

Trading up and governing across: transnational governance and environmental protection

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ABSTRACT This article explores the adequacy of international governance mechanisms to address environmental issues. It examines the impact of increased global economic integration on national and regional environmental standards, the role of market mechanisms in facilitating the dissemination of environmental standards from greener nations to less green ones and the impact of international agreements on trans-border environmental problems. It argues that current regional and international governance mechanisms are adequate to enable nations which have the resources and the commitment to improve environmental quality to do so, either on their own or in co-operation with other nations with similar values and resources. Fears about a 'Delaware effect' regulatory race to the bottom are unwarranted: competition from nations with weaker environmental regulations has not prevented richer, greener nations – where the majority of world production occurs – from strengthening their own regulatory standards. On the contrary, there is substantial evidence for a 'California effect': nations are increasingly adopting the standards of their richer, greener trading partners. Trade agreements and environmental treaties have also played a critical role in strengthening many national environmental practices. However, current governance mechanisms do not adequately address regional and global environmental problems which require substantial changes in the behavior of poorer and less green nations.

KEY WORDS California effect; environment; European Community (EC); regulation; trade; treaties.

THE IMPACT OF ECONOMIC INTERDEPENDENCE

Contrary to the fears of many environmentalists, the increase in economic interdependence has not led to a weakening of national environmental standards. International trade as a proportion of GNP has significantly increased in every industrial nation since the late 1960s.¹ Yet during this same period, environmental regulations have become progressively stricter in all industrial nations and a number of industrializing ones as well. Virtually all nations now devote substantially more resources both in absolute and relative terms to environmental protection than they did in 1970.

Since the early 1970s few major economies have experienced a greater increase in their exposure to the global economy than the United States: between 1970 and 1980 both its imports and exports as a share of GNP more than doubled.² At the same time, American regulatory standards have become substantially stronger during the last quarter century. The proportion of America's GNP devoted to pollution control stood at 1.5 percent in 1972; it has been higher every year since, averaging more than 1.7 percent between 1980 and 1986 and increasing to 2.2 percent in 1992.³ Annual expenditures on compliance with federal environmental regulations totaled \$90 billion in 1990 and increased by approximately \$30 billion following passage of the 1990 Clean Air Act Amendments.⁴

In Europe, the goal of creating a single market was in large measure motivated by the interests of business managers and political leaders in making European industry more competitive in the global economy. Yet the Single European Act also authorized and has contributed to a significant strengthening of EC environmental regulations. In recent years, the EC has emerged as the world's pace-setter for environmental innovation, led by Germany, its largest and most important member state. Since the early 1970s Japan has been both a major international exporter and has significantly increased its environmental expenditures.⁵ During this period, it has accumulated record global trade surpluses, while making substantial progress toward improving domestic environmental quality, especially in the area of air pollution.

The strengthening of domestic environmental standards has not been confined to the world's richest nations. In recent years, Taiwan, South Korea and Singapore – all major exporters – have committed substantially more resources to environmental protection. The compatibility between increased exposure to the global economy and the strengthening of domestic regulatory efforts is also borne out by the experience of Mexico, a developing nation. Since 1986, Mexico has significantly opened up its economy to foreign competition, while between 1988 and 1991 government spending on environmental protection increased tenfold.⁶

The United States itself provides the clearest example of the compatibility of strict regulatory standards and extensive economic interdependence.⁷ As a union of states, the United States itself is a highly integrated market whose Constitution permits few restrictions on interstate commerce, especially for traded goods. While many regulatory standards are set by the federal government, a number of federal regulatory statutes only set minimum standards. For example, states are permitted to enact stricter controls on automobile emissions than those required for the nation as a whole. States also are free to impose tougher standards on stationary sources of pollution and additional restrictions on land use. Additionally, recycling requirements are set by state and local governments.

While states do compete with one another to attract investment, they have generally not chosen to do so by maintaining their lower environmental standards. On the contrary, many state standards are stricter than federal ones. A number of states have enacted more stringent controls over the use of pesticides and CFCs than the federal government. Several state and local governments have also established ambitious recycling programs, bans on the use of specific materials in packaging and strict standards for solid waste disposal and incineration. A number of states have

also established their own, stricter air pollution control standards; those imposed on both individuals and businesses by the Southern California Air Quality Management District are among the strictest in the world.

Nor is the United States unique. A number of subnational governments in other federal systems, including Canada and Australia, have enacted environmental regulations stricter than those required by their central governments. Indeed, it was precisely the increasing propensity of local governments to establish their own tougher regulatory standards that led the drafters of the World Trade Organization (WTO) Agreement on Technical Barriers to Trade to include a provision holding central governments responsible for the regulatory standards of subnational political units.

In the case of the European Union, some directives have sought to equalize regulatory requirements within the Union in order to prevent less green nations from taking advantage of the stricter standards of greener ones. But these encompass only a small portion of EC environmental regulations, many of which have little or no impact on the relative costs of producing regionally traded goods. The most pressing source of political conflict over environmental standards in the EC comes not from the interests of southern member states in keeping their standards low in order to attract investment, but from the efforts of northern member states to impose stricter domestic standards which place imports from southern member states at a competitive disadvantage.

Environmental standards are primarily determined by domestic political preferences and interests.⁸ They tend to be stronger and better enforced in affluent nations with influential green pressure groups. They also tend to be strengthened during periods of economic prosperity and stabilized or weakened during periods of slower growth.⁹ There is no evidence that any relatively affluent nation has *lowered* its existing environmental standards in order to increase the competitiveness of domestic producers, though international economic pressures may well have reduced the rate at which they have been strengthened.¹⁰ In short, the global economy has not interfered with the ability of governments to enact environmental regulations stricter than those of their trading partners with whose products their domestic producers compete.

THE COSTS OF COMPLIANCE

Why hasn't increased regional and international competition led regions, nations, or subnational governments to compete with one another by enacting *less* stringent environmental regulations? For example, how can we account for the fact that the Single European Act, which was primarily enacted to strengthen the competitiveness of European firms, also contained provisions designed to strengthen European environmental standards? Why have the periodic challenges to American environmental regulations that conservatives have launched over the last two decades not emphasized their negative impact on American competitiveness?

Moreover, in light of recent trends in labor markets, it seems puzzling that regulatory policies in rich nations have not followed the same pattern as wages – which have been adversely affected by increased competition from developing

nations. To take one example from an important industrial sector, why have real wages, fringe benefits and employment security for American automobile workers declined, in part because of increased international competition, while *over the same period* emission and fuel economy standards have been strengthened?

One important reason is that for all but a handful of industries, the costs of compliance with stricter regulatory standards have not been sufficient to force relatively affluent nations or subnational governments to choose between competitiveness and environmental protection. In marked contrast to labor costs, the overall costs of compliance with environmental regulations have been modest. According to Martin Houldin, the environmental director at the consulting firm KPMG Peat Marwick in London, 'The international differences in the cost of labor are generally so much more important that the environment pales into insignificance.'¹¹ This is not to say that costs are non-existent: many expenditures to improve environmental quality do reduce output and lower the rate of productivity growth. But in the aggregate, increases in national levels of pollution-control expenditures have had little effect on the growth of economic output.¹² Nor have American states with stronger environmental policies experienced inferior rates of economic growth and development.¹³

While production standards obviously can and do affect corporate plant location decisions, for most industries the effects are not significant.¹⁴ Within the United States, differences in environmental standards have not been a major factor in plant siting or expansion decisions.¹⁵ Studies of international corporate location decisions reach similar conclusions. For example, only a relatively few heavily polluting industries have relocated their production from the United States to other countries, 'mostly because pollution control expenses alone are generally not large enough a share of total costs to make it worth a company's while to relocate.'¹⁶ Significantly, environmental control costs comprise less than 2 percent of total production cost for most US industries, even though American standards are relatively stringent.¹⁷

The Organization for Economic Co-operation and Development (OECD) reports that 'very little evidence exists of firms being transferred abroad in order to escape the more stringent environmental regulations at home.'¹⁸ The OECD concludes that the fear that poorer countries would 'deliberately keep environmental standards lax in order to attract investment by becoming pollution havens has [not] materialized ... mostly because pollution control expenditures are generally not a large enough share of total costs to make it worth a company's while to relocate.'¹⁹ Accordingly, 'there is no reason to suppose that international competition for comparative advantage will lead nations to adopt inappropriately low environmental standards.'²⁰

In addition, just as industrial production often imposes public costs, so do protective regulations produce public benefits. Thus expenditures on air pollution may increase agricultural output while improvements in water quality may result in better fishing yields or increased tourism. Equally importantly, improvements in environmental quality can improve the health, and thus the productivity, of a nation's work-force, in addition to reducing national health-care expenditures. This analysis cannot be pushed too far: nations are not free to impose whatever

environmental regulations they wish. For while stricter environmental standards may not make a nation poorer, neither do they make it richer; greater wealth leads to a preference for strong regulatory standards, not the reverse.²¹

Michael Porter has argued that stringent environmental regulations can enhance the competitiveness of domestic firms in international markets by encouraging them 'to re-engineer their technology,' thus lowering their costs and improving the quality of their products. But while this may be true for some firms, it does not hold true for the economy as a whole. Porter's argument lacks empirical support: there is no evidence of a casual link between environmental standards and growth rates.²² While nations with stricter environmental regulations have not experienced lower growth rates than those with laxer ones, neither have those nations with relatively strict standards experienced higher growth rates.

Strengthening regulatory standards

There are two ways in which the dynamics of international competition can contribute to the strengthening of environmental standards. First, stricter regulations can create market opportunities for the export of pollution-control equipment.²³ These markets are not large. For example, pollution-control equipment accounts for less than one half of 1 percent of total US merchandise exports. But they can be important for particular sectors. For example, owing to their strict emission standards for coal-burning power plants, both Germany and Japan dominate the world market in scrubbers which remove sulfur dioxide from power plant smokestacks.

There is also a second, more subtle way in which stricter regulatory standards can strengthen the international competitiveness of domestic firms. Regulations rarely affect all producers equally: they usually advantage some firms and disadvantage others. Some regulations create a competitive advantage for domestic producers by making it more difficult for foreign producers to sell their products. In fact, knowing or anticipating that the burdens of compliance will fall disproportionately on their international competitors may make domestic producers more willing to support stricter regulations than they would have in the absence of foreign competition.

Examples of 'alliances' between environmentalists and domestic producers abound.²⁴ For example, the recycling requirements enacted by Denmark and the Canadian province of Ontario have both disadvantaged foreign beer producers while improving environmental quality. The strict automobile emission control requirements supported by German environmentalists during the 1980s protected the domestic market share of German automobile companies, since it was more difficult for French and Italian firms to comply with them. America's strict automotive fuel economy standards have helped to both improve American energy efficiency and raise the prices of European luxury car imports. The American ban on exports of logs from government-owned forests both reduced the cutting of old-growth forests in the Pacific northwest and increased the market share of American lumber mills – satisfying the demands of American environmentalists and the interests of the American forestry industry.

From this perspective, rather than pressing nations to lower their regulatory standards, more liberal trade policies may actually provide governments with an economic incentive for strengthening them. By contrast, since relatively closed economies can rely on tariffs and quotas to restrict imports, they have less need to adopt protective regulations that advantage domestic producers.

Nevertheless, the fact that relatively strict environmental standards are not, for the most part, a source of competitive disadvantage, and may, under limited circumstances, even be a source of competitive advantage, only means that governments enjoy a fair degree of autonomy in establishing domestic environmental standards. It does not, however, mean that they will necessarily choose to do so. In fact, relatively poor nations which lack influential domestic green pressure groups are unlikely to enact environmental controls in the absence of international pressure. However, there are two mechanisms by which the standards of 'greener' countries can be 'exported' to other, less green ones: one has to do with the terms of market access, the other with international agreements. The remainder of this article describes and assesses their impact.

The California effect

A number of national environmental regulations exhibit what can be described as the 'California effect': they have moved in the direction of political jurisdictions with stricter regulatory standards.²⁵ The California effect can be illustrated by the history of American automobile emission standards. The 1970 Clean Air Act Amendments specifically permitted California to enact stricter emissions standards than the rest of the United States, an option which California then exercised. Consequently its standards remained stricter than those of any other state. In 1990, Congress brought national emission standards up to California's and once again permitted California to impose stricter standards. It also gave other states the option of choosing either national or California standards.²⁶

In 1994, twelve eastern states requested the federal government to permit them to adopt California's new standards.²⁷ These standards, in turn, are likely to become the basis for the next round of minimum federal requirements. California has now had America's strictest automotive pollution-control standards for more than three decades. Thus, instead of states with laxer standards undermining those with stricter ones, in the case of automobile emissions precisely the opposite has occurred: California helped to make American mobile emissions standards steadily stronger. Automobile producers had a strong incentive to produce vehicles that complied with California's stricter standards so that they could continue to market their cars in such a large and important market.

The term 'California effect' is meant to suggest a much broader phenomenon than the impact of American federalism on state regulatory standards. The general pattern suggested by this term, the upward ratcheting of regulatory standards in competing political jurisdictions, applies to many national regulations as well. Political jurisdictions which have developed stricter product standards often force foreign producers in nations with weaker domestic standards either to design products that meet those standards, since otherwise they will be denied access to its

markets. This, in turn, encourages those producers to make the investments required to produce these new products as efficiently as possible. Moreover, having made these initial investments, they now have a stake in encouraging their home markets to strengthen their standards as well, in part because their exports are already meeting those standards.²⁸

Thus the willingness of Germany's automobile manufacturers to support stricter EC standards was in part because of their previous experience in producing vehicles for the American market. It was precisely the firms supplying the largest, wealthiest automobile market in Europe which took the lead in pressuring the EC to adopt the product standards already set by the world's largest, richest market, namely the United States. They made common cause with German environmentalists to demand that Europe adopt American standards. Significantly, half of German automobile sales in the United States are in California, the political jurisdiction with the world's strictest automotive emission standards.

Indeed, German producers stood to benefit from the EC's adoption of American standards, since they could then produce similar vehicles for both markets at lower costs. For a similar reason, Japan chose to adopt the strict 1970 American automobile emission standards. Indeed they are referred to in Japan as 'the Muskie standards' in recognition of Senator Muskie's sponsorship of the 1970 Clean Air Act Amendments.²⁹ By requiring that its auto makers install the same pollution abatement device on cars sold in the domestic market as on exports, Korea has effectively upgraded its regulatory standards to match those of the United States, the European Union, and Japan.³⁰

Similarly, the eventual willingness of the French and Italian manufacturers to support the stricter standards of the Small Car Directive stemmed in part from the experience they had gained in producing cars for export to greener markets in Europe and the United States as well as their fear of losing additional export markets to their greener competitors. The expansion of trade between the United States and Canada following the Free Trade Agreement between the two countries prompted Canada in 1993 to establish automobile emission requirements similar to those imposed on vehicles sold in America three years earlier.

As a result of the growth of Israeli agricultural exports to the EC, Israel recently adopted EC pesticide standards. (Moreover, because of its dependence on automobile imports from Japan, the United States and the EC, it has recently required all imported vehicles to run on unleaded gasoline.)³¹ The United States has had a similar impact on the pesticide standards of those nations from whom it imports food.³² A number of Latin American governments closely follow American pesticide regulations, often prohibiting or restricting the use of pesticides whose use has been canceled or suspended by the US Environmental Protection Agency (EPA).³³ And owing to their dependence on exports of manufactured goods to Germany, Dutch producers have been forced to substantially change their own packaging policies as a result of Germany's *Verpackungsverordnung* (packaging law).

The pattern of chemical regulation also illustrates how concerns about market access can strengthen regulatory standards. The enactment of the Toxic Substances Control Act by the United States prompted the European Union to enact the Sixth

Directive. The EC feared that unless its standards were comparable to those of the United States, it would be deprived of access to one of the world's largest chemical markets. As a result, it established a much stricter system for the introduction and marketing of chemical products. Once again, stricter American standards drove those of its major trading partner *upward*.

The relationship between product standards that disadvantage importers and those which prompt exporters to strengthen their own standards in order to maintain market access must be understood in dynamic terms. The environmental regulatory agenda is a highly fluid one. Rich green nations are continually enacting new regulatory standards. In some cases, these may create only a temporary source of competitive advantage until other nations have adopted them, while in other cases this advantage may prove more enduring. But the result is similar: market incentives can serve to promote the ratcheting upward of regulatory standards.

EXPORTING PRODUCTION STANDARDS

The California effect primarily holds for product standards.³⁴ But product standards constitute only one dimension of environmental regulation; many environmental harms stem from the way a product is produced or processed. In some cases 'greener' nations have used restrictions, or the threat of restrictions, on access to their markets to force their trading partners to change their *production* standards – notwithstanding the fact that such practices violate GATT/WTO rules. Such restrictions have generally been enacted owing to some combination of pressures from domestic firms which want to create a 'level playing field' by imposing additional costs on their international competitors, and environmental groups which want to use trade as leverage to improve the environmental practices of other countries.

For example, the threat of the withdrawal of market access by the EC forced Canada to end its killing of baby seals and has persuaded both the United States and Canada to modify their use of leg-traps to catch fur-bearing animals.³⁵ The EC's eco-labelling program, because it is based on a 'life-cycle' analysis, explicitly covers the way imported products are produced: many of its provisions are intended to force the EC's trading partners to change their forestry and agricultural practices. Thirteen American laws authorize the use of unilateral sanctions to force America's trading partners to adopt American environmental production standards.³⁶ All involve efforts to protect animals and marine life outside the legal jurisdiction of the United States. These laws have had a significant impact on the conservation practices of a number of America's trading partners. For example, thanks to the American tuna embargo against Mexico, incidental dolphin deaths by non-American tuna fishing vessels have significantly declined.

In some cases, the impact of the threat of withdrawal of market access has gone beyond specific products. Israel has been effectively (if informally) pressured by both the United States and the European Union to impose production requirements on its new manufacturing plants that conform to American and European environmental standards – lest goods produced in these factories 'unfairly' compete with those produced under American and European laws. An American threat to

impose 'environmental countervailing duties' on goods from nations whose pollution-control standards were laxer than those of the United States played a critical role in strengthening Korean policy-makers to upgrade their nation's environmental standards.³⁷ In 1994, the EC approved a proposal to modify its Generalized System of Preferences (GSP) to extend additional tariff benefits to 'recipient countries which are able to prove a commitment to international standards of social progress and environmental protection.'³⁸

The interest of some developing countries in increasing their access to rich, green country markets has also provided an incentive for the former to strengthen their environmental standards. While the North American Free Trade Agreement (NAFTA) does not formally govern national production standards, the environmental objections raised to NAFTA during the Congressional debates over American approval of the trade agreement played a critical role in intensifying Mexican environmental controls during the early 1990s.³⁹ Likewise, the possible extension of NAFTA to Chile has prompted this country to strengthen its domestic environmental standards. And the prospect of membership in the European Union has provided an important incentive for a number of central European nations to bring their environmental production as well as product standards into conformity with those of the EC.

The California effect also has an important non-governmental dimension. Environmental activists in rich countries have frequently targeted particular products that are produced in environmentally harmful ways. In some cases, they have organized boycotts of these products while in others they have applied pressures on multinational firms responsible for their production. A number of these pressures have been highly effective, particularly in the areas of forest and wildlife conservation. International environmental activists based in rich countries have also become an important source of influence on the environmental practices of multinational firms and their subcontractors in many less developed nations. Moreover, 'multinational companies are increasingly adopting the same environmental standards for their plants, regardless of the country in which they operate,' thus helping to promote the export of green country standards to less green ones.⁴⁰

THE LIMITS OF MARKET PRESSURES

Nevertheless, the significance of market mechanisms in facilitating the export of higher environmental standards is limited. The deliberate use of trade restrictions to force foreign producers to change how they produce their products has been confined to a relatively small number of highly visible and largely 'symbolic' products, usually associated with natural resources. The threat of consumer boycotts by green country consumers or the targets of green activists has likewise been limited to a handful of products, virtually none of which are manufactured goods. How many rich country consumers know or care about the environmental consequences of the production of toys, textiles or steel in developing nations?

Moreover, the experiences of Israel and Korea are atypical; most countries have faced relatively little scrutiny of the way their exports are produced. Significantly, neither the EC nor the United States sought to use their market leverage to pressure China to change its environmental practices. The export of green country *product*

standards has covered a broader range of products, including chemicals and automobiles, but these standards only affect the environmental impact of the products themselves, not the way they are manufactured. And most involve goods primarily traded among rich countries.

WTO rules have certainly played a role in discouraging rich countries from using production standards to restrict imports from less developed ones on environmental grounds. The decision of the GATT dispute panel in the 1991 tuna/dolphin case, which held that GATT rules prohibited signatories from restricting the import of a product on the basis of how it was produced outside their legal jurisdiction, has promoted a lively and frequently heated debate about the environmental impact of trade rules.⁴¹ But the tension between WTO rules and more effective global environmental governance should not be exaggerated. As both the EC's eco-labeling scheme and the provisions of the Montreal Protocol reveal, some production standards can readily be turned into product standards, thus making them WTO consistent.

More importantly, even if WTO rules were changed to permit the use of trade restrictions based on production standards, the impact of this change might well be modest. Neither policy-makers nor consumers in rich countries appear willing to bear the significant economic costs of imposing restrictions on the substantial number of imports from developing countries that are produced in environmentally damaging ways. Were such restrictions actually implemented on a large scale, the prices of many consumer goods in the West would increase substantially, thus depressing rich country living standards, as well as significantly reducing world trade. Thus the fact that Americans were willing to pay more for dolphin-free tuna does not mean they would also pay higher prices for textiles, toys or automobiles produced according to stricter environmental standards.

Only a relatively small number of countries can realistically aspire to join the European Union or NAFTA. And most of the countries whose environmental policies have been affected by the use of market mechanisms had relatively high environmental standards to begin with. In addition, to date the use of economic leverage has been confined to the United States and the European Union. Japan has remained notably reluctant to use access to its large domestic market to pressure other Asian countries to improve their environmental practices, even though Japan imports considerable quantities of raw materials and, more recently, manufactured goods from this region. (However, there are some signs that this may be changing as Japanese air quality is increasingly being affected by industrial pollution from China.)

Finally, much of global production is unaffected by the economic leverage of richer, greener countries. It is either consumed domestically or is exported to other less green countries. As a result, many of the most serious environmental problems in the Third World, such as the destruction of the coral reefs in Asia, deforestation in Latin America and Asia, and air pollution in Latin America and China, remain largely unaffected by the product standards and trade policies of green countries.

The European Community

There is one additional mechanism of international governance: agreements and treaties. The most important of these agreements is the European Community

which, while primarily an economic agreement, has played an important role in both co-ordinating and strengthening environmental standards among its fifteen member states. Although a detailed discussion of the environmental policies of the EC is beyond the scope of this article, three points are worth noting.⁴²

First, the EC has significantly magnified the external environmental impact of its greener member states, most notably Germany, the Netherlands and Denmark. Thanks to the increasing scope of EC environmental regulations and directives, environmental standards have been significantly strengthened throughout the Union, even in poorer member states in which environmental non-governmental organizations (NGOs) enjoy relatively little influence. For much of southern Europe, the EC is the most important cause of any additional resources they have devoted to improving environmental quality. The EC's regulatory rules encompass not only production and product standards for regionally traded products, but a number of other dimensions of environmental quality, such as drinking water quality, the shipment and disposal of hazardous wastes and nature conservation. The EC has also facilitated the ability of its member states to address cross-border environmental problems, such as air and water pollution.

Second, the EC has helped to strengthen global environmental standards. As noted above, it has not only employed its economic leverage to affect the environmental standards of a number of its trading partners, but it has also played an important role in negotiating and strengthening a number of international environmental treaties, including the Montreal Protocol, the Lomé convention (which bans exports of hazardous and radioactive wastes) and the Convention on Long-Range Transboundary Air Pollution. It has also explored proposing a carbon/energy tax to limit carbon dioxide emissions which contribute to the greenhouse effect as well as a number of changes in WTO rules that are intended to better reconcile trade policy and environmental regulation. It is unlikely that these initiatives would have had as much impact at the national level if the EC did not exist.

However, it is important to note that the EC remains a unique institution. While there have been a number of regional trade agreements in Latin America, Asia and the Middle East as well as numerous bilateral free trade agreements, these have not led to any significant co-ordination of environmental policies. Aside from the EC, all other efforts to address issues of either regional or international environmental governance have taken place through environmental treaties. (The only exception is NAFTA, but its scope does not extend to the co-ordination of national environmental standards.)

INTERNATIONAL ENVIRONMENTAL AGREEMENTS

There are also approximately 120 environmental treaties, the majority of which are regional in scope. Their impact has been mixed.⁴³ Some have been reasonably effective. The Montreal Protocol has succeeded in reducing emissions of chemicals that harm the ozone layer while the Long-Range Transboundary Air Pollution Convention has effectively addressed the problem of acid rain in Europe. Three related agreements, the (London) Convention for the Prevention of Marine

Pollution by Dumping from Ships and Aircraft, the Convention on the Protection of the Marine Environment of the Baltic Sea Area, along with the Oslo, Paris and Helsinki Commissions, have made progress toward protecting water quality in the Baltic and North Atlantic, and the Mediterranean Action Plan has improved water quality in this sea.⁴⁴ Other environmental agreements have reduced cross-border flows of pollution between the United States and Canada and between the United States and Mexico, and have protected both the Arctic and Antarctic regions from pollution and commercial exploitation.⁴⁵

The impact of other agreements has been much more limited.⁴⁶ These include the Convention on International Trade in Endangered Species, various agreements to promote international fisheries management, the International Tropical Timber Agreement, the Bonn Convention on Migratory Species, and the Rio Agreement on Biological Diversity. While several of these agreements have had a significant impact on the environmental practices of rich countries, noncompliance on the part of less affluent nations has been pervasive.⁴⁷

There is a considerable scholarly literature on the factors that promote effective international environmental governance.⁴⁸ Many of the most effective agreements are regional. They address specific, highly visible and commonly acknowledged problems of cross-border pollution, usually air or water, involve a limited number of countries, impose costs on only a relatively few industries and primarily affect countries with substantial financial resources and administrative capacity. With the notable exception of the Mediterranean Action Plan, regional environmental agreements primarily impose costs and distribute benefits between or among rich countries. Virtually all affect environmental quality in or adjacent to western Europe or North America. Thus governance mechanisms among rich countries, a category which also includes the EC, appear adequate. By contrast, regional environmental agreements are virtually non-existent in Asia, Latin America or Africa – the regions of the world in which environmental problems are the most serious.⁴⁹

There have been relatively few effective global environment agreements. One of the most significant exceptions, the Montreal Protocol, was made possible by a unique set of circumstances which are unlikely to be readily duplicated: this agreement reflected a clear scientific consensus, the countries which benefited from it were many of the same countries on which it imposed costs, effective technological substitutes were available, compliance is relatively easy to monitor since there are a relatively small number of producers, and most of the burdens of compliance are borne by relatively rich countries.⁵⁰ In a number of respects, the ozone agreement resembles a regional agreement among rich countries. By contrast, the Convention on International Trade in Endangered Species of World Flora and Fauna (CITES) has had much more limited impact: many nations attach relatively little value to preserving endangered species, the burdens of compliance fall disproportionately on poorer countries and compliance is extremely difficult to monitor. Unfortunately, the latter type of agreement is more common than the former.

The key to effective environmental governance at both the regional and global level is the commitment of rich countries: they must be willing both to change their

own policies and provide less affluent or green countries with sufficient incentives to modify theirs as well.⁵¹ Many developing nations, including the growing economies of China, India and Indonesia, and the most important Latin American economy, Brazil, remain unwilling to curb trade in endangered species, protect the coral seas, reduce their cutting of hardwood trees, maintain biodiversity or reduce their production of greenhouse gases. They might well change their behavior in response to economic incentives from rich countries, as they did in the case of the Montreal Protocol. But the amount of resources that would be required to be transferred to make them do so is well beyond the political capacity of the EC, the United States and Japan.

In the long run, as many developing nations become more affluent, they are likely to develop both the economic capacity and the political willingness to devote more resources to address their domestic environmental problems. And presumably, they will then enter into regional agreements to address cross-border pollution problems and global treaties to address international ones. But in the short run they are unlikely to make any significant changes in their environmental policies. This is not because international competition is pressuring them to lower their regulatory standards; it is rather that their current level of economic development has made them unwilling to trade off economic growth for environmental quality – especially in those cases where many of their own citizens are not adversely affected by the environmental harms they cause.

This does not preclude rich countries from strengthening their environmental standards, whether acting on their own or in co-operation with other rich countries. The problem is not that poor countries are driving rich country standards downward; it is rather that rich countries lack adequate mechanisms to drive poor country standards sufficiently upward. The problem is not the threat of a 'Delaware effect;' it is rather the limited impact of the 'California effect.' To the extent that the environmental damage caused by the developing countries primarily affects their own citizens or physical environment and is not irreversible, this may not be a serious problem for the global commons, especially if they strengthen their standards as they become more affluent. However, for those international environmental problems which require significant changes in the behavior of poor countries in the short run or which will be exacerbated as they become more affluent, the world confronts a deficit in environmental governance.

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