
Sustainable Trade



THE PICTURE CUBE/FOTO DU MONDE

A New Paradigm for World Welfare

By Robert Costanza, John Audley,
Richard Borden, Paul Ekins,
Carl Folke, Silvio O. Funtowicz,
and Jonathan Harris



In no area does conventional economic wisdom achieve greater unanimity than in its advocacy of free trade. Trade benefits all parties, the conventional wisdom goes, by reaping the rewards of specialization, thereby fostering economic growth and contributing to the achievement of other economic objectives. Proponents of free trade also argue that it will benefit the environment by generating the resources necessary for environmental protection and enhancement.

As with the benefits of trade in general, however, this benign outcome depends on several important conditions that are not often met in practice. In today's harsh and increasingly competitive trading system, it is likely to be more difficult still because of the growing pressures to gain competitive advantage by externalizing environmental costs. When world trading rules permit countries to protect their own environments but not to protect their industries from competitors who do not, then only the countries with the strongest economies will be able to pursue environmental protection. This effort, however, will be under continual siege from those concerned with international competitiveness.

If the potential environmental benefits of free trade are to be realized, trading rules must recognize that environmental externalities amount to subsidies that are as economically distorting and unfair as any financial subsidy. The rules must not

only discourage such "eco-dumping" through these subsidies, they must also permit countries to protect themselves against eco-dumping by others. This, however, will require a sea change in the General Agreement on Tariffs and Trade (GATT).

Free Trade: Theory and Reality

Conventional wisdom is based on a theory that dates from the earliest days of classical economics and draws on two related but distinct concepts: specialization and comparative advantage. Every country has a wide range of production possibilities, being capable of producing many different goods and services in many different combinations. However, given its unique resources (land, labor, capital, raw materials, technology, and so forth), a country is generally more efficient at producing some goods and services than others. Clearly, it will maximize the value of its production if it specializes in what it does best. The optimal pattern of production may not correspond to the pattern of consumption the country desires, however. Trade obviates this difficulty; it permits a country to concentrate on its most efficient product lines, producing a surplus to exchange for those goods and services it cannot produce efficiently.

According to the standard theory of international trade, a country should specialize in those areas where it has a com-

parative advantage. Having a comparative advantage does not mean having the lowest production costs in absolute terms, however. Rather, it means having the lowest opportunity cost, that is, having to forgo the fewest other goods and services to produce the good or service in question. The distinction

are determined by the interaction of both supply and demand factors (including the extent of competition in the market) and are subject to change over time. If, for instance, several producers specialize in a certain product because they believe they have a comparative advantage in it and the

and diversification into products with higher added value.

No coercion in production or exchange—For all parties to benefit, both production and exchange must be voluntary and fair. Yet disparities in wealth and power, both within and between countries, have never been more pronounced. Exploitative working conditions and the expropriation of assets that yield tradable goods (e.g., land for cash crops) can prevent weaker parties within countries from sharing the benefits of trade; and gross inequalities between trading partners can allow the stronger partner to strongly influence the terms of the exchange.

No international mobility of capital—The concept of comparative advantage is based explicitly on the assumption that capital is not mobile internationally, that is, that no country invests beyond its own borders. Where that is not the case, comparative advantage becomes irrelevant because capital will flow to countries with an absolute advantage.² Countries without such advantage will experience pressure on wage rates, working conditions, environmental regulations, and anything else perceived to hinder competitiveness. At the present time, of course, the mobility of capital is almost total.

The invalidity of these assumptions gives a different and less benign perspective to free trade. The world trading system becomes a harsher, more competitive regime, with outright losers as well as winners. In all probability, the strong will get stronger at the expense of the weak. At the same time, the existence of a practically infinite labor supply in the South will put continued pressure on wages worldwide. Forgoing self-reliance for specialization is even riskier because needs that are not met through domestic production will probably not be met through trade. Some countries,

The current level of environmental damage is ample evidence that externalities are pervasive.

between absolute and comparative advantage is crucial, as relatively little trade would occur if a country had to have an absolute advantage to engage in it. The standard theory thus leads to two important conclusions. First, because every country's comparative advantage is unique, its products will find a ready market. Second, specialization along the lines of comparative advantage will maximize world product.

The real world applicability of this theory, however, depends on five crucial assumptions, none of which appears to hold in the current state of affairs:

No externalities—Externalities are extra-market effects such as environmental degradation and the impairment of workers' health and safety. Where these effects are significant, prices will not reflect the full cost of production and a country's real comparative advantage will not be readily apparent. As a result, it may specialize in activities that lower its welfare. The current level of environmental damage is ample evidence that externalities are pervasive.

Stable prices—Comparative advantage is determined by production costs, a supply factor. Prices, however,

expanded production significantly lowers its price, the benefits of specialization will be greatly reduced. In extreme cases, the price may even fall below production cost, making specialization a disaster. According to the secretariat of the United Nations Conference on Trade and Development (UNCTAD), developing countries that specialized in the production of nonfuel primary products suffered a marked decline in their terms of trade during the 1980s, with the price index of their exports falling "a staggering 50 percent in real terms."¹ Compounding their difficulties is the fact that the demand for such products is usually relatively inelastic (unresponsive) with respect to price.

No dynamic differences—Trade theory implicitly assumes that comparative advantage and the benefits it confers are constant over time. Which product lines a country specializes in can have a real impact on its future development, however. For example, a country with a current comparative advantage in bananas may be better off attempting to develop its chemical industry because that course may eventually spur technological innovation, the development of labor skills,

A VISION OF SUSTAINABLE TRADE

Both the North American Free Trade Agreement (NAFTA) and the Uruguay Round of GATT embody a vision of unlimited economic growth in a world where environmental problems are trivial—and most easily solved by more growth. These agreements are rational only within the context of this vision, however. Arguably, this vision is fundamentally flawed because environmental limits are in fact central to humanity's continued survival on the planet.

In an alternative, sustainable vision, trade is one element of a larger exchange among people, communities, and nations that involves goods and services, culture, and information as well as the natural environment. Different countries, of course, have different comparative advantages in goods and services; but they also have differences in culture, social systems, and attitudes toward the environment. These differences cannot simply be homogenized under the banner of free trade. Each community seeks to preserve its identity and maintain its own set of values. Exchanges of culture and information, which one can call symbolic exchanges, are thus as important as exchanges of goods and services.

These symbolic exchanges take place at varying levels, depending on the issues involved. For example, discussions of air and water quality in the United States and Mexico may take place at the national level or between border communities specifically affected by these issues. Discussions of global warming necessarily have a worldwide scope. Issues such as the use of recombinant DNA hormones in milk production will be debated at local, regional, and national levels, as well as in international discussions. In discussions of rainforest preservation, numerous perspectives are relevant, including those of indigenous peoples, development planners, foreign consumers of forest products, minerals, and agricultural products, and domestic and foreign conservationists.

What are the appropriate types of organizations, levels of representation, and channels of communication and

harmonization among these different interest groups? Local and national government entities, nongovernmental organizations, and international bodies all have a role to play. The best outcome—a consensus among all the affected groups—can only be achieved as a result of dialogue and negotiation in which each recognizes that there is a common good that transcends individual interests. Where consensus cannot be achieved, it is important to respect the rights of local communities.

In many of the issues involving trade and the environment, there is significant uncertainty about the likelihood and severity of environmental impacts. Under such circumstances, maintaining sustainability requires the adoption of the precautionary principle.¹ When the nature and extent of future damage is unknown (as in the case of global warming, the introduction of new chemicals or life forms into the environment, and the extinction of species), this principle calls for erring on the side of precaution; rather than allowing market or trade dynamics to determine events, regulators should act to prevent any potential harm. Simply put, this principle is as follows: If we act as if it matters and it doesn't, then it won't matter; if we act as if it doesn't matter and it does, then it will matter.

The precautionary principle is invoked so frequently in international environmental resolutions that it has come to be seen as a basic normative principle of international environmental law.² By itself, however, the principle does not offer complete guidance to policymakers: Although it "implies the commitment of resources now to safeguard against the potentially adverse future outcomes of some decision,"³ it does not indicate how many resources are necessary or which adverse outcomes are most important.

The "size of the stakes" is a primary determinant of how uncertainty is dealt with in the political arena because high uncertainty or high stakes result in a much more politicized environment. Current methods cannot really deal with either high stakes or high uncertainty, however; these require a new approach,

what might be called "post-normal" or "second-order" science.⁴ This new science is really just the application of the basic scientific method to a new area. The scientific method does not imply anything about the precision of the results achieved; it does imply a forum for open and free inquiry without preconceived answers that is aimed at determining the extent of our knowledge or, alternatively, the magnitude of our ignorance.

This view of science implies a new approach to environmental protection, one that acknowledges the existence of uncertainty and provides safeguards against potentially harmful effects, while at the same time stressing low-impact technologies and attempting to broaden understanding. The precautionary principle sets the stage for this approach, but the real challenge is to develop methods of determining the potential costs of uncertainty and to adjust incentives so that the appropriate parties pay these costs. Without this adjustment, the full costs of environmental damage will continue to be left out of the accounting, and the hidden subsidies from society to those who profit from environmental degradation will continue to provide strong incentives to degrade the environment beyond sustainable levels. Only when this step is taken will international trade have the potential to contribute to true global welfare.

1. D. Bodansky, "Scientific Uncertainty and the Precautionary Principle," *Environment*, September 1991, 4; and R. Costanza and L. Cornwell, "The 4P Approach to Dealing with Scientific Uncertainty," *Environment*, November 1992, 12.

2. J. Cameron and J. Abouchar, "The Precautionary Principle: A Fundamental Principle of Law and Policy for the Protection of the Global Environment," *Boston College International and Comparative Law Review* 14 (1991): 1.

3. C. Perrings, "Reserved Rationality and the Precautionary Principle: Technological Change, Time, and Uncertainty in Environmental Decision Making," in R. Costanza, ed., *Ecological Economics: The Science and Management of Sustainability* (New York: Columbia University Press, 1991), 153-67.

4. S. O. Funtowicz and J. R. Ravetz, "A New Scientific Methodology for Global Environmental Problems," in Costanza, note 3 above.

through strict discipline, scant respect for democracy and human rights, and ransacking of their natural resources (e.g., Malaysia, Thailand, and Indonesia), may manage to scramble on the development bandwagon. However, most southern countries will continue to be squeezed by worsening terms of trade, high levels of debt service, protected northern markets, and a rapidly deteriorating environment. This is the current experience of most of sub-Saharan Africa.³

Growing inequality both within and between countries will increasingly mean that the poorest in both categories experience more of the costs than the benefits of trade. For them, abandoning the logic of the world market, or as economist Samir Amin has put it, "submitting external relations to the logic of an internal development that is independent of them,"⁴ may represent their best option. However, it is a move that will be strenuously resisted by northern countries and southern elites for whom world trade is an unequivocal advantage.

Toward Fair and Sustainable Trade

In general, there are two different ways to create a fair and sustainable trading system. (The concept of sustainability is discussed in the box on page 19.) The first is to include environmental and social safeguards in international trade agreements. Such safeguards would both prohibit abuses by countries and permit them to protect their industries against eco-dumping by others. In this way, they would subject global market forces to political decisionmaking. Various environ-

mental organizations are now pressing GATT to adopt safeguards of this nature. The second way to achieve fairness and sustainability is to incorporate social and environmental costs

seek to secure the benefits of orderly world trade, of course, but only in the context of environmentally sustainable patterns of economic activity. It would be a profound distortion of pri-

Among regional trading associations, only the European Union has created strong enough institutions to implement some social and environmental protection.

directly into trading operations. For instance, there are now alternative trading organizations linking concerned consumers in the North with producers in the South that guarantee the latter fair prices and working conditions (sometimes exceeding world levels).⁵ Ecological tariffs have also been proposed to internalize these costs.⁶

To date, neither of these approaches has been implemented at the global level. Among regional trading associations, only the European Union has created strong enough institutions to implement some social and environmental protections. Meanwhile, indiscriminate market integration at the world level proceeds apace. As long as this is the case, trade theory and current trading practice both suggest that the inequalities between rich and poor—and the attendant environmental destruction—will worsen. Insofar as the world's current trading system leads to unrestrained resource consumption that risks catastrophic environmental damage, it is a serious cause for concern. Proposals for environmentally sustainable trade must

of great potential harm to human welfare, for the world's trading system to impede its progress towards sustainability.

The highly integrated global economy of the 1990s, which is dominated by the activities of a few hundred transnational corporations, bears little resemblance to that for which GATT was conceived. All but the most narrow proponents of the free market now recognize that efficient markets need effective governmental frameworks.⁷ But such frameworks do not yet exist at the international level, leaving a vacuum of accountability and the potential for gross irresponsibility. GATT's single-minded focus on reducing protectionism is dangerously inappropriate, even though it aims at important social and environmental objectives. Rather, the world needs to move towards a trading system that is predicated on the principles of civil, political, economic, and social rights that have been enunciated by the United Nations and in which the basic norms of social justice and environ-

(continued on page 39)

WATCH FOR...

Steve Charnovitz writing on regional trade agreements.

Sustainable Trade

(continued from page 20)

mental sustainability are both promoted and enforced. It remains to be seen whether a reformed GATT can become part of such a system or whether it will remain an obstacle. Insights into this question can be gained by reviewing two recent trade agreements, the North American Free Trade Agreement (NAFTA) and the Uruguay Round of GATT.

NAFTA and the Uruguay Round

NAFTA was passed by the U.S. Congress in November 1993 and signed into law by President Clinton the following month. The Uruguay Round was adopted in December 1994. Both agreements prompted great concern about the environmental implications of trade policy. NAFTA, in fact, was nearly derailed by its possible environmental consequences; a separate side agreement on the environment was necessary to obtain passage.⁸

Supporters of NAFTA's environmental provisions claim that it represents the "greenest trade agreement ever." This statement is largely a truism, however, since the United States had never before attempted to include environmental issues in trade negotiations. The Uruguay Round, on the other hand, has not received even such faint praise. On the contrary, almost every U.S. environmental organization openly opposed it. The reason environmentalists have objected to these agreements is very basic: neither NAFTA nor the Uruguay Round was designed to mitigate the negative environmental effects of trade liberalization. Only in a procedural sense are the agreements more sensitive to environmental protection, and only NAFTA offers some opportunity for environmental input into policy deci-

sions. Both agreements stack up poorly in terms of furthering fair and sustainable trade.

Prospects for Sustainable Trade

None of the provisions of NAFTA and the Uruguay Round address the deviations of the real world from the assumptions necessary for trade to be fair and sustainable. Rather, their objectives were simply to further eliminate barriers to trade in goods and services among countries, increase foreign investment opportunities, and

protect the property rights of foreign investors.⁹ Four of the five assumptions noted above (stable prices, equal dynamic benefits, no coercion in production and exchange, and no international mobility of capital) are contrary to the stated objectives of the agreements themselves. For example, both agreements encourage capital mobility by reducing investment barriers and providing more protection for intellectual property rights.¹⁰ The investment provisions will preserve the current comparative disadvantages by keeping

STILL PICTURES—HEINE PEDERSEN



Although Taiwan and a few other countries have managed to develop along Western lines, it is unclear how many can.

the latest technology under the control of international companies and restricting poorer countries to older technology. Both agreements are also designed to put downward pressure on the returns to domestic factors of production (land, labor, and capital) to reduce the prices of goods and services. The most obvious example of this is labor costs: Workers in high-wage countries like the United States and Canada are now in direct competition with workers in countries whose comparative advantage is low-cost labor.¹¹

NAFTA's energy chapter was intended to "strengthen the important role that trade in energy and basic petrochemical goods plays in the free trade area."¹² No mention is made, however, of the importance of efforts to reduce dependency on fossil fuels, nor did any analysis of the potential implications of expanded trade in

energy take place. The same shortcoming is found in both agreements' agriculture chapters,¹³ which fail to consider the environmental implica-

stantive changes to date.

Political pressure from national and grass-roots environmental organizations is largely responsible for the

To some extent, the interaction between environmental groups and policymakers has led to greater transparency in international trade discussions.

tions of changing patterns of pesticide and fertilizer use.

Furthermore, neither NAFTA nor the Uruguay Round allows countries to exclude products whose production processes are environmentally harmful. This means that if the Mexican government does not require treatment of heavy-metal contaminants entering water systems, Canada could not exclude a chrome-plated product made in Mexico—even if Canadian law requires such treatment. In essence, trade allows consumers to purchase products they would be prohibited from purchasing if made in their own country.

Procedural Transparencies

While neither agreement addresses the deviations of reality from the assumptions of international trade theory, NAFTA is notable in that it attempts to mitigate the more serious environmental problems arising from trade liberalization.¹⁴ It does this largely through efforts to create channels for input from environmental organizations. Unfortunately, such input has not resulted in many sub-

greater public involvement in the decisionmaking process. The North American Agreement on Environmental Cooperation (NAAEC), signed by the United States and Mexico in conjunction with NAFTA, created two public advisory committees. The first is a joint committee that advises both the secretariat and the Committee on Environmental Cooperation (CEC);¹⁵ the second is a committee of border-area residents that advises the Border Environmental Cooperation Committee (BECC) on the lending policies of a newly created regional lending institution called the North American Development Bank. Almost a year into NAFTA, however, neither the NAAEC secretariat nor the two advisory committees is fully operational.

The Uruguay Round acknowledges some relationship between trade rules and environmental protection but does not create avenues for public participation. The only way that environmentalists can influence the proposed World Trade Organization is through the Committee on Trade and the Environment (CTE), established at the signing of the round in Marrakesh,



SEDAC Project Scientist

CIESIN is a private, nonprofit organization based in Saginaw, Michigan. CIESIN has been designated by NASA to build the Socioeconomic Data and Applications Center (SEDAC) as one of nine data centers within the Earth Observing System Data and Information System. SEDAC is developing unique applications to integrate social and natural science data, especially remote sensing data, and is making these applications and other data and information resources available to support decision making in diverse user communities.

CIESIN is seeking qualified candidates for the position of Project Scientist to provide scientific guidance on SEDAC's development and management. Requirements include a Ph.D. in the social or natural sciences; interdisciplinary data and project management skills; knowledge of relevant science and policy communities; excellent oral and written communication skills; and peer-reviewed scientific publications.

Salary is commensurate with qualifications and includes an excellent benefits package. For consideration, please submit cv along with letter of application and salary requirements to: CIESIN Human Resources SPS, 2250 Pierce Rd., University Center MI 48710 USA. Internet: resume@ciesin.org. An EO/AA Employer.

Morocco, on 15 April 1994. The CTE is charged with making recommendations regarding any conflicts between efforts to protect the environment and the terms of the trade agreement.¹⁶ However, direct access to CTE proceedings is only possible if committee members seek outside assistance or member nations intercede. To date, only the U.S. government has routinely involved environmental advisors in trade policy matters.

The willingness of the Clinton administration to include environmentalists in the formulation of trade policy is a sign that environmental concerns are being taken seriously. In fact, a number of changes have been made in both the Office of the United States Trade Representative (USTR) and the U.S. Environmental Protection Agency (EPA) to facilitate interaction between trade policy experts and environmentalists. The USTR created an Office of Environment and Natural Resources and expanded the number of its environmental advisors, adding (among others) the president of the Environmental Defense Fund. A permanent advisory committee, including representatives from the World Wildlife Fund, the National Wildlife Federation, and the Natural Resources Defense Council, was also created to assist staff members working with the CEC. Similarly, EPA has created a group to work on trade policy matters.

To some extent, the increased interaction between environmental groups and policymakers has led to greater transparency in international trade discussions. The USTR has made transparency one of its objectives in negoti-

ations over trade and environmental issues at the Organisation for Economic Cooperation and Development (OECD), as well as in the working group meetings of the World Trade Organization. In both fora, the United States has argued that meeting minutes and working papers should be given an "unrestricted" classification so that nongovernmental organizations can

Round implementing legislation, they would remain silent about their opposition to the agreement itself. While some attempt was made to accommodate these groups, it was abandoned in response to pressure from conservative Republicans and business supporters (who threatened to oppose the agreement if the linkages remained).¹⁷

In part, however, international

PROFILES WEST—BOB WINSETT



For most developing countries, comparative advantage means specializing in low value-added agriculture, such as this farm that is being carved out of the rainforest in Costa Rica.

examine them and comment on the proceedings.

But dialogue between environmental groups and the U.S. government has not produced any apparent commitment to temper the effects of trade liberalization on the environment. In the summer of 1994, these groups offered the Clinton administration a compromise designed to ensure environmental linkages in future trade negotiations: In exchange for permanent linkages between trade rules and environmental goals in the Uruguay

efforts to link environmental concerns to trade policy have been blocked by the unwillingness of other countries to make any commitment. During recent meetings of the OECD and the World Trade Organization's trade and environment subcommittee, many members strongly opposed U.S. efforts to link these issues, apparently because they felt this would risk efforts to liberalize trade.

Other hoped-for benefits from the increased transparency in NAFTA are also questionable, particularly regard-

ing future trade agreements. The progress toward greater public participation may not extend beyond this agreement because most of the relevant provisions are in a supplemental agreement rather than in the main one and the legal relationship between the two is uncertain. Future accessions to the agreement,¹⁸ for instance, may not require endorsement of the supplemental agreement.

Externalities in NAFTA

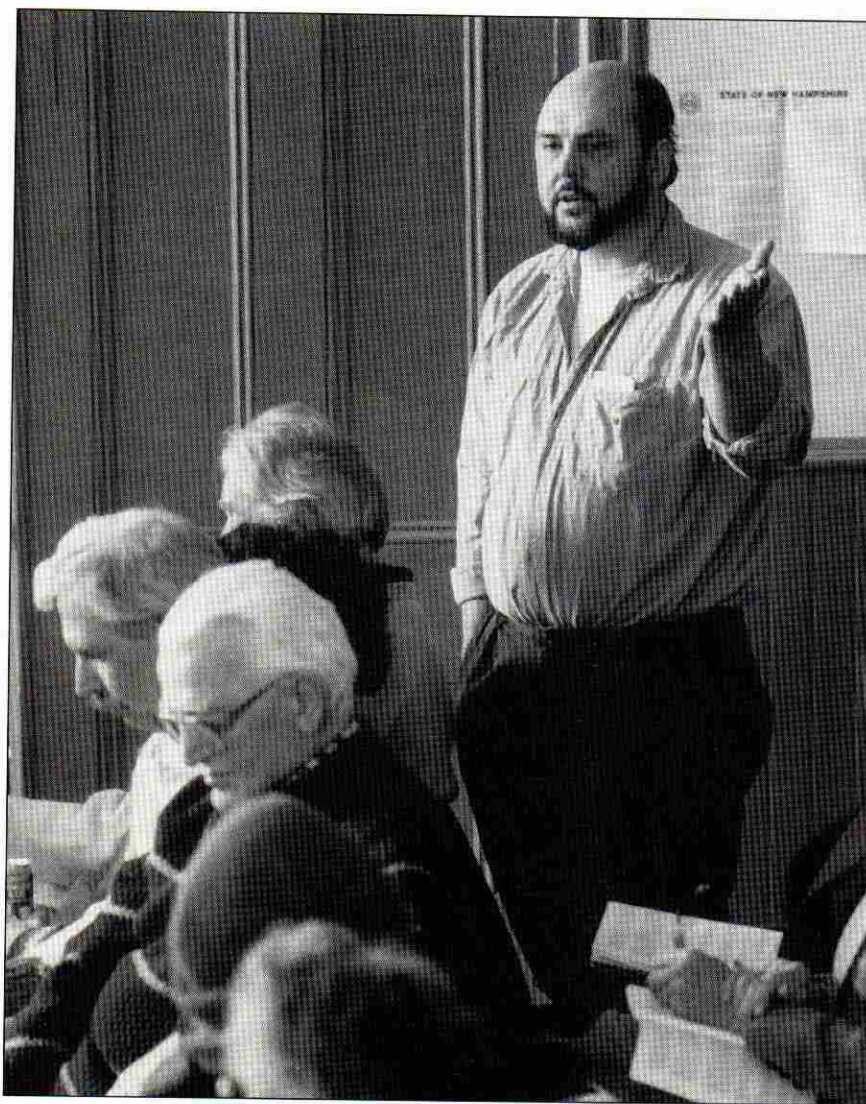
As noted above, NAFTA differs from the Uruguay Round in its attempt

to address some of the externalities associated with trade liberalization. All three governments conducted "environmental reviews" to better identify the environmental implications of this agreement. The United States conducted two such reviews, which were released in February 1992 and September 1993 respectively.¹⁹ Canada released its review in September 1992;²⁰ Mexico's was never made public. Additionally, NAFTA's environmental commissions have been charged with monitoring environmental factors affected by trade flows,

such as air and water quality, the use of chemicals and pesticides in production, and changes in agricultural practices.²¹ Language in the agreement also bolsters efforts to internalize environmental externalities in the area of food safety and technical standards and admonishes governments not to reduce environmental protection efforts to attract investment.²² Finally, the North American Development Bank will provide funds to address environmental problems in the Mexico-U.S. border region and increase public awareness of the impact of industrialization on environmental quality.

It is too early to judge the success of these efforts to solve trade-related environmental problems. Perhaps this is one area where international efforts are ahead of those in North America. International agencies like the United Nations Conference on Trade and Development, the United Nations Environment Programme, and the Committee for Sustainable Development have all developed agendas for problems involving trade and the environment.

In summary, the failure to address basic problems makes both NAFTA and the Uruguay Round dangerous to the environment. The steps that have been taken so far are unlikely to internalize environmental costs to any great extent, and the problems associated with coercion, capital mobility, and dynamic comparative advantage will make it difficult for poorer countries to compete without compromising the environment. The greater transparency in NAFTA may be the first step in a gradual process of trade policy reform; but the poor performance of the new environmental institutions and the overall unwillingness of many countries to take seriously the linkages between environmental protection and trade rules suggest that these institutions will be more window-dressing than substance.



THE PICTURE CUBE—PAULA LERNER

The institutions governing international trade should stress consensus building, as in the traditional New England town meeting.

New Institutions for Sustainable Trade

Ultimately, fair and sustainable trade will depend on a proper system of governance. What should this system look like? It certainly has to be very different from the current system of bureaucratic national governments and international governing bodies. It needs to focus on global consensus building, with effective citizen, interest group, and other stakeholder participation.

Solutions to the problems of sustainability will be robust and effective only if they are fair and equitable. As philosopher John Rawls has argued, policies that represent an overlapping consensus of interest groups are most likely to be fair and effective.²³ The normal political process tends to accentuate conflict, and majority voting can sidetrack any effort to achieve overlapping consensus because the minority is always overruled. Moreover, policies resulting from majority voting are not resilient—the minority will spend much of its time fighting the outcome and trying to build a new majority. This problem is particularly important in the case of current trade agreements, where the principle of free trade runs counter to the desires of environmentalists and other affected parties.

How can we develop policies based on overlapping consensus that are truly effective in solving environmental and other social problems? The techniques of alternative dispute resolution (ADR) offer a good place to start. ADR uses a "policy dialogue" format that includes—from the beginning—all the major parties affected by a policy. It is an especially effective tool for institution building because it creates a sense of common purpose among people from different institutions who would otherwise be competing with one another. It may also be possible to create a system of multi-

scale governance (from local and national to regional and global) that embodies the principles of precaution and overlapping consensus as well as ADR. This system actually exists and is very effective on a small scale, as shown by New England town meet-

agricultural subsidies could be resolved by redirecting those subsidies to soil conservation and the development of low-impact farming techniques.²⁴

What then remains of the free trade paradigm? Trade still offers clear benefits in terms of increased efficiency,

How can we develop policies based on overlapping consensus that are truly effective in solving environmental and other social problems?

ings and tribal governments. The challenge will be to make it effective on a broader scale.

Clearly, it will never be possible to achieve complete agreement on most issues. But today's exclusive and secretive approach to international trade matters must be replaced by a more transparent and inclusive one. Three general guidelines may be offered in this regard: First, in regional agreements such as NAFTA, where there is no supranational rule-making body, trade agreements should reflect individual country desires to promote environmental sustainability and social justice. This means that environmental protection laws must take precedence over trade agreements. Second, in cases such as the European Union, where an elected supranational governing body does exist, that body should be responsible for environmental and social issues to the extent its mandate allows. And third, broad agreements such as GATT should be replaced by agreements that are consistent with sustainable development. For instance, the current conflict over

technology transfer, and the exchange of sustainably produced goods and services, and governments should pursue these benefits. But the era of free trade pure and simple is over. It has to be replaced by a "green" framework in which environmental issues are given due weight and nongovernmental organizations play a much greater role. Of course, improved communication can facilitate the involvement of all stakeholders in the decisionmaking process. But only a broad reconceptualization of the whole concept and purpose of trade can make it compatible with environmental sustainability.

ACKNOWLEDGMENTS

This article is partly based on a short course entitled "Trade and the Environment: Focusing on the U.S.-Mexico Free Trade Agreement" that was held 24-28 February 1992 at EPOMEX (*Programa de Ecología, Pesquerías y Oceanografía del Golfo de México*) in Campeche, Mexico, as well as on a special issue of *Ecological Economics* (January 1995) on trade and the environment put together by Carl Folke, Paul Ekins, and Robert Costanza. We also benefited from the comments of the Balaton group, to whom an early version of the article was presented at a meeting in Csopak, Hungary in 1993.

NOTES

1. J. Madeley, *Trade and the Poor* (London: Intermediate Technology Publications, 1992), 34.
2. H. E. Daly and J. Cobb, *For the Common Good* (London: Green Print, 1990); and H. E. Daly, "The Perils of Free Trade," *Scientific American*, November 1993, 50-57.
3. See A. L. Mabogunje, "The Environmental Challenges in Sub-Saharan Africa," *Environment*, May 1995, 4.
4. S. Amin, *Delinking: Towards a Polycentric World* (London: Zed Books, 1990), 66.
5. See P. Ekins, *A New World Order: Grassroots Movements for Global Change* (London: Routledge, 1992), 135-37; and Madeley, note 1 above, chapter 10.
6. Daly, note 2 above; and R. Costanza, "Three General Policies to Achieve Sustainability," in A. M. Jansson, M. Hammer, C. Folke, and R. Costanza, eds., *Investing in Natural Capital: The Ecological Economics Approach to Sustainability* (Washington, D.C.: Island Press, 1994).
7. H. E. Daly and R. Goodland, "An Ecological-Economic Assessment of Deregulation of International Commerce under GATT," *Ecological Economics* 9 (1995): 73-92.
8. J. J. Audley and E. M. Uslaner, "NAFTA, the Environment, and American Domestic Politics," in National Planning Association, *An Environmental Agenda for North America: Post-NAFTA*, North American Outlook (Washington, D.C., 1994), 23.
9. See article 102(1)(a), (c), and (d) of NAFTA in U.S. House of Representatives, *Message from the President*, North American Free Trade Agreement Supplemental Agreements and Additional Documents, 103rd Cong., 1st sess., 1993, H. Doc. 103-160.
10. See articles 1115-1139 of NAFTA, note 9 above; and article XX of the Uruguay Round agreement in U.S. House of Representatives, *GATT Uruguay Round of Multilateral Trade Negotiations*, Communication from the President, 103rd Cong., 2nd sess., 1994, H. Doc. 103-105.
11. One chapter of NAFTA addresses the problems that result when one country dumps products "in such increased quantities . . . and under such conditions that the imports . . . constitute a substantial cause of serious (economic) injury" (see article 801(1)). However, the chapter does not address the issue of long-term price instability, nor does it recognize eco-dumping as actionable.
12. Article 601(3).
13. Article 7 of NAFTA, note 9 above; and Article XX of the Uruguay Round agreement, note 10 above.
14. D. Magraw, "NAFTA's Repercussions: Is Green Trade Possible?" *Environment*, March 1994, 14.
15. Peter A. A. Berle, president of the National Audubon Society, is one of the advisory committee's members.
16. Decision on Trade in Services and the Environment, Marrakesh Agreement, 15 April 1994.

17. R. Keatley, "Division Between Congress, President Threatens Ratification of Treaty," *The Wall Street Journal*, 2 September 1994, A-6; and E. Flattau, "A Bad Trade for the Environment," *St. Louis Post-Dispatch*, 15 July 1994, 7C.
18. Chile may join NAFTA this year.
19. Office of the United States Trade Representative, *Review of Environmental Concerns Arising from the Proposed North American Free Trade Agreement*, (Washington, D.C., February 1992); and U.S. House of Representatives, *NAFTA: Report on Environmental Issues*, North American Free Trade Agreement Supplemental Agreements and Additional Documents, 103rd Cong., 1st sess., 1993, H. Doc. 103-160.
20. Environment Canada, *Review of Environmental Issues in the North America Free Trade Agreement* (Ottawa, September 1992).
21. See article 2(1), article 13(1), and article 12 of the North American Agreement on Environmental Cooperation, North American Free Trade Agreement Supplemental Agreements and Additional Documents, note 19 above.
22. Article 1114(1)(2).
23. J. Rawls, *A Theory of Justice* (Oxford, U.K.: Oxford University Press, 1971); and J. Rawls, "The Idea of an Overlapping Consensus," *Oxford Journal of Legal Studies* 7 (1987): 1.
24. Similarly, a substantial carbon tax may be necessary to stem global emissions of carbon dioxide, and the preservation of biodiversity may require trade restrictions or special tariffs.

SUBSCRIBE

THE JOURNAL OF ENVIRONMENTAL EDUCATION

ORDER FORM

- ☐ YES! I would like to order a one-year subscription to **The Journal of Environmental Education**, published quarterly. I understand payment can be made to Heldref Publications or charged to my VISA/MasterCard (circle one).
- ☐ \$35.00 individuals ☐ \$68.00 institutions

ACCOUNT# _____ EXPIRATION DATE _____

SIGNATURE _____

NAME/INSTITUTION _____

ADDRESS _____

CITY/STATE/ZIP _____

COUNTRY _____

ADD \$12.00 FOR POSTAGE OUTSIDE THE U.S. ALLOW 6 WEEKS FOR DELIVERY OF FIRST ISSUE.

SEND ORDER FORM AND PAYMENT TO:

HELDREF PUBLICATIONS, THE JOURNAL OF ENVIRONMENTAL EDUCATION

1319 EIGHTEENTH STREET, NW, WASHINGTON, DC 20036-1802

PHONE (202) 296-6267 FAX (202) 296-5149

SUBSCRIPTION ORDERS 1 (800) 365-9753

The Journal of Environmental Education is a vital research journal for everyone teaching about the environment. Each issue features case studies of relevant projects, evaluation of new research, and discussion of public policy and philosophy in the area of environmental education. **The Journal of Environmental Education** is an excellent resource for department chairpersons and directors of programs in outdoor education.