct violations of specific WTO rules. The United States could not overcome those
Reconciling Trade and the Environment

The EU would like to negotiate a competition policy agreement in the WTO to accomplish some level of harmonization. In the areas where principal authorities can agree on principles – for example, regarding cartels – a WTO agreement could result in better international coordination of investigations and more consistent enforcement across jurisdictions. A WTO agreement would not resolve basic areas of disagreement in doctrine among principal authorities, but in these areas, it could assure equal treatment for domestic and foreign firms, and help safeguard the trading system from lax enforcement as a means of veiled protection.185

Environment

The WTO approach to international environmental law has been to recognize it as a coequal body of public international law. This is reflected in the language of the Decision on Trade and Environment adopted at the 1994 Marrakesh Ministerial Conference, the report of the CTE adopted by the 1996 Singapore Ministerial Conference, and the reference to these findings by the Appellate Body in Shrimp-Turtle.

hurdles to the satisfaction of the dispute settlement panel in the Kodak-Fuji film dispute, and for all practical purposes, most restrictive business practices are not actionable through the WTO dispute settlement. Japan – Measures Affecting Consumer Photographic Film and Paper, Report of the Panel, WT/DS44/R, 31 March 1998.

The primary effect of a WTO Competition Policy Agreement (CPA) would be to transform the failure of WTO members to address specific classes of private restrictive business practices — delineated by the language of a CPA — into “violation complaints.” That would permit members to file complaints when other member governments do not address the anticompetitive practices, much as members may file complaints when another member provides an export subsidy or fails to address copyright piracy as required by TRIPS.

185 It is important to recognize that the WTO has no jurisdiction over private firms and individuals. A CPA would not establish a supranational authority, for example, to prosecute cartels or to review mergers. Rather, a CPA would establish standards for member government enforcement against restrictive business practices when these adversely affect other members’ international commerce, and it would provide members with a mechanism to obtain a relief when another member fails to meet its obligations under the agreement.

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The 1994 Decision established the CTE and charged it:

(a) to identify the relationship between trade measures and environmental measures, in order to promote sustainable development;

(b) to make appropriate recommendations on whether any modifications of the provisions of the multilateral trading system are required, compatible with the open, equitable and non-discriminatory nature of the system...

Among other things, item (b) offered the CTE the opportunity to propose when members could rely on customary and conventional international environmental law to invoke Article XX of the GATT and similar provisions in GATS and TRIPS. However, it has not reached consensus on this issue.

In Shrimp-Turtle, U.S. actions could be justified by certain customary and conventional international environmental laws. CITES listed sea turtles as an endangered species, and the complainants (India and several other Asian countries), the respondent (the United States), and all third parties were participants in CITES. The United States had entered into an agreement on the use of turtle-friendly shrimping methods with other countries in the Western Hemisphere, though it had not pursued a similar agreement with the complainants.

Nevertheless, neither CITES nor the Western Hemisphere agreement provided the Asian countries with a useful forum, one with jurisdiction and remedies. In the face of a U.S. action that violated their GATT rights, these countries were prudent to bring a claim to the WTO.

Lacking guidance from CTE regarding how the various rights and obligations of the complainants and respondent should be balanced under international environmental law and WTO agreements, the Appellate Body assumed responsibility and laid down its own criteria for evaluating whether the U.S. measure qualified for an exception under Article XX.\(^{186}\)

\(^{186}\) The Appellate Body stated:

Pending any specific recommendations by the CTE to WTO Members on the issues raised in its terms of reference, and in the absence up to now of any agreed amendments or modifications to the substantive provisions of the GATT 1994 and the \textit{WTO}...
Reconciling Trade and the Environment

In evaluating whether measures met the requirements of the chapeau to Article XX, the Appellate Body asserted that the task is “essentially the delicate one of locating and marking out a line of equilibrium between the right of a Member to invoke an exception under Article XX and the rights of other Members under the varying substantive provisions (e.g., Article XI) of the GATT 1994...” The Appellate Body proceeded to locate this line of equilibrium in the case of the U.S. ban on shrimp caught without turtle-excluding devices.

The task at hand is to examine what economics teaches about where that line should be drawn, given the contemporary understanding that population pressures, congestion, and the increasing scale of industrial activity have turned many domestic pollution and resource-conservation issues into transnational issues and problems of the global commons.

Locating the Line of Equilibrium

According to modern welfare and international economics, a market economy achieves an optimal combination of income and environmental well-being when it is open to trade and when prices reflect true social costs – private costs plus the costs of externalities. Therefore, welfare is maximized by free trade and by policies that internalize emission and resource-depletion costs – i.e., the polluter pays, and resources are priced at their marginal social cost.

The optimal WTO treatment of environmental measures would permit governments to internalize environmental costs into the prices of products whose production creates externalities, without requiring or permitting governments to impose similar, direct penalties on the prices of domestic or foreign products that do not create externalities.

Placing a value on an externality and internalizing it into the price of a product may sometimes be a fairly straightforward process. For

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Agreement generally, we must fulfill our responsibility in this specific case, which is to interpret the existing language of the chapeau of Article XX by examining its ordinary meaning, in light of its context and object and purpose in order to determine whether the United States measure at issue qualifies for justification under Article XX.

See Shrimp-Turtle, para. 155.
example, consider scrubbers for smokestacks, when scrubbers resolve an emission problem at the least cost.

At other times, however, this process is less than precise. For example, what is the optimum scheme for regulating crabs taken from the Chesapeake Bay? Should there be catch quotas and/or limits to the number of commercial crabbers, the hours of crabbing, days of the week for crabbing or months in the crabbing season?

Sometimes this process is subjective. For example, when does noxious, but not unhealthy, air pollution from a paper mill require abatement? The answer may well depend on how important the emitter is to the local economy, and the incomes and alternative economic opportunities available to the inhabitants. For example, is the factory located fifty miles from Seattle or from Jakarta?

Economists and engineers can guide government officials by delineating the costs and benefits of alternative approaches to problems. In the end, though, citizens acting through their governments must choose from among various economic and environmental outcomes, and must balance the interests of stakeholders.

In the international arena, addressing an environmental problem generally entails negotiating an agreement or reaching a consensus by other means, here denoted by an MEA.\textsuperscript{187} This would include a consensus about the nature of the problem (depletion of the ozone layer), its causes (the release of ODS into the atmosphere), and perhaps specific joint actions to correct it (national schedules to phase-out production and consumption of ODS). The measures implemented may affect trade only among participants in the consensus (regulations on trade in ODS among participants), or with nonparticipants (prohibitions on trade in ODS with nonparticipants).

\textsuperscript{187} An MEA is only one of several ways relevant states may accomplish consensus about goals and means. For example, consensus may be reflected through the administrative decisions of a regional economic group or have origins in customary law. Here the term MEA is used to denote both formal MEAs and other mechanisms. In the end, WTO panels and the Appellate Body will have to determine when mechanisms, other than formal MEAs, have established consensus.
Reconciling Trade and the Environment

When governments negotiate MEAs, they have the opportunity to weigh the environmental benefits created by the agreements against their economic costs. In this context, they have the responsibility to vet these choices through their domestic political processes. It seems reasonable, therefore, to assume that the terms governments negotiate and ratify place appropriate values on externalities, much as emission and resource-conservation regulations do for domestic externalities.

For the WTO, the issue will often boil down to when the WTO should grant an Article XX exception to a measure taken pursuant to an MEA? Similarly, when should an exception be granted under GATS, TRIPS, SPS, TBT, or other agreements? For the purposes of this study, the question is phrased in terms of GATT Article XX.

General Principles

To ensure that the WTO treatment of environmental measures permits governments to pursue optimum economic and environmental policies, including international cooperation to address transboundary issues and the protection of the global commons, the following principles should guide the application of WTO rules and, in particular, Article XX.

Prices for tradable goods should reflect true social costs. In particular, prices should include the costs of environmental externalities.

The values societies assign to environmental externalities are affected by geography, culture and income levels. For domestic problems, national governments are the most competent to assign values to externalities.

For environmental problems having a transnational dimension, international agreements among governments are the best means to assign values. Measures to implement and enforce these agreements should be the least trade-restrictive necessary to accomplish their objectives.

International environmental problems are identified by consensus among affected parties about the nature of the problem and the goals to be accomplished – for example,
sea turtles are an endangered species and should be
protected.

These principles are strongly consonant with:

the prescriptions of the Rio Declaration – notably,
Principle 16 (the polluter should pay), Principle 11 (certain
measures adopted by developed countries may not be
appropriate for developing countries), and Principle 12
(governments should foster open trade, address
international issues through consensus, and not adopt
measures that impose unjustifiable, arbitrary or disguised
restrictions on trade);

the objectives of the WTO – notably, the Preamble goals
of increasing income through trade and sustainable
development, and the 1996 report of the CTE
(international agreements and consensus are the best ways
to tackle environmental problems); and

the prescriptions of modern international and welfare
economics – notably, the optimal combination of income
and environmental well-being are attained when trade is
unencumbered and market prices reflect private and social
costs, externalities are best addressed at their source, and
placing a value on certain externalities is subjective and
requires political decisions.

Welfare Analysis

The above characterization permits the following taxonomy:

Domestic Problems Having Wholly Local Sources and
Effects

International Problems Characterized by Consensus about
Goals and Measures

International Problems Characterized by Consensus about
Goals but Not Measures

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Case I: A Domestic Problem Having Wholly Local Sources and Effects

If a policy is aimed at a local problem, and if no international consensus has been reached or is perceived to be needed, traditional GATT logic applies. A regulation in a high-standards country that discriminates against an otherwise like product from a lower-standards country on the basis of an unincorporated PPM will not improve the environment in the importing country, and it denies the exporter use of its comparative advantage. If the exporter, for example, enjoys a higher absorptive capacity or a more abundant supply of a renewable resource, discrimination against its products by the importer only serves to burden the efficient use of global resources and to lower incomes in both the exporting and importing country.

This said, when governments relax environmental regulations for export- or import-competing industries, these preferences constitute an export subsidy and should be treated as such by WTO rules.

Therefore, when no international consensus has been achieved that a resource in the global commons is threatened, WTO members should not be granted Article XX exceptions for measures that regulate imports’ unincorporated PPMs or otherwise seek to impose their environmental policies on other members. However, the failure to enforce environmental regulations in an export- or import-competing industry should be recognized as a subsidy and applicable WTO rules should apply.

Case II: An International Problem with Consensus about Goals and Measures

Suppose the relevant international community has reached a consensus about the nature of a regional or global problem and the appropriate measures to address it (unanimous agreement about ends and means). Whatever specific measures members have agreed to take, which may affect one another’s trade, should be presumed to qualify for an Article XX exemption.

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188 The Appendix offers a more formal presentation of the welfare conclusions presented here for Cases II and III.
It is important to recognize that the same governments that negotiated the WTO agreements also negotiate the relevant MEA. As they negotiate specific MEA measures, member governments should weigh the tradeoffs between the environmental benefits created by the MEA and the economic costs imposed by well-delineated derogations from WTO rules. This is part of the more general political task of choosing from among combinations of economic and environmental well-being, and presumably, sovereigns vet choices through their domestic legislative and electoral apparatus as they negotiate and ratify agreements.

In addition, when governments ratify MEAs, they should understand the consequences of noncompliance for the global commons and for their economies. In particular, they should understand the consequences of measures placed at the disposal of other MEA members should they fail to comply with the agreement. An example of actions against a member for failing to comply with an MEA was provided by the Montreal Protocol measures against Russia in 1997. Under these circumstances, trade measures by complying participants may be justifiable on economic grounds.

Significant issues emerge when an MEA is not explicit about what measures will be applied to achieve its stated objectives. For example, the CITES Standing Committee may recommend that members apply “stricter domestic measures” against a member found in noncompliance, but the nature of these stricter measures is not specified.

Issues also emerge when an MEA adopts a new policy with which one or several members do not agree. The 1997 ban on trade in elephant ivory, objected to by Zimbabwe, is an example. In such a situation, the consensus on means is no longer operative, and Case III below may apply.

Assume j countries have the necessary resources to engage in the production of good X. These countries agree to eliminate a production process that harms the global commons, and all nonproducing countries who import X agree with the measure even though it raises the cost of producing and consuming X. Hence, the relevant international community has reached a consensus on ends and means.

Now, suppose one of the producers, country j, fails to honor its commitments, gains a cost advantage, and increases its production and sales in the markets of both the producing and nonproducing countries. To the extent that country j’s production and sales increase above its pre-MEA
levels, the benefits that the other j-1 producers and the nonproducers receive from the MEA are lower than they would be with country j’s compliance.

Consider two scenarios: a global embargo and a producers’ embargo against imports of good X from country j.

**A Global Embargo**

The other j-1 producing countries and all nonproducing countries could be better off if they embargoed imports of X from country j than if they continued to comply with the MEAs but did nothing in the face of noncompliance by j, or if they abandoned the agreement to stop the harmful production process. Although they might not achieve the level of welfare obtainable with j’s compliance, they could accomplish a second-best level of welfare through joint action.

Governments of complying countries are best able to assess the net benefits of an embargo, and should they decide to proceed, their actions would reveal that the net benefits for countries other than j are positive.

**A Producers’ Embargo**

If the other j-1 producers embargoed imports of X from country j, they and nonproducers could be made better off than if the j-1 producers did nothing in the face of country j’s noncompliance, or if the other j-1 producers abandoned the agreement to stop the harmful production process.

The net benefits the other j-1 producers receive from continuing their participation in the MEA is determined by the value they place on improvements in environmental quality obtained through the MEA less the value they place on lost sales of X. Net benefits could become negative if their lost sales became large. How much of a problem this turns out to be will depend on the volume of X consumed in nonproducing countries relative to the volume consumed in the j producing countries, the volume of production and consumption in the complying j-1 countries relative to those in country j, and the cross elasticity of demand between X produced in the complying countries and X produced in j.

Generally, the larger the share of global consumption and production domiciled in complying countries, and the lower the cross
elasticity, the more able will be complying countries to use an import embargo to limit market growth by country j. Governments of producing countries are best able to assess their net benefits, and these would be revealed by whether they chose to proceed with an embargo. If nonproducing countries do not object, trade measures taken jointly should qualify for an Article XX exception.

When an MEA includes the participation of all governments whose trade may be affected, WTO dispute settlement panels should give most-favorable consideration under Article XX to measures taken to implement or enforce the MEA. If the MEA provides options to accomplish its objectives, the measures selected may regulate unincorporated PPMs and should be the least trade-restrictive available. If the MEA does not specify the exact characteristics of trade measures, those selected may regulate unincorporated PPMs but should otherwise meet the conditions of XX(b) or (g). In either case, measures should not pose arbitrary, unjustifiable or disguised barriers to trade, as required by both the Rio Declaration and chapeau of Article XX.

**Case III: An International Problem with Consensus about Ends but Not Measures**

Suppose the relevant international community has reached a consensus about the nature of a regional or global problem but not about appropriate measures to address it (unanimous agreement on ends but not means). Furthermore, suppose a limited number of producers agree on specific measures to address the problem. To the extent that these measures affect one another’s trade, they should be presumed to be WTO-consistent. In addition, to the extent that members use these measures to obtain compliance by nonparticipating states, under certain circumstances, these measures may be consistent with accomplishing the joint goals of increasing incomes and improving the environment. As such, it may be appropriate to grant them exceptions under Article XX.

An example is provided by CITES. The members agree that Appendix I species are threatened and ban trade for commercial purposes in these species and their parts. However, this may not be all that is necessary to preserve the species. For example, the incidental killing of sea turtles by shrimp nets is not a violation of CITES.

Suppose that only j countries, globally, have the necessary resources to engage in the production of good X; that j-1 agree through an
MEA to eliminate a production process that harms the global commons; and that all nonproducing countries importing X agree with the measure even though it raises the cost of producing and consuming X.

To the extent that the production and sales of nonparticipating country j increase above its pre-MEA levels, the benefits that the other j-1 producers and nonproducers receive from the MEA are lower than they would be with country j’s participation.  

In evaluating potential responses of the members of the MEA to country j’s behavior, the motivations of j are important. On the one hand, j’s income level and general dependence on exports of X may fall within the range of other producers, its government may have embraced the goals of the MEA in international forums, and it may choose not to comply with the MEA simply so it may enjoy the benefits of being a free rider. On the other hand, j may be poorer and more dependent on exports of X than other producers of X, and it may believe it cannot withstand the financial burden of abandoning the harmful production process.

Again, consider two scenarios: a global embargo and a producers’ embargo against imports of good X from country j.

A Global Embargo

The other j-1 producing countries and nonproducing countries could be better off if they embargoed imports of X from country j than if they continued to comply with the MEA but did nothing in the face of nonparticipation by j, or if they abandoned their agreement to stop the

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189 As in Case II, the net benefits that the j-1 producers receive will be determined by the value they place on improvements in environmental quality obtained through the MEA less the value they place on lost sales of X. The net benefit that producing countries receive could become negative depending on the amount of sales they lose. How much of a problem this turns out to be will depend on the amount of X consumed in the nonproducing country relative to the j producing countries, the volume of production and consumption in the j-1 participating countries relative to those in country j, and the cross elasticity of demand between X produced in participating countries and X produced in j. Generally, the larger the share of global consumption and production domiciled in participating countries, and the lower the cross elasticity of demand, the more capable participating countries will be to use trade measures to limit market growth by the nonparticipating country.
harmful production process. Although they might not attain the level of welfare obtainable with j’s participation, they could attain a second-best level of welfare through joint action.

Importantly, j would be better off as a free rider to the MEA if other producing and nonproducing countries did nothing about its noncompliance than if other producing countries abandoned their agreement to stop the harmful production process.

Although j’s welfare would be lower with the MEA and the embargo than with the MEA and no embargo, country j could still be better off than it would be without both the MEA and embargo. The net impact of the MEA and embargo on j is determined by the value it places on improvements in environmental quality created by the MEA less the value it places on lost sales of X.

In part, j’s net benefits would depend on its share of global production of X and the share of its production of X that is exported. The smaller these shares are, the more likely that j is better off with the MEA and embargo than without the MEA and embargo. Also, if country j’s income level is similar to that of the other producers, if it has espoused the environmental goals of the MEA, if the members of the MEA have adopted cost-effective methods for achieving those goals, and if the members of the MEA have offered j flexibility in meeting those goals, then it is less likely that j is hurt by their policy and more likely that it benefits from the combination of the MEA and embargo.

Country j’s development status is important. If country j’s per capita income is lower than other producing countries, if it has stated that it must give higher priority to its development goals than certain environmental goals, and if it is dependent on exports of X to accomplish its development objectives (exports of X are a large share of its exports), then it is more likely to be hurt by the combination of the MEA and embargo. The other producers could offer country j financial or technical assistance in abandoning the harmful production process, or they could permit the ban to apply only to new facilities over a long transition period. Often, the latter approach is more efficacious, because the costs of implementing environmentally friendly technologies are greater for existing facilities than for new ones.


Reconciling Trade and the Environment

A Producers’ Embargo

The j-1 producers and nonproducers could be made better off if the j-1 participating producers embargoed imports of X from country j than if they did nothing in the face of j’s nonparticipation or abandoned their agreement to stop the harmful production process. The governments of the j-1 producing countries are best able to assess their net benefits, and these would be revealed by whether they chose to proceed with an embargo.

Although j’s welfare would be lower with the MEA and an embargo than with an MEA and no embargo, country j could still be better off than it would be without both the MEA and embargo. If j’s sales increase above its pre-MEA level by virtue of increased sales to nonproducing countries, it would clearly be better off.

If j’s sales fall below its pre-MEA level, the net impact of the MEA and embargo would be defined by the value j places on the improvement in environmental quality created by the MEA less the value it places on lost sales of X. In part, this would depend on its share of global production of X and the share of its production of X that is exported. To the extent that both are small, j is more likely to be better off with the MEA and embargo than without the MEA and embargo. If country j’s income level is similar to that of the other producers, if it has espoused the environmental goals of the MEA, if the members of the MEA have adopted cost-effective methods of achieving those goals, and if the members of the MEA have offered j flexibility in meeting those goals, then it is less likely that j would be hurt by the combination of the MEA and the embargo.

Again, country j’s development status is important. If country j’s per capita income is lower than other producing countries, if it has stated that it must give higher priority to its development goals than certain environmental goals, and if it is dependent on exports of X to accomplish its development objectives (exports of X are a large share of its exports), then it is more likely to be hurt by the combination of the MEA and embargo. The j-1 other producers could offer country j financial or technical assistance in abandoning the harmful production process, or they could permit the ban to apply only to new facilities over a long transition period.

If the complainants and the respondent in a dispute are all participants in an MEA establishing goals but not measures, WTO dispute settlement panels should give reasonable consideration under Article XX to

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measures taken by individual governments pursuant to MEA goals. Measures selected should be the least trade-restrictive available to accomplish their objectives and may include those that regulate imports’ unincorporated PPMs. However, these should otherwise meet the conditions of XX(b) or (g), and should not pose arbitrary, unjustifiable or disguised barriers to trade, as required by both the Rio Declaration and chapeau of Article XX.

Regarding the latter, respondents should be required to demonstrate that they have sought the complainant’s participation and have offered to the latter flexibility in implementing relevant technologies and assistance, each appropriate to the cost of the technology and the complainant’s development circumstances.
Chapter 6:
A WTO Agreement on Trade and the Environment

The salient findings of this study may be restated to suggest the general contents of a WTO Agreement on Trade and the Environment.

To ensure that the WTO treatment of environmental measures permits governments to pursue optimum economic and environmental policies, including international cooperation to address transboundary issues and the protection of the global commons, the following principles should guide the application of WTO rules and, in particular, Article XX.

Prices for tradable goods should reflect true social costs. In particular, prices should include the costs of environmental externalities.

The values societies assign to environmental externalities are affected by geography, culture and income levels. For domestic problems, national governments are the most competent to assign values to externalities.

For environmental problems that have a transnational dimension, international agreements among governments are the best means to assign values. Measures to implement and enforce these agreements should be the least trade-restrictive necessary to accomplish their objectives.

International environmental problems are identified by consensus among affected parties about the nature of the problem and the goals to be accomplished.

These principles are strongly consonant with Principles 11, 12 and 16 of the Rio Declaration and the goals of the WTO, especially as expressed in the Preamble and the 1996 report of the CTE endorsed by the Singapore Ministerial Meeting; as well as the prescriptions of modern international and welfare economics.
Measures to Protect the Domestic Environment

When governments impose emission and conservation regulations, they require that market prices more adequately reflect social costs. For wholly domestic problems, permitting countries with higher compliance costs to impose their regulatory regimes on countries with lower compliance costs – for example, through cost-equalizing tariffs on products made in environmentally less-costly ways or by otherwise regulating imports’ unincorporated PPMs – would subvert the comparative advantage of the exporter. However, when governments relax environmental regulations for export- or import-competing industries, these preferences constitute a subsidy.

When no international consensus has been achieved that a resource in the global commons is threatened, WTO members should not be granted Article XX exceptions for measures that regulate imports’ unincorporated PPMs or otherwise seek to impose their environmental policies on other members. However, the failure to enforce environmental regulations in an export- or import-competing industry should be recognized as a subsidy, and applicable WTO rules should apply.

Measures Taken Pursuant to a Consensus about Goals and Measures

When an MEA or other mechanism accomplishes a consensus about an international environmental problem, including the measures necessary to address it, the prices of tradable goods and patterns of trade that result from compliance with the MEA best reflect social costs and comparative advantages, as well as promote optimal combinations of income and environmental well-being.

When an MEA includes the participation of all governments whose trade may be affected, WTO dispute settlement panels should give most-favorable consideration under Article XX to measures taken to implement or enforce the MEA. If the MEA provides options to accomplish its objectives, the measures selected may regulate imports’ unincorporated PPMs but should be the least trade-restrictive available. If the MEA does not specify the exact characteristics of trade measures, those selected may regulate unincorporated PPMs but should otherwise meet the conditions of
XX(b) or (g). In either case, measures should not pose arbitrary, unjustifiable or disguised barriers to trade, as required by both the Rio Declaration and the chapeau of Article XX.

**Measures Taken Pursuant to a Consensus about Goals but Not Measures**

Many times a complete consensus about goals and measures is not possible. If the complainants and the respondent in a dispute are both participants in an MEA establishing goals but not measures, WTO dispute settlement panels should give reasonable consideration under Article XX to measures taken by individual governments pursuant to MEA goals. Measures selected should be the least trade-restrictive available to accomplish their objectives and may include those that regulate imports’ unincorporated PPMs. However, these should otherwise meet the conditions of XX(b) or (g), and should not pose arbitrary, unjustifiable or disguised barriers to trade, as required by both the Rio Declaration and the chapeau of Article XX.

Regarding the latter, respondents should be required to demonstrate that they have sought the complainant's participation and have offered to the latter flexibility in implementing relevant technologies and assistance, each appropriate to the cost of the technology and the complainant’s development circumstances.
Appendix:
Welfare Analyses for Cases II and III

According to modern welfare and international economics, a market economy achieves an optimal combination of income and environmental well-being when it is open to trade and when prices reflect true social costs – i.e., private costs plus the value of externalities. Assuming no nonenvironmental externalities, welfare is maximized by free trade and by policies that internalize emission and resource-depletion costs – i.e., the polluter pays, and resources are priced at their marginal social cost.

Governments place values on externalities and resources when they impose regulations and fees on emissions and access to resources. Assigning values is not always precise and, by necessity, can be somewhat subjective. In the end, through the regimes they impose, governments may be viewed as maximizing a social welfare function by selecting among various attainable combinations of income and environmental quality.

The optimal WTO treatment of environmental measures would permit governments to internalize environmental externalities into the prices of products without requiring or permitting governments to impose similar, direct penalties on the prices of domestic or foreign products that do not create externalities.

Case II

Suppose the relevant international community has n countries, where i = 1, 2, ...j are producers of X, and i = j+1, j+2 ...n are nonproducers (only consumers). Assume that producers and nonproducers negotiate an MEA to curtail an environmentally harmful production process. Let E be the value each country places on the quality of the international commons not captured by GDP accounting.

Assume that each country has a transformation function, \( T_i = T_i (GDP, E) \), which describes the combinations of GDP and E that each achieves as MEA members phase out the harmful production process. Further, assume for each country that \( T_i = T_i (GDP, E) \) has a negative slope – more E requires less GDP across the relevant set of scenarios. Also, assume that,
when negotiating the MEA to improve $E$, signatories agree on trade measures for noncompliance.

Also, assume each government defines for its country a welfare function $W_i = W_i(GDP_i, E_i)$, and assume it is an increasing function of $T_i (GDP, E)$ as GDP increases and $E$ decreases.

Without the MEA, income and environmental value in each country are $GDP_i$, $E_i$.

With the MEA, these become $GDP_{ai} \leq GDP_i$ and $E_{ai} \geq E_i$.

In the absence of other distortions and externalities, $GDP_i$, $E_i$ and $GDP_{ai}$, $E_{ai}$ each describe a Pareto optimal state. Through the process of negotiating the MEA, governments reveal for their individual welfare functions:

$$W_i(GDP_{ai}, E_{ai}) \geq W_i(GDP_i, E_i), \text{ for } i = 1, 2, \ldots n$$

If country $j$ violates the agreement and other countries continue to comply with its terms, then: in other producing countries, GDP would fall below $GDP_{ai}$; in country $j$, GDP would rise above $GDP_{ai}$; and in nonproducing countries, GDP would rise above $GDP_{ai}$. In all countries, $E$ would fall below $E_{ai}$. Describe this state as $GDP_{aj}$, $E_{aj}$.

**Global Embargo**

If all countries other than $j$ embargo $X$ produced in $j$ by methods that violate the MEA, each country, including $j$, would move closer to $GDP_{aj}$, $E_{aj}$. Describe this state as $GDP_{aj}$, $E_{aj}$.

Governments of complying countries are best able to assess their net benefits, and if they chose an embargo, their actions reveal that $GDP_{aj}$, $E_{aj}$ is preferred to $GDP_{ai}$, $E_{ai}$ and $GDP_{aj}$, $E_{aj}$ even if it is not as desirable as $GDP_{ai}$, $E_{ai}$:

$$W_i(GDP_{ai}, E_{ai}), W_i(GDP_j, E_j) \leq W_i(GDP_{aj}, E_{aj}) \leq W_i(GDP_{aj}, E_{aj})$$

for all $i$, except $j$.  

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Producers’ Embargo

Suppose only producing countries embargo X produced in j by methods that violate the MEA. Describe this state as GDP_{ijp}, E_{ijp}. The welfare of nonproducers improves, because the production of X made in ways that violate the MEA will either stay the same or fall, and the supply of X they may import increases. The actions of all countries other than j reveal that GDP_{ijp}, E_{ijp} is preferred to GDP_{ia}, E_{ia} and GDP_{a}, E_{a} even if it is not as desirable as GDP_{ia}, E_{ia}:

\[ W_i (GDP_{ia}, E_{ia}), W_i (GDP_{ijp}, E_{ijp}) \leq W_i (GDP_{ijp}, E_{ijp}) \leq W_i (GDP_{ia}, E_{ia}), \]

for all i, except j.

Case III

Suppose that the relevant international community has n countries, where i = 1, 2, ... j are producers of X, i = j+1, j+2, ... n are nonproducers (only consumers), and all agree that a certain production process is harmful to the global commons. Assume j-1 producing countries negotiate an MEA to curtail the harmful production process, and country j chooses not to participate in the MEA. Let E be the value each country places on the quality of the international commons not captured by GDP accounting.

Assume each country has a transformation function, \( T_i(T_i (GDP, E)) \), which describes the combinations of GDP and E that each achieves as MEA members phase out the harmful production process. Further, assume for all countries, except j, that \( T_i(T_i (GDP, E)) \) has a negative slope – more E requires less GDP across the relevant set of scenarios. The same would apply to j if it chose to participate in the MEA; however, the absolute value of the slope would be smaller for countries 1, 2, ... j-1 if j chose to participate.

Also, assume that each government defines for its country a welfare function \( W_i(W_i (GDP_{i}, E_{i})) \), and assume it is an increasing function of \( T_i (GDP, E) \) as GDP increases and E decreases.

Without the MEA, income and environmental value in each country are GDP_{ia}, E_{ia}.  

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With the MEA, these become $\text{GDP}_{ia} \leq \text{GDP}_i$ and $E_{u} \geq E_i$ for $i = 1, 2, \ldots j-1$; however, if $j$ is a net exporter of $X$, then $\text{GDP}_{ja} \geq \text{GDP}_j$ and $E_{ja} \geq E_j$.

Through the process of negotiating the MEA, governments reveal for their individual welfare functions:

$$W_i(\text{GDP}_{ia}, E_{ia}) \geq W_i(\text{GDP}_i, E_i), \quad i = 1, 2, \ldots j-1$$

However, it is important to recognize that $j$’s welfare is greater if it chooses not to participate than if it chooses to join the MEA (denoted by ‘‘):

$$W_i(\text{GDP}_{ja}, E_{ja}) \geq W_j^*(\text{GDP}_{ja}, E_{ja}), W_j(\text{GDP}_j, E_j)$$

Therefore, $j$ is a classic free rider.

Moreover, welfare is lower for other producing countries without $j$’s participation than with $j$’s participation:

$$W_i(\text{GDP}_{ia}, E_{ia}) \leq W_j^*(\text{GDP}_{ja}, E_{ja}), \quad i = 1, 2, \ldots j-1$$

Global Embargo

If countries $1, 2, \ldots j-1$ and $j+1, \ldots n$ agree to embargo $X$ produced in $j$ by methods that do not comply with the MEA, and if producers of $X$ earnestly seek $j$’s participation in the MEA, their actions would reveal that their welfare is greater with an embargo (denoted by ‘’) but not as great as it would be with $j$’s participation:

$$W_i(\text{GDP}_{ia}, E_{ia}) \leq W_i^{**}(\text{GDP}_{ia}, E_{ia}) \leq W_i^*(\text{GDP}_{ia}, E_{ia}),$$

$$i = 1, 2, \ldots j-1, j+1, \ldots n$$

For country $j$, welfare is lower with nonparticipation and an embargo than with nonparticipation and no embargo:

$$W_j^{**}(\text{GDP}_{ja}, E_{ja}) \leq W_j(\text{GDP}_{ja}, E_{ja})$$
However, country \( j \) could still be better off than it would be without both the MEA and the embargo. The net impact of the MEA and embargo on \( j \) is determined by the value \( j \) places on improvements in environmental quality created by the MEA less the value it places on lost exports of \( X \):

\[
W_j^{**} (\text{GDP}_\mu, E_{\text{\mu}}) > W_j (\text{GDP}_1, E_1)
\]

**Producers’ Embargo**

If countries \( 1, 2, \ldots, j-1 \) agree to embargo \( X \) produced in \( j \) by methods that do not comply with the MEA, the welfare of nonproducers improves, because the production of \( X \) made in ways that violate the MEA will either stay the same or fall, and the supply of \( X \) they may import increases:

\[
W_i (\text{GDP}_{\mu_i}, E_{\text{\mu}_i}) \leq W_i^{**} (\text{GDP}_{\mu_i}, E_{\text{\mu}_i}) \leq W_i (\text{GDP}_{\mu_i}, E_{\text{\mu}_i}), \quad i = j+1, \ldots, n
\]

If producers of \( X \) earnestly seek \( j \)’s participation in the MEA, their actions would reveal that their welfare is greater with an embargo (denoted by ‘"") but not as great as it would be with \( j \)’s participation:

\[
W_i (\text{GDP}_{\mu_i}, E_{\text{\mu}_i}) \leq W_i^{**} (\text{GDP}_{\mu_i}, E_{\text{\mu}_i}) \leq W_i (\text{GDP}_{\mu_i}, E_{\text{\mu}_i}), \quad i = 1, 2, \ldots, j-1
\]

Again for country \( j \), welfare is lower with nonparticipation and an embargo than with nonparticipation and no embargo:

\[
W_j^{**} (\text{GDP}_{\mu_j}, E_{\text{\mu}_j}) \leq W_j (\text{GDP}_{\mu_j}, E_{\mu_j})
\]

However, country \( j \) could still be better off than it would be without both the MEA and the embargo. The net impact of the MEA and embargo on \( j \) is determined by the value \( j \) places on improvements in environmental quality created by the MEA less the value it places on lost exports of \( X \):

\[
W_j^{**} (\text{GDP}_{\mu_j}, E_{\text{\mu}_j}) > W_j (\text{GDP}_1, E_1)
\]
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