

**Trade-Environment Negotiations
In the EU, NAFTA, and GATT/WTO:
State Power, Interests, and
the Structure of Regime Solutions**

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Working Paper 75
1995

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The author wishes to thank Jose Canela-Cacho, David Caron, Eileen Doherty, Lloyd Gruber, Ernie Haas, Heather Hazard, Robert Kagan, Steve Krasner, Jonah Levy, David Vogel, Helen Wallace, Steve Weber, Lyuba Zarsky, and John Zysman for helpful suggestions on this Working Paper or aspects of it. The author appreciatively acknowledges support from The Pew Charitable Trusts for the BRIE Trade and Environment Policy Project.

I. INTRODUCTION

A modified structural regimes model,¹ elaborated in ways suggested below, explains the process and extent of environment-friendly convergence on trade-environment issues in each of the world's three largest international trade institutions-- the European Union (EU), the North American Free Trade Agreement (NAFTA), and the World Trade Organization (WTO).

Richer states tend to be greener and more powerful than poorer states. In all three institutions, the richest greenest states have used their power to exert environment-friendly pressure on international trade-environment rules. Power has been used not only to coerce dirtier countries into accepting greener trade-environment rules, but, even more commonly, to compensate them for doing so. Whether by coercion or compensation, the greening process has involved structuring trade-environment rules (or their implementation) so as to reduce opposition (and compensatory demands) from dirtier poorer states, matching the political "price" paid by the demandeur states to the limits of their power.

As shown below, while power explains the process of greening within each trade institution, the most parsimonious post hoc explanation for variance in the extent of environment-friendly outcomes across the three institutions turns on differences in the interests of the powerful demandeur states, which are deeply affected by the depth of economic integration among members of the institution: the deeper economic integration among members of the institution, the more that previously "domestic" regulations (such as environmental rules) find their way onto the integration agenda and the more salient environment-friendly trade-environment solutions are to important interest groups within the green demandeur states. Hence, as integration deepens within a trade institution, powerful green states demand and obtain an increasingly environment-friendly web of trade-environment rules in the institution. That is why environment-friendly trade-environment rules are most well-developed in the EU, moderately well-developed in NAFTA, and not well-developed in the WTO.

Finally, it will be shown that trade-environment rules appear to be regionalizing. In the last twenty years, integration has deepened both regionally and multilaterally, but integration has

¹ See, e.g., Stephen D. Krasner, ed., *International Regimes* (Ithaca: Cornell University Press, 1983). See esp., Stephen Krasner, "Structural Causes and Regime Consequences: Regimes As Intervening Variables," in Stephen D. Krasner, *International Regimes* (Ithaca: Cornell University Press, 1983).

deepened further and faster through regional institutions (like the EU and NAFTA) than through the multilateral one (the GATT/WTO). The increasing regionalization of integration has mirrored the diffusion of international political power. Together these relationships explain enhanced global environmental protection as it relates to trade, but explain and suggest further regionalization of trade-environment rules.

Part II of this article defines and operationalizes the independent, intervening, and dependent variables, and then develops a modified structural regimes framework and model for explaining the process and extent of environment-friendly convergence in a given trade institution. Using the "structured, focused comparison"² method, Parts III, IV, and V, respectively present case studies of the processes and outcomes of environmental regulatory efforts in three trade institutions-- the WTO, NAFTA, and EU. The case studies confirm the usefulness of the model outlined above. Part VI concludes by summarizing results and drawing implications for modified structural regimes theory.

II. A FRAMEWORK AND MODEL FOR EXPLAINING THE PROCESS AND EXTENT OF ENVIRONMENT-FRIENDLY CONVERGENCE IN INTERNATIONAL TRADE INSTITUTIONS

An explanation of the extent of environment-friendly convergence realized through international trade institutions requires a definition of "environment-friendly convergence" and a model that proposes to explain the process of convergence and variance in outcomes across institutions.

Defining the Variables: "Environment-Friendly Rules" and "Environment-Friendly Convergence"

The "extent of environment-friendly trade-environment convergence" means the extent to which different states (and their nationals) engage in an increasingly narrow range of environment-friendly behavior across trade-environment issues. The "breadth" of environment-friendly trade-environment convergence means the number of trade-environment problems that

² Alexander George has described this method of analysis as derived from three traditions: Mill's method of agreement and differences, process-tracing, and counterfactual reasoning. See Alexander George, "Case Studies

have enjoyed environment-friendly convergence. The "depth" of environment-friendly trade-environment convergence means the extent to which there is an increasingly narrow range of environment-friendly behavior on a particular environmental problem. It will be seen that, empirically, the breadth and depth of environment-friendly trade-environment convergence covary as integration deepens, so it is possible to think of the "extent of environment-friendly trade-environment convergence."

There are four types of "trade-environment issues" addressed by one or more of the three institutions studied.

First, international trade institutions have addressed the tension between free trade and the desire of governments to maintain domestic health, safety, and environmental protection standards. These standards include *inter alia* domestic food safety standards, pollution emission standards, and product labeling rules. Domestic health, safety, and environmental protection standards are usually established in accordance with a chosen level of risk. Standards in developing countries are often established in accordance with a willingness to accept a higher level of risk than is required in developed countries. On one hand, most governments want to be able to ban the importation of goods that embody standards that do not meet domestic levels of protection. On the other hand, many governments do not want these standards to be used as a barrier to free trade, especially not as a disguised means of protectionism. The challenge for international trade negotiators is to strike a balance. Two approaches have been used (listed in order of the resulting depth of environment-friendly convergence): (1) a bounded right to ban imports that do not meet domestic standards, and (2) upward harmonization or approximation of standards. The former approach protects the importing country's right to ban imports in order to maintain its chosen level of environmental protection, but subjects the exercise of that right to specified tests intended to ensure that the ban is not used as a disguised means of protectionism. This approach is generally friendly to the relatively high level of protection in richer/greener countries, and it may put some pressure on poorer-dirtier countries to raise their standards (by means described below), but it does not directly raise the standards of poorer-dirtier countries. The latter approach, upward harmonization or approximation, ensures that richer/greener

and Theory Development: The Method of Structured, Focused Comparison," in Diplomacy: New Approaches in History, Theory, and Policy, ed. Paul Gordon (New York: The Free Press, 1979).

countries can maintain their standards and it directly increases environmental protection in poorer-dirtier countries.

Second, some international trade institutions have addressed the problem of environmental "dumping." Most richer/greener country governments are concerned that poorer-dirtier countries regulate processes and production methods (PPMs), and the killing and use of threatened or endangered species, less stringently than in the greener countries. Less stringent regulation of those activities results in social costs to the greener countries in the form of degradation of the global commons, and lost jobs and less investment in the greener countries as "dirty industries" move to dirtier regulatory environments and ship their products back to the greener countries. Some non-government organizations (NGOs) have argued that environmental dumping puts downward pressure on environmental standards in greener countries: they may participate in a standards-lowering "race" in pursuit of money and jobs. Whereas the issue described in the preceding paragraph is concerned primarily with environmental rules within the borders of the greener countries, the environmental dumping issue is focused most directly on environmental rules outside the borders of greener countries. To the extent that trade institutions have addressed this issue, three types of approaches have been used, alone or in combination: (1) a limited right to ban imports that do not meet the importing country's PPMs or rules on trade in endangered or threatened species; (2) upward harmonization or approximation of PPMs and rules on trade in endangered or threatened species; and (3) international rules intended to ensure that governments enforce their enacted PPM standards and rules on trade in endangered or threatened species. Each of these approaches can be expected to reduce trade in endangered and threatened species among the member-states, narrow the range of PPMs applied in the member-states, and increase the stringency of applied PPMs.

Third, in the context of international trade negotiations or within trade institutions, member-states may reach agreement to undertake transboundary remediation. This may take the form of an agreement to clean up a polluted river or border area in a sub-region of the territory covered by the organization's membership, or to clean up specified types of habitat or environment throughout the territory covered by the organization. These arrangements are negotiated as part, or in the shadow, of trade negotiations and usually involve specifying means of financing the remediation effort. Agreements to engage in transboundary remediation efforts can be expected to result in greater convergence of environmental clean-up behavior and of the

process by which national governments, their NGOs, and their businesses plan to clean up the environment.

Fourth, to varying degrees, international trade organizations create or modify existing institutions to perform functions relating to trade-environment issues. Various administrative, legislative, and advisory bodies within the organization may be granted legal competence to debate environmental issues, and various agents (member-state governments, NGOs, political parties, etc.) may be granted standing to participate in those debates. The organization's dispute settlement process may be given the responsibility of adjudicating trade-environment disputes, with or without input from scientific or technical advisors, and with or without standing for NGOs, individuals, or corporations-- in addition to member-states. A bank may be established to finance transboundary remediation. Committees and agencies may be established to set environmental standards. And the secretariat may play a role in monitoring compliance with rules and standards. Increased opportunities for member-states, their NGOs, and their businesses to cooperate or otherwise communicate on environmental issues through specified institutional channels can be expected to result in deeper convergence of the processes by which those actors resolve environmental issues.

Towards A Modified Structural Regimes Model Elements of a Framework

Many political scientists building on a "Rationalist" model of international institutions have suggested that, to a large degree, international politics shapes international institutions and law.³ Rationalism takes the interests and identities of states as exogenous, assumes that states are rational unitary actors operating in an anarchical international system, and asks how those states maximize their welfare.⁴ From those and a few other basic assumptions, Rationalists claim to be able to deduce the existence of international institutions, the international law of a particular institution, and behavior within institutions.

One group of Rationalists-- Neoliberals-- has shown that the creation and maintenance of international institutions and international law are functional: institutions offer a positive-sum

³ Robert Keohane, "International Institutions: Two Approaches," *International Studies Quarterly* 31 (1988), pp. 379-96.

outcome to a group of states by reducing transactions and information costs, and decreasing uncertainty, which would otherwise inhibit international cooperation.⁵ For example, Fawcett has argued that international law can constitute "rules of the game" that are demanded by states because they "secure stability and order by limiting behavior and making it reasonably predictable."⁶ In this view, international institutions and international law correct market failures, moving states towards Pareto optimality.

Another group of Rationalists-- Neorealists-- has argued that most great power fights about international institutions (and, by extension, international law) are not about solving market failures, but about the distributional consequences of a particular institutional structure or international law; they are distributional battles that constitute "life on the Pareto frontier."⁷ In the traditional realist view, regimes, institutions, and, by extension, international law are established and maintained by great powers to serve their interests.⁸ In its pure form, Neorealism goes a bit further. Neorealist work on regime theory argued that regimes have no independent effect on behavior; they are epiphenomenal intervening variables: relative power yields international regimes and rules, which yield the behavior desired by those with power.⁹ In this view, regimes and their rules are outcomes to be explained. Power explains behavior; regimes and rules have no independent role.

More recently, Krasner and Garrett have borrowed implicitly from that regimes model to explain battles about the rules adopted by international institutions. While there are many

4 Ibid. See also, Robert Powell, "Anarchy in International Relations Theory: The Neorealist-Neoliberal Debate," *International Organization* 48, 2 (Spring 1994), pp. 313-44. See generally, Kenneth Waltz, *Theory of International Politics* (Reading, Mass.: Addison-Wesley, 1979).

⁵ Keohane, "International Institutions: Two Approaches;" Arthur Stein, Why Nations Cooperate: Circumstance and Choice in International Relations (Ithaca: Cornell University Press, 1990); Powell, "Anarchy in International Relations Theory: The Neorealist-Neoliberal Debate;" see also, Robert Axelrod, The Evolution of Cooperation (New York: Basic Books, 1984).

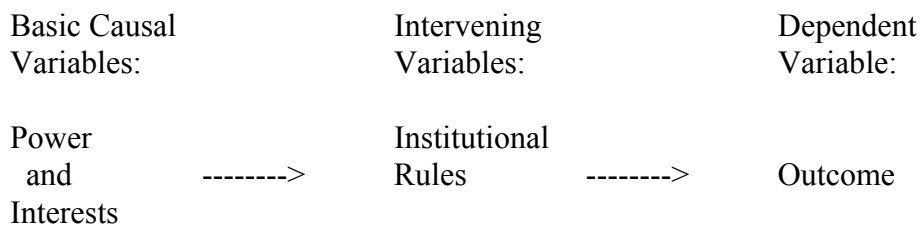
⁶ James Fawcett, Law and Power in International Relations (London: Faber and Faber Ltd., 1982), p. 37. See also, Paul R. Milgrom, Douglass C. North, and Barry R. Weingast, "The Role of Institutions In the Revival of Trade: The Law Merchant, Private Judges, and the Champagne Fairs," Economics and Politics 2,1 (March 1990), p. 1-23 (on how domestic institutions can play a similar role).

⁷ Stephen Krasner, "Global Communications and National Power: Life on the Pareto Frontier," World Politics 43,3 (April 1991), pp. 336-66.

⁸ See, e.g., H. Morgenthau, "Diplomacy," Yale Law Journal 55 (1946), pp. 1067, 1078; H. J. Morgenthau, In Defense of the National Interest: A Critical Examination of American Foreign Policy (New York: Knopf, 1951), p. 101; and George Schwarzenberger, Power Politics (London: Stevens, 3d Ed., 1964), p. 199.

potential outcomes along the Pareto frontier, Krasner has suggested that the equilibrium will rest on a point that mirrors the relative power of the bargaining states and their interests, and that as relative power and interests shift, so will the equilibrium.¹⁰ By way of example, Krasner showed that the rules of the international institutions governing telecommunications changed as the interests and relative power of countries in those institutions changed. Using the same model, Garrett showed that the institutional rules (including the adjudicative and decision-making rules) embedded in the 1992 Single European Act reflected the interests of the big European powers-- Germany and France.¹¹ Krasner's and Garrett's case-studies treat the rules of a particular institution as bearing a one-to-one correspondence with underlying bargaining power and interests in the issue area governed by the institution.

Figure One: International Regimes Framework



As illustrated in Figure One, modified structural regimes theory attributes meaning to both underlying power and interests, and institutions and rules, suggesting that power (not fully defined, but likely conceived broadly) and interests (conceived broadly) are the "basic causal variables," but that institutions and rules may be meaningful intervening variables. Power and

⁹ See, e.g., Stephen D. Krasner, ed., International Regimes (Ithaca: Cornell University Press, 1983). See esp., Stephen Krasner, "Structural Causes and Regime Consequences: Regimes As Intervening Variables," in Stephen D. Krasner, International Regimes (Ithaca: Cornell University Press, 1983).

¹⁰ Stephen Krasner, "Global Communications and National Power: Life on the Pareto Frontier" in World Politics. See also, *Ibid.*

¹¹ Geoffrey Garrett, "International Cooperation and Institutional Choice: The European Community's Internal Market," International Organization 46, 2 (Spring 1992), pp. 533-60.

interests explain the rules in a particular regime and the structure of the institutions, a set of intervening variables, which in turn cause "related behavior and outcomes" in that regime.¹²

The Structure of State Preference Formation:
Suppliers and Demandeurs of Environment-Friendly Convergence

Consistent with the modified structural approach, trade-environment politics may be considered simultaneously on two levels-- domestic and international.¹³ For Neorealists, state "interests" are given-- they are exogenous to the model. Some realists have suggested that state preferences are set by liberal domestic processes and that analyses of liberal preference formation may be used effectively with a realist model of politics at the international level.¹⁴ It is not inconsistent with Rationalist assumptions to conceive of nations as having a supply curve or demand curve associated with a particular "good" for sale or purchase in the international system, with the slope and position of those curves depending on domestic politics. On trade-environment issues, rich countries have been the demandeurs and poor countries have been the suppliers.

Richer countries-- which are generally more powerful than poorer countries-- tend to have more stringent environmental standards and regulations than poorer countries. This premise may be inferred from national positions in international negotiations, and from rigorous studies by a host of scholars.¹⁵ Some scholars have explained the relationship between income and demand for environmental protection by arguing that domestic environmental standards are a normal good (i.e., as income rises, so will demand for environmental standards);¹⁶ other studies might be interpreted as suggesting that domestic environmental standards are a "luxury good"

¹² See Krasner, "Regimes and the Limits of Realism: Regimes As Autonomous Variables" in International Regimes.

¹³ See Robert Putnam, "Diplomacy and Domestic Politics: The Logic of Two-Level Games," International Organization 42, 3, pp. 427-60 (Summer 1988).

¹⁴ Andrew Moravcsik, "Negotiating the Single European Act," International Organization 45, 1, pp. 19-56 (Winter 1991).

¹⁵ See, e.g., Gene M. Grossman and Alan B. Krueger, "Economic Growth and the Environment," NBER Working Paper No. 4634 (Cambridge, Massachusetts: National Bureau of Economic Research, February 1994) (showing that air pollution levels are lower in richer countries than in poorer ones). See also, Ludwig Kramer, "The Single European Act and Environment Protection: Reflections on Several New Provisions in Community Law," Common Market Law Review 24: 659-88, esp. 680 (1987); and Aaron Wildavsky, Searching for Safety (New Brunswick: Transaction Books, 1988).

¹⁶ Paul Krugman (1993).

(i.e., there is an income threshold above which demand for more stringent environmental standards begins to rise).¹⁷

In international trade fora, richer, more powerful country governments have taken the position that their countries bear costs resulting from less stringent environmental standards in poorer countries. These costs may be thought of as externalities-- not simply as international economic externalities that require correction to achieve efficiency, but also as international "political externalities" that require correction to avoid political conflict. For example, the trade-environment problem of environmental "dumping" (i.e., free trade allows goods produced in countries with low environmental standards to be exported to or "dumped" into countries with higher standards) can be treated as resulting in an economic externality-- harm to the global commons such as air pollution, the costs of which are not factored into production costs-- and a political externality-- political costs to the importing developed country government, in the form of lost jobs and investment in the developed country, which are not factored into developing country production costs. While there may not be a consensus about the extent to which national differences in environmental standards actually affect production location decisions, many interest groups in developed countries believe they do and so do many developed country policy-makers. Similarly, the trade-environment problem of protecting domestic product health standards (i.e., free trade may limit the right of countries with higher health standards to restrict importation of foreign products that embody lower health standards) can be treated as resulting in an economic externality-- a higher risk of health problems for persons in the importing country, the costs of which are not factored into production costs-- and a political externality-- political costs to the importing country government, in the form of unhappy consumers, environmentalists, and interest groups, which are not factored into production costs.

Under these premises, liberal preference formation suggests the possibility of conceiving of an international "supply" and "demand" for poorer-dirtier countries to agree to environment-friendly convergence on trade-environment questions.

Consider a given developing country's supply to the international community of higher environmental standards. Domestic politics will yield preferences at the international level. At

¹⁷ See Gene M. Grossman and Alan B. Krueger, "Economic Growth and the Environment," NBER Working Paper No. 4634. Grossman and Krueger found that national air pollution levels rise with national annual per capita gross

the domestic level, if environmental protection is a normal good, then as per capita income rises, environmental protection rises, *ceteris paribus*. Presumably, a developing country government would be willing to raise its environmental standards above the level set by domestic pressures, provided foreign governments "pay" for it. At the international level, the level of protection offered by a developing country rises as its per capita GDP rises or as payments are made to the developing country: developing countries may be seen as offering an international supply of increased environmental protection-- for a price._

Now consider a given wealthy country's international demand for environment-friendly convergence on trade-environment issues and for higher environmental standards in dirtier countries. The essence of the greener country's demand is its view that low environmental standards in dirtier countries create externalities. Again consider the politics at two levels. Domestic forces within a greener country will demand improved environmental protection in dirtier countries as the perceived social costs resulting from the differences become more salient. What is crucial is that those costs will become increasingly salient to domestic interest groups-- especially labor unions and environmental NGOs-- as trade barriers fall and economic integration deepens. Deep integration increases the threat to domestic health and safety standards: imports with unsafe or dirty characteristics will face fewer trade barriers. Deep integration will make it easier for production to locate in poorer-dirtier countries (since goods produced there will face fewer barriers to their export into wealthier-greener countries), worsening the threat of environmental dumping. Deep integration is likely to increase concerns about border-area environmental degradation, as more people and goods travel through the border region and trade creation yields the establishment of more industries in border-regions. Thus, deeper integration will make the externalities resulting from environmental regulatory differences more salient to demandeur countries, increasing their demand for environment-friendly convergence. Empirically, it appears that when powerful countries engage in an integration exercise, they require enhanced trade-environment solutions as part of the package they bring home for domestic ratification: such solutions are intended to curry favor from domestic environmental and labor groups, in large part to allay their concerns that increased

domestic product (GDP), reaching a maximum threshold at \$8,000 annual per capita GDP, then fall as annual per capita GDP rises above the \$8,000 figure. One inference is that air pollution regulations might be a luxury good.

integration would otherwise upset domestic bargains previously struck on environmental issues or otherwise undermine domestic environmental standards.

Hence, in a given trade institution, the extent to which the richer, more powerful states are interested in environment-friendly trade-environment rules will depend on the extent to which economies are being integrated among members of the trade institution. There are two other reasons for this relationship.

First, when integration deepens, with tariffs at zero and other border measures eliminated, trade organizations may begin to further open trade by addressing laws and regulations previously considered domestic issues. Once overt border protection is withdrawn, leveling the playing field may require (among other things) harmonizing or approximating technical, product, and PPMs standards. By definition, this entails convergence, but it does not dictate whether such convergence will be environment-friendly or unfriendly. That will be determined by the rich/poor dichotomy identified previously: richer/greener countries will demand upward harmonization in order to maintain their higher levels of health and environmental protection.

Second, deeper integration is a natural vehicle by which richer/greener countries can compensate poorer-dirtier countries for environment-friendly trade-environment solutions: deeper integration further opens the market of the more powerful richer/greener countries to the poorer, dirtier countries.

Power as Currency:
Coercion and Coasian Compensation in the Perfect Market

These supply and demand relationships suggest the possible payment of a "price" by greener demandeur countries to dirtier supplier countries in order to reach environment-friendly solutions to trade-environment problems. Alternatively, the greener demandeur states may try to force their desired result. Two instruments of national power-- compensation and coercion-- may be thought of as the "currency" used to reach a solution.

First, richer/greener countries can "compensate" poorer-dirtier countries to agree to environment-friendly solutions. In fact, most developing country negotiators take the position that their country is entitled to compensation from the North for agreeing to improve environmental conditions. In some international environmental negotiations, this compensation

takes the form of cash, such as a \$40 million U.S. aid package to India to induce its acceptance of the Montreal Protocol,¹⁸ planned aid packages under the World Bank's Global Environment Facility,¹⁹ or payments from richer to poorer EU member-states from the EU Cohesion Fund.²⁰ In the international trade context, cash transfers are sometimes used but the primary means of compensation is a promise by the compensator to grant access to its previously protected domestic market to imports from the country agreeing to an environment-friendly rule in the trade organization: tariffs can be reduced, quotas can be eliminated, and technical regulations can be eased or made less discriminatory on products made in the country seeking compensation. Such compensation may be paid by a richer country to a poorer country in exchange for an international liability rule²¹ on environmental issues. For example, as discussed in greater detail below, the United States gave Mexico preferential access to the big U.S. market in exchange for *inter alia* a liability rule that says Mexico must enforce its domestic PPM standards and that failure to do so could result in U.S. trade sanctions.

Such compensation is similar to the prescription for internalizing social costs offered by R.H. Coase in the domestic context. Coase argued that in a competitive economy with zero transactions costs, perfect information (including no monitoring costs), and clear property rights, the problem of externalities will be solved through compensation payments from the recipient to the producer of the externality, resulting in internalization of the social costs and making both parties better off than they were before the payments and associated behavioral changes were made.²² By definition, sovereignty entails property rights for a government within its national territory. While property rights to the global commons could be assigned, impact on the global commons is not the only trade-environment issue: "political externalities" are a central problem. Those costs-- threats to importing countries' standards and lost investment and jobs-- are borne inside the territory of wealthier-greener countries. Hence, under the Coasian formulation,

¹⁸ See Ronald Herring, "Menaka Gandhi's Refrigerator Theory: India's Contingent Compliance With the Montreal Protocol," Conference Draft, Annual Meeting of the APSA, September 1994, p. 6. [Consulting author for permission to cite.]

¹⁹ See Raymond Clemencon, "The Global Environment Facility," Conference Draft, Annual Meeting of the APSA, September 1994, p. 6. [Consulting author for permission to cite.]

²⁰ David Wilkinson, "Maastricht and the Environment: The Implications for the EC's Environment Policy of the Treaty on European Union," Journal of Environmental Law 4(2): 221-39, esp. 232 (1992).

²¹ More completely, the exchange may be characterized as a contract involving a promise by the developing country that constrains its own property rights by means of agreement to an international liability rule.

compensation will be paid from richer/greener countries to poorer-dirtier countries in exchange for behavior that will internalize the costs. With both sets of countries better off after the compensation is paid, and the social costs internalized, the Coasian solution may be considered Pareto efficiency improving.²³

Second, in the anarchic international context, the recipient of the social cost has an alternative to paying compensation that would be unavailable in the domestic context: the recipient can try to coerce the producer into modifying behavior and internalizing social costs. Without police to stop them, more powerful countries can try to force less powerful countries to accept particular solutions. This alternative to compensation is suggested by Neorealist analyses, such as Krasner's study of international telecommunications institutions. It is also central to other realist examinations, such as Alexander George's classic treatise on the phenomenon of "coercive diplomacy."²⁴ In the international trade context, the primary means of coercion is a threat to close access to a domestic market that is consuming products from the country that is the object of coercion. For example, under the U.S. Marine Mammals Protection Act, tuna caught by a means that kills more dolphins than the U.S. tuna fleet kills (as defined by the statute) cannot enter the United States: this law is intended to change foreign behavior by threatening to close the large U.S. market to tuna from nations that use dolphin-unsafe methods.²⁵ Hence, richer/greener countries can try to coerce poorer-dirtier countries into environment-friendly international liability rules that solve trade-environment problems.

²² R.H. Coase, "The Problem of Social Cost," The Journal of Law and Economics 3 (October 1960).

²³ Keohane has applied Coase's theorem to the international level for the limited purpose of arguing that institutions may be necessary for Coasian solutions to take place. Robert Keohane, After Hegemony, pp. 85-87.

This author notes that the compensation method for achieving environment-friendly solutions in international trade negotiations only works in the absence of serious market failures. Similarly, the trade-environment issue suggests a collective goods problem. Low environmental standards in poorer-dirtier countries leads to over-pollution of the global commons and flight of investment and jobs from countries with higher standards, both of which present collective goods problems: the benefits of improved environmental standards in dirtier countries will benefit all countries with higher standards and all countries that breathe global air, drink from rivers that cross national boundaries, and consume fish and other environmentally-sensitive resources from the high seas.

²⁴ See Alexander George, David K. Hall, and William E. Simons, The Limits of Coercive Diplomacy (Boston, 1971).

²⁵ Elizabeth DeSombre has identified several U.S. laws that attempt to limit imports on environmental grounds. See Elizabeth R. DeSombre, "Unilateral Action for Multilateral Goals: United States Environmental Sanctions," Draft Paper presented for delivery at the 1994 Annual Meeting of the American Political Science Association, September 1994.

Whether operationalized through coercion or compensation or both, the exercise of power by rich-green states has brought about environment-friendly convergence in trade. "Power" may be conceptualized in terms of the magnitude of an offer of compensation in the form of improved market access and the magnitude of a threat to close a market. A demandeur country must have big markets that, if opened further, offer enticing compensation and, if closed, impose substantial economic costs on other countries. Hence, environment-friendly convergence on trade-environment issues in a particular institution is facilitated by the existence of a demandeur country or countries with markets that are so big that other members of the institution are dependent on the markets or can be enticed by their size.²⁶

"Coercion" and "compensation" operationalize the realist expectation that rules in an institution will reflect underlying power, but the model needs a further nuance: power needs to be considered relative to the outcomes and rules being proposed. Rules may be structured in many ways. For example, a richer-greener country may demand that poorer-dirtier countries raise their environmental standards overnight; or it may demand that standards rise over a period of several years. The latter approach likely will be less difficult for the poorer-dirtier country to accept, and so less "costly" to the richer-greener demandeur state. This suggests that a trade organization with a dispersed power structure may need to use the latter approach, while an organization with highly powerful richer-greener countries may be able to use the former approach. Hence, in order to solve the trade-environment problem, a nation or nations within the trade organization *must match the solution or rule being proposed to the power of the demandeur states.*

Summary of the Model of
Trade-Environment Processes and Outcomes--
And Its Expectations

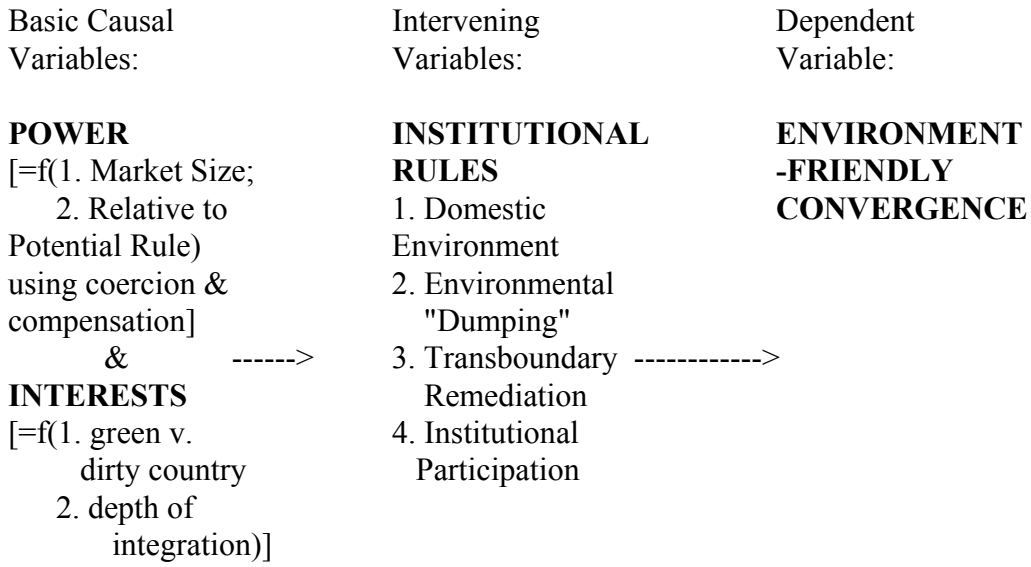
Given the framework above, what political-economic factors facilitate environment-friendly solutions to trade-environment problems in a given international institution? Conceptually, it will depend on the interests of the demandeur rich-green countries in affecting environment-friendly convergence (an interest that intensifies as integration deepens) and the

²⁶ This is not to suggest that the structure of power is the same in all three institutions examined here. It is intended simply to argue that in all three institutions at this time the power structure is such that the richer, greener countries

extent of their power to do so (which must be measured in relation to the structure of potential rules).

These relationships may be combined into a single model illustrated in Figure Two.

Figure Two: Model to Explain Environment-Friendly Convergence in a Trade Institution



The model suggests several important trade-environment outcomes and associated processes. It suggests that in all three trade institutions examined, the richer-greener countries are powerful enough to bring about some environment-friendly convergence, provided they structure trade-environment rules to match their power. Moreover, since deeper integration creates greater demand for environment-friendly rules, the model explains why the GATT/WTO should have the least environment-friendly convergence, the NAFTA should have more environment-friendly convergence, and the EU should enjoy the most environment-friendly convergence. The model also explains the process by which such convergence takes place: rich-green countries coerce or compensate poorer-dirtier countries into accepting environment-friendly rules, but they negotiate a rule structure that reduces poorer-dirtier countries' opposition, thereby fitting their power "budget" to the rules they ultimately "pay" for.

have the power necessary to set deep and broad environment-friendly rules.

III. TRADE AND ENVIRONMENT IN THE GATT/WTO

A Description of the Extent of Environment-Friendly Convergence Through Rules in the GATT/WTO

Environment-friendly convergence through GATT/WTO rules is much less extensive than in the NAFTA or the EU. A description follows of the extent of convergence expected from rules along the four dimensions identified in Part II.

1. Domestic Health, Safety, and Environmental Protection

Of the four dimensions of the trade-environment agenda, the most environment-friendly rules in the GATT/WTO are found on the question of whether a green country can ban product imports that threaten maintenance of its chosen level of domestic health, safety, and environmental protection. The general rule under the GATT and GATT jurisprudence, the Uruguay Round Agreement on the Application of Sanitary and Phytosanitary Measures (SPS),²⁷ and the Uruguay Round Agreement on Technical Barriers to Trade (TBT)²⁸ is that each country may maintain laws and regulations necessary to protect life, health, and the conservation of exhaustible natural resources, and may determine for itself the level of risk it deems appropriate to embody in its product standards.²⁹ In general, the importation of products not meeting those standards may be prohibited. Each country may provisionally prohibit imports of goods during the period in which national control, inspection, and approval procedures (e.g., FDA approval) are underway.³⁰

These environment-friendly rules are qualified so as to ensure that they are not used as disguised means of protectionism. Hence, product standards that limit imports must: be applied on a most-favored-nation (MFN) basis;³¹ be subject to national treatment disciplines;³² not

²⁷ The SPS Agreement covers measures relating to human, animal, and plant health and safety in agriculture, including *inter alia* pesticide and fungicide tolerances, and inspection rules for meat.

²⁸ The TBT Agreement covers technical standards not addressed by the SPS Agreement and product labeling rules.

²⁹ SPS Agreement Arts. 2 and 5; TBT Agreement Preamble. GATT Arts. XX(b) and (g). See also, GATT, Thailand - Restrictions on Importation and Internal Taxes on Cigarettes, Report of the Panel, GATT Basic Instruments and Selected Documents, 37th Supp. pp. __-__ (1990).

³⁰ SPS Art. 5.7 and Annex C. TBT Arts. 2-4.

³¹ SPS Art. 2.3; TBT Art. 2.1.

³² Ibid.

"arbitrarily or unjustifiably discriminate" against imports;³³ and not be "more trade restrictive than necessary"³⁴ to achieve the chosen level of protection.³⁵ SPS measures must either conform with international standards, guidelines, or recommendations-- in which case they are deemed GATT-consistent-- or not be maintained "without sufficient scientific evidence" of a relationship to the harm to be avoided.³⁶

This balance may be considered relatively friendly to the environment inside a country with relatively stringent environmental standards, since the importing country can generally keep out products that would undermine its standards. However, the GATT/WTO approach will not likely increase environmental protection in countries with relatively weak standards to the same extent that a requirement of upward harmonization would.³⁷ The net result of the GATT/WTO rules will be maintenance of, but little improvement in, the level of global environmental protection.

2. Environmental "Dumping"

The GATT/WTO has offered no solution to the problem of environmental "dumping." Developing countries have consistently opposed a right under the GATT to impose any trade restriction or duty surcharge by importing countries on goods produced in countries with less stringent PPMs. In addition, there has been no agreement to upward harmonization of PPMs.

The general GATT rule is that import restrictions may not be imposed on products solely because they have been made or obtained in an environmentally unsound manner outside the

³³ SPS Art. 2.3; TBT Preamble.

³⁴ SPS Art. 2.2; TBT Art. 2.2. The SPS Agreement uses the word "necessary," while the TBT Agreement uses the word "required." See also, GATT Art. XX; and GATT, Thailand - Restrictions on Importation and Internal Taxes on Cigarettes, Report of the Panel.

³⁵ A footnote in the SPS Agreement clarifies the meaning of this language: to successfully challenge an import restriction under this language, the challenging party must show that another measure that would achieve the same level of protection is "reasonably available" and would be "significantly less restrictive to trade." SPS Agreement, Fn. 3.

³⁶ SPS Art. 2.2.

³⁷ The GATT/WTO approach may nonetheless result in some upward harmonization via two means. First, the SPS Agreement deems conformity to international standards as GATT-consistent, creating an incentive for poor countries that cannot afford testing to simply default and choose the international standard, which is generally more stringent than current developing country standards. Second, the right of wealthy-green countries to ban imports that do not conform to their relatively stringent standards likely creates market pressures on developing countries to produce products for export that meet those higher standards. On this latter point, see David Vogel, Trading Up: Consumer and Environmental Regulation in a Global Economy (Cambridge: Harvard University Press, 1995).

jurisdiction of the importing country. GATT Article XI bans non-tariff import restrictions and Article II limits tariffs to those agreed in a country's Schedule of Concessions. GATT Article XX provides exceptions, including actions necessary for the protection of human, animal, or plant life or health,³⁸ or the conservation of exhaustible natural resources,³⁹ but those provisions have been interpreted, in the now famous "tuna-dolphin" decision,⁴⁰ to permit import restrictions for the protection of health or exhaustible natural resources only *within the national jurisdiction* of the importing party. Thus, the GATT does not permit green countries to restrict imports of goods produced or obtained in ways they consider environmentally unsound in the global commons or foreign countries.

Indeed, under current GATT/WTO jurisprudence, under certain circumstances, it would be WTO-inconsistent to comply with the conflicting terms of international environmental accords, such as the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES),⁴¹ which requires signatories to prohibit imports of products that contain parts from endangered species. More specifically, application of CITES against a WTO member that is not a signatory to CITES would likely be WTO-illegal.⁴² Even a simple modification of GATT/WTO rules to permit compliance with conflicting international environmental agreements has been opposed by developing countries (most prominently India); in the WTO Committee on Trade and the Environment, the developing countries have asked to be "paid" for such an amendment.⁴³

Hence, under the GATT/WTO rules, others can produce goods cheaply by means that are not subject to stringent environmental PPM standards and then export those goods to countries where they will compete with products made by more costly means that conform to stringent PPM standards. Developing countries have cheered this result, fearing "eco-imperialism" by the United States and other relatively green countries.

³⁸ Art. XX(b).

³⁹ Art. XX(g).

⁴⁰ GATT, United States - Restrictions on Imports of Tuna, Report of the Panel, GATT Doc. DS29/R (June 1994) ("Tuna II").

⁴¹ Done ____, 1973. TIAS 8249, 27 UST 1087, 993 UNTS 243.

⁴² Application of CITES against a WTO member that is a signatory to CITES would likely be legal under the doctrine of *lex specialis*. *Op cit*, para. 3.41, p. 23.

⁴³ Confidential author interview with a member of the WTO Secretariat who follows the trade-environment debate, Geneva, January 1995.

3. Transboundary Remediation

Transboundary remediation efforts have never been negotiated or undertaken under GATT auspices or in the shadow of GATT negotiations. In 1994, in meetings associated with the work program of the Committee on Trade and the Environment, the possibility of addressing transboundary remediation has been met with assertions that such negotiations and undertakings would extend beyond the GATT's legal competence.⁴⁴

4. Trade and Environment Institutions

The GATT/WTO institutions for addressing trade and environment issues have very limited mandates. Trade-environment issues are discussed in three fora: the Committee on Trade and the Environment, which has been mandated (pursuant to a 1994 Ministerial Declaration) to consider trade-environment issues (defined to include increased market access) and report back to the Contracting Parties with recommendations; the Committee on Sanitary and Phytosanitary Measures, which administers the SPS Agreement; and the Committee on Technical Barriers to Trade, which administers the TBT Agreement. Only contracting party government representatives may attend or participate in meetings of these groups.

The WTO dispute settlement process can adjudicate trade-environment disputes, but the focus of the analyses is the trade-friendliness of environmental standards, not the environment-friendliness of trade rules. Only the governments of contracting parties have standing to request dispute settlement and participate in the adjudicative process. Only government officials of contracting parties and members of the WTO secretariat may attend oral argument and receive official WTO documents relating to the dispute, the distribution of which to persons outside of government is prohibited.

Institutionalized monitoring of trade-environment issues is very limited. Such "monitoring" is undertaken primarily by complainant countries and, to a lesser degree, by the WTO secretariat in the context of the Trade Policy Review Mechanism, which analyses each

⁴⁴ Ibid. A discussion of the GATT/WTO's legal competence is beyond the scope of this article, but it is likely that an argument could be made that such negotiations and activities would be within the GATT's legal competence pursuant to Article XXV of the General Agreement, and within the WTO's legal competence pursuant to Article III of (and the first paragraph of the preamble to) the Agreement Establishing the World Trade Organization. On the

large contracting party's trade practices every four years. All such monitoring is limited to consideration of the trade-friendliness of national environmental measures and does not consider the environment-friendliness of national measures.

Process By Which Environment-Friendly Convergence
Has Taken Place in the GATT/WTO

The United States and the EU have been the demandeurs of environment-friendly rules on trade-environment issues in the GATT/WTO. They have also driven integration exercises in the GATT. Japan still refuses to act as a demandeur of much of anything in the GATT, including trade-environment issues, continuing to play the passive international role it has played for nearly half a century.⁴⁵

The United States was the primary architect of the GATT in the 1946-48 period⁴⁶ and the U.S. Draft Charter (the first GATT draft text, which was proposed by the United States) included the central environmental exceptions to the general prohibition on import restrictions-- Article XX exceptions "relating to the conservation of exhaustible natural resources"⁴⁷ and those "necessary to protect human, animal, plant life or health."⁴⁸

The United States organized most subsequent tariff-cutting negotiating rounds, and the United States and the European Community jointly agreed to the Tokyo and Uruguay Round agendas. Two Uruguay Round agreements (the TBT and SPS agreements), negotiated at the behest of the United States, with European support, revisited the balance between environmental protection and trade protectionism. In light of several U.S-EU disputes over SPS measures, U.S. and EU negotiators, who drove the SPS negotiations, sought ways to narrow the use of sanitary and phytosanitary measures as barriers to trade; environmental and consumer groups on both sides of the Atlantic joined the fray in 1990, demanding that the SPS Agreement include

scope of GATT legal competence generally, see Frieder Roessler, "The Competence of GATT," Journal of World Trade Law __ (198_), pp. 73-83 .

⁴⁵ The reason for Japan's international passivity is the subject of much speculation. Hypothesized reasons include: fear of international engagement because of the "lesson" learned from the catastrophic results of interwar period international engagement; and a domestic political and industrial structure that favors the status quo, fearing external pressures that could be encouraged by active international engagement. While a definitive explanation for Japan's passivity at the GATT would be interesting, it is beyond the scope of this analysis.

⁴⁶ See John Jackson, World Trade and the Law of GATT (Charlottesville, Virginia: 1969).

⁴⁷ See GATT, Analytical Index: Guide to GATT Law and Practice (Geneva: GATT, 1994), pp. 541-2

⁴⁸ Op cit., p. 745.

provisions affirming the right of each country to establish the level of risk to health and the environment that it deems appropriate. As indicated in the analysis above, the final text ensures at least as much environmental protection as trade liberalization.

Thus, in both major GATT/WTO negotiations relating to the environment (1946-48 and 1986-94), the richer/greener countries were the demandeurs of enhancing environmental protection, and in both negotiations environmental issues were raised in conjunction with proposals to deepen integration in ways that might otherwise threaten environmental protection.

The developing countries have consistently resisted environment-friendly trade-environment provisions in the GATT/WTO. Nearly all of the G-77 developing countries are WTO members. Until being compensated and coerced into doing so, developing country negotiators expressed their intention not to sign the Uruguay Round TBT and SPS agreements. Moreover, the developing countries, led by India and Brazil, have already made it clear that they expect to be paid if the WTO is to more fully address trade and environment issues. At the insistence of the developing countries, the Uruguay Round Ministerial Declaration establishing a work program on trade and the environment includes increased "market access" in its agenda. And in 1994 and 1995 meetings of the Committee on Trade and the Environment, the developing countries have repeatedly demanded payment in the form of increased market access in exchange for addressing the trade-environment issue.

Power has been the means by which the richer/greener countries have gotten the poorer, dirtier countries to accept the GATT/WTO provisions bearing on the subject. Most developing countries acceded to the GATT in the 1960s and in obtaining the improved access to developed country markets implicit in accession, they had to accept the environmental exceptions of Article XX. At the conclusion of the Uruguay Round of trade negotiations, the European Union and the United States effectively compensated and coerced the developing countries into accepting two agreements that are central to the GATT/WTO trade-environment regime (the Agreement on Sanitary and Phytosanitary Measures and the Agreement on Technical Barriers to Trade), as well as other agreements (on intellectual property, investment measures, and services), by simultaneously threatening to otherwise withdraw most-favored-nation (MFN) treatment of their goods and offering new MFN treatment with lower tariff levels. Specifically, developing countries had to accept the TBT and SPS agreement as part of the WTO package. Failure to do so would have jeopardized MFN treatment of their goods by the United States and the EU, which

are withdrawing from GATT 1947 and have joined GATT 1994, the latter agreement constituting an integral part of the WTO agreements. A decision to sign onto the SPS, TBT, and other WTO agreements also provides the developing countries with increased access to the United States and EU markets on an MFN basis by virtue of the decrease in tariff barriers embodied in the WTO agreements.⁴⁹ Coercion and compensation.

IV. TRADE AND ENVIRONMENT IN THE NORTH AMERICAN FREE TRADE AGREEMENT

A Description of the Extent of Environment-Friendly Convergence Through Rules in the NAFTA

Environment-friendly convergence in the NAFTA has been far more extensive than in the GATT/WTO. This is illustrated not only by the following discussion of each element of convergence, but also by the fact that many leading environmental NGOs in the United States that actively opposed Congressional implementation of the Uruguay Round -- such as the National Wildlife Federation, the World Wildlife Fund, and the Natural Resources Defense Council-- actively supported Congressional implementation of the NAFTA.

1. Domestic Health, Safety, and Environment Protection

The NAFTA's rules on domestic health, safety, and environmental protection are almost identical to those embodied in the GATT/WTO Uruguay Round agreements.

The NAFTA provisions on sanitary and phytosanitary measures are virtually identical to those in the Uruguay Round SPS agreement, described above. In December 1991, a Uruguay Round SPS draft agreement was tabled by the GATT Director-General Arthur Dunkel. That draft, known as the "Dunkel Draft," became the basis of the final Uruguay Round text: no significant changes to the Dunkel Draft were made and it is essentially the same text that is included in the Uruguay Round Final Act. The Dunkel Draft was incorporated into the draft

⁴⁹ More specifically, the Uruguay Round Final Act provides that signatories shall withdraw from the GATT 1947-- which releases all Final Act Parties from the GATT 1947 MFN provision-- and accede to the GATT 1994-- which amounts to assuming a new MFN promise, but only to signatories of the Final Act, which also includes the agreements on intellectual property, investments, and services that the developing countries had threatened not to sign. The GATT 1994 (combined with other Uruguay Round instruments) includes new schedules of concessions offering lower tariffs than those found in the prior arrangements. See Richard H. Steinberg, "The Uruguay Round: A Legal Analysis of the Final Act," 6(2) International Quarterly 1-97 (April 1994).

NAFTA in 1992. Canadian, Mexican, and U.S. negotiators reasoned that many countries had already agreed to those provisions in the Uruguay Round negotiations, so they could also agree to them as NAFTA's solution. And if the Uruguay Round were not successfully concluded, which was a real possibility in 1992, then the NAFTA would establish an acceptable set of rules on the subject. Hence, the NAFTA negotiators adopted the Uruguay Round provisions wholesale.

On technical barriers to trade, the Parties to the NAFTA expressly agreed to adhere to the GATT/WTO Agreement on Technical Barriers to Trade⁵⁰-- again adopting the GATT/WTO approach. At the request of U.S. negotiators, the other Parties agreed to make more explicit an underlying principle in the WTO TBT Agreement: the NAFTA states expressly that each party may "establish the level of protection it considers appropriate."⁵¹ The only significant difference from the GATT/WTO rules on technical barriers to trade is that the NAFTA deems a technical standard that has been adopted by an international standards-setting body as in compliance with the NAFTA. Since the standards adopted by international standards-setting bodies are usually more stringent than those established in poor countries, this NAFTA rule was intended by U.S. negotiators to put upward pressure on some of Mexico's technical standards; it also relieved Mexican Government concerns that the United States might otherwise attack other Mexican standards as NAFTA-illegal technical barriers to trade, despite their compliance with internationally agreed levels of protection.

In short, the NAFTA rules on the use of trade measures to protect domestic human, animal, plant, and environmental health and safety are almost identical to those in the GATT/WTO. They establish the right of a Party to ban imports that do not meet the level of domestic health, safety, and environmental protection deemed appropriate by that Party, subject to some general tests intended to ensure that the restrictions are not a disguised means of trade protectionism.

2. Environmental "Dumping"

The problem of environmental dumping is addressed much more fully, and in a much more environment-friendly way, in the NAFTA than in the GATT/WTO.

⁵⁰ NAFTA Art. 903.

⁵¹ NAFTA Art. 904(2).

In contrast to the WTO system, the NAFTA provides for limited extrajurisdictionality as a legitimate basis for some import bans. The NAFTA prohibits most import restrictions unless they are used to protect health or the conservation of exhaustible natural resources within the jurisdiction of the importing country. However, unlike the GATT/WTO rules, the NAFTA expressly provides that import restrictions may be applied in order to enforce specified international environmental agreements, such as CITES, the Montreal Protocol on Substances that Deplete the Ozone Layer,⁵² or the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal.⁵³

More significantly, the NAFTA effectively increased the stringency of *applied* PPMs in Mexico. U.S. Government analysts reviewed Mexican PPMs and concluded that, on the books, Mexico's PPMs are generally equivalent to, and, in some cases, more stringent than those in the United States.⁵⁴ The problem was that Mexican PPMs were not being enforced. The NAFTA resolves the problem by providing that a Party government may challenge another Party's "persistent pattern of failure to enforce" domestic environmental measures through NAFTA dispute settlement; demonstration of such a pattern and the failure to cure it would give rise to a monetary fine against the non-enforcing Party, and, eventually, a right to trade retaliation if the pattern of failure to enforce were not cured. The NAFTA also provides for environmental NGOs to formally report a "persistent pattern of failure to enforce" to specified tri-national authorities.

This solution to the environmental dumping problem appears to have been enormously successful. Prior to 1992, the Mexican Government had fewer than twelve inspectors of compliance with the country's PPMs and international environmental obligations. Since then, Mexico has created a new agency, the Office of the Attorney General for the Environment (Procuraduria), which has over 500 inspectors.⁵⁵ Under these rules, it far less likely than before that U.S. production will relocate to Mexico because it maintains less stringent environmental protection.

⁵² Done _____, 1987. 52 Fed. Reg. 47,515.

⁵³ Done _____, 1989. 51 Fed. Reg. 20,606.

⁵⁴ Confidential author interviews with U.S. Government officials (from USTR and the Environmental Protection Agency) who negotiated NAFTA trade-environment issues, Washington, D.C. September 1994.

⁵⁵ Confidential author interview with a Mexican Government official who negotiated NAFTA trade-environment issues, Berkeley, California, November 1994.

3. Transboundary Remediation

In the shadow of the NAFTA negotiations, motivated by the same political forces that demanded a solution to other trade-environment issues, Mexico and the United States concluded the Agreement on the Funding of Environmental Infrastructure Projects in the U.S.-Mexico Border Region. Building off foundations established in the 1983 La Paz agreement on transboundary pollution, Mexico and the United States agreed to a \$4 billion border-region clean-up project. The remediation activities will be financed by a newly created North American Development Bank, which will be jointly managed and operated by the NAFTA parties. The United States has committed \$379 million for the first two years and Mexico has committed \$466 million for the first three years of the NAFTA.

4. Trade and Environment Institutions

The NAFTA's trade-environment institutions are better developed than the GATT/WTO's.

Legislative and administrative issues concerning trade and environment issues are entertained in multiple fora. The Committee on Sanitary and Phytosanitary Measures,⁵⁶ and the Committee on Standards-Related Measures,⁵⁷ each serve as a forum for particular types of trade-environment issues, and any trade-environment issue may be raised by a member-state in the North American Council, which oversees the operation of the NAFTA. These entities are analogous to their GATT/WTO counterparts-- the SPS and TBT Committees, respectively, and the GATT Council.

But unlike the GATT/WTO, which has only a Committee on Trade and the Environment to focus exclusively on trade-environment issues, the NAFTA has a complex, well-developed, multi-functional set of legislative/administrative institutions operated under the auspices of the Commission for Environmental Cooperation (CEC). The Commission is run by the CEC Council (which is different from the North American Council), composed of cabinet-level representatives from each of the three member-states, which: oversees implementation of the NAFTA Agreement on Environmental Cooperation; considers trade-environment data; assesses

⁵⁶ See NAFTA Art. 722.

⁵⁷ See NAFTA Art. 913.

the environmental impact of proposed projects likely to cause significant transboundary environmental effects (e.g., power plants in Northern Mexico intended to send electricity to Southern California but which also send air pollution into the Southern California air basin); assesses how to improve the compatibility of environmental technical standards and regulations in the three member-states; develops recommendations regarding the foregoing; and may exercise limited legislative powers.

The CEC Council is serviced by a Secretariat, which provides technical and administrative support, prepares reports on matters subject to the Agreement on Environmental Cooperation, and considers submissions from NGOs regarding a Party's failure to enforce its environmental measures. The CEC Council may also ask for advice from the standing Committee of Scientific and Technical Advisors. A Joint Public Advisory Committee, composed of five members of the public from each Party, advises the Council and provides information to the Secretariat.

Like the GATT/WTO, the NAFTA has a dispute settlement process that grants standing only to Party governments. But unlike GATT/WTO dispute settlement: environmental NGOs can take formal action that may indirectly initiate a dispute, and provide information to a NAFTA dispute settlement panel, by submitting data to the CEC Secretariat; and a NAFTA dispute settlement panel may convene and ask for input from a Scientific Review Board in trade-environment cases.⁵⁸ Moreover, a special set of dispute settlement rules and institutions have been tailored to address trade-environment problems arising in the NAFTA context. Given the political sensitivity of the issue to both the United States and Mexico, especially in light of the substantive legal standards (e.g., “persistent failure to enforce”), an extraordinary dispute settlement procedure was established for trade-environment issues. Unlike other NAFTA disputes: two of the three NAFTA members must agree to send a trade-environment dispute to dispute settlement; the penalty for “persistent failure to enforce” is a dollar-denominated fine against the losing government, not to exceed a specified amount (set initially at \$20 million); non-payment of the fine can lead to trade sanctions.

Unlike the GATT/WTO, the NAFTA has its own bank for financing transboundary remediation-- the North American Development Bank.

⁵⁸ See NAFTA, Ch. 20.

And under the NAFTA, several entities monitor not only the trade-friendliness of environmental measures (as in the GATT/WTO), but also the environment-friendliness of trade measures. Monitoring is conducted not only by complainant Party governments (as in the GATT/WTO), but also by the CEC Secretariat, the CEC Council, the JPAC, and NGOs that may submit data, reports, or complaints to the CEC Council or Secretariat.

In contrast to the GATT/WTO institutions, this is a complex web of trade-environment institutions, performing many more trade-environment functions than in the GATT/WTO, composed of several function-specific units, each with a clearly defined trade-environment mandate and multiple sources of input from governments, NGOs, and scientific and technical experts.

The Process By Which Environment-Friendly Convergence Has Taken Place in the NAFTA

The United States is the dominant power in the NAFTA, and has been willing to use its power on trade-environment issues. The United States possesses dominant market power in North America and Mexico wanted access to the U.S. market. U.S. environmental and labor groups complained loudly that they needed strong trade-environment rules if they were to refrain from opposing the NAFTA. The Bush Administration demanded that Mexico agree to environment-friendly provisions in the TBT and SPS chapters of the NAFTA, and to a revised La Paz Agreement, and Mexico complied. When it became clear in early 1993 that the United States Congress would not grant Mexico the preferential access promised by NAFTA without further agreement on trade-environment issues, Mexico began to seriously negotiate the Agreement on Environmental Cooperation, which culminated in establishment of highly specialized rules, institutions, and processes intended to deal with trade-environment issues. Market access in the United States was the compensation Mexico was offered in exchange for environment-friendly convergence.

V. TRADE AND THE ENVIRONMENT IN THE EUROPEAN UNION

A Description of the Extent of Environment-Friendly Convergence Through Rules in the EU

Of the three trade institutions studied here, environment-friendly convergence has been most extensive in the EU.

1. Domestic Health, Safety, and Environment Protection

Compared to the GATT/WTO and the NAFTA, the EU provides member-states with a similar right to ban imports from other member-states that do not comply with domestic levels of health, safety, and environment protection. But the EU also provides for upward harmonization of member-state standards for protecting internal health, safety, and the environment. Taken together, these approaches have led to more extensive environment-friendly convergence on the domestic protection issue than in the other two institutions.

The EU legal standards for import bans intended to maintain chosen levels of domestic environmental protection are similar to the rules in the other two organizations studied. As in the GATT/WTO and NAFTA, each EU member-state may prohibit the import of goods insofar as "necessary" to meet the importing country's chosen level of environmental or health risk,⁵⁹ and may impose an import ban provisionally in cases where it has not yet established the level of risk it is willing to accept for a particular additive or emission.⁶⁰ And as in the GATT/WTO and NAFTA, this right is circumscribed by a set of tests intended that consider not only environmental concerns, but the principle of free trade as well: the import restriction must be maintained in a manner that provides for national treatment and MFN treatment, and evidence that harm would result from non-application of the measure must be based on sound science. While the EU and the other two institutions have a rule that the import restriction must be the

⁵⁹ Treaty on European Union, Art. 36. See also, *Danish Bottles* case, Commission v. Denmark, Case 302/86 [1988] ECR 4607, [1989] 1 CMLR 619 (Danish requirement that certain beverages be sold only in recyclable bottles rules not inconsistent with Treaty of Rome, despite effects on intra-Community trade).

⁶⁰ *Dutch Nisin* case, Officier van Justitie v. Koninklijke Kaasfabriek Eyssen B V, Case 53/80 [1981] ECR 409, [1982] 2 CMLR 20 (ECJ upheld Dutch ban on the use of nisin in processed cheese until clear health risks were established for maximum permissible intake).

least trade restrictive means necessary to effectuate the measure's legitimate purpose,⁶¹ the European Court of Justice (ECJ) has interpreted that rule potentially more broadly than it has been interpreted in NAFTA and the GATT/WTO: the ECJ has interpreted the rule as requiring “proportionality”-- a balancing test between the trade restrictiveness of the measure and the purpose of the measure.⁶² It may be argued that this invites a determination by the ECJ as to the importance of the measure's purpose, effectively substituting the ECJ's judgment about risk aversion for that of national authorities. However, the ECJ has been careful about intruding on national sovereignty in adjudicating disputes over import restrictions adopted for the purposes of domestic health or environmental protection. Thus, for example in some well known cases, the ECJ has upheld national laws apparently intended to protect domestic health and the environment,⁶³ but has struck down other national laws that do not appear legitimately intended for that purpose.⁶⁴

The subtle differences from the legal rules used in the GATT/WTO and the NAFTA can not be understood and should not be evaluated in isolation from the EU's political and regulatory context in which upward harmonization or approximation of standards has played a central role. Unlike the other organizations studied here, the EU has engaged in a massive exercise in upward harmonization of product additive and emission standards. Efforts at such harmonization began in the late 1960s, but were not successful on a large scale until the SEA exercise (1987-92). By the end of 1992, the EC had harmonized or approximated 75 SPS measures (including directives that established maximum allowable pesticide residues in cereals, fruits, and vegetables; a directive on the use of hormones for growing cattle; a directive on appropriate slaughterhouse veterinary and cleanliness standards; and a directive prohibiting the sale in the Community of foodstuffs that have come into contact with any type of plastic not on a positive list),¹⁸ other food law measures (including directives on milk and eggs, and a directive requiring member-

⁶¹ See, *Cassis de Dijon*, Rewe-Zentral AG v. Bundesmonopolverwaltung für Branntwein, Case 120/78 [1979] ECR 649 (German ban on French Cassis, on theory that French Cassis was high in alcoholic content, held inconsistent with Treaty of Rome); *French Brioches* case, Fabriek voor Hoogwaardige Voedingsproducten Kelderman B.V. [1981] ECR 527 (Dutch ban on French brioches held inconsistent with common market principles in the Treaty of Rome).

⁶² *Cassis de Dijon* case; and *German Beer Purity Law* case, Commission v. Germany, Case 178/84 [1987] ECR 1227, [1988] 1 CMLR 780, [1988] BLTC 133 (German beer purity law, Rheinheitsgebot, held to impermissibly interfere with intra-Community trade) .

⁶³ *Danish Bottles* case; *Dutch Nisin* case.

⁶⁴ *German Beer Purity Law* case; *Cassis de Dijon* case.

states to permit the use of 412 food additives approved by the EC's Scientific Office-- although each member-state could still decide how much of each additive could be used and in which foods).⁶⁵ In addition, the EU had established Community-wide automobile emissions standards.

At Germany's insistence, the SEA and the Maastricht Treaty provide that harmonized or approximated standards⁶⁶ and EU environmental measures⁶⁷ are to be based on "a high level of protection."⁶⁸ Moreover, at Germany's and Denmark's insistence,⁶⁹ where Community standards for purposes of completing the internal market are adopted only by a qualified majority vote, member-states may maintain their own more stringent standards;⁷⁰ and for all other Community environmental measures, member-states may maintain or adopt their own more stringent standards.⁷¹ Each member-state must permit imports of products from other member-states that comply with unanimously established Community standards. Almost all the harmonization and approximation directives have required that the member-states eventually meet standards that are as high as those then in place in Germany.

The EU's exercise in upward harmonization or approximation of standards is very environment-friendly. The NAFTA and GATT/WTO legal standards permit each country to impose import bans to enforce the level of risk it deems appropriate; such an approach has *maintained* domestic health and environmental protection within each country (and may have indirectly raised standards in poorer-dirtier countries). By comparison, the EU's exercise in upward harmonization has generally *maintained* domestic health and environment protection within the greenest Northern European importing countries and simultaneously *increased* the stringency of pesticide, fungicide, product additive, and emissions standards in the dirtier European countries.

2. Environmental "Dumping"

⁶⁵ Baker & McKenzie, Single European Market Reporter (Chicago: Baker & McKenzie, 1994)

⁶⁶ I.e., action taken under Treaty on European Union Art. 100A.

⁶⁷ I.e., action taken under Treaty on European Union Art. 130r(2).

⁶⁸ Treaty on European Union, Arts. 100A(3) and 130r(2).

⁶⁹ Ludwig Kramer, "The Single European Act and Environment Protection: Reflections on Several New Provisions in Community Law," Common Market Law Review, esp. 680. See also, Dirk Vandermeersch, "The Single European Act and the Environmental Policy of the European Economic Community," Common Market Law Review, 12:407-29, esp., 417-19 (December 1987).

⁷⁰ Treaty on European Union, Art. 100A(4). See also, *Danish Bottles* case.

⁷¹ Treaty on European Union, Art. 130t.

The EU goes further than the NAFTA in addressing environmental "dumping."

EU rules specifically permit some import bans directed at poor environmental protection taking place outside a member-state's jurisdiction. EU member-states are required to ban imports from other member-states and from outside the Community of goods embodying animal parts covered by CITES (plus all species of dolphin and cetacean products), the EC Fur Seal Ban (1983), or the EC Whale Ban (1981). In addition, under some directives, EU member-states are required to ban imports of goods from outside the Community not produced in accordance with specified EU PPMs; for example, the EU directive on animal-testing of cosmetics will require each member-state to ban the importation of all cosmetics produced by companies that use animals to test the safety and health effects of cosmetics. And at least one ECJ decision suggests that a member-state may maintain a national environmental rule that is more stringent than EU or international standards, and that bans the importation of goods from other member-states, with the intention of protecting animal life outside its border.⁷²

Perhaps more significantly, the EU has engaged in an upward harmonization or approximation exercise of dozens of PPM standards. That exercise has been subject to the same requirements-- using a "high level of protection" and allowing member-states to maintain more stringent standards-- as described above. For example, each member-state must now: limit NOX and SO2 emissions in accordance with the Large Scale Combustion Directive; reduce lead content in petrol and offer unleaded gasoline in accordance with the EC emissions directives; reduce water pollution in accordance with the water effluent directive; control or restrict the use of chemical substances in accordance with EC chemicals directives; and recycle a specified proportion of solid wastes in accordance with the Solid Wastes Directive.

3. Transboundary Remediation

Transboundary remediation also takes place under EU auspices and action, pursuant to Article 130r(2) of the Treaty on European Union, or in the shadow of Community activity. For example, the 1979 Directive on Conservation of Wild Birds requires some member states to restore wild bird habitat. Directives contemplated under Article 130r would require polluters

⁷² Dicta in *Dutch Red Grouse* case, described in OECD, Environment Directorate and Trade Directorate, Joint Session of Trade and Environment Experts, "Typology of Trade Measures Based on Environmental Product

throughout the Community to remediate specific sights where toxic wastes have contaminated soil.⁷³ And the Convention for the Protection of the Rhine Against Chemical Pollution, negotiated in the shadow of Community environmental cooperation, accepted by the EU, and conformed with EU directives on discharging certain dangerous substances into the Aquatic environment, provides for remediation of the Rhine River.⁷⁴

National cost-sharing or EU support for remediation is either expressly provided for in legal instruments prescribing the remediation, as in the case of Rhine River remediation,⁷⁵ affected by means of payments from the Cohesion Fund⁷⁶ or other funds.⁷⁷

4. Trade and Environment Institutions

EU trade-environment institutions are better developed, perform more functions, and provide for more sources of non-governmental participation than those in the NAFTA or the GATT/WTO.

The EU legislative process was intended to facilitate environment-friendly convergence. Decisions on harmonization relating to establishment of the single market⁷⁸ are taken by qualified majority voting (QMV) subject to co-decision,⁷⁹ and most other environmental legislation⁸⁰ is adopted by QMV subject to co-participation.⁸¹ In either case, member-states may maintain more stringent standards,⁸² and in both cases a "high level of protection"⁸³ must be

Standards and PPM Standards," 28-30 September 1993, COM/ENV/TD(93)89. *Dutch Red Grouse case, Commission v. Netherlands*, Case 169/89 [1990] ECR 2143.

⁷³ EC Green Paper on Remedying Damage to the Environment, COM(93)47.

⁷⁴ See Alexandre Kiss and Dinah Shelton, Manual of European Environmental Law (Cambridge: Cambridge University Press, 1993); and Thomas Bernauer, "International Financing of Environmental Protection," Paper prepared for the 1994 Annual Meeting of the APSA, New York, September 1-5, 1994.

⁷⁵ Ibid.

⁷⁶ The scope of environmental side-payments made through the Cohesion Fund is set forth in Article 130d of the Treaty of Maastricht and the Protocol on Economic and Social Cohesion attached to the Maastricht Treaty. David Wilkinson, "Maastricht and the Environment: The Implications for the EC's Environment Policy of the Treaty on European Union," Journal of Environmental Law, esp. 232.

⁷⁷ Ludwig Kramer, "The Single European Act and Environment Protection: Reflections on Several New Provisions in Community Law," Common Market Law Review.

⁷⁸ Action taken under Art. 100A.

⁷⁹ Co-decision means that the Parliament may veto the Council decision.

⁸⁰ Action taken under Art. 130s.

⁸¹ Co-participation means that the Parliament has two chances to amend the legislation.

⁸² Art. 100A(4) and Art. 130r(2).

⁸³ Art. 100A(3) and Art. 130r(2).

pursued.⁸⁴ In short, the absence of a unanimity requirement makes environmental and standards harmonization in the EU easier to undertake than in the GATT/WTO (which requires consensus) or the NAFTA (which requires consent), and safeguards ensure that national environmental measures will not be replaced by less stringent EU standards.

Issues concerning legislation and administration of trade-environment issues may be raised by: member-states in the Council; private individuals, NGOs, or corporate lobbyists before the Commission; scientific and technical advisors before standards-setting bodies organized by the Commission; and political parties-- such as the Green Party-- in the European Parliament.

The ECJ adjudicates trade-environment disputes and offers standing to member-states, private individuals, business organizations, and the Commission. The ECJ may consider input from science and technical advisors in rendering a decision.

Two institutional units participate in allocating financial adjustments to pay for increased national standards or environmental remediation: the Council and the Commission (DGXI). Financial support for such purposes are available from the Cohesion Fund, the Guidance Section of the European Agricultural Guidance and Guarantee Fund, the European Social Fund, and the European Regional Development Fund.⁸⁵

Several institutions participate in establishing Community environmental standards, which may be embodied in products or PPMs. The member-states participate in standards-setting through the Council and its committees, such as the Standing Committee on Foodstuffs, which was established in 1969. Scientific and technical advisors participate via committees organized by the Commission, such as the fifteen science and technical experts from the member-states that comprise the Scientific Committee on Food, which was established in 1974, or the Consultative Committee on Food, which was established in 1976. Business organizations and NGOs, like the Consumers in the European Community Group, lobby the Commission on standards issues. And political parties, such as the Green Party, participate in environmental standards-setting in the European Parliament.

⁸⁴ See David Wilkinson, "Maastricht and the Environment: The Implications for the EC's Environment Policy of the Treaty on European Union," Journal of Environmental Law, esp. 232.

⁸⁵ Ludwig Kramer, "The Single European Act and Environment Protection: Reflections on Several New Provisions in Community Law," Common Market Law Review, esp. 673.

Compliance with all major aspects of EU trade-environment measures is monitored, including the trade-friendliness of national environmental measures, the environment-friendliness of national trade measures, national implementation of Community standards, and national implementation of remediation requirements. Monitoring is conducted by officials in DG XI, the European Environment Agency, and by means of complaints by competing member-state or business organizations, or by NGOs. A member-state's failure to implement a directive is subject to a lump-sum "penalty payment"⁸⁶ and, ultimately, to the freezing of sizable payments from the EC's Structural Funds.⁸⁷

The Process By Which Environment-Friendly Convergence Has Taken Place in the EU

There is often a "North-South" split within the EU over environmental measures: Germany, Belgium, Luxembourg, the Netherlands, and Denmark usually support stringent standards and environment-friendly measures, whereas Greece, Portugal, and Spain tend to favor weaker standards and measures; France, Britain, and Italy usually fall somewhere in the middle.⁸⁸ Thus, for example, in the Large Scale Combustion Directive debate over EC emissions standards for sulfur dioxide, Germany, Denmark, and the Netherlands favored stringent standards, while Britain and Italy opposed stringent standards.⁸⁹

Yet the relatively concentrated EU distribution of power in the hands of green, demandeur countries has facilitated environment-friendly convergence. In particular, Germany is the biggest market in Europe. Analyses of how EU trade-environment disputes are resolved show that German market power has dominated the process and the outcomes. Thus, for example, in bargaining over auto emissions standards, Germany used its market power as a basis for coercing other EU member-states into raising their standards: Germany threatened more than once to simply close its markets to other member-state automobiles that did not meet German

⁸⁶ Art. 171 of the Treaty on European Union.

⁸⁷ David Wilkinson, "Maastricht and the Environment: The Implications for the EC's Environment Policy of the Treaty on European Union," Journal of Environmental Law, esp. 233.

⁸⁸ Ludwig Kramer, "The Single European Act and Environment Protection: Reflections on Several New Provisions in Community Law," Common Market Law Review, esp. 678-82.

⁸⁹ Nigel Haigh, "New Tools for European Air Pollution Control," International Environmental Affairs (Winter 1989), 26-37.

auto emissions standards-- unless the EU agreed to more stringent standards.⁹⁰ And in bargaining over the SEA and Maastricht Treaty, Germany used its market power as the basis for compensating the rest of Europe to raise environmental standards: in exchange for agreeing to further access to its market, Germany held fast for language in the SEA stating that in harmonizing national regulations, "the Commission. . . shall take as a base a high level of protection,"⁹¹ and for language in the Maastricht Treaty requiring that Community environmental measures "shall aim for a high level of protection."⁹² Using those guidelines, the EU has raised its environmental standards through the promulgation of directives on 450 Community-wide environmental regulations from 1989-91 and on about 100 new environmental regulations each year since.⁹³

Moreover, Germany's will to use its power on trade-environment issues has increased as European integration has deepened: with each exercise in deepening, Germany has insisted upon and obtained more environment-friendly convergence. Specifically, with each step of deepening, the EU has adopted legislative rules that make it easier to achieve environment-friendly convergence. The Treaty of Rome nowhere mentions the environment; harmonization of standards had to be undertaken pursuant to Article 100 of the Treaty, by unanimous vote, under the theory that harmonization was necessary to stop distortion of competition.⁹⁴

With deeper integration pursued under the Single European Act, legislative processes for harmonization (or approximation) and environmental decisions were made more environment-friendly. Harmonization decisions under Article 100A (relating to completion of the single market) could be taken by QMV subject to co-decision, provided that standards were based on a "high level of protection," and member-states could maintain more stringent standards. In

⁹⁰ David Vogel, Trading Up.

⁹¹ Art. 100A(3) of the EEC Treaty and the Treaty on European Union. Ludwig Kramer, "The Single European Act and Environment Protection: Reflections on Several New Provisions in Community Law," Common Market Law Review, esp. 678-82. See also, Dirk Vandermeersch, "The Single European Act and the Environmental Policy of the European Economic Community," Common Market Law Review, esp. 417-19 (December 1987).

⁹² Art. 130r(2). David Wilkinson, "Maastricht and the Environment: The Implications for the EC's Environment Policy of the Treaty on European Union," Journal of Environmental Law 4(2): 221-39 (1992).

⁹³ Baker & McKenzie, Single European Reporter.

⁹⁴ See Commission v. Italy, ECJ Case 91/79 (1980), E.C.R. 1099 at 1106 (Italy's challenge to the Council Directives on harmonization, arguing lack of competence, was rejected on the ground that "if there is no harmonization of national provisions [on the environment and health], competition may be appreciably distorted"). See also, Ludwig Kramer, "The Single European Act and Environment Protection: Reflections on Several New Provisions in Community Law," Common Market Law Review, esp. 661-62.

addition, Article 130r-t was added, permitting adoption of environmental measures unrelated to completion of the single market by unanimous vote of the Council, with a right of member-states to adopt more stringent measures.⁹⁵

With a step towards still deeper integration via the Maastricht Treaty, Article 100 was left largely untouched, while Article 130r-t was made even more environment-friendly. Now, most decisions taken on the environment under Article 130r-t may be taken by QMV subject to co-participation, provided they "shall aim at a high level of protection." The right of member-states to adopt more stringent measures remains intact.⁹⁶

Finally, the EU has developed several ingenious ways to structure trade-environment solutions so as to reduce the political power required to bring about convergence among member-states. Initial efforts at convergence in the 1970s and early 1980s were not very successful, in large part because they focused on immediate, complete harmonization, requiring unanimous member-state support.⁹⁷ Beginning with the SEA exercise, the Council attempted to approximate national standards instead of harmonizing them, structuring Community directives so as to raise the overall level of environmental protection in Europe, while holding down the political costs of doing so. There have been at least seven mechanisms for so structuring EU environmental directives.

First, some EU trade-environment rules or standards are phased in, such as the three stages for implementation of the Large Scale Combustion Directive.⁹⁸ Such phase-ins may be characterized temporally (e.g., phase 1 is 1974-77, phase 2 is 1978-81, etc.) or according to changes in per capita GDP (e.g., all countries with a per capita GDP of under \$10,000 shall meet standard X, while all countries with a per capita GDP of over \$10,000 shall meet the more stringent standard Y), an approach known as "graduation." Phase-ins effectively reduce the discounted present costs of upward harmonization for poorer-dirtier member-states.

Second, some EU trade-environment rules or standards have included derogations for the poorest countries, such as the derogations for Spain and Portugal in the Large Scale Combustion

⁹⁵ Ludwig Kramer, "The Single European Act and Environment Protection: Reflections on Several New Provisions in Community Law," Common Market Law Review. See also, Dirk Vandermeersch, "The Single European Act and the Environmental Policy of the European Economic Community," Common Market Law Review.

⁹⁶ David Wilkinson, "Maastricht and the Environment: The Implications for the EC's Environment Policy of the Treaty on European Union," Journal of Environmental Law.

⁹⁷ See David Vogel, Trading Up.

Directive.⁹⁹ Such directives still raise the EU's "average" and "median" standards, but at no cost to the poorest member-states.

Third, some EU trade-environment rules or standards are harmonized at high-- but not the highest-- levels.¹⁰⁰ For example, in the context of the EU debate over solid waste recycling, the member-states adopted a December 1993 directive requiring all member-states to recover a specified minimum and maximum percentage of packaging material. Germany had required recovery of more than the maximum, flooding the European market with recovered packaging material. The directive's formulation forced Germany to reduce its recovery activities, and reduced the costs of upward harmonization to dirtier member-states, but still significantly raised the overall level of recovery activity in the EU.

Fourth, some EU trade-environment rules or standards employ flexible approaches that take into account differences in local conditions, thereby reducing the costs of upward harmonization. For example, in setting water effluent standards, the Commission considered that Britain's rivers flow faster on average than those on the Continent.¹⁰¹ Similarly, prior to the SEA, different auto emissions standards were established for cars with different sized engines, effectively establishing different requirements for French, Italian, and German auto-makers, each of which faced different engineering and economic problems in reducing auto emissions.¹⁰²

Fifth, not all EU trade-environment standards are being harmonized simultaneously. Different issues have been addressed at different times, spreading the harmonization exercise-- and the costs associated with it-- over a long period.

Sixth, some EU trade-environment rules or standards are established as a "floor," with greener member-states maintaining a more stringent standard.¹⁰³ This approach raises the standards only of those member-states with standards previously below the floor, thereby raising the EU's "average" standard without incurring the political costs that would accompany a

⁹⁸ Nigel Haigh, "New Tools for European Air Pollution Control," International Environmental Affairs, 26-37.

⁹⁹ Ibid.

¹⁰⁰ Ludwig Kramer, "The Single European Act and Environment Protection: Reflections on Several New Provisions in Community Law," Common Market Law Review, esp. 678-82 (1987).

¹⁰¹ See, e.g., Directive 76/464 of May 4, 1976 on Water Pollution Caused By the Discharge of Dangerous Substances, O.J. 1976 No. L 129, 23-29. See also, Dirk Vandermeersch, "The Single European Act and the Environmental Policy of the European Economic Community," Common Market Law Review, esp. 420.

¹⁰² David Vogel, Trading Up.

solution that raised every member-state's standard to that of the member-state with the most stringent standard.

Seventh, some EU trade-environment rules or standards are established as a "trade-opening ceiling." Under this formulation, no member-state may require imports to meet a standard that is more stringent than that established as the "ceiling." This formulation, employed in the EC's auto emissions standards directive for the 1977-85 period, creates an incentive for producers in dirtier member-states to raise their standards to the "ceiling," which ensures that they will be able to export their goods throughout the Community.¹⁰⁴ Alternatively, those producers may decide not to compete in other countries in the Community, producing products only for their home country market at a standard that is inferior to the Community ceiling. The aggregate effect is to raise the Community's "average" standard, but to reduce the political costs of doing so by leaving discretion to each firm to decide whether compliance with the ceiling is worthwhile.

Through each of these vehicles, and combinations thereof, the EU has effectively reduced the political "costs" of environment-friendly convergence, thereby reducing the power required of greener demandeur countries to resolve trade-environment problems in an environment-friendly way.

¹⁰³ Treaty on European Union, Art. 100A(4), permits a member-state to maintain a more stringent standard than the Union's standard if the latter was adopted by qualified majority voting.

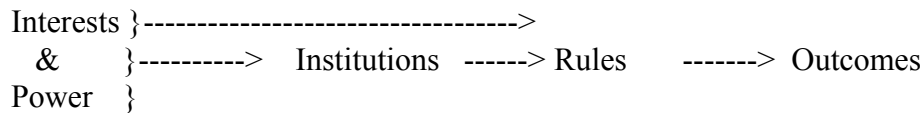
¹⁰⁴ Op cit.

VI. CONCLUSIONS: THE STRUCTURE AND PROCESS OF
REGIME RULE-MAKING AND
THE REGIONALIZATION OF TRADE-ENVIRONMENT RULES

The Structure and Process of Trade-Environment Rule-Making

This study employs a model in which interests drive states to establish institutions, rules, and outcomes that they favor. The power of demandeur states limits what can be achieved, but rules may be constructed so as to maximize the benefits of a solution given the demandeurs' "budget." Institutions may be required to "fine-tune" that process and administer complex rules. These relationships, suggested originally in Figure One above, are elaborated in light of this study and depicted in Figure Three below.

Figure Three:



Further explanation of these relationships, conclusions about the process and structure of trade-environment rule-making, and the implications of this model for the study of regimes generally, are discussed below.

Causal Factors: Interests and Power

Table One summarizes similarities and differences in the independent variables across the three trade institutions examined here.

Table One: The Structure of Interests and Power on Trade-Environment Issues in the GATT/WTO, NAFTA, and EU.

	<u>WTO</u>	<u>NAFTA</u>	<u>EU</u>
INTERESTS:			
EXTENT OF INTEGRATION			
- Average Internal Tariff Rate	7.5%	0	0
- Common External Tariff?	No	No	Yes
-Policies On :	X	X	X
Services		X	X
Workers		X	X
Transport			X
Capital			X
Fisheries			X
Competition			X
Taxation			X
Social Policy			X
Companies			X
Money			X
POWER			
- Concentration of Market Power In Favor of a Green Country or Countries?	Moderate Concentration	High Concentration	Moderate-High Concentration
- Green Powers:	U.S. and EU	U.S.	Germany (Plus Den., Neth., Sweden)
EXPECTATION	Few Environment-Friendly Rules	More Environment-Friendly Rules	Most Environment-Friendly Rules

Table One shows an important difference among the three institutions: the extent of integration-- with the EU most deeply integrated, the NAFTA moderately integrated, and the WTO least integrated. As was shown in the case-studies, and as will be summarized below, the extent of environment-friendly convergence in a given trade institution correlates with this rank-ordering: increased integration creates increased demand for environment-friendly trade-

environment rules by important interest groups in the powerful, green countries. Process-tracing confirmed this relationship.

Yet interest alone is not enough: those states interested in environment-friendly convergence must have power to bring about their desired outcome. The study suggests that modified structural explanations¹⁰⁵ of the relationship between power and the rules adopted in international institutions should be elaborated. This study shows that the operationalization of "power" in terms of the ability to "coerce" and "compensate" helps explain *processes* by which power is used. Previous modified structural analyses of the development of institutional rules generally have not been specific about processes by which regime rules are made. Krasner suggests that "power" in telecommunications regimes is a function of technology, and Garrett suggests that "power" in the EU is a function of market size, but neither has described the process by which that power was actually used in bargaining to achieve the outcomes they explain. The concepts of "coercion" and "compensation" can help operationalize the process by which power affects outcomes. In the international trade bargaining context, "coercion" and "compensation" has been described in this study in terms of "market power": "coercion" is seen as a threat to reduce access to a market, and "compensation" is seen as a reward by means of increasing access to a market. These concepts and associated metrics permit a more complete explanation of trade-bargaining *processes* than is possible with a general notion of "power," or a description of what power depends on.

The distinction between "compensation" and "coercion" as expressions of power also broadens the set of modified structural lenses to illustrate some alternative patterns of political behavior in international institutions and associated welfare effects. Krasner and Garrett have distinguished two important patterns: bargaining between dominant powers in an institution that usually entails movement along the Pareto frontier; and the adoption of institutional mechanisms that solve market imperfections, permitting movement toward the Pareto frontier.

"Compensation" underscores a corollary of the latter point: the ability to compensate another actor for the distributive consequences of an action can transform a game on the Pareto frontier to a game of Pareto-improvement (i.e., from a zero-sum game into a positive-sum game).

¹⁰⁵ Stephen Krasner, "Global Communications and National Power: Life on the Pareto Frontier," [World Politics](#); Geoffrey Garrett, "International Cooperation and Institutional Choice: The European Community's Internal Market," [International Organization](#).

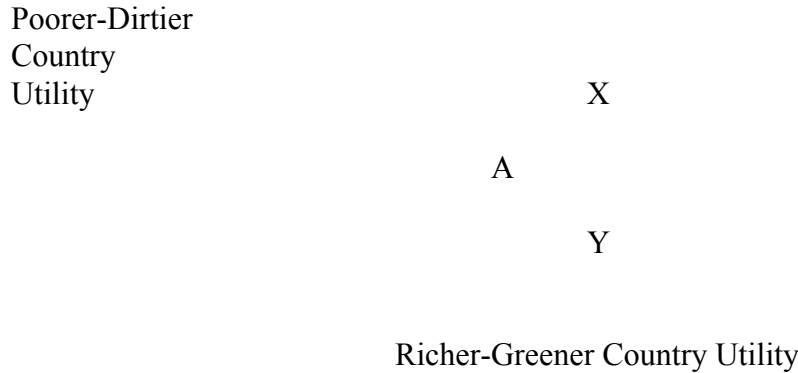
The payment of compensation can transform a situation in which parties appear to be fighting on a Pareto frontier about one issue into a situation in which two issues are simultaneously addressed and both parties can be made better off. An actor that would enjoy favorable distributive consequences from adoption of a particular rule at the expense of another actor can compensate that other actor, making both actors better off and leading to a Pareto-improving outcome. Thus, where market failures are not a barrier to exchanges, much of the day-to-day life of a regime may focus on how to structure solutions that are Pareto-improving.

“Coercion” of a small power by a great power can lead to movement strictly along the Pareto frontier, as suggested by Krasner and Garrett, but it can also lead to a Kaldor-Hicks efficiency improving outcome. The study shows that richer/greener countries can try to coerce poorer-dirtier countries into environment-friendly international liability rules that solve trade and environment problems. Insofar as coercion leads to internalization of social costs, the outcome is the same as if compensation were paid: efficiency is enhanced. But the distributive impacts are quite different: under the compensation solution, the greener countries pay the price of internalizing social costs; under the coercion approach, the dirtier countries pay.¹⁰⁶ Thus, the coercion solution will be Kaldor-Hicks efficiency improving: the richer/greener country will be so much better off after successful coercion that it could compensate the poorer-dirtier country and still come out ahead-- but the compensation need not be paid.

Figure Four illustrates the difference in welfare effects between the compensation and coercion approaches. The vertical axis measures utility for a poorer-dirtier country and the horizontal axis measures utility for a richer-greener demandeur country. The curve represents the Pareto frontier. Point A represents the welfare enjoyed by both parties given the initial level of environmental protection in both countries. The compensation approach to environment-friendly convergence leads to outcomes in area X: both parties have increased utility, so the outcome is Pareto efficiency improving. The coercion approach leads to outcomes in area Y: the richer/greener country is better off, while the developing country is worse off, but the outcome is Kaldor-Hicks efficiency improving because social and political costs are being internalized.

¹⁰⁶ For a general discussion of this difference in the domestic context, see Guido Calabresi and A. Douglas Melamed, "Property Rules, Liability Rules and Inalienability: One View of the Cathedral," 85 *Harv. L. Rev.* 1089-1128 (1972).

Figure Four: Welfare Effects of Compensation Versus Coercion Approaches.



The coercion/compensation dichotomy suggests that coercion has important political costs. The fact that the United States (in the NAFTA context) and Germany (in the EU context) have been willing to compensate smaller powers for their environment-friendly actions, instead of using coercion, suggests that coercion is costly. This has been long acknowledged by international law scholars and Neoliberals, who have argued that coercion can inspire a retaliatory reaction and damage the legitimacy of international laws that order relations in ways which generally benefit those with power.¹⁰⁷

Intervening Variables and Outcomes: The Extent of Environment-Friendly Convergence

Table Two summarizes variance in the four dimensions of the intervening variables across the three trade institutions examined here. It shows that the EU has the most environment-friendly rules, suggesting that it enjoys the broadest and deepest convergence; the NAFTA has moderately environment-friendly rules, suggesting that it enjoys broad but relatively shallow convergence; and the GATT/WTO has the least environment-friendly rules, suggesting that it has narrow and shallow convergence.

¹⁰⁷ See, e.g., Louis Henkin, How Nations Behave: Law and Foreign Policy (New York: Frederick A. Praeger, 1968), pp. 9, 25-26, 31-35, and 45-70; and Abram Chayes and Antonia Handler Chayes, "On Compliance," International Organization 47,2 (Spring 1993), pp. 175-204.

Table Two: Extent of Environment-Friendly Rules in the GATT/WTO, NAFTA, and EU-- And Expected Convergence.

	<u>WTO</u>	<u>NAFTA</u>	<u>EU</u>
DOMESTIC HEALTH, SAFETY, AND ENVIRO. PROTECTION	- Bounded right to stop imports that undermine protection.	- Bounded right to stop imports that undermine protection.	- Bounded right to stop imports that undermine protection. - Upward harmonization of standards.
ENVIRO. "DUMPING"	- No right to stop imports in response to extrajurisdictional environmental degradation.	- Limited right to stop imports in response to extrajurisdictional environmental degradation. -Mechanism to ensure domestic enforcement of PPM standards.	- Limited right to stop imports in response to extrajurisdictional environmental degradation. -Mechanism to ensure domestic enforcement of PPM standards. - Upward harmonization of PPM standards.
TRANS-BOUNDARY REMEDIATION	- No activities.	- Sub-regional, project-specific efforts. - Regional financing.	- Sub-regional, project-specific efforts. - Regional financing. - Region-wide rules requiring remediation.
TRADE-ENVIRO. INST'NS	- Leg., admin., and adjud. units with limited mandates - Participation by country governments only. - Limited monitoring.	- Leg., admin., adjud. and financing units with broad mandates - Participation by governments, NGOs, science and tech. advisors. - Broad monitoring.	- Leg., admin., adjud. financing, and stds.-setting units with broad mandates - Participation by governments, NGOs, business orgs., science and tech. advisors, and pol. parties. - Broadest monitoring.
OVERALL EXTENT OF CONVERGENCE	LOW	MODERATE	HIGHEST

The extent to which the rules and institutions of each organization are environment-friendly correlates with the rank-ordering of the depth of integration in the trade institutions examined. Process-tracing has confirmed that deepening increased the salience of trade-environment issues for richer-greener states and led to demands by those states for more environment-friendly rules and institutions. Moreover, in all three institutions, the demandeurs enjoyed at least a moderate concentration of power in their favor, which facilitated outcomes in their interest. It is important to note, however, that power in the EU is not as concentrated as in the NAFTA, which enjoys less environment-friendly convergence. Thus, deep integration in the EU may have provided the will for environment-friendly convergence, but has the concentration of power alone provided the way?

It appears that the complex structure of trade-environment rules in the EU has been a crucial instrument in matching the demandeurs' power to their interests. In the 1970s and early 1980s, European efforts at immediate and complete harmonization failed. Beginning in the mid-1980s, the EU began employing more complex rules that reduced the cost of environment-friendly convergence through several mechanisms. For example, by using "graduation" rules, which phase in the application of more stringent standards over time, the economic and political costs of converging towards more environment-friendly rules were effectively amortized, reducing the associated costs at any one time. Similarly, another frequently used rule reduced the political and economic costs of environment-friendly convergence: derogations exempt the most "expensive" countries from the rules, effectively capping the marginal cost the demandeurs would pay for improved standards in any one country. And still another approach set a "floor", a minimum environmental standard below which no country could fall, effectively pushing only the environment-unfriendly "tail" towards more environment-friendly standards.

Use of these mechanisms yields outcomes that are less environment-friendly than immediate, upward harmonization of standards. However, each of the mechanisms has made the average of EU member state standards more environment-friendly than they were and they have required less power of the demandeurs than would have been required for immediate, upward harmonization, enabling an outcome (upward harmonization or approximation) that otherwise had not been possible. Complex rules have been an instrument of matching power and interests.

Institutions then play an important role in implementing these cost-effective rules. Phase-ins, floors, and other complex rules require extensive monitoring. Several political

scientists and economists have shown that international institutions can help solve market imperfections: institutions can reduce transactions and information costs associated with complex, on-going negotiations and implementation of a multilateral arrangement.¹⁰⁸ The existence of well-developed institutions associated with a trade organization reduces the marginal cost to nearly zero of creating institutional mechanisms to solve market imperfections that otherwise could be barriers to the negotiation and implementation of trade-environment understandings.

In each of the institutions examined, there have been means available to eliminate market failures that otherwise might have inhibited solutions to trade-environment problems or implementation of the negotiated results. Market imperfections that threaten Pareto-improving solutions may be solved by existing institutions or the creation of new or more elaborate institutions. The existence of an exercise in integration-- in the absence of an institution-- provides an existing process (and so reduces the transactions costs associated with creating such a process) by which compensatory payments may be made to poorer-dirtier countries and by which already planned institutions may be modified to monitor and administer the new trade-environment agreements. In each of the three institutions examined here, an institution existed to facilitate Pareto-improving solutions and administer complex rules. In two of the cases-- the NAFTA and the EU-- new institutions were created, or existing institutions were modified, to facilitate the process of environment-friendly convergence.

Conclusions About The Modified Structural Regimes Model

As Neorealists argue, power and interests are crucial factors that drive regime outcomes. And as Neoliberals argue, the establishment of institutions is important in reducing transactions and information costs and facilitating Pareto-improving outcomes. But the findings of this study suggest that much of the day-to-day work in regimes involves figuring out how to reach Pareto-improving compensatory deals (what has to be paid by whom for what?), and then structuring the rules of the deal so as to minimize the political power that must be “spent” by demandeurs on the deal.¹⁰⁹

¹⁰⁸ See, for example, Robert Keohane, After Hegemony (Princeton: Princeton University Press, 1984).

¹⁰⁹ The model works well at modeling a particular kind of game in which the primary tensions in an institution are between richer nations and poorer nations, the richer nations are the demandeurs of a particular outcome, and the

The Regionalization of Trade-Environment Rules

The foregoing has illustrated how the structure of power and interests in the world trading system and have provided paths toward environment-friendly convergence, and how rules and institutions facilitate travel along that path. But it has also suggested that trade-environment rules are regionalizing.

The study shows that in 1985, NAFTA did not exist, and the breadth of trade-environment convergence in the GATT and the EC were more similar than today: neither institution seriously addressed environmental dumping or engaged in significant transboundary remediation, and the EC saw only limited institutional activity involving environmental cooperation while the GATT saw none. Since then: the EC has deepened, widened, and enjoyed significant convergence on trade-environment issues, including internal harmonization or approximation of hundreds of standards; the NAFTA has been formed and has broadly strided towards addressing the issue; and the GATT has lurched forward only slowly. This dynamic description of the institutions suggests a regionalization of trade-environment rules, with the EU moving down one path, the NAFTA moving down another, and the GATT/WTO barely moving at all.

The model above helps explain this process of regionalization of environment-friendly convergence on trade issues. Interest in environment-friendly convergence is associated with deepening integration, and maximizing the effectiveness of demandeur-state power is facilitated by the use of intervening complex rules and institutions. In the last decade, the pattern of deeper economic integration has taken a decidedly regional turn:¹¹⁰ the EU and NAFTA have enjoyed

poorer nations are the suppliers of that outcome. Thus, for example, the model probably would work well in explaining North-South international trade debates over national labor standards and intellectual property rights. But the model can not be applied to explain several other games that have fundamentally different structures. For example, this model cannot explain the resolution of North-North or South-South environmental issues, such as U.S.-Japanese discussions over methods and standards for the reduction of hydrocarbon emissions, or Thai-Malaysian discussions about how to better manage shrimp aquaculture so as to reduce mangrove destruction. Resolution of problems like these raises competitiveness issues and may be better suited to a model based on the prisoners' dilemma.

¹¹⁰ This is consistent with a Neorealist argument that the world trading system is regionalizing. Stephen Krasner and Robert Gilpin, for example, have each argued that the world trading system is regionalizing as the structure of power in the system becomes more diffuse. See, e.g., Stephen D. Krasner, "State Power and the Structure of International Trade," *World Politics* 27(3):317-47 (April 1976); and Robert Gilpin, *War and Change*. Krasner argues that multilateral free trade is likely to be supported in the context of a system with a single hegemonic power. The hegemon not only derives economic growth and increased national income from free trade by being the most

integration that runs deeper than that in the WTO. Moreover, the institutions within trade organizations that facilitate environment-friendly outcomes have developed more extensively on a regional than a multilateral basis. It is no wonder, then, that the study reveals more environment-friendly convergence on regional than a multilateral basis.¹¹¹

This suggests that: (1) the Americas and Europe are separately enhancing environmental protection in their respective regions, meaning that there is Western convergence toward a higher level of protection, but (2) trade-environment rules are converging only regionally, with each region likely to adopt its own particular product standards, PPMs, associated industrial behavior, and institutions for environmental cooperation, and (3) multilateral trade-environment rule-building and institution-building is proceeding slowly relative to regional efforts.

technologically advanced and economically strongest trader in a free trade regime, but also can derive greater political power, increasing the dependence of poorer countries on itself by deepening trade ties. In contrast, in a system characterized by several medium-sized powers, regional trading blocs are more likely. In such a system, multilateral free trade threatens each great power with the prospect of losing important industries to other great powers; each great power can preserve its own industry, expand markets, exercise its regional power, and enhance its power (by creating dependence of smaller, less developed countries) by acting as a regional hegemon, deepening integration regionally-- not multilaterally. This model could help explain the apparent regionalization of relations in the last decade. As power has diffused in the world trading system, larger European powers have decided to deepen integration through the EC/EU, while the United States has chosen to build its own regional bloc, starting with NAFTA and moving towards a Free Trade Area of the Americas (FTAA). The great powers on both continents are deepening integration regionally, while multilateral efforts move slowly.

¹¹¹ In the future, continued trade regionalization is likely. Europe has increasingly focused on integration through widening and deepening the European Union. The United States is continuously frustrated at the GATT/WTO, and will likely continue to be, prompting more attention to a regional integration effort in the Americas. The regional efforts in Europe and the Americas are likely to feed back and define the nature of conflict in the WTO. And the great powers will find it difficult to back away from their own region's rules, as non-state actors build up their own set of interests around the character of the region's trajectory.

APPENDIX:
Some Implications for Policy

In the public policy debate over the extent and causes of convergence of national environmental standards, most studies focus on national environmental standards and emphasize the importance and nature of domestic, bottom-up demand for environmental protection. Associated prescriptions suggest the importance of economic development for improved global environmental standards.

In contrast, this study emphasizes the importance and nature of international, top-down pressure for increased environmental protection through international trade institutions. The study suggests that four sets of policy considerations can help facilitate environment-friendly convergence on trade-environment issues.

First, the extent of environment-friendly convergence will depend in large part on which international organization is chosen as the forum for action. U.S. policy-makers are currently pursuing trade-environment issues in at least three alternative fora: the WTO, NAFTA, and APEC. Daniel Esty¹¹² and C. Ford Runge¹¹³ have each recommended the creation of still other international fora for resolving trade-environment issues, fora that would be multilateral and could address environmental issues more broadly defined than the trade-environment issues. This study suggests that the United States will be most successful at pursuing environment-friendly trade convergence through the NAFTA and its enlargement in the Americas: the dominant market power of the United States in that forum will facilitate deeper and wider integration there, which will spread environment-friendly rules across the Americas. In contrast, progress is likely to be slow in the GATT/WTO (and other multilateral institutions): the prospects for deeper integration there (and associated agreement on trade-environment rules) are limited by a more diffuse power structure, the associated consensus decision-making rule, and conflicts between the United States and EU over the ways in which integration should deepen, given their respective regional integration strategies. Moreover, even if the EU and United States agreed to do so, they might not have the market power in the GATT/WTO to compensate or coerce poorer-dirtier powers to accept a set of trade-environment rules that are as

¹¹² Daniel Esty, "GATting the Greens-- Not Just Greening the GATT," *Foreign Affairs*, 72, 5 (November-December 1993), pp. 32-36.

¹¹³ C. Ford Runge, *Freer Trade, Protected Environment* (New York: Council on Foreign Relations, 1994).

environment-friendly as those that could be attained regionally (i.e., where U.S. and German power, respectively, are more concentrated); this problem will worsen as other countries, such as China, join the WTO. Similarly, the distribution of power in APEC is likely too dispersed to expect substantial progress in that forum.

Second, environment-friendly convergence in an international organization will be facilitated by structuring solutions to trade-environment problems that reduce the amount of power required to affect them-- i.e., by reducing the costs of a solution (which face poorer-dirtier countries in implementing the solution and must be borne by the richer/greener countries if they are to pay "compensation"). This study identified seven such solution structures used by the EU to reduce the costs of environment-friendly convergence for poorer countries: (1) phase-ins; (2) use of derogations; (3) harmonization at high-- but not the highest-- levels; (4) approaches tailored to differences in local conditions; (5) spreading the harmonization exercise over time; (6) use of a "floor;" and (7) use of a "trade-opening ceiling." While such solutions will result in less rapid and less complete convergence than immediate, across-the-board approaches, they will still achieve environment-friendly convergence. And by reducing the costs of environment-friendly convergence borne by poorer countries, the richer-demandeur countries can employ less power to affect convergence (i.e., they do not have to offer as much compensation or threaten as much coercion). Pro-environmental NGO activities in poorer countries can also reduce the political costs to poorer country governments of achieving a given level of environment-friendly convergence, thereby reducing the extent of political differences between poorer-dirtier and richer/greener countries concerning achieving that level of environment-friendly convergence.

Third, environment-friendly convergence will be facilitated by actions that enhance the will and capacity of richer/greener countries to compensate or coerce poorer-dirtier countries into action. The capacity of richer/greener countries could be enhanced in the WTO and APEC through adoption of a common position that could be presented to the developing country member-states. Adoption of a common position by the most powerful countries would effectively concentrate their market power in favor of a single environment-friendly proposal, overcoming the primary problem for reaching a solution in those organizations: the existence of a relatively dispersed power structure. In addition, pro-environmental NGO activity in richer/greener countries can increase the will of those countries' governments to use their power to affect environment-friendly convergence in international organizations.

Fourth, environment-friendly convergence can be facilitated by pursuing deeper economic liberalization in international trade organizations. Deeper liberalization will be accompanied by the establishment of institutional structures that can be used to reduce transactions costs associated with the negotiation of trade-environment issues and that will reduce the marginal cost of building institutions that can monitor and otherwise support the implementation of trade-environment undertakings. Moreover, deeper liberalization will increase the salience of trade-environment issues in richer/greener countries, increasing their political will to use coercion and compensation to obtain environment-friendly rules in international trade organizations.

This study and these prescriptions suggest that international trade organizations can be an important source of environment-friendly convergence of national environmental standards. Contrary to the assertions of some environmentalists, international trade may be an important source of protection for the global environment.

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