

# Economic Integration, Cooperation, and the Asian Environment

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## Abstract

*Deepening regional and global economic integration is raising the demand for greater international cooperation on domestic resource and environmental policy issues. Concerns over competitiveness effects and disguised protectionism have generated opposition to this trade and environment linkage. The debate has centered primarily in the GATT I WTO, and in trade provisions of multilateral environmental agreements, and has the potential to undermine the rules-based trading system on which Asian developing countries are particularly dependent. Asian developing countries have mounted a broad range of responses and initiatives in subregional, regional and global fora related to cross-border environmental interactions, reflecting the varied nature and scope of environmental concerns, but much remains to be done. Greater scientific and socioeconomic research is needed, as is greater dissemination of existing knowledge and a clearer delineation of WTO's mandate. Smaller groupings, such as APEC, may be useful fora for initial discussions and activities.*

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The recent acceleration of regional and global integration of national economies has brought with it greater scrutiny of domestic policies that affect the competitiveness of industries in the international marketplace. Simultaneously, concerns about resource depletion and environmental degradation at national, regional, and global levels have been growing rapidly, leading to calls for policies to enforce stricter environmental standards. Together these developments have caused an entwining of policies relating to trade, foreign investment, and the environment. That entwining has the potential to bring about good outcomes in terms of the economy and the environment, but unless it is very carefully managed there is considerable risk that *both* the economy and the environment will suffer.

Why is the deepening of regional and global economic integration raising the demand for greater international cooperation on domestic resource and environmental policy issues? How are growing transborder and global environmental concerns to be managed? Under what circumstances (if any) is trade policy an appropriate instrument for addressing such concerns? What are the implications for the global trading system, for regional trading arrangements, and for their interaction? What should Asian countries and regional cooperation efforts do about this development?

In seeking to address these questions, the present paper is structured as follows. The first section looks at why environmental and other social policies are becoming subjected to more international scrutiny, both regionally and globally. The second section explains why environmental issues are becoming more entwined with trade policy. Section three examines the relationship between economic growth, trade, foreign investment, and the environment. The fourth section discusses the nature and extent to which GATT/WTO trade policy and the environment are becoming entwined. This is followed by projections on what lies ahead for the WTO in its relationship with existing and prospective multilateral environmental agreements. The final section of the paper focuses on what Asian developing countries and the Asia-Pacific Economic forum (APEC) have been, could, and should be doing in response to these developments.

### **Environmental and Other Social Policies: Under Scrutiny**

Social policy differences across countries are to be expected. Partly they reflect per capita income differences: as communities become richer, so does their demand for social policies and higher standards. Policy differences exist also because of differences in tastes and preferences. Indeed one of the key reasons for nationhood is to bring together and distinguish one grouping of people whose preferences are more similar to each other than to those of neighboring groups (Alesina and Spolaore 1995). In the case of environmental policies, they also reflect differences in per capita endowments of natural resources and environmental amenities, and of information about environmental effects of various economic activities. Location, too, can matter: countries whose pollution blows off shore may be less concerned with controlling emissions than those whose own citizens bear a fuller share of the burden. A diversity of social policies therefore is inevitable, and that diversity in turn contributes to differences in countries' comparative advantages in trade and to the gains from trade.

As economic integration proceeds, though, pressure increases to reduce differences in social policies that have economic consequences. This has clearly happened *within* countries in the course of their economic development: numerous local, state or provincial policies/standards have gradually, been replaced by national standards and conformance assessment (for the US experience see, for example, National Research Council 1995). The motivation is not just to reduce administrative and conformance costs. It also results from concerns in high-standard regions that costs of production for some firms and industries are higher in their region than in regions with lower standards, causing them to be less competitive. These differences become evermore important as traditional barriers to trade and investment between regions fall (notably transport and communication costs). Harmonization of those standards could go in either direction, however, with winners and losers in each region trying to influence the outcome. And there is no reason to presume that overall national economic and social welfare will improve because of those social policies being harmonized.

Similar forces to those intranational ones are also at work in the international arena. There have been substantial reductions in recent decades in traditional barriers to foreign import competition, including international transport and communication costs, tariffs, and other governmental border policies that inhibit flows of goods, services, and capital across national borders.<sup>1</sup> The resulting extra exposure of national economies to competition from abroad—in part due to the very success of the General Agreement on Tariffs and Trade (GATT) in promoting trade liberalization—has caused attention to focus more sharply on domestic policies, including cost-raising social policies and standards, that continue to reduce the international competitiveness of some firms and industries in each country (Bhagwati 1996). These harmed producers are especially likely to protest when new players with lower standards become significant competitors. This has happened increasingly during the past quarter century first with the growth of Asia's newly industrializing economies and then with the opening up of People's Republic of China and numerous other transition and developing countries.

It has been suggested that one of the driving forces behind regional integration initiatives has been the tardiness of the GATT in taking up social policy issues among its large and diverse group of contracting parties (Lawrence 1995). Achieving agreement to harmonize social policies and otherwise coordinate trade-related and investment-related domestic policy reforms is easier the more similar are the per capita incomes, tastes, and preferences of the countries concerned. Hence we observe the formation of trade blocs more among similar than disparate economies. We also observe the inclusion of social in addition to trade policies more in integration agreements involving richer than poorer countries, presumably because the demand for social policies is income elastic, and (b) barriers to international trade and investment flows (both natural and governmental) tend to be lower among rich countries than between them and poorer countries or among poorer countries.

When dissimilar countries have sought to join such blocs (e.g., Mediterranean to the European Community/European Union, or EC/EU; Mexico to the North Atlantic Free Trade Agreement or NAFTA), advocates for higher standards have endeavored to tie market access to the upward harmonization of social policies. To a considerable extent they have succeeded in doing so in the EU, and seem likely to continue to do that as and when Central and Eastern European countries join the EU. And in the case of NAFTA they were also successful after President Clinton came into office, to the extent that side agreements on environmental and labor standards were added to the NAFTA in the closing hours of its negotiations.

As for trade outside these blocs, we tend to observe advocates for high standards supporting import restrictions on like products from lower standard countries. Why? Because such restrictions simultaneously reduce opposition by local firms to the raising of standards at home *and* increase the incentive for foreign firms and their governments to adopt higher standards abroad (out of fear of losing market access). However, such uses of trade policy are both discriminatory and protectionist. That brings advocates for higher standards both into direct conflict with supporters of liberal world trade and into coalition with traditional protectionist interests. Fear of the latter gaining superficial respectability in arguing against trade liberalization has led to claims that “social correctness” is becoming the New Protectionism (Steil 1994).

This development concerns Asia's developing countries for at least three reasons. First, those with a comparative advantage in natural resource-intensive and pollution-intensive products may lose directly from such trade restrictions. Second, none of them are members of either of the two main trading blocs (EU and NAFTA) and so are more vulnerable than members. And third, they could lose in so far as

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<sup>1</sup> These reductions are reflected in the fact that globally, the volume of merchandise trade has been growing nearly twice as fast as the volume of merchandise output (3.9 compared with 2.1 percent per year during 1980-1992), and trade in commercial services has grown even faster (raising its share of global exports of goods and commercial services from 17 to 21 percent during 1980-1992; see GATT 1994). Global direct and portfolio foreign investment, meanwhile, has grown nearly twice as fast as international trade over the past decade or so, following the deregulation of many countries' financial markets and the revolution in communications and data transmission.

this development undermines the rules-based global trading system on which these countries are especially dependent (see below).

### **Environmental Issues and International Trade and Foreign Investment Policies**

The concern to harmonize social policies across countries for reasons of efficiency of conformance and/or international competitiveness is only part of the explanation for the call for regional and global cooperation on environmental matters. Another important part has to do with the growth in transborder and global resource and environmental concerns per se. The list of environmental concerns with international or global dimensions has grown rapidly in recent years. In addition to people being worried about air, water, soil, and visual pollution at the local, national, and regional levels, some of that pollution is believed to be also damaging the environment on a global scale, for example through ozone depletion and climate change. Some in rich countries are concerned that these problems will be exacerbated as economic growth takes off in newly industrializing countries with lower prices for fossil fuels and laxer environmental standards. More and more people also worry about resource depletion, species extinction, and animal welfare at the global level, regardless of national boundaries. Ongoing integration of the world economy also brings with it new health and safety concerns by consumers of imported products. Needless to say, personal values play an important role in debates on these issues. Hence there is considerable scope for friction between countries with different preferences, resource endowments, incomes, and knowledge about how different activities and policies affect the environment, and therefore different perceptions of optimal national and global environmental and resource policies.

Though they might fluctuate with the business cycle, these heightened concerns for resource depletion and the environment are likely to keep growing. One reason is that, even though uncertainties remain, the scientific basis for many of these concerns is perceived to be more solid now than was the case 20 years ago. Another is that both the world's population and its real per capita income continue to increase at very high rates by historical standards. Unfortunately, though, the supplies of most natural resources and environmental services are limited, and markets for many of them are incomplete or absent.<sup>2</sup> Markets are underdeveloped because of disputed, ambiguous, or nonexistent property rights, or because of the high cost of enforcing those rights.

It is true that the more advanced economies have established institutional structures to help handle the tasks of arriving at a social consensus on what are appropriate environmental or sustainable development policies for that society, of allocating property rights, and of enforcing policies. The same is true in some traditional societies before they begin to "modernize" and their resources come under pressure because of declining mortality rates. But it is less true in the newly "modernizing" economies, where the world's population and consumption growth are expected to be concentrated for the foreseeable future. Likewise at the multilateral level, cooperative intergovernmental mechanisms in the environmental area have only recently begun to be formed and will take some time before they become very effective, especially where free-rider problems are rife.

Thus with sufficient fora yet to be fully developed for multilateral environmental dialogue, and with the problems increasingly being perceived as urgent as new scientific evidence becomes available, there is a growing interest among environmental groups-especially in the more advanced economies-in

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<sup>2</sup> This does not apply equally of course to all natural resources and environmental services. Doomsayers have been shown to be spectacularly wrong in predicting the exhaustion of minerals and energy raw materials, for example, because they have failed to take into account economic feedback mechanisms. Beckerman (1992) notes that the cumulative world consumption of many minerals during the past quarter century exceeded "known reserves" at the beginning of the period, yet today's revised "known reserves" nevertheless exceed those of 25 years ago! The same cannot be said for tropical hardwoods and some fish species, however, although in these cases there is scope to move further from the current "hunter/gatherer" technology to using land or water more intensively in planting trees for timber or practicing aquaculture in the same way as agriculture uses land to produce most other forms of food and fiber.

using one of the few policy instruments apparently available to their governments, namely trade restrictions, to influence environmental outcomes both at home and abroad.

Environmental groups perceive trade policy as a means both of raising national environmental standards at home and abroad and of inducing countries to become signatories to and abide by international environmental agreements. On the first, these groups are aware that, unless compensated, firms will oppose the raising of domestic standards if competitors abroad are not subjected to similar cost increases. But since the loss of competitiveness can be offset by import restrictions on products from lower-standard countries, such restrictions can at the same time remove opposition by local firms to higher standards at home *and* increase the incentive for foreign firms and their governments to adopt higher standards abroad. Not surprisingly, those features make trade policy very attractive to environmentalists.

On the second, with respect to international environmental agreements, a major attraction of trade measures is that they can be used effectively as sticks or carrots because they are relatively easy to use and are immediate in their impact. Even the threat of trade sanctions can have a rapid and persuasive effect in encouraging a country to join an international environmental agreement and subsequently to abide by its rules.

Already we have seen the use of discriminatory trade restrictions affecting particular targeted products (for example, in the Montreal Protocol on chlorofluorocarbon [CFC] substances that deplete the ozone layer). There have also been proposals to use trade sanctions against unrelated products. These aim chiefly at persuading developing countries to adopt stricter environmental standards (for example, threats to provide less open access to textile and other markets in industrial countries unless logging is curtailed or managed on a more sustainable basis).

### **Relationships Between Trade, Investment, Development, and the Environment**

The standard theory of changing comparative advantages in a growing world economy, which has been developed without consideration of environmental concerns, can readily be modified to incorporate at least some of those concerns. As espoused by Krueger (1977) and Leamer (1987), this theory suggests that when a developing country opens up to international trade, its exports initially will be specialized in primary products. This is because its stocks of produced capital relative to natural resources are comparatively low. Should those nonnatural capital stocks per worker (including human skills) expand more for this country than globally, the country's comparative advantage will gradually shift from the extraction of raw materials (minerals, timber from natural forests) to more capital-intensive and skill-intensive activities (particularly manufactures and services)-except in relatively land-abundant countries where produced capital and new or newly imported capital-intensive technologies may be employed profitably to extract minerals or farm the land. The industrialization will begin at an earlier stage of economic development, and the nonprimary exports will initially tend to be more intensive in the use of unskilled labor, the more natural resource-poor or densely populated the country. In the case of manufactures, the process of upgrading to more capital-intensive production over time leaves room in international markets for later-industrializing countries also to begin with labor-intensive export-oriented manufacturing.

If national boundaries were such that there were no international environmental spillovers, and there were no global commons, this story need be complicated only slightly to incorporate nonmarketed environmental services and pollution byproducts. The complication required is simply to allow for the fact that as a country's per capita income and industrial output grow, the value its citizens place on the environment increases. As well, their demands grow for proper valuation of resource depletion and environmental degradation, for the assigning and better policing of property rights, and for the implementation of costly domestic pollution abatement policies-at least after certain threshold levels of

income and/or pollution are reached.<sup>3</sup> Beyond those threshold points the severity of such abatement policies is likely to be positively correlated with per capita income, population density, and the degree of urbanization.

If all economies were growing equally rapidly, the progressive introduction of national environmental taxes and regulations would tend to cause pollution-intensive production processes to gradually relocate from wealthier and/or more densely populated countries to developing and/or more sparsely populated countries.<sup>4</sup> They would also slow or reverse the growth in the quantity demanded of products whose consumption is pollutive, and more so in wealthier and/or more densely populated countries where taxes on such products would tend to be highest. If more advanced economies are net importers (net exporters) of products whose production (consumption) is pollutive, these countries' optimal environmental policies would worsen their terms of trade to the benefit of poorer economies, and conversely (Siebert et al. 1980, Anderson 1992a). Thus even countries without (or with unchanged) environmental policies will be affected through foreign trade and investment by the development of environmental policies that accompany growth in other economies. The extent of international relocation of productive activities due to the raising and enforcement of environmental standards should not be exaggerated, however. Recent studies suggest the effect of such policies on comparative costs may be quite minor.<sup>5</sup>

The story becomes more complicated, however, when account is taken of policy reactions to international environmental problems such as the global commons, species depletion, or animal rights. The ban on ivory trade under the Convention on International Trade in Endangered Species (CITES) provides an extreme example: the strong revealed comparative advantage that southern American nations had in elephant products disappeared when the ban was introduced in 1989 (since the trade was no longer possible). Another is the recent ban, adopted under the Basel Convention relating to hazardous waste, on exports of so-called hazardous recyclables from industrial to developing countries: that ban threatens the growth prospects for recycling industries in developing countries. A third example is the proposed limitation on imports into some high-income countries of tropical hardwoods, the aim of which is to discourage deforestation. An import ban of this kind would reduce export growth in logs and perhaps sawn timber in those developing countries still well endowed with hardwood forests, while improving the terms of trade of other net importers of hardwood such as Japan; Republic of Korea; and Taipei, China. In addition, the Montreal Protocol on phasing out the use of ozone-depleting CFCs incorporates discriminatory trade provisions, designed to limit the relocation from signatory to nonsignatory countries of industries producing or using CFCs, as well as encouraging nonsignatories to accede to the Protocol.<sup>6</sup> Then there is the infamous example of the United States ban on the importation of Mexican tuna which US authorities deem to have been caught in dolphin-unfriendly nets: domestic US regulations affecting the use of dolphin-unfriendly nets on US registered fishing vessels, if implemented alone, would have boosted Mexican competitiveness in tuna fishing, but the subsequent ban on tuna imports instead reduced it. As is clear in the latter two examples, the motive for trade policy action is often a mixture of national

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<sup>3</sup> Three recent papers reporting evidence in support of the claim that the demand for implementing and enforcing pollution abatement policies is income-elastic are Radetzki (1992), Grossman and Krueger (1993), and Grossman (1995).

<sup>4</sup> The term "pollution-intensive production processes" should be broadly interpreted to include activities such as mining in pristine areas or leisure services that may attract undesired local or international tourists. The presumption is that industries are not affected equally by the progressive raising of environmental standards and charges, for otherwise there would be little change in the pattern of accounts trade.

<sup>5</sup> See, for example, Leonard (1988), Low (1992), Jaffe et al. (1995), and Levinson (1996). As well, Tobey (1990) finds little evidence of actual changes in patterns of trade specialization in response to the imposition of environmental regulations since the 1960s. However, as noted by Hoekman and Leidy (1992), the absence of changes in trade patterns may be because import barriers were raised to offset any decline in the competitiveness of affected industries.

<sup>6</sup> A list of the international environmental agreements with trade provisions is provided in GATT (1992, Appendix 1) and Esty (1994, Appendix D).

competitiveness concerns-especially in wealthier countries (typically not shared to the same extent by developing countries)-and concern for the global commons and for animal welfare.

Two facts therefore need to be recognized. The first is that there are important international environmental spillovers beyond the simple transborder ones that can be handled through negotiations between governments of affected neighboring countries. Those spillovers are of two sorts: in addition to the physical damage our activities can do to the global environment regardless of the location on the globe of those activities, there are nonphysical spillovers as well. For example, I may grieve if another country's activities threaten a particular animal or plant species in its jurisdiction. Or I may grieve if I believe your desires for higher environmental standards in your country are not being recognized sufficiently by your national government (a political market failure). Controversial though such views are,<sup>7</sup> many people perceive a need for multilateral action to reduce these spillover problems, and that is where trade policy measures enter the debate: they are seen by environmentalists as providing powerful carrots and/or sticks for attracting signatories and/or penalizing nonsignatories to bilateral or multilateral environmental agreements, as well as for encouraging other countries to adopt better national environmental policies for the sake of their own citizens and environment.

The other fact that needs to be recognized is that one country's environmental policy choice is not independent of the choices of other countries. Why? Because the imposition of higher standards or pollution charges at home alters the international competitiveness of industries, in particular by harming the more pollution-intensive industries. The more their competitors abroad are not subjected to similar cost-raising policies, the more such industries would lobby against the imposition of higher standards at home. And while it is true that the less-pollutive industries at home would benefit from higher environmental standards, they are more diffuse and so are not likely to add much support to the environmentalists' lobbying.

It was because of this latter fact that trade policy first entered the environmental picture, back in the latter 1960s when the first wave of widespread concern for the environment began in industrial countries. As already mentioned, environmental groups perceived that, since the loss of competitiveness of pollution-intensive industries could be offset by restrictions on imports from lower-standard countries, such restrictions could at the same time reduce opposition by such industries to higher standards at home *and* increase the incentive for foreign firms and their governments to adopt higher standards abroad to avoid being subjected to anti "eco-dumping" duties.

The demand for unilateral use of trade policy for this latter reason has grown in two ways over time with the internationalization of the global economy. One is that, with the decline in traditional trade barriers (tariffs, transport and communication costs, etc.), any given environmental charge is becoming relatively more important as a determinant of international competitiveness, *ceteris paribus*. And the other is that, with the 1980s' deregulation of financial markets and direct foreign investment, the possibilities for firms to disinvest in high-standard countries and relocate their capital in lower-standard countries ("pollution havens") have increased markedly. Environmental groups fear this will result in governments delaying the introduction or enforcement of environmental policies-and possibly even a lowering of standards in a "race to the bottom" in their attempts to attract or retain investments and hence jobs.

Both types of environmental uses of trade policy-unilaterally, and to increase the workability of multilateral environmental agreements-raise potential conflicts of interest between rich and poorer countries; and the fact that discriminatory trade measures are increasingly being used to achieve the environmental objectives of rich countries, without regard for legitimate economic development concerns

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<sup>7</sup> Some would argue that nonphysical spillovers are less worthy of consideration than physical spillovers, not least because they are less measurable and hence less "objective". Hence the scope for traditional protectionists "capturing" environmentalists concerned with nonphysical spillovers is considerable. Others would counter that there is often so much uncertainty about the extent and effects of physical spillovers that they too may be subjective and hence qualitatively no different from nonphysical spillovers. The point is that both exist, and we see no reason a priori to presume that one is more important than the other in some "willingness-to-pay" or popularity sense.

of poorer countries, increase the likelihood of environment-related trade disputes. There is even dispute over what constitutes the global commons: some argue that a country or region should not have to bow to international pressure to preserve endangered species in their territory (or at least not without adequate compensation), while others argue that such countries are merely the custodians of those resources for the benefit of humankind in general.

The increasing use of discriminatory trade measures to address environmental issues should concern the world at large, and Asia's developing countries in particular, for at least four reasons. First, trade policy measures typically will not be the first-best instruments for achieving environmental objectives. This is because trade sanctions or the threat of trade sanctions does not directly affect the root cause of the environmental problem. Their use in place of more efficient instruments reduces unnecessarily the level and growth of global economic welfare as conventionally measured, and may even add to, rather than reduce global environmental degradation and resource depletion.<sup>8</sup>

The second reason for concern is that producer interest groups and some environmental groups are nevertheless finding it mutually advantageous to use environmental arguments in support of their claims for unilateral import restrictions, particularly following the costly imposition of stricter environmental standards on domestic producers.<sup>9</sup> In this sense, the environment can provide a convenient additional excuse for raising trade barriers-and one that is socially respectable. Unfortunately, such protectionist action reduces real incomes not just at home but elsewhere too, especially in developing and natural resource-abundant countries.

Third, in so far as this can lead to an escalation in trade disputes-as is almost inevitable, especially given the North-South dimension involved and the fact that environmental uses of trade policy are inherently discriminatory-it could be followed by retaliatory and counterretaliatory action, the end result of which would be an undermining of the rules-based open global trading system on which the dynamism of Asia's developing economies continues to depend.

The fourth reason to be concerned is that there is another important sense in which aspects of environmentalism are putting at risk the global trading system: in addition to proposing the use of trade restrictions, some environmentalists also oppose trade and investment liberalization. They oppose the GATT's attempts to reduce barriers on at least two grounds: that freer trade means more output and income which they presume would mean more resource depletion and degradation of the natural environment; and that freer trade and investment encourages the relocation of environmentally degrading industries to countries with lower environmental protection standards and/or more fragile natural environments, and leads to greater transportation activity which contributes further environmental damage.

Neither of these assertions is unambiguously supported by empirical evidence. The first, that income increases mean greater damage to the natural environment, may be true initially for some poorer countries (in which case any additional environmental damage has to be weighed against the marginal economic benefits of higher incomes for poor people), but once middle-income status is reached people

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<sup>8</sup> The ban on ivory trade again provides a case in point. By lowering the value of elephant products, the ban reduces the incentive for rural Africans to tolerate elephants trampling upon their crops and so ultimately could result in more rather than less culling of elephants in some areas. In other areas, the ivory trade ban has reduced the value of the animal so much that it is no longer profitable to cull the herd. An unfortunate consequence is that bushland in national parks is being decimated by the increased number of elephants, which is of course endangering other species (Barbier et al. 1990).

Even the threat of trade restrictions can be environmentally counterproductive. The talk of European import bans on tropical hardwood logs (together with tariff escalation on timber product imports) has encouraged Indonesia to ban log exports. But since felling has been allowed to continue, this policy has lowered the domestic price of logs and thereby raised effective assistance to Indonesia's furniture and other timber-using industries to extremely high levels (GATT 1991, 127). At that lower log price and with possibly lower-quality saw-milling techniques it is not surprising that less of each tree is now used, leading to nearly as many trees being felled as prior to the log export ban.

<sup>9</sup> See the discussion in Hillman and Ursprung (1992) and Hoekman and Leidy (1992).

tend to alter their behavior in ways that reduce pressures on the environment. A key change is in family size: higher incomes lead in time to lower population growth rates (Baldwin 1995). Along with the increased employment opportunities resulting from trade liberalization, this is likely to have a major effect in reducing the rate of environmental degradation due to population pressures in developing countries. In rural areas it means fewer people denuding hillsides to eke out a subsistence income, while in urban areas it means fewer unemployed or underemployed squatters in shanty towns with poor sanitation and water.

Another common behavioral change as economies open up and incomes rise is that the demand for education expands, and with more income and education comes more skillful management of all resources including the environment, and more forceful demands on governments to improve the establishment and policing of private property rights and more stringent environmental policies (Radetzki 1992, Grossman 1995). As well, the political cost of implementing such policy reforms tends to fall because of increased opportunities for businesses to meet stricter standards by acquiring more, cheaper, and environmentally benign production processes and products from abroad.

Third, the increase in the value of poor people's time in developing countries will alter household activities in another way which is especially important for the environment. Specifically, the relative price of wood (in terms of time spent gathering it) for household fuel rises. Since about three quarters of the timber harvested in developing countries is used as household fuel, this change could have a major beneficial impact in reducing deforestation and carbon dioxide levels.

The other major assertion by environmentalists, that the global environment is necessarily harmed by the relocation of production following trade and investment liberalization, is also questionable. We know from the law of comparative advantage that not all industries will be relocated from rich to poor countries when the former's trade barriers are lowered: some industries in the North will expand at the expense of those industries in the South, and conversely. In any case, it should not simply be assumed that relocating some production to the South necessarily worsens the environment. Recent preliminary examinations of the likely environmental effects of reducing government assistance to two of the North's most protected industries, coal and food, reveal that in both cases the global environment may well be improved by trade liberalization, especially if complementary environmental policies are in place (Anderson 1992b, 1992c, 1995; Steenblik and Coroyannakis 1995). Nor need the risk of environmental damage from transport activity increase with trade reform. The lowering of import barriers to processed primary products, for example, would allow more raw materials to be processed in resource-rich countries, so reducing the bulkiness of shipments. But evidently many more empirical studies are required before the more extreme environmental groups will alter their perception of and publicity against multilateral trade reform as an environmentally unfriendly activity.

### **The GATT/WTO and the Environment**

At the level at which Asia is economically integrated with the rest of the world through international trade, its dominant forum for discussing issues and settling disputes is the GATT, which at the beginning of 1995 evolved into the World Trade Organization (WTO). How "green" are the rules of the GATT and how have they been adapted over time?<sup>10</sup> From the outset the GATT has been a conservationist institution in the sense that its purpose has been to reduce trade barriers and thereby reduce the inefficiency in the use of the world's resources.

The heart of the GATT, agreed to by 23 original contracting parties in 1947 and since then by another 100 or so countries, is the nondiscrimination requirements of Articles I and III. These obligate parties to treat imports from any GATT contracting party no less favorably than other imports (the "most-favored-nation" requirement) and no less favorably, after border taxes are paid, than similar domestic products (the "national treatment" requirement). Article XX provides exceptions to these general rules,

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<sup>10</sup>. For detailed legal assessments, see for example Hudec (1996) and Esty (1994).

however, including provisions for some environmental regulations. Specifically, parts (b) and (g) of Article XX allow trade restrictions “necessary to protect human, animal, or plant life or health” and “relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption”, subject to the requirement that such restrictions “are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade”. The latter has been interpreted to mean that the measure must be *primarily* for a conservation purpose (rather than for a mixture of motives) and must be *necessary* in the sense of being the *least GATT -inconsistent* measure available. These provisos have ensured that the Article has been rather narrowly interpreted, which is partly why some environmental groups have felt further greening of the GATT is required (Charnovitz 1991, Esty 1994). But there is nothing in the GATT that prevents a country adopting production or consumption measures to offset environmental externalities associated with either of those sets of activities. And since trade itself is almost never claimed to be the root cause of an environmental problem, supporters of the institution see little need to consider trade measures as part of the solutions to those problems.

As already mentioned, widespread public interest in trade and environmental issues first surfaced in rich countries in the late 1960s or early 1970s. At that time concern focused mainly on industrial pollution within and between neighboring advanced economies. The foreign trade and investment issues raised at that time centered on how the imposition of stricter pollution standards at home rather than abroad might damage the international competitiveness of the home country’s firms, and how to avoid such damage through border protection measures. Where the environmental damage caused by production is purely local, the calls by disadvantaged firms for trade restrictions or subsidies to offset the decline in their international competitiveness, because standards have been raised, has no economic logic: such assistance would tend to offset the desired effect of limiting byproduct pollution.<sup>11</sup> Nor is it reasonable to conclude that other countries are engaging in “ecodumping” if the imports they are able to supply are produced with laxer environmental standards, if those lower standards are consistent with the preferences and natural resource endowments of those exporting countries (e.g., because those countries are poorer and/or less densely populated and less urbanized). Even so, claims for protection against “ecodumping” have political appeal and may result in higher import barriers or export subsidies than would otherwise be the case in advanced economies. Leading up to the UN Conference on the Human Environment held in Stockholm in June 1972, the GATT Secretariat produced a background paper on those issues (GATT 1971), and a Working Group on Environmental Measures and International Trade was established. But no significant changes to the GATT occurred during the Tokyo Round as a result of these concerns being expressed, and it was two decades before the Working Group met for the first time.

Trade policy actions are more likely to occur, and to be more difficult to dismiss as inappropriate, when environmentalists in such countries view particular damage to the environment as unacceptable *regardless of the nation in which the damage occurs*. This case is even more problematic if the damage is not just nonphysical (as with animal rights) but also physical, for then the relocation of production to a country with laxer environmental standards may worsen animal welfare, or the environment at home, and reduce the profitability of the home firms. The US-Mexico dispute over the use of dolphin-unfriendly nets by tuna fishermen again comes to mind. In that case the GATT ruled against the US ban on imports of tuna from Mexico, partly because the ban did not discriminate according to which type of net was used, as it cannot, because an aspect of the production process rather than the final traded product itself is what is considered objectionable. The GATT panel ruled against the ban because to do otherwise would have created a huge loophole in the GATT for any country unilaterally to apply trade restrictions as a means of imposing its environmental standards on other countries. Such a loophole would work against the main

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<sup>11</sup> Such protection from import competition cannot be justified on economic efficiency grounds (nor for that matter on environmental grounds), because the environmental policy aims to eliminate an unjustifiable (implicit) subsidy arising through undervaluation of environmental resources, rather than to add an unjustifiable tax (Snape 1992).

objective of the multilateral trading system which is to provide stable and predictable nondiscriminatory market access opportunities through agreed rules and disciplines and bound tariffs on imports.

Following a lull in interest brought on by the economic disruptions of the 1973-1982 oil-shock period, the current wave of public concern for the natural environment, leading up to and following the United Nations Conference on Environment and Development (UNCED) held in Brazil in June 1992, is much more intense, widespread, and likely to be sustained and to affect a much broader range of countries than before the latter 1980s. The Uruguay Round agenda was set by 1986 before the current wave had built up, so the trade/environment issue was not a separate item for negotiation. Nor was there an environmental impact assessment of the Round as a whole. However, the Working Group on Environmental Measures and International Trade that was formed in 1971 was activated for the first time in 1991 and has met frequently since then. As well, several of the Uruguay Round agreements contain provisions that relate to the environment and build on Articles in the General Agreement.

The most fundamental provision in the Round is in the Preamble to the agreement to establish the World Trade Organization (GATT 1993), which refers to the WTO's objective as enabling all contracting parties the maximum opportunities for:

expanding the production and trade in goods and services, while allowing for the optimal use of the world's resources in accordance with the objective of sustainable development, seeking both to protect and preserve the environment and enhance the means for doing so in a manner consistent with their respective needs and concerns at different levels of economic development (p. 1).

To give initial effect to that, a decision was taken on trade and environment by ministers meeting in Marrakesh in April 1994 to sign the Final Act of the Uruguay Round. They agreed to establish a Committee on Trade and Environment to report to the first biennial meeting of ministers (in Singapore in December 1996). The other main features of the Uruguay Round agreements with environmental provisions relate to technical barriers to trade, sanitary and phytosanitary measures, and the agreements on subsidies and countervailing duties and on trade-related intellectual property rights. Overall, the trade liberalization to result from the Uruguay Round is likely to conserve resources and reduce environmental degradation rather than be unfriendly to the natural environment (see Anderson 1996 for details).

### **GATT/WTO and Multilateral Environmental Agreements**

The other way in which trade policy is being called upon to help achieve environmental objectives has, as mentioned above, more validity. It is either a carrot or stick to entice countries to sign and abide by multilateral environmental agreements. In the case of combatting global environmental problems such as ozone depletion or climate change, the free-rider problem arises. One of the more obvious and possibly more cost-effective ways to reduce the free-rider problem is to write trade provisions into the agreement, as was done in the 1987 Montreal Protocol on reducing the use of CFCs and halons to slow down ozone depletion. To date no GATT contracting party has formally objected to use of that trade policy. Nor have they to the bans on trade in ivory, rhino horn, and tiger products that are part of the Convention on International Trade in Endangered Species (CITES), or to the trade provisions in the Basel Convention on trade in hazardous wastes. Conflicts may well arise in the future, however, if trade provisions are drafted into more contentious multilateral environmental agreements. (For example, attempts to impose a global carbon emissions tax are met by resistance from fossil fuel exporting countries as well as users of such fuels.) That is why this matter figures importantly on the agenda of the new WTO Committee on Trade and Environment. Discussions so far in the GATT/WTO have centered around the idea of providing waivers on a case-by-case basis or, alternatively, of providing an "environmental window" for multilateral environmental agreements within the GATT exceptions clause (Article XX).

To help assess the appropriate role for trade policy in multilateral environmental agreements, it is helpful to recall that supporters of trade liberalization and of environmental protection share a common goal: to improve social welfare. They also share a common problem: the need to foster multilateral cooperation to fully achieve that objective, because in each sphere (the economy and the environment) there is considerable and increasing interdependence among nations. But the two groups differ in the important respect that supporters of liberal world trade have understood its virtues for two centuries and have been active for more than 50 years in building institutions such as the GATT and WTO to help achieve their goal, whereas widespread concerns about the environment are relatively new and supporters of environmental protection entered only recently as significant players in international policy arenas.

Understandably, supporters of liberal trade and the GATT/WTO resent the encroachment of these “new kids on the block” onto what they perceive as their hard-won territory, especially when they genuinely believe that reducing trade barriers is likely to be environmentally friendly and consistent with sustainable development in the long run in the sense that it allows the world to use its resources more efficiently.<sup>12</sup> Equally, advocates for greater environmental protection are frustrated that international agreements as important as those resulting from the GATT’s recent Uruguay Round can be implemented without being subject to environmental impact assessments or environmental safeguards.

Clearly there is scope for greater understanding and altered strategies on both sides. More than that, there is the distinct possibility that, by working together, both groups’ objectives will be further enhanced—a “win-win” outcome. But such an outcome will require much more than just “greening” the GATT/WTO. Some observers believe it may ultimately require a Global Environmental Organization (GEO) to set rules, negotiate multilateral agreements, and settle disputes over environmental policies in the same way that the GATT has presided over trade policies for the past five decades (Esty 1994). The advantage of a GEO, it has been argued, is that it could redirect environmentalists’ attention away from trade policies and toward ensuring the implementation of more appropriate policy instruments for achieving environmental objectives, allowing both sets of policies to more effectively contribute toward the common goals of sustainable development and improvement in the quality of life. Even so, the issue of whether the WTO or the GEO would have precedence would need still to be resolved. It is noteworthy that the side agreement to the NAFTA gives a surprising degree of precedence to environmental concerns relative to trade concerns. What would be more appropriate is a recognition that where the two are in conflict, achieving the optimal welfare-maximizing outcome requires both to compromise somewhat.

Thus the trade policy community needs to be involved in negotiating multilateral environmental agreements that are likely to include trade provisions, and to develop criteria by which WTO members could assess in advance the extent to which trade restrictions within such agreements are acceptable. Some of the relevant criteria were enunciated at UNCED. It is important to ensure that trade provisions are strictly necessary and effective in achieving the environmental objectives involved. For reasons outlined earlier, there will often be an alternative, more effective instrument than trade restrictions. Where trade instruments *are* required in the absence of superior policy measures, they should be used only in proportion to the size of the associated environmental problem and should be the least trade restrictive measure available. The measures ought to be transparent and not be protectionist in impact, and where possible be consistent with both the GATT principles of nondiscrimination (most-favored-nation and national treatment) and the key environmental principles such as the polluter pays and the precautionary principles.

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<sup>12</sup> See the literature review in, for example, Ulph (1994). Liberal traders should acknowledge, however, that opening up to trade can lead to overexploitation of common-property resources (e.g., via deforestation of tropical forests) in the absence of adequate property rights, environmental charges, and/or policing, in which case there may be a second-best case for restricting trade until those problems are resolved (Chichilnisky 1994, Copland and Taylor 1995).

## **Response of Asian Developing Countries**

The international efforts under way in various subregional, regional, and global fora related to cross-border environmental interactions cover a wide range of activities, from capacity building and institutional strengthening, to biological research, to the control of cross-border movement of hazardous wastes, bans on driftnet fishing, and efforts to slow down global warming and protect the ozone layer. Yet, given the urgency of many of the problems and the tendency for international disputes to escalate if not resolved, even more needs to be done. We begin by looking at what has been achieved recently in Asia, and then examine what else could or should be done.

### **Subregional and Regional Initiatives<sup>13</sup>**

Not all international environmental issues affect all countries. Problems such as acid rain, desertification, flooding due to deforestation or siltation, or pollution of a particular watercourse may involve only a small set of neighboring countries. Environmental issues like these are best dealt with in a regional or even subregional forum. Over the past two decades, as the economic and environmental interdependence of developing economies in Asia has increased, so have their efforts toward regional and subregional cooperation. While these cooperative efforts primarily are aimed at promoting intraregional trade and investment, with beneficial environmental consequences through more efficient resource use, they also provide fora for discussing and planning cooperative efforts for sustainable use of the environment.

An example is the APEC. APEC members are committed to “open regionalism”, designed to encourage greater openness throughout the global economy as well as in the region. The linkage between trade and the environment was identified as a “key facilitation issue” in the Second Report of the APEC Eminent Persons Group and the forum members have recently agreed to promote cleaner industrial production technologies, convincing companies to meet the ISO 14000 standards. Members who have implemented pollution charges to promote sustainable development, such as Malaysia and Indonesia, and those with plans for their implementation, such as the Philippines, use the forum to learn from each other’s experiences. The APEC energy working group also promotes cleaner and more diversified energy sources in its member countries, which account for half of the world’s energy consumption.

Another example is the Association of Southeast Asian Nations (ASEAN). ASEAN has developed a plan of action on the environment and a working group on transboundary pollution that is developing procedures to control the cross-border movement of hazardous wastes between member countries. The plan of action on the environment aims to strengthen legal and institutional capacities to implement international environmental agreements, to harmonize ambient air and river water quality standards, and to develop a regional framework for integrating environmental concerns in the decision-making process of member countries. ASEAN also has a Working Group on Nonconventional Energy Research and energy programs with its dialogue partners Australia, Canada, and the United States.

The South Pacific Forum also has been active in environmental matters. In 1979 it established the Forum Fisheries Agency to provide technical assistance to Forum members in developing and managing fisheries. It adopted the South Pacific Nuclear Free Zone Treaty, also known as the Treaty of Rarotonga, in 1985 and was prominent in protesting the 1995 French nuclear testing in the Pacific. The Treaty has since been signed by all of the major nuclear powers. The Forum has also drafted a treaty to ban the importation of toxic waste into the region. In 1989 the South Pacific Forum also issued the Tarawa Declaration calling for a cessation of driftnet fishing in the South Pacific, which was followed by later UN resolutions to the same effect. There is as well a South Pacific Regional Environment Programme (SPREP), which undertakes research and monitors and provides information for sustainable management

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<sup>13</sup> This section draws on Brooks (1995).

of natural resources and which has played a key role in negotiation of a Convention for the Protection of the Natural Resources and Environment of the South Pacific Region.

There is also the recently formed Greater Mekong Subregional Working Group on Environment. Its purpose is to facilitate cooperation regarding environmental and natural resource management among the six Greater Mekong Subregion countries and to address the environmental implications of various infrastructure and other projects undertaken in the subregion. It is composed of senior level representatives of the national environmental protection agencies of the six countries and reports to the Ministerial Conference on Subregional Cooperation. The main activities expected of the Working Group include policy advice and guidance on specific subregional environmental programs, overview and advice on the Environment Program conducted under the auspices of the Mekong River Commission and other externally funded environment programs, guidance on appropriate treatment of environmental issues raised by proposed infrastructure and other projects, seeking donor support and coordination for priority subregional needs in the environment sector, harmonizing environmental policies which impact on neighboring countries, and sharing information on successful approaches to common problems. Other cooperative activities in the Greater Mekong Subregion include a subregional environmental monitoring and information system technical assistance project, a subregional environmental training and institutional strengthening project, and a project on sustainable management of forest resources.

### **What Asian Developing Countries Can Do**

A major concern is the large gaps in the scientific knowledge of environmental interactions. More research needs to be done at the national, regional, and global levels, with international cooperation playing a key role in exchange of knowledge, technology; and human and financial resources for research and dissemination. That some of the newly industrializing economies, such as Republic of Korea, are now placing greater emphasis on research and development in industry is an encouraging sign, but much more empirical analyses are sorely needed.

The experiences of the Uruguay Round and of the Inter-governmental Panel on Climate Change made clear that empirical studies are far more powerful than abstract arguments in focusing attention on the need for policy reform. Those quantitative exercises have provided the world with multisector, multicountry models that are capable of being modified to estimate as well the linkages between trade, resource depletion, and environmental degradation. A beginning has been made in that direction, but there is great scope for further, high-payoff research in this area. Such forward-looking modelling requires the inclusion of endogenous behavioral relationships not only for private households and firms but also for governments, so as to capture not just the demographic transition but also the transitions in both trade and environmental policies that typically accompany per capita income growth. Now is not too early to begin if that research is to influence the next round of multilateral trade negotiations, because they are scheduled to get under way before the end of this decade. It would also be helpful in APEC trade liberalization discussions following the Bogor Declaration of November 1994, for example in demonstrating the adverse environmental and economic consequences of excluding agriculture from the move toward free trade in APEC by 2020. Since East Asia's developing economies have more to gain than most others from that type of empirical studies, now is the time for them to cooperate in sponsoring such analyses, perhaps with the help of regional institutions.

More research is also needed on the institutional aspects of solving the market failures that often result in environmental problems. In practice, the property rights and the tax or subsidy approaches to correcting market failures often differ more in emphasis than in substance. Marketable permits for pollution emissions have proven to be a useful innovation, but both the range of their application and their alternatives need to be more fully developed, particularly for application at an international level. International aid for the environment, as with other types of international aid, suffers from problems of coordination. The wide range of nongovernmental, national, and cooperative arrangements undertaking action for environmental preservation or improvement can easily lead to inefficient use of scarce

resources, something that those concerned about the environment should be particularly wary of. International environmental agreements cover a wide range of subjects and are not a new phenomenon, and their number has grown rapidly in the past few decades, but generally in a piecemeal way.

Proposals for a global environmental organization to track and/or coordinate international environmental activities, on the order of the WTO, have so far met with a lukewarm response. In part this reflects the recentness of widespread international concern for the environment, relative to that for trade or some other interests. Similarly, although there are international agreements covering some environmentally sensitive areas, there is no organization to set and enforce regulations covering cross-border environmental effects in the way that national governments can protect their domestic environments. A formally structured organization may be unnecessary, but with little coordination in efforts and with limited understanding of the environmental interactions on which our lives depend, the dangers of neglect may be great.

The Uruguay Round agreements themselves are good news for Asia's developing countries. However, demands for greater harmonization of domestic environmental policies for conformance and competitiveness reasons, coupled with the greening of world politics, are likely to put the WTO and trade policy under pressure to perform tasks for which they were not designed and are not well suited-and at a time when the WTO needs first to consolidate its role in the world and ensure the implementation of the Uruguay Round before moving into these more thorny issues that are only peripherally connected with trade.<sup>14</sup>

The pressure on the WTO to become more entwined with environmental standards is and should be of considerable concern to Asia's developing countries. The reason is not so much that the imposition of higher standards themselves would be costly to them. In fact middle-income, mid-standard countries may well be net beneficiaries if low-income, low-standard countries were required to raise their standards more than them to reach minimum acceptable levels. Even the negative direct effect for low-income economies of having to raise their standards could be offset somewhat, at least for the least densely populated poor countries, by a terms of trade improvement if many countries were to raise their standards multilaterally. Nonetheless, many developing countries are suspicious of the motives of OECD countries, and object to what they perceive as social imperialism and a denial of their national sovereignty. While they are not being targeted per se, the fact is that such standards tend to be applied less in developing countries because they are poorer. That, together with the fact that their comparative advantages often are in natural resource-intensive and pollution-intensive industries, means those countries are vulnerable either to being pressured to enforce stricter standards and/or to facing less market access for their exports to stricter-standard countries. Furthermore, should the use of trade policy to try to harmonize standards upward lead to trade retaliation and counterretaliation, the end result could be a weakening of the multilateral trading system on which Asia's developing countries depend heavily.

Since the entwining of environmental issues with trade policy is more likely to tighten than to disentangle in the foreseeable future, the question arises as to how developing countries ought to respond at the global level. One response is to disseminate more widely the sound arguments for not using trade-restrictive measures to achieve the following environmental objectives:

- (a) that differences in standards are a legitimate source of comparative advantage in so far as they reflect differences in resource endowments and societies' preferences and ability to afford the good things in life;

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<sup>14</sup> The suggestion has been made, for example, that the WTO become active in monitoring and enforcing agreed-upon minimum environmental standards. That presumably would involve environmental standards being reviewed as part of the GATT/WTO regular Trade Policy Reviews (TPR). Given that the WTO's TPR mechanism is already stretched to its limit in covering even the major trade policies of contracting parties, such an addition to its workload would require a very substantial addition to its resources-not to mention the extra burden on those employed in national capitals when the reviews are under way. An even greater potential increase in workload would result for the WTO's dispute settlement mechanism.

- (b) that standards rise with per capita income and that liberal trade and investment policies promote income growth;
- (c) that theory and empirical evidence provide little reason to expect that differences in standards contribute significantly to differences in costs of production and hence to trade and investment patterns, nor that downward harmonization of standards (a “race to the bottom”) is occurring;<sup>15</sup>
- (d) that if freer trade were to worsen welfare of, say, low-skilled workers, adjustment assistance programs such as retraining subsidies should provide much cheaper solutions than trade restrictions, as do nontrade measures such as labelling (“dolphin-friendly tuna”) that allow consumers to exercise their preferences through the market;
- (e) that since developing countries have contributed a disproportionately small amount per capita to global environmental problems such as the greenhouse effect, they should be compensated accordingly for contributing to their solution, rather than have that contribution demanded of them under threats of trade sanctions; and
- (f) that the GATT rules-based multilateral trading system is threatened by the risk of environmental groups being captured by traditional protectionist groups in high-standard countries, and by the risk of resulting trade restrictions and pressure to involuntarily raise standards being used by protectionist groups in lower-standard countries to argue against their countries’ export-oriented development strategy.

More dialogue and compromise between countries is likely to be needed. One suggestion is if developing countries were to commit themselves to enforcing minimum standards and to raising those standards over time according to a specified schedule in return for gradual improvements in OECD market access over and above commitments bound in the GATT/WTO, vocal interest groups in high-income countries would be less able to deny that improvements in social standards are positively related to income and trade growth. That would be using trade policy as a carrot rather than a stick. (It would, however, still entwine environmental standards and trade in a way that might prove unhealthy for the global trading system.) Likewise, if developing countries were seen to be enforcing reasonable standards especially effectively on their foreign investors, concerns about capital outflows to “pollution havens” would be less justifiable. Alternatively or additionally, developing countries could transfer the onus back to high-standard countries to insist their firms accede to the same high standards when they invest in developing countries as in more advanced economies. Further, anxiety over deforestation could be reduced if developing countries were able to demonstrate they can police restrictions on logging and are prepared to do so in return for adequate compensation in the form of greater access to OECD markets and/or aid (e.g., via the Global Environment Facility).

Finally, on the role of APEC, since a complete decoupling of environmental issues from trade policy seems unlikely in the foreseeable future, it is important for developing countries to consider what principles ought to govern the design of trade policies and trade-related environmental policies to ensure equitable and sustainable development. Several have been mentioned above. Even if developing countries were simply to discuss such a list with higher-standard countries, the resulting dialogue may itself be productive in diffusing some of the concerns expressed by environmental groups. APEC, with its diffuse but relatively small membership, provides an obvious forum for such discussion before the much larger WTO membership debates the issues. In the same spirit, APEC might also begin to monitor trade-related environmental measures as part of its overall compilation of trade impediments in the Asian and Pacific region. As well, it might actively seek, as a priority in its trade facilitation and liberalization initiatives, the removal of trade policies that incidentally harm the environment-again, providing a regional example for what might eventually be achievable globally through the WTO.

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<sup>15</sup> Surveys of the relevant theory can be found in Bhagwati and Srinivasan (1996) and Wilson (1996). For empirical evidence, see for example Tobey (1990), Low (1992), Jaffe et al. (1995), and Levinson (1996).

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