

Part VII: Trends and Innovations
CHAPTER 17: INTERNATIONAL TRADE AGREEMENTS
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Up to now, this Anthology has been concerned with various ways in which international law may restrict the actions of states in the furtherance of global environmental values. However, we must recognize the possibility that some kinds of international law may obstruct the environmental-protecting activities of states. Some international trade agreements may fit this description. Because these agreements are motivated by states' desires to improve their economic welfare, that motivation may override concerns of environmental protection.

The first essay in this Chapter explores how trade agreements, which are themselves generally silent with respect to environmental protection, can nevertheless impact upon environmental values by limiting the freedom of states to use import and export restrictions to further these values. Next we present a debate over whether trade agreements impede environmental protection by (for example) imposing import restrictions upon products whose manufacture or capture harms the global environment, or whether they promote environmental protection by fostering economic growth and the international harmonization of environmental standards. Finally, the Chapter ends by isolating for more in-depth treatment the circumstance that gives rise to the trade environment debate: differing national environmental standards. It focuses upon the reasons that states differ in their environmental standards and suggests some strategies for harmonization of standards.

A. Trade Agreements and National Environmental Standards¹

Governments impose environmental standards in order to correct market failure. Trade agreements do not regulate the application of such standards to internal production or commerce. It is only when a nation wants to apply its standards to an imported product that trade agreements come into play.

Why would a nation want to apply its internal standards to imports? There are three main reasons. First, a nation might have environmental goals that could not be attained if imports were immune from regulation. For example, a government might want to assure its citizens a safe food supply. While national environmental goals will often be inward-looking, nations may sometimes have more cosmopolitan objectives. For example, a government might want to preserve planetary biodiversity.

A second reason for applying internal standards to imports is to maintain the political or economic viability of a national environmental policy. For example, the European Community Commission is banning the use of painful leghold fur traps and will apply the same process standard to fur imports. Assuming that "humane" trapping methods are more expensive, the application of the standard merely to European producers would put them at a competitive disadvantage. If the EC had not been able to employ its standard on imports, it is doubtful that this standard could have been enacted.

A third reason for applying standards to imports is to maintain the political or economic viability of an international environmental regime. For example, the Wellington Convention on Driftnets requires parties to prohibit the transshipment of driftnet-caught fish.

Trade agreements do not superintend environmental laws. Rather, they regulate the use of trade measures for environmental purposes--that is, environmental trade measures (ETMs). The term "regulation" is used in its international sense. That is, trade agreements apply obligations, yet lack the coercion that is common in national regulation. The GATT has no police to enforce its rules.

In focusing on how trade agreements regulate ETMs, one should keep in mind why trade agreements do so. There is an irresistible temptation for nations to use their health and environmental standards to make it harder for foreign producers to compete against domestic producers. The recognition of the need for international rules goes back to the early economic work of the League of Nations. Nevertheless, it has proven difficult to devise a sieve which can separate protectionist health measures from legitimate ones.

Three approaches exist for disciplining ETMs. First, governments may be able to apply their own internal standards to imports. This can be called "domestic treatment." Second, governments may be prohibited from applying their own standards to imports and instead be required to accept products that meet the environmental standards of the exporting country. This is called "mutual recognition." Third, governments may commit themselves to follow a common environmental standard. This is called "harmonization." These three approaches are often used in combination. For example, all three co-exist within the European Community. Many analysts distinguish between "upward" and "downward" harmonization. Upward harmonization occurs when governments agree to achieve the strictest environmental standard among them; downward harmonization occurs when governments agree to drop to the most lax standard among them. Neither approach is typically taken in its pure form. Still, these diametric

concepts are useful in predicting the direction of change likely to result from a trade agreement. For all three regulatory approaches, it is important to point out that trade agreements do not convey environmental "rights" to parties. What trade agreements do is to convey disciplines--for example, obligations to avoid using ETMs to assist domestic producers. Recent trade agreements have used the term "right" in a potentially confusing way. For example, the drafters of NAFTA imply that it is NAFTA itself which grants the "Right to Take Standards Related Measures."

As noted above, environmental standards pertain to both products and processes. Although many commentators have suggested that international trade rules make a fundamental distinction between the two (i.e., disfavoring process standards), a more accurate view is that the legal status of process standards is unsettled. The uncertainty concerns whether the process standards can be applied to imports to achieve goals which transcend the jurisdiction of the importing country (e.g., sustainable forests). Few would disagree with the long-established practice of applying process standards to imports to protect food safety within the importing country.

Quite apart from the issues of legal interpretation, practical considerations are rendering the product versus process distinction useless. First, as methods of scientific analysis improve, many process standards may be rewritable as product standards. The dividing line is the verifiability of the product attribute. If the use of artificial growth hormone became testable in the product, then the EC's controversial beef hormone regulation could be converted to a product standard. Second, many emerging standards already straddle the distinction. Consider recycled content restrictions on newsprint or bottles. It is not clear whether they are product or process standards. Third, environmental certifications can be used to indicate the production process. Certifications have long been recognized by the international trading system to indicate the genuineness of a trademark or copyright. Certifications are also used by countries trafficking in endangered wildlife to declare that the export "will not be detrimental to the survival of that species" (Convention on International Trade in Endangered Species, Article II:2a).

Although products do not normally publicize their production process, the use of certifications allows border inspectors to apply process specifications. In summary, as the line fades between product and process standards, a regulatory regime predicated on that distinction will come under increasing fire.

B. DEBATE: Do Trade Agreements Impede Environmental Protection?

1. Affirmative²

The environmental community's objections to subjecting environmental regulations to the trade regime stem not solely from the processes by which trade rules are adopted and implemented, but also from the incompatibility of existing and proposed trade rules with effective solutions to pressing environmental problems. This incompatibility derives both from the divergent goals and philosophies of the two regimes and from the particular precepts that are embodied in existing and proposed trade rules.

Forty-five years ago, few, if any, of the drafters of the GATT could have envisioned the types of environmental problems that plague the world today or the nature of regulatory solutions to such problems that currently exist or are being developed at the international, national, and local levels. As a result, the GATT was not drafted with these types of problems and regulatory solutions in mind. Instead, it was designed to address international economic problems that were largely divorced in most people's minds from health and environmental considerations. The first decades under the GATT continued this focus on tariffs and other strictly economic measures. It is in this context of economic regulation, with little thought given to health and environmental regimes, that the GATT rules, interpretations, and dispute settlement procedures evolved.

When GATT negotiations and trade challenges began to focus in recent years on health and environmental measures such as nontariff trade barriers, it was from a trade perspective that viewed such measures with great suspicion and even hostility. As Professor Jackson states, "[a]ll too often during the past decade, it has appeared that the trade policy specialists have feared the incursion of environmental policies on their terrain (partly because the environmental policies can be so easily used as an excuse for protectionism)"

The trade experts tend to view health and environmental measures that restrict trade as undesirable because they impede trade, regardless of the particular reasons for, and context of, the measures. From the trade perspective, the goal in negotiations and trade disputes is to curtail such measures or, where that is not possible, to limit them to the bare minimum necessary to serve what the trade world deems are legitimate purposes and through what the trade world concludes are acceptable means.

This goal derives from the general philosophy behind the trade regime--that a free market economy will make the world better off. While this philosophy has historically been couched in terms of economic well-being, it has more recently become the rallying cry for free traders seeking to defend the expansion of the trade system into the environmental arena. Thus, the argument goes, trade liberalization will make countries better able to afford costly

environmental protections. This argument ignores the fact that the trade rules promote certain behaviors that are harmful to the environment and stand in the way of government actions to curtail such behaviors. As a result, the issue is not limited to the effectiveness of government actions to rectify environmental problems, which would be enhanced by the availability of more government resources for that purpose. Rather, the focus should be first and foremost on understanding the types of environmentally harmful behaviors that will be promoted by the trade system and the solutions that will be prohibited by it.

a. The Trade Rules Do Not Account For Environmental Externalities

Under the international trade system, the societal costs of the environmental impacts and of the consumption of natural resources are not borne by the producer, and are thus not reflected in market prices. In economic terms, the costs of these impacts are said to be "externalized." While it is possible that the trade regime could require the internalization of such external costs of production, the current trade system makes no such accommodation. As a result, pollution and other environmentally harmful by-products of market behavior are permitted without any market adjustments, and government actions taken to curtail or account for such externalities are often considered restraints of trade.

The trade system could be redesigned to encourage the full accounting or internalization of such costs by attributing the societal costs of pollution to the polluting activity. A government's failure to regulate the activity so that market prices reflect these costs would be an impermissible government subsidy that would be actionable under the GATT. An importing country could then impose countervailing duties on imports from that country, equivalent to those adverse environmental impacts. This type of system would eliminate the competitive advantage that otherwise accompanies weak environmental regulation. It would therefore obviate the need for trade restrictive measures to protect domestic industries that internalize such costs from competition from industries that do not.

Since the trade system currently does not require the internalization of environmental impacts, and is not moving towards doing so in the near future, it penalizes industries that internalize such costs and leaves governments no effective means to combat any competitive disadvantage faced by industries that bear such costs. Thus, if a country wants to maintain tough pollution control standards and still preserve its competitiveness, it must either subsidize the costs of complying with such standards or establish import tariffs to ensure that imports from other countries without comparable standards do not gain an unfair competitive advantage. However, the GATT prohibitions on government subsidies and differential import tariffs do not permit these adjustments. The GATT prohibition on discrimination between like products based on a variation in the method of production also stands in the way of market corrections for differing degrees of internalization of the environmental costs of production.

Similarly, the current trade system is hostile towards efforts to promote sustainable development, in large part because the consumption of natural resources is not factored into market prices. As a result, the means by which governments may promote sustainable development, for example, subsidies or other protections for domestic industries that use sustainable development practices or import restrictions on products produced through unsustainable means, are trade restrictions that run afoul of the GATT.

The most effective reform of the existing trade system would be to require the internalization of environmental costs. If this reform were made, countries would have less need to resort to trade restrictive measures. However, in the absence of this reform, a whole series of lesser reforms is essential. Thus, government subsidies that promote environmentally beneficial behavior should not be actionable under the GATT. Furthermore, trade measures in the form of import tariffs or other import restrictions that penalize environmentally harmful production processes should be permitted.

The existing trade regime does not embrace the concept of internalization, nor is it likely to do so. However, the trade and environment debate must necessarily confront this issue. If it is ignored or assumed away, the trade system will never be able to command full legitimacy as the system that should resolve conflicts between trade and the environment. The only way to resolve this issue in a way that has a chance of satisfying, or at least appeasing, advocates of the various points of view is to ensure that it is fully debated and resolved on an even playing field. Because the trade system has already staked out its position, it is far from neutral and therefore cannot be the forum for debating and resolving this issue.

b. The Trade System Discounts Unilateral Environmental Actions

Another significant issue in the trade and environment debate is the extent to which one country, or a group of countries, may impose restraints on trade to address an environmental problem outside their borders. Again, the trade regime is not neutral on this issue, but instead views unilateral environmental actions as suspect. Thus, in the Tuna/Dolphin dispute, the GATT panel concluded that cooperative international arrangements should be pursued before trade restrictions may be imposed. Similarly, the Uruguay Round and the NAFTA food safety provisions make it clear that countries may not restrict trade in order to protect health or life outside their borders.

This prohibition on the extraterritorial reach of environmental regulations is devastating because many environmental problems extend behind national borders. Where an industrial activity in one country produces environmental damage in another, the recipient of the harm may seek to curb the behavior causing that harm. Canada's attempt to compel the United States to take action to lessen acid rain provides a case in point. To be effective, most such efforts would need to focus on production processes, rather than final products, and thus they would discriminate against like products in violation of the GATT. However, if the trade system ties Canada's hands, then free trade in acid rain is assured. In other words, United States industries are permitted to externalize the environmental cost of production at Canada's expense. Canada should be able to correct the flaws in the market that derive from the U.S. market's failure to require the internalization of these costs.

The market's imperfections are exacerbated with respect to the global commons, such as the atmosphere and the global climate, that are shared by all. Significant disincentives stand in the way of national regulation because of the problems presented by holdouts (those refusing to cooperate) and free-riders (those refusing to share the costs of regulation). In the face of the externalization of the environmental costs of production, countries may forgo regulations that protect the global commons in order to gain a competitive advantage.

Extraterritorial regulation by countries willing to take the lead in such regulation may shift the balance and force other countries to follow suit. It also may be the only way to obtain any degree of cooperation among countries willing to act. For example, the Montreal Protocol imposes different trade restrictions on developed and developing countries, and it restricts trade not only in Chlorofluorocarbon (CFC) products but also in products produced through processes that utilize CFCs. These trade restrictions extend to trade with nonparties, as well as parties, to the Montreal Protocol. Without incentives for developing countries and provisions preventing nonparties from picking up the slack in CFC trade and gaining a competitive advantage from retaining CFC processes and products, the Montreal Protocol would neither gain wide support, nor lead to effective solutions.

Extraterritorial regulation is also critical in protecting endangered and threatened species. Although there are many international conventions protecting endangered species, the enforcement mechanisms are generally ineffective or nonexistent. Thus, the Convention on International Trade in Endangered Species (CITES) allows any country to enter a reservation to a change in the list of protected species and thereby to exempt itself from the Convention with respect to that species. Various United States laws impose trade bans on such species, and sometimes also on trade in products caught by methods that threaten such species, in order to give teeth to CITES and other international conventions and to place political pressure on the offending countries. Without this tool, economic self-interest will be left unchecked and perpetuate the cycle of endangerment.

Even where a resource is located within the territorial boundaries of a country, such as a rain forest or an elephant herd, depletion of that resource has consequences for the international environment, for example, by contributing to global warming or threatening to extinguish a species or reduce biodiversity. A ban on imports of tropical hardwood or elephant ivory products may be the most effective way to prevent deforestation of rain forests or elephant extinction.

Given that actions must be taken at critical points to prevent environmental problems from worsening or becoming irreversible, extraterritorial environmental regulation is an important, if not an essential, tool. This is also why it is sometimes necessary for countries to adopt such measures before an international consensus emerges. Requiring an international consensus is likely to lead to lowest common denominator solutions because environmental costs are externalized in the absence of some corrective action and because of holdout and free-rider problems. To make matters worse, even a lowest common denominator solution may be long in coming in the absence of some pressure from extraterritorial regulation. Given the need to take swift action in response to many environmental problems, many people feel that there is an overriding need to move ahead of the existing international consensus.

Even if environmental trade restrictions are limited to those supported by some sort of international consensus, there are likely to be disagreements as to when an international consensus has emerged. Staking out a rather extreme position, the trade system has exhibited extreme reluctance to acknowledge any international consensus on trade-restrictive environmental measures. Thus, the Montreal Protocol and CITES command substantial international support, yet further action in the form of a waiver is necessary before GATT will recognize them. Similarly, even though the Organisation for Economic Cooperation and Development (OECD) endorsed the polluter pays principle in 1972, the trade world does not recognize that principle as a valid international consensus. Moreover, where there is an international consensus as to the existence of a problem and the need for a trade-restrictive remedy, the trade world may still refuse to accept the legitimacy of that remedy either because it is not mandated by the letter of an international agreement, as in the case of a CITES reservation, or because it is not the least restrictive way to address the problem.

The extent to which unilateral trade restrictions may be imposed for environmental purposes is a burning issue in the trade and the environment debate. The trade regime has already come out against unilateral, extraterritorial environmental measures. For this reason, it is not a neutral forum in which to air and resolve this issue.

c. GATT's Health And Natural Resources Exceptions Thwart Needed Environmental Regulation

The clash between the trade system and environmental regulation could be alleviated if the trade rules contained exceptions to their prohibitions on trade restraints for environmental regulations. The GATT, in fact, contains two exceptions that could, in theory, serve this purpose: an exception for measures that are "necessary to protect human, animal or plant life or health . . ." and another for measures "relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption . . ."

These exceptions have been construed in such a way that they do not afford sufficient protection to necessary environmental regulations, which is not surprising given that they have been interpreted and implemented in closed trade processes by trade, not environmental or public health, experts who tend to view environmental regulations as inherently protectionist. Especially troubling is the fact that the trade world will determine whether a particular measure serves legitimate health or environmental goals, and whether it does so through acceptable means.

In the Uruguay Round, elaborate standards are being developed to distinguish between legitimate and illegitimate food safety and technical standards. Under these provisions, certain international standards (that often are not the most protective of health or the environment) would be deemed to be legitimate. Standards that provide more protection to public health or the environment would need to pass muster under a sound science test. As stated in the latest Uruguay Round draft, a country maintaining such a food safety standard would need to show that there is a scientific justification for the standard and that it is not maintained in the face of contrary scientific evidence. The draft also spells out other requirements for such standards, such as that food safety standards must be based on risk-benefit analyses and that technical standards must be performance, rather than design or product, standards.

The notion of a country being forced to present the scientific justification for its actions to a GATT dispute settlement panel that lacks scientific expertise is troubling, particularly because there is rarely certain scientific evidence. In the face of scientific uncertainty of an environmental problem and the likelihood that it will worsen significantly unless prompt action is taken, many governments will decide to take action based on their political assessment of the situation and risks. One illustration of this proposition is provided by the Delaney Clauses of the Federal Food, Drug and Cosmetic Act, which prohibit the introduction of certain carcinogens into foods. These prohibitions were adopted by Congress more than thirty years ago, based on its policy determination that cancer-causing substances should not be added to the food supply. Science as we know it today had little to do with that decision. Indeed, industry advocates argue that the Delaney Clauses are outmoded, while consumer and public health advocates continue to support them.

The other significant limitation imposed by trade rules on health and environmental standards is the requirement that such standards must use the available means that are least restrictive to trade. However, as a general rule, the most effective solutions to environmental problems will be more restrictive to trade than the less effective alternatives. For example, it could almost always be argued that it is less restrictive to trade to require disclosures of the adverse health or environmental effects of a product than it would be to ban the product, but a ban is unquestionably a more effective environmental solution.

By mandating the use of alternatives that are the least restrictive to trade, the trade system is stacked against effective environmental regulation. Thus, if a country seeks to create incentives for reusable containers by taxing disposable containers and, to a lesser extent, recyclable ones, it could open itself up to a trade challenge, particularly if it has already shifted its own use to reusable containers. The tax, though nondiscriminatory on its face, would be viewed as protectionist because it favors the domestic industry that uses the more environmentally friendly containers. The measure would also be subject to scrutiny under the GATT for a determination of whether the taxes are disproportional to the environmental harm caused by the disposable and recyclable containers, respectively. And of course, trade experts who tend to see protectionism in virtually all environmental regulations would determine whether the measure employed the least restrictive means of achieving a legitimate goal.

Existing trade rules against which health and environmental standards are measured are, like the trade system's failure to internalize environmental costs, and its presumptions against unilateral measures, stacked against effective health and environmental regulations. Especially in light of the processes for developing and implementing these rules, they are far from neutral. As such, they are an inappropriate backdrop or starting point for the debate over when health and environmental measures may impose restrictions on trade.

2. Negative³

The global multilateral trading system and its centerpiece, the General Agreement on Tariffs and Trade (GATT), are facing a new challenge from a quite unexpected quarter. The GATT is under attack by some in the environmental community who charge that international free trade blindly fosters the exploitation of natural resources. The GATT is depicted as a sinister charter that allows "big business" a free hand to plunder the bounty of the natural world. In certain environmentalists' view, "free trade can destroy the environment." Thus, a segment of the large and influential environmentalist lobby has joined the growing coalition of interests seeking to scuttle what is left of international free trade.

The environmentalists who argue that free trade will destroy the environment are shortsighted and wrong. As a recent GATT informational report has pointed out, there is no fundamental conflict between GATT rules and the need to protect environmental quality. Analysis shows that existing GATT regulations place virtually no constraints on the ability of a nation to protect its own environment and resources against damage caused by either domestic production or domestically produced or imported products. GATT rules can also be made consistent with efforts to preserve regional and global environmental quality. Furthermore, trade liberalization, whether on a global or regional basis, will actually help the environmentalists' cause by (1) fostering common standards for environmental protection that must be observed even by certain developing countries that currently ignore environmental concerns; (2) terminating subsidies, particularly in agriculture, that are environmentally destructive, as well as inefficient;⁴ and (3) ensuring economic growth, which will create the financial means, particularly for developing countries, to control pollution and protect the environment.

The current ruckus raised by the environmentalists over GATT rules is due primarily to a GATT dispute panel's invalidation of a United States import ban on tuna from countries that do not require "dolphin-friendly" fishing methods. From this ruling many environmentalists have drawn the conclusion that the GATT is hostile to all natural resource conservation restrictions. This is totally false; the tuna ban violates the GATT not because of any inherent policy against conservation but because the GATT rightly protects member states from the unilateral imposition of domestic standards by importing countries through market access restrictions. Such protection is necessary even from an environmental standpoint. If every country were allowed to impose its own domestic environmental standards on other countries, the result would not be greater environmental protection but chaos and anarchy.

a. Protecting the Domestic Environment

The GATT recognizes that the contracting parties retain control over policies regarding health, safety and pollution, as well as natural resources, within their jurisdiction. Accordingly, several different methods may be used to apply domestic environmental policies to imports and exports.

First, Article XX(b) permits import prohibitions or restrictions to enforce domestic policies concerning human health and safety, and animal and plant conservation. However, as we have seen, such restrictions must be enforced on a nondiscriminatory basis; they must be "necessary" in the sense that other methods are not available or practicable; and their reach must be confined to the jurisdiction of the country enacting the measure. Within these limits, Article XX(b) may be used to justify a wide variety of environmental and health regulations on imports, including auto emission standards, product noise standards, food and drug regulations, toxic and hazardous substance regulations, and pesticide residue limits.

Second, Article XX(g) permits trade restrictions relating to the conservation of exhaustible natural resources, but such restrictions must be applied on a nondiscriminatory basis, "primarily aimed" at the conservation of the resource, enforced in conjunction with restrictions on domestic production and consumption, and aimed at conserving resources within the jurisdiction of the country enacting the measure. Pursuant to this exception, a nation may certainly prohibit the export of species of endangered plants and animals within its jurisdiction.⁵ It may also ban or restrict the exportation of certain natural resources, such as tropical timber, but only if the conditions listed above are fulfilled.

A third source of justification for conservational trade restrictions under the GATT is Article XI(2)(a), which permits an export prohibition or restriction when there are domestic shortages. Such measures may be "temporarily applied to prevent or relieve critical shortages of foodstuffs or other products essential to the contracting party." This provision was relied upon by the United States Congress in passing the Forest Resources Conservation and Shortage Relief Act of 1990,⁶ which prohibits the export of unprocessed logs from federal and state lands. This law includes an extensive justification designed to satisfy Article XI(2)(a).

Under existing interpretations of the provision, however, the ban does not appear to qualify. First, it is doubtful that timber is really in short supply in the United States, especially since the export restrictions were not accompanied by any corresponding domestic restrictions on production or consumption. Second, the primary purpose of the law appears to be economic: to improve business in the Pacific Northwest where domestic mills face

dwindling supplies of timber as greater quantities of unfinished logs are imported by foreign countries at higher prices.

Moreover, trade measures such as these, even when their application is considered to be within the power of sovereign states, raise two kinds of concerns. First, although many environmental, health and safety standards are concededly justifiable and necessary, some may be enacted for ulterior motives: to protect domestic industry from foreign competition. Therefore, the enactment of such a measure raises the legitimate question whether it is a lawful trade restriction or disguised protectionism. How do we distinguish between the two?

Second, even when such standards are found to be justifiable and necessary, the very fact that different countries have different policies, standards and regulations is itself a barrier to international trade. Should we, therefore, allow the proliferation of national differences, bowing to the paramount value of environmental protection? Or should the international community attempt to lessen the conflict between trade and environment by adopting international standards or fostering the harmonization of different national standards?

The GATT correctly restricts environmental exceptions to regulations that fulfill environmental purposes. By excluding "disguised restrictions on international trade," the GATT properly tries to distinguish restrictions that purportedly protect the environment but really have other purposes. The difficulty lies in the lack of proper criteria for differentiating between environmentally protective trade restrictions and disguised trade barriers.

Environmentalists may object that harmonizing standards or adopting international standards is equivalent to a "lowest common denominator" approach that will result in lax requirements. Although this may once have been the case, the future should be different. In virtually all countries, there is political pressure for greater environmental controls; nations, such as the United States, Japan and the EC members, that have higher environmental standards are likely to bring increasing pressure to bear upon countries with lax controls to eliminate their competitive advantages; and there is a greater awareness of the urgency and global scope of environmental problems.

b. Protecting the Global Environment

As the realization has grown that protection of the environment must be addressed on a global basis, the number of multilateral and bilateral agreements has proliferated. International environmental law is among the most dynamic areas of law; more than 150 multinational agreements have been concluded in the last ten years.

What is the status of these and other multinational environmental agreements in relation to the GATT? Being valid international agreements, they enjoy equal status with the GATT as international obligations of the parties. The issue then becomes: if one of these agreements conflicts with a GATT obligation, which agreement has priority? To resolve this question, we may rely upon the Vienna Convention on the Law of Treaties.⁷ Article 30 of this Convention contains clear rules relating to inconsistent treaties: (1) between parties to a treaty that later become parties to an inconsistent treaty, the early treaty applies only insofar as its provisions are not incompatible with the later treaty; and (2) between a party to both treaties and a party to only one of them, their mutual rights and obligations are determined by the treaty to which both are parties.

Thus, the trade restrictions in multilateral environmental agreements between parties that are also members of the GATT are, in effect, exceptions to the GATT because as later treaties they have priority. When the nonparty is a GATT member, however, GATT obligations remain, and a waiver must be sought under GATT Article XXV(5) if there is any conflict with GATT requirements.

Certain provisions of both CITES and the Montreal Protocol are inconsistent with GATT norms. CITES would appear to be justified under GATT Article XX, subsections (b) (protection of human, animal or plant life or health) and (g) (relating to the conservation of natural resources); however, such is not the case. As interpreted by the U.S. Tuna Ban GATT panel, subsections (b) and (g) have no application to natural resources located outside the jurisdiction of the trade-restricting state. Thus, the Article XX exceptions may only be applied to trade restrictions for endangered domestic species. Since CITES trade restrictions are employed for many endangered species that are not indigenous, Article XX would not apply, and the restrictions are forbidden under GATT Article XI(1).

The Montreal Protocol would not present this difficulty and appears to qualify for the exception under Article XX(b) because of the demonstrated threat to human, animal and plant life and health from depletion of the ozone layer. However, the Montreal Protocol violates GATT norms because of the arbitrary discrimination under its Article 4, which provides for trade restrictions only on nonparties. This discrimination appears to disqualify the Article XX(b) exemption, which explicitly forbids measures that constitute "arbitrary or unjustifiable discrimination between countries where the same conditions prevail." Arguably also, the trade restrictions on nonparties are not "necessary." Their purpose is to incite nonparties to join the Montreal Protocol regime; but this could be done by other means such as by providing financial support or transfer of technology.

If these two important environmental agreements are inconsistent with the GATT, what is their status under international law? Will they and similar treaties meet the same fate as the U.S. tuna ban if they are tested before a

GATT dispute resolution panel? First, the vast majority of contracting parties under the GATT have adhered to both CITES and the Montreal Protocol. Under Article 30 of the Vienna Convention, GATT obligations give way to the provisions of the later treaty for those states that are parties to both. Second, there would be a problem only for GATT members that are not a party to CITES or the Montreal Protocol. Under Article 30, nonparties to CITES and the Montreal Protocol may assert their GATT rights.

Obviously, this is an unsatisfactory state of affairs. Unlike the unilateral U.S. tuna embargo, multilateral international agreements such as CITES and the Montreal Protocol should be upheld in their entirety. There should be no doubt about their validity under the GATT.

c. Inadequate Environmental Protection Controls in Other Nations

The imposition of the costs of pollution control on companies whose manufacturing processes generate pollution may be justified on both environmental and economic grounds. Requiring the polluter to pay ensures that those costs are borne by the polluter and the consumers of its products, not by society at large. Therefore, countries should be encouraged to implement pollution control measures either by command and control regulations or by levying a tax commensurate with the level of pollution. Not all nations will adopt such controls, however, and industries located in nations with few or none may well be able to produce competing goods at less cost.

As we have seen, in conformity with the GATT, country A may restrict the import of goods that may endanger the domestic environment, for example, hazardous wastes, toxic chemicals and products containing CFCs; but may country A single out those nations with inadequate pollution controls and adopt trade restrictions on their products—tariff surcharges, quotas or taxes—on the theory that it is removing the “pollution advantage” inherent in the products concerned?

Under existing GATT law, country A would certainly violate its GATT obligations by enacting such a “pollution equalization” measure. First, it would violate the most-favored-nation requirement of GATT Article I(1), since the surcharge, quota or tax would be levied on the basis of the geographic origin of the product. Levying a tariff surcharge, quota or tax on imports from only certain countries would therefore violate the obligation in Article I(1) to treat “like products” imported from all GATT contracting parties uniformly.

Second, the U.S. Tuna Ban decision is authority for the proposition that a quota in such a case would also violate GATT Article XI(1) since it could not be justified as a regulation under Article III(4). Third, a “pollution tax” levied on imports from certain countries while exempting domestic industries producing like products would additionally contravene the GATT’s national treatment clause, Article III(1), under the authority of the Superfund decision. Furthermore, none of these methods of burdening imports can be justified under the exceptions in GATT Article XX; subsections (b) and (g) were intended to apply only to resources and environmental conditions within the jurisdiction of country A, but the imported goods, although their production is polluting the country of origin, are not hazardous to the environment of country A. Therefore, country A cannot restrict the importation of goods merely because they were produced at what country A perceives to be excessive environmental costs.

Is this a flaw in the GATT system? Is the GATT hostile to environmental protection? On the contrary, the GATT rules appear to be the only workable solution. Nations face a widely differing array of economic, health, safety, social and environmental conditions. They must be allowed the right under international law to choose their own policies and priorities. To allow each country unilaterally to restrict trade on the basis of differing environmental conditions in another country would invite chaos and retaliation. Furthermore, if unilateral trade restrictions were permitted for environmental reasons, they could also be used to combat all manner of national socioeconomic policies. Permitting such actions would reduce international trade to a power-based regime that would have no stability or rationality.

d. Conclusion

Contrary to the alarmist claims of some environmentalists, there is no inherent conflict between international free trade as it has evolved under the aegis of the GATT and protection of environmental quality. The GATT recognizes and contains policy instruments that can be used to protect domestic and global natural resources; the GATT and environmental protection are largely compatible. Nevertheless, the current tension between environmentalists and free international trade points up certain problems that must be addressed. The environmentalists should realize that international free trade is essential to world economic progress, which is in turn necessary for the protection of environmental values, particularly on a global scale. For their part, those who are concerned with the GATT system should acknowledge the necessity and immediacy of environmental goals that did not exist at the time GATT principles were formulated. In addition, they must recognize that the relationship between GATT law and environmental protection needs to be clarified and extended. The GATT should authorize the working group on the environment to prepare for a full-fledged negotiation among the contracting parties.

C. Harmonization⁸

The World is simultaneously facing increasing economic interdependency and intensified demands for protecting the environment. The June 1992 United Nations Conference on Environment and Development (UNCED) in Rio has stimulated awareness of the global character of many environmental problems and the impact of environmental regulation on economic growth. At the same time, businesses and nations increasingly are concerned about their ability to compete in the international marketplace. Nations such as the U.S. that adopt stringent environmental protection measures fear that they will be disadvantaged in that competition. The appropriate response to competitiveness concerns is not autarchy. The U.S. should not attempt to insulate itself by barring or imposing discriminatory duties on products from nations with less stringent standards. Rather, the solution is a combination of domestic policy changes to eliminate unnecessary regulatory and liability burdens, and international efforts to move toward partial harmonization of national environmental measures.

Environmental regulations and liability rules differ among nations, often strikingly so. The differences are greatest between the developed and the developing nations, but there are also substantial variations within each of those vague but convenient groupings.⁹ This Part provides a conceptual analysis of three questions: What accounts for these differences in environmental laws? What are the potential effects of these differences on international competition and trade? Are these effects desirable?

1. Explaining Differences in Environmental Standards Among Nations

a. Differing Assimilative Capacities

Geographic, ecological, and demographic variations among nations affect the ability of different nations to assimilate pollution and other forms of natural resource exploitation. A nation with fast-running, short rivers, such as Britain, can assimilate a higher level of water pollution with less environmental harm than nations with long, slow-running rivers such as Germany or France. Nations with soils that are low in buffering capacity suffer greater damage from acid deposition than those with high buffering capacity. A large, sparsely-populated country will suffer fewer adverse health and environmental effects from a given level of pollution emissions than will a small, densely populated country.

Nations also differ in their existing levels of pollution and other forms of environmental resource use. For example, those with lower levels, other things being equal, will be better able to accommodate additional pollution than nations that already have high levels of pollution. This conclusion must, however, be qualified by noting that nations with relatively pristine environments may have a strong interest in preserving them; in such a nation, the marginal harm of an additional increment of pollution may be greater than in a nation already moderately polluted.

Social, cultural, and historical factors may lead different societies to attach more or less importance to environmental protection as opposed to expanding the supply of public and private goods and services. For example, even within Western European nations at comparable stages of economic development, there are striking differences in environmental orientation between nations such as Germany, Denmark, and the Netherlands on the one hand and France, Great Britain and Italy on the other.

There are also differences in wealth among nations. Experience shows that societies treat environmental quality as a "luxury"; they demand relatively more of it as income rises and needs for housing, food, and other "basics" are satisfied. Wealthier societies also tend to be better educated and therefore more cognizant of the importance of environmental protection. Thus, wealthier nations are more likely to choose to devote a higher percentage of their resources to environmental protection. Wealth and associated educational levels also affect nations' abilities to develop strong, capable administrative authorities to devise, implement, and enforce effective environmental protection measures.

Finally, nations differ in their stage of economic development, which affects not only their wealth but also the composition of their productive output. While there is no "iron law" that produces a fixed, uniform pattern of economic development, most contemporary nations have moved from economies that are based primarily on agriculture, to a stage of intensive industrialization, and then to patterns in which service industries are increasingly important. Nations at the intermediate stage of intensive industrialization are likely to produce proportionately more pollution and other forms of environmental degradation in relation to GDP than nations whose economies depend primarily either on agriculture or services. It will accordingly be relatively more costly for such nations to achieve a given level of environmental quality than those in which industry constitutes a smaller percentage of output.

These several variables will mean that different nations will vary in their capacity to assimilate pollution and other adverse environmental effects of resource use. They will also differ in the extent to which citizens are willing to forgo public and private goods and services to prevent environmental degradation. Accordingly, the governments of different nations, each responsive to the welfare of its citizens, could justifiably adopt environmental requirements of quite different stringency. These requirements would appropriately reflect the effective assimilative

capacity of the environment in each country.

b. Political Failure

The account above assumes that all governments are responsive to their citizens' welfare and values, but this clearly is not the case. To varying degrees in different nations, environmental policies reflect the nature of the government and the influence of dominant economic or political factions. Some governments may be corrupt, incompetent, shortsighted, or overly responsive to development interests. As a result, they may adopt inadequate laws and fail effectively to enforce them. Other governments, driven by symbolic politics and responsiveness to alliances between regulatory bureaucracies and ideological interest groups, might adopt excessively stringent requirements.¹⁰ Accordingly, differences among national environmental standards may to some extent be explained by different forms of "political failure."

c. Externalities

Externalities can also generate inadequate standards. Environmental process standards are likely to be less stringent when some of the adverse environmental effects of a process are imposed on other nations, for example through transboundary pollution. The nation in which the processes are located is likely to pay little or no attention to the interests of other nations, and accordingly, it will fail to adopt adequate requirements. For many years Britain did not control sulfur emissions from its power plants because most of the adverse effects were experienced in Scandinavia and elsewhere. Some nations may allow destruction of their tropical rain forests because most of their own citizens do not care greatly about preserving them, even though many people in other countries are extremely distressed by the disappearance of rare species and ecosystems. In such cases, nations will often fail to adopt appropriate environmental standards because of a political externality; the costs of more stringent standards will be borne by the nation adopting them, whereas a significant portion of the benefits will go to those in other countries.

A somewhat different form of externality problem is present in the case of the global commons, such as the atmosphere, the oceans, or Antarctica. Biological diversity might also be regarded as a form of global commons even though many biological resources are located within natural boundaries. All nations may benefit if each acted to protect the commons from despoliation, but no nation has an incentive to take such action. Each nation may, for example, benefit from measures to eliminate emissions of chlorofluorocarbons (CFC's) that destroy upper atmospheric ozone, causing an increase in cancer-causing ultraviolet radiation at the earth's surface.¹¹ Similarly, it may be in the mutual interest of all nations to limit whaling in order to prevent the extinction of whales.¹² From the viewpoint of any one nation it may not, however, be rational to unilaterally limit CFC emissions or whaling because most of the benefits of such action would accrue to others while it would bear all of the costs. If this is true for each nation, no nation will adopt restrictions, even though all nations would be better off if each did. Under this "tragedy of the commons" scenario, no one will prevent the despoliation of the commons.¹³

Even if the benefits to a nation of its action to protect the global commons exceeds its costs and the nation unilaterally adopts restrictions,¹⁴ other nations will not follow if their cost-benefit calculus of unilateral action remains negative.¹⁵ Moreover, countries that do not take measures to protect the environment can "free ride" by enjoying some of the benefits of the actions unilaterally taken by other countries without incurring any of the costs. This "exploitation of the great by the small" may explain some differences in national standards relating to the global commons. No single one of these three explanations--differences in assimilative capacity, political failure, and externalities--can account for all differences among national environmental measures; yet each plays a role.

2. Effects of Differing National Environmental Requirements on Competitiveness

Variations in the stringency of different nations' environmental measures have potentially important implications for international trade and investment. On standard economic assumptions, putting aside for the moment markets for "green" technologies created by environmental regulation and liability rules, industries in nations with higher assimilative capacity and less stringent environmental regulation and liability rules will face lower compliance costs and enjoy a comparative advantage in international product competition. New industrial facilities will have a tendency to locate in nations with lower compliance costs, until these nations' assimilative capacities decrease and compliance costs increase to the level of other nations. These are the essential features of what we may call the international market in comparative assimilative capacity.

In addition, the effects of different standards and liability rules on competitiveness depend not only on the rules' relative stringency but also on the policy instruments and legal and administrative approaches chosen to implement these measures. A relatively rigid, legalistic command-and-control regulatory approach, like that used in the U.S., tends to drive up compliance costs.¹⁶ Nations with more flexible, less litigious approaches can achieve the same basic level of environmental protection at significantly less cost. Nations adopting regulatory approaches that enable industry to meet environmental goals at lower cost thus enjoy a comparative advantage over other nations.

3. Desirability of International Competition in Assimilative Capacity

Let us suppose, subject to the qualifications noted, that the international market in comparative assimilative capacity operates as described. Is such a market desirable? Or should states adopt uniform standards, unilaterally impose countervailing duties, or take other measures against product imports from states with less stringent process standards? Should international businesses' investment decisions be regulated in order to limit capital mobility? Most economists would probably applaud the market and oppose such measures, claiming that they would reduce social welfare. Economists would argue that investment in polluting industry should flow to nations with lower standards and greater assimilative capacity. This flow of investment benefits the residents of these nations, who place a higher priority on expanding the output of public and private goods and services or can assimilate pollution with less environmental damage. It also benefits residents of nations with higher standards and lower assimilative capacity, who would suffer greater welfare loss if polluting industries were located in their country. This beneficial flow of investment is driven by variations in relative competitive advantage attributable to the differences in national standards. Adoption of uniform standards would lead to inappropriately high standards in nations with higher assimilative capacity, forcing them to devote too few resources to non-environmental goods and services which they would otherwise prefer. It might also lead to inappropriately low standards in other nations. Unilateral measures would reduce welfare by restraining trade without producing compensating benefits.

Those concerned with environmental protection and the impact of different national standards on U.S. competitiveness make two attacks on these conclusions. One attack questions whether the international market in assimilative capacity operates in the welfare-maximizing fashion described. It has been claimed that competition among nations for industry is a form of Prisoner's Dilemma.¹⁷ Each nation, acting independently, fears that other nations will adopt lax environmental requirements, and that it will therefore suffer serious competitive disadvantage by adopting the more stringent requirements that it prefers. Since each nation reasons in the same way, all adopt less stringent requirements than they would prefer individually. This is the "race to the bottom."¹⁸ More colorful accounts include industry efforts to play one nation off another and engage in "blackmail."

The response to this criticism is that there is no reason to suppose that international competition for comparative advantage will lead nations to adopt inappropriately low environmental standards. In a purely domestic context, a government must weigh the benefits of environmental protection against the cost of forgoing other goods and services that could be produced by the resources devoted to environmental protection. In the international context, those costs may also include reduced competitiveness in the world market, a cost set by the existing levels of environmental requirements throughout the world. Each nation will weigh this cost against the benefits of enhanced environmental protection, which are a function of its assimilative capacity. Each nation will achieve its own balance between cost and benefit.

There are nonetheless ways in which a "race to the bottom" might occur. One possibility is that national political systems are myopic. The government of Nation A may lower its standards in order to gain competitive advantage, not foreseeing that B may reduce its standards in response. When B matches its reduction, A may reduce its standards still further in the false expectation of securing a permanent advantage. Such extreme myopia, which might produce a never-ending downward spiral in standards, seems highly implausible.

A more realistic possibility is that A is uncertain about the exact value that B's political system places on environmental protection and how B's government will respond to A's choice of standard, and vice-versa. If each nation's choice of standards depends on those chosen by other nations, if each is uncertain as to what choices others will make, and if each is unsure how others will respond to its choices, it is possible that each nation might indeed adopt lower standards. For example, assume two nations, A and B, and three relevant levels of environmental protection, 1, 2, and 3 (with 3 representing the highest level of protection). Because B is wealthier than A, it prefers a higher level of environmental protection than A and is willing to incur the competitive disadvantage involved, provided that the difference between its level and A's is not greater than 1. A wants to maintain a competitive advantage as against B, but will be satisfied with that provided by a difference in environmental levels of 1. Within these constraints, B would prefer level 3, and A would prefer level 2. Each, however, is uncertain of the other's priorities and the level that it will adopt. A is equally uncertain whether B will choose 1, 2, or 3. Because 2 is the average expected level that B will adopt, A adopts level 1. B, in response, adopts level 2. Both end up with lower levels of environmental quality than they would prefer.

Whether this is a realistic model of national environmental decisionmaking is, however, subject to question. For many environmental problems, nations do not find themselves at ground zero; each nation has already chosen standards and may be subject to internal and external constraints in changing them.¹⁹ Further, the large number of nations may restrict the scope for strategic interdependency. Finally, the priority that other nations place on environmental protection and their likely responses to changes in standards by others may not be as uncertain as in the example.²⁰ Despite these and other questions, the example suggests that the risk of a "race toward the bottom"

cannot be entirely ruled out.

The second attack on the desirability of international competition in comparative assimilative capacity invokes political failures and externalities which, for reasons explained earlier, may lead some nations to adopt seriously inadequate standards. When this occurs, the competitive disadvantage to other nations of maintaining more stringent standards increases, causing these other nations to adopt laxer requirements. This scenario provides an alternative account of the "race toward the bottom."

Many environmentalists believe that everything is connected to everything else, and that the regional and global environmental externalities generated by local activities are pervasive and powerfully destructive. If this is the case, this Article's premise that environmental policy is presumptively a national matter is questionable. Far-reaching regional or international agreements or authorities would be necessary to deal with systematic and compelling externalities. Such externalities would also reduce the importance of, and therefore the need to accommodate, national differences in ecological conditions and values that would otherwise justify substantial differences in national standards. They would undercut economists' argument for an international market in comparative assimilative capacity. If the adverse effects of local pollution and other resource uses are indeed global, pervasive, and serious, then a worldwide imperative of environmental protection may indeed trump Ricardo.

This view underlies Professor Edith Brown Weiss' endorsement of "sustainable development" as a common obligation of all nations and peoples. Thus far, however, science has established relatively few acute environmental externalities of broad scope; these include stratospheric ozone depletion, atmospheric buildup of greenhouse gasses, loss of biodiversity, and instances of regional air or water pollution problems. In addition, interests of national sovereignty do not easily yield, and differences in wealth and societal values will continue to produce significant variations in the priority accorded environmental protection in different nations. In these circumstances, uniform environmental standards will in most instances be neither appropriate nor feasible. Steps towards harmonization should focus on the most significant externalities.

Global economic rivalry introduces a further complication. Environmental externalities would exist even in the absence of trade, but trade, capital mobility, and the resultant struggle by businesses and nations for competitive edge make environmental standards a possible element of comparative advantage. This struggle could hinder effects to harmonize national standards. At the same time, the struggle introduces the threat of a "race to the bottom" in environmental standards, giving environmentalists another reason to promote harmonization.

4. The Competitiveness Impacts of National Differences in Environmental Regulation and Liability Rules

The empirical studies on productivity, trade, and industrial location are broadly consistent with one another. They show that national differences in environmental regulation have had an important impact at the margin in the case of a relatively few "dirty" industries. There is also evidence of a more general shift in the location of heavy industrial and chemical facilities and trade advantage in those sectors to developing countries. Environmental regulation has adversely affected U.S. productivity, and the negative effect on the U.S. is greater than in some other OECD countries, particularly Japan. Still, the studies do not show that environmental requirements are a dominant factor in overall international competitiveness.

This attention could provide political support for two steps that should be taken in any event. The first is to reexamine and redirect U.S. environmental priorities and adopt better means for achieving them. The second step is to mount additional efforts for international harmonization of environmental laws and to improve the environmental performance of other nations, particularly some of the developing nations, Eastern Europe, and the former Soviet Union. The case for multilateral action is especially compelling in the case of environmental externalities, such as stratospheric ozone depletion and potential climate change, which directly affect the welfare of the U.S.

5. International Harmonization of Environmental Standards

a. Justifications for Harmonization

A potential response to concerns in the U.S. and other developed countries regarding the impact on competitiveness of different national environmental standards and the perceived threat of a worldwide "race toward the bottom" is to eliminate or reduce those differences through international agreements. Yet differences among nations in comparative assimilative capacity make appropriate some differences in national standards. Moreover, as a practical matter many developing countries would not agree, at least in the short to medium term, to adopt the same environmental standards as the OECD nations. Nor would the latter agree to lower their existing standards.

In addition, as Professor Revesz points out, if nations compete for mobile capital by lowering their environmental standards, harmonizing standards at a relatively high level will not eliminate such competition altogether. Rather, it will simply shift the competition into other forms, such as lower occupational health and safety standards or lower taxes for funding social programs. If so, one must justify giving priority to eliminating competition in environmental standards.

For these several reasons, it would be neither desirable nor feasible to have internationally uniform standards for all environmental problems. On the other hand, existing national standards may not be adequate. Quite apart from "race to the bottom" concerns, the presence of significant environmental externalities suggests that in many instances national standards may be too low. Political and administrative failures in many developing countries are also likely to lead to inadequate environmental protection.

In the area of product regulation, harmonization would benefit consumers in all nations by eliminating differences in environmental standards that undercut producers' ability to achieve economies of scale, increase the transaction costs of complying with different state regulations, and hinder trade and its attendant benefits. But here, too, differences among nations in assimilative capacity and the social value placed on environmental protection create impediments to common standards. Work to harmonize regulatory and labelling standards for chemicals is proceeding under the auspices of the GATT, OECD, and international environmental and health organizations. Understandably, it has been much more difficult to harmonize environmental standards for other products, such as automobiles, where differences in assimilative capacity are often much more important. Thus, it makes little sense to have the same automotive emission controls in Mali as in Japan. Harmonization has also been impeded by the insistence of nations, such as the U.S., that others adopt their relatively stringent standards ("harmonization up") or that they retain the right to set standards more stringent than those adopted by international agreement.

Differing national requirements for resource exploitation and manufacturing processes present other considerations. Harmonization of process measures cannot be justified on the ground that it promotes consumer welfare by removing impediments to trade. Indeed, to the extent that existing variations in national standards appropriately reflect national differences in assimilative capacity and social values, eliminating those differences would reduce consumer welfare. Existing standards are often too low, however, because of two types of externality problems. In the first type of problem, exemplified by transboundary pollution and the destruction within a given country of rare ecosystems and endangered species, part of the costs of environmental degradation are borne by those in other jurisdictions. In the second type of problem, exemplified by stratospheric ozone depletion, climate changes threatened by greenhouse gas emissions, and over-exploitation of the ocean's resources, all nations face a potential tragedy of the commons. Some form of collective agreement is necessary to deal with these externalities and to prevent environmental degradation that reduces total welfare. These externalities would exist even without trade, although economic growth resulting from trade liberalization might make these externalities more severe.

It is difficult to reach such agreements for many reasons. Because of their more urgent need for economic development, citizens of developing countries often place a lower value on reducing environmental externalities than citizens of developed countries. Moreover, these countries often have very limited administrative and technical, as well as general economic, resources. A relatively modest infusion of additional resources from the developed nations could make it possible to strengthen the standards of the developing countries, which would obtain economic and environmental benefits as a result of such transfers.²¹ Both developed and developing nations would benefit from the protection of ecologically valuable resources, such as tropical rain forests, that are located in developing countries. Developed nations might also benefit from the creation of markets for exports of environmentally superior technologies. They could also benefit by reducing transboundary pollution and other forms of environmental spillovers. The developing countries have some responsibility to deal with these spillovers, but at most only in relation to standards appropriate to their own assimilative capacities as well as to their proportionate contribution to common environmental problems. Once it is acknowledged that differences in national standards are appropriate, such transfers ought not to be dismissed as mere "bribes" to induce other nations to cease improper behavior.²² Rather, they may be an essential element in arrangements of mutual advantage and common responsibility.

b. Competitiveness Concerns as Impediments to International Agreement

Negotiation of international agreements to harmonize environmental standards and promote common measures is no easy task. The number of countries is large, their interests are quite diverse and often sharply conflicting, and international institutions are underdeveloped and highly imperfect. Rather than providing a solution to international competitiveness concerns, international negotiations may become a new battleground of economic rivalry as each country or group of countries seeks to "tilt" the structure and content of proposed agreements to its competitive advantage. For example, in the global climate negotiations the European Community (EC) sought agreement on specific targets and timetables for limiting fossil fuel CO₂ emissions. Leading EC nations, such as Germany, had already concluded that such limitations were desirable for purely economic reasons relating to plant modernization and productivity. Others, such as France, were committed to expanding their already formidable nuclear generating capacity. The U.S. has abundant fossil fuel resources, especially coal, which emits higher amounts of CO₂ per energy yield than other fossil fuels. An agreement restricting fossil fuel CO₂ emissions would therefore disadvantage U.S. industry relative to industry in the EC. The U.S. opposed limitations on fossil fuel CO₂

alone, arguing for a comprehensive approach which would include all greenhouse gases (GHG's), their sources, and their sinks. OPEC nations, including Saudi Arabia, also opposed fossil fuel CO₂ limitations. On the other hand, developing countries like Brazil were concerned about the potential extension of any agreement to include non-fossil CO₂ and methane emissions resulting from deforestation. In the end, no binding limitations were agreed to. The Climate Convention is a framework convention; agreements on specific limitations of GHG emissions must await future protocols. The EC is debating a proposed energy fuel tax based in part on carbon content of fuel, but at the insistence of European industry the proposal would become effective only if Japan and the U.S. adopted CO₂ limiting measures that imposed comparable financial burdens on their industries.

The slow pace of international agreements and the struggle for competitive advantage may lead nations to adopt unilateral trade measures, such as product import bans and taxes, to promote environmental objectives and protect domestic industry. The GATT panel decision invalidating the unilateral U.S. ban on imports of Mexican tuna and the proposed NAFTA agreement with Mexico have created lively controversy about the relation between trade and environmental issues. The U.S. has been the leader in imposing unilateral restrictions, although it could well become a target if, for example, the EC imposed an energy/carbon tax to curtail CO₂ emissions and imposed countervailing duties on imports from the U.S. if it failed to adopt a similar tax. Such measures could be justified as internalizing the external costs of environmental degradation and establishing a level playing field for competition. The difficulty with these justifications is that the costs of environmental degradation are a function of societal values and other elements of assimilative capacity which vary from nation to nation. There is no objective or uniform "cost" of pollution. Given the serious potential for protectionist abuses of unilateral measures based solely on different standards in other countries, the GATT appropriately views such measures as violating international trade law. Nevertheless, these measures are justified to the extent that they are aimed at transboundary pollution or despoliation of the global commons, and to the extent that they are adopted by a substantial number of nations. As illustrated by the CFC-related trade restrictions in the Montreal Protocol, international environmental agreements must increasingly address trade issues. At the same time, the GATT and regional trade agreements must increasingly address environmental concerns.

c. The Use of Economic Incentives in International Harmonization

The global climate policy debate vividly illustrates the relation between environmental problems, international competitiveness, and environmental policy instruments. The costs of achieving significant limitations on GHG's are enormous. The use of international command-and-control requirements to limit the many different GHG sources and sinks would be extraordinarily cumbersome. It is also doubtful that sufficient transfers of technology and other assistance from the developed to the less developed countries can be achieved through bilateral or multilateral assistance mechanisms. Developed countries' industries are most reluctant to accept costly new GHG limitation requirements that would disadvantage them in international competition. At the same time, some of these industries could enjoy rich market opportunities for sales of resource-efficient, environment-friendly technologies to developing countries. These several factors suggest the desirability of using economic incentives to limit GHG emissions and generate the resources to launch less developed countries on "green" development paths. One option is the imposition of taxes or fees on net GHG emissions, earmarking part of the revenues for transfers to less developed countries. Another is the use of tradeable net GHG emission rights. Under the latter approach, firms in the developed countries could be partially compensated for the transfer of GHG-reducing technologies by transfers of GHG emission allowances that less developed countries would no longer need. Such arrangements could lead to the development of a world market in GHG allowances, a form of "green" currency that would channel technology and resources to wherever in the world net GHG emissions could be reduced at the lowest cost. In addition to providing mechanisms for transfers of capital and technology from developed to developing countries, these economic incentive systems would, for reasons already explained, significantly reduce the costs of achieving reductions and avoid the need to create an elaborate international command-and-control regulatory authority.²³ Both of these features would promote the likelihood of agreement on targets and timetables for GHG limitations.

International measures to deal with global climate change represent only one possible application of economic incentive approaches. Other candidates include forest preservation, which could be promoted by a system of tradeable resource rights, and biodiversity. An innovative, market-based approach to preserving biodiversity which could set a broad precedent is an agreement between a major U.S. pharmaceutical company and the Government of Costa Rica in which the company agreed to finance preservation of tropical forest in return for preferential access to the forest's genetic resources. Economic incentives are not, of course, a panacea for all of the difficulties in developing successful environmental policies in the international context, any more than in the domestic context. Nonetheless as Dean Aman points out, market-based environmental protection measures are especially well adapted to the circumstances of a global economy. Such measures avoid the enormous problems of a top-heavy, worldwide

command-and-control regulatory authority, and would provide considerable scope to local flexibility and innovation. They would also harness the logic of comparative advantage and the power of market forces to protect the global environment. They would make environmentalists of Adam Smith and David Ricardo.

FOOTNOTES CHAPTER 17

¹ Steve Charnovitz, *The Regulation of Environmental Standards By International Trade Agreements*, INT'L ENV'T. REP. (BNA) 631, 631-33 (Aug. 25, 1992). Copyright 1992. Reprinted by permission.

² Patti A. Goldman, *Resolving The Trade and Environment Debate: In Search of a Neutral Forum and Neutral Principles*, 49 WASH. & LEE L. REV. 1279, 1289-96 (1992). Copyright 1992. Reprinted by permission.

³ Thomas J. Schoenbaum, *Free International Trade and Protection of the Environment: Irreconcilable Conflict?*, 86 AM J. INT'L L. 700, 702-03, 713-17, 720-23, 726 (1992). Copyright 1992. Reprinted by permission.

⁴ GATT, GATT LAW AND THE ENVIRONMENT, Doc. GATT/1529 (Feb. 3, 1992), reprinted in 4 WORLD TRADE MATERIALS 32-35 (1992). Ending inefficient agricultural subsidies in richer countries would have the effect of shifting agricultural production to poorer countries that use less than one-tenth the amount of chemical fertilizers and pesticides as, for example, countries in Europe. Agricultural trade liberalization would therefore produce a substantial increase in global environmental quality. Id. at 34.

⁵ EDMOND MCGOVERN, INTERNATIONAL TRADE REGULATION 405 (2d ed. 1986).

⁶ Title IV of Pub.L. No. 101-382, 104 Stat. 714, Forest Resources Conservation and Shortage Relief Act of 1990, 16 U.S.C.A. §§ 620-620j (West Supp.1992). There is a limited exception to this general prohibition under which states may still export a portion of their annual timber harvest. The new law establishes a 400-million-board-foot threshold for state timber exports. States cutting less than this amount may not export any of the timber as raw logs; states cutting more may export the additional amount. Washington is likely to be the only state able to take advantage of this provision because only it cuts more than the threshold amount.

⁷ Opened for signature May 23, 1969, 1155 UNTS 331, reprinted in 8 ILM 679 (1969). Technically, the Vienna Convention does not apply to the GATT because the GATT preceded it. Nevertheless, the portion of the Vienna Convention governing the general interpretation of treaties is considered to codify accepted rules of customary international law. See JACKSON, supra note 25, at 88. Because the Vienna Convention is regarded as declaratory of existing law, it is considered authoritative even for countries not a party to it. Id. Accordingly, although it has never formally ratified the Convention, the United States accepts the substantive provisions of the Vienna Convention as authoritative on the subject. See RESTATEMENT (THIRD) OF THE FOREIGN RELATIONS LAW OF THE UNITED STATES, pt. III, Introductory Note (1987).

⁸ Richard B. Stewart, *Environmental Regulation and International Competitiveness*, 102 YALE L.J. 2039, 2040-41, 2051-61, 2084-85, 2097-2100, 2102-05 (1993). Copyright 1993. Reprinted by permission.

⁹ The developed/developing country distinction is an inevitably convenient but potentially misleading simplification. For example, the distinction does not clearly account for the nations of Eastern Europe and the former Soviet Union, the OPEC nations, or the "Asian Tigers." There are also wide differences among the developing nations of Africa, the Americas, and Asia. On the difficulty of distinguishing among developed and developing countries, see generally GERALD M. MEIER, LEADING ISSUES IN ECONOMIC DEVELOPMENT 5-15 (1989) (pointing out that definitions of "development" vary with policy goals).

¹⁰ Jerry L. Mashaw, *The Economics of Politics and the Understanding of Public Law*, 65 CHI-KENT L. REV. 123, 132-33 (1989).

¹¹ See, e.g., Robert W. Hahn and Albert M. McGartland, *The Political Economy of Instrument Choice: An Examination of the U.S. Role in Implementing the Montreal Protocol*, 83 NW. U. L. REV. 592, 595 (1989).

¹² See, e.g., Anthony D'Amato & Sudhir K. Chopra, *Whales: Their Emerging Right to Life*, 85 AM. J. INT'L L. 21, 22 (1991).

¹³ A seminal discussion of the "tragedy of the commons" is found in Garret Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243, 1244 (1968).

¹⁴ A nation might engage in unilateral action if, for example, it is large, rich, and strongly committed to environmental protection.

¹⁵ The marginal cost of controls to another nation will remain the same, barring technological innovation resulting from the unilateral initiative. The marginal benefit of controls could theoretically increase or decrease, depending on the shape of the damage function. If, as seems likely in many cases, damages increase more than proportionately to emissions, the unilateral initiative will reduce the marginal benefits of action by others, making action by others less likely. If, for example, major sources of carbon emissions such as the U.S., the European

Community, Brazil, Russia, and the Eastern European nations made heavy cuts in their emissions, the resulting reduction in the threat of climate change could reduce the incentives of other nations, such as China and India, to limit their emissions. For a discussion of the strategic conflicts among nations in connection with the negotiation of the Framework Convention on Climate Change, see Daniel Bodansky, *The United Nations Framework Conventions on Climate Change--A Commentary*, 18 YALE J. INT'L L. 451 (1993).

¹⁶ See Bruce A. Ackerman & Richard B. Stewart, *Reforming Environmental Law: The Democratic Case for Market Incentives*, 13 COLUM. J. ENVTL.L. 171, 173-75 (1988). Under a command-and-control approach, government regulators specify the control technology or the maximum levels of pollution or hazard that each product, production unit, emissions or discharge source, waste treatment, waste storage, or waste disposal facility must meet. Other approaches, such as market-based incentives or contractual arrangements, allow sources much more flexibility to take into account variances in costs, production processes, and individual circumstances relevant to environmental protection goals.

¹⁷ In the classic Prisoners' Dilemma, two prisoners are separately interrogated by the authorities, who attempt to extract confessions from each implicating the other. If both are silent, each will go free. If both confess, each will get a moderate sentence. If one confesses and the other does not, the former will get a light sentence and the latter a heavy sentence. Accordingly, both prisoners would be best off if each remains silent, but each fears that the other will confess. To avoid the danger of the heavy sentence that would follow from the other's confession, each confesses and incurs a moderate sentence. The prisoners are unable to reach their preferred outcome (total silence) because they are unable to communicate and reach a binding agreement. See R. DUNCAN LUCE & HOWARD RAIFFA, *GAMES AND DECISIONS: INTRODUCTION AND CRITICAL SURVEY* 94-97 (1957).

As adapted to the situation of different nations' environmental regulations, the model claims that each nation will not adopt the standard that it prefers because it fears that the other will adopt a lower standard in order to gain competitive advantage. Since each nation reasons in the same way, both will end up with lower standards than they prefer. They are unable to coordinate their choices because of the difficulty in reaching a binding agreement that can be enforced.

¹⁸ See Richard L. Revesz, *Rehabilitating Interstate Competition: Rethinking the "Race to the Bottom" Rationale for Federal Environmental Regulation*, 68 N.Y.U. L. REV. 1210 (1993) (discussing issue in context of competition for industry among states in the U.S.).

¹⁹ A "ground zero" model may, however, be appropriate for newly discovered environmental problems, such as global climate change.

²⁰ Even if uncertainty is reduced, however, inappropriately low standards may still result if other factors, such as systematic predictive error or risk aversion, come into play. For example, politicians in A may know that B places a relatively high value on environmental protection and would in no event choose Level 1. However, they might erroneously predict that B was more likely to adopt Level 2 than Level 3 because they tend systematically to undervalue the political power of environmental as opposed to economic considerations. Or A's politicians, in the face of uncertainty, may be more averse to the risk of failing to maintain economic advantage and suffering loss of industry and unemployment than the risk of failing to achieve the level of environmental protection which A's citizens prefer, and therefore adopt level 1. One would, however, have to provide plausible reasons why such systematic predictive errors or patterns of risk aversion might occur.

Professor Revesz suggests an entirely different reason why nations might systematically adopt unduly low environmental standards. For political reasons, governments may be compelled to impose taxes on mobile capital in order to fund government-provided goods, services, and transfer payments. Such taxes, however, would lead mobile capital to fund investments in other jurisdictions. In order to offset this effect, governments may reduce environmental, health, or safety regulations below the otherwise appropriate level. See Revesz, *supra* note 18.

²¹ Requirements by developed nations that developing nations meet certain environmental standards as a condition of receiving assistance could, however, be resented as a contemporary manifestation of colonialism. See Peggy Au Rodgers, Note, *Looking a Gift Horse in the Mouth: The World Bank and Environmental Accountability*, 3 GEO. INTL ENVTL. L. REV. 457, 476 (1990).

²² Cf. Ronald Coase, *The Problem of Social Cost*, 3 J. L. & ECON. 1 (1960).

²³ There would have to be international agreement on the allocation of allowances. Once such an allocation was established, market transactions and nation-to-nation agreements would determine the extent of controls of different GHGs for particular sources and the extent of preservation and enhancement of particular sinks. Under a command-and-control approach, each of these thousands of particularized decisions would have to be made through some authoritative international process.