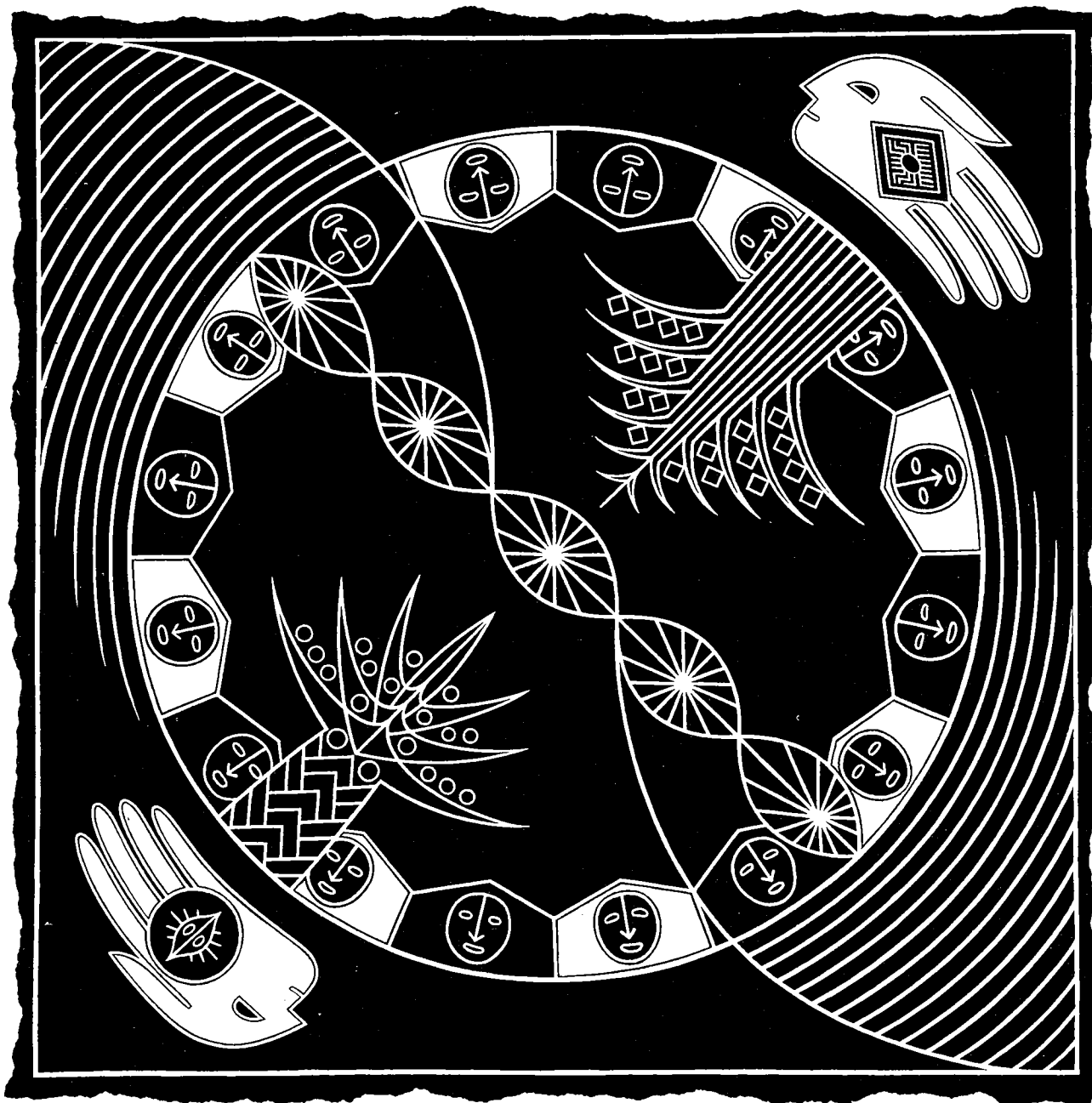


# Trade and Sustainable Development



A Survey of the Issues  
and a New Research Agenda

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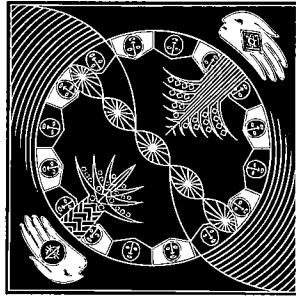
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# Trade and Sustainable Development

## A Survey of the Issues and A New Research Agenda

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DAVID RUNNALLS, INSTITUTE FOR RESEARCH ON PUBLIC POLICY

**IRPP**

AARON COSBEY, INTERNATIONAL INSTITUTE FOR SUSTAINABLE DEVELOPMENT

**IISD**

A REPORT OF THE

**IISD**

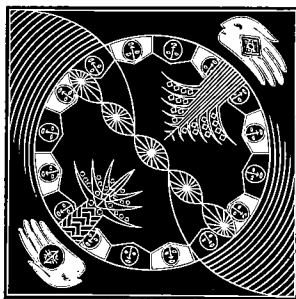
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# Preface

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## **Preface**

The last few years have seen an unprecedented public interest in the negotiations of the GATT, as well as in the European Community's Maastricht Treaty, the Canada-U.S. Free Trade Agreement and NAFTA, and the many other emerging regional trading blocs. The reason is clear; trade affects all of us, and is a leading stimulus in the trend towards globalization.

Much of the publicity surrounding the Uruguay Round trade debate focused on agriculture and on intellectual property rights. Recently, however, there has been growing interest in the environmental implications of trade — not just in its effects on the environment, but also in the effects of environmental concerns on trade. Both the trade and environmental communities are cautious in their dealings with each other, as they seek to understand and build appropriate relationships. The linkage of trade and environment will undoubtedly figure prominently in all future trade agreements, and in many environmental accords.

The broader question of how trade relates to *sustainable development* has been of importance to IISD since the Institute's inception. This publication, which surveys the issues from a sustainable development perspective and sets out the resulting global research agenda, is the first major product of our endeavours in the area.

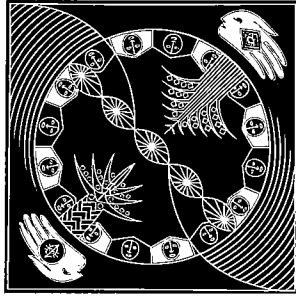
The message of this book is clear: trade is a powerful force, with potential to either frustrate or foster sustainable development on a global scale. It argues that trade and sustainable development must be made compatible, and identifies a need to clarify how that might work, in drafting trade agreements, in amending present agreements, and in promulgating trade measures.

The preparation of the book has been a truly collaborative effort, the product of over a year of consultation and research. The substantial contributions of the authors, and of Murray Smith of the Centre for Trade Policy and Law and Nurul Islam of the International Food Policy Research Institute, as well as that of the participants in a number of IISD workshops, must all be acknowledged.

IISD believes it is essential to identify new principles linking trade and sustainable development. This will require wide-ranging international inputs. We believe that a clear set of principles could be valuable to both global and regional agreements. IISD is prepared to work with others to define these as quickly as possible.

Arthur J. Hanson  
President & CEO  
International Institute for Sustainable Development





# **Foreword**

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## **Foreword**

What took place in Rio de Janeiro in June of 1992 was a loss of innocence: the adoption of Agenda 21 by over 100 Heads of State meant that henceforth no government could plead ignorance of the challenges that we face as a planet. None could say that they did not appreciate the severity of the environmental degradation that threatens us. And none could say that they did not understand how urgent was the need for the countries of the South to achieve development.

And, more important, none could deny the fundamental linkages which bind together environment, development and the interests of both the Northern and Southern countries. Lack of development in the Third World means environmental degradation which impoverishes not only the South, but all the citizens of the earth, and their children after them. It will translate into not only eroded hillsides and malnourished infants, but also into lost biodiversity, depleted seas, a degraded ozone layer and an intensified greenhouse effect.

Thus, there has been a call for a more environmentally sustainable form of development in the South — one which does not rob future generations of the heritage we received from our ancestors. But it is critical to realize that we will not reach this goal if systems of international trade are working against us. As long as the South faces pervasive protectionism in the markets of the North, it will be in the unenviable position of choosing between development which exploits resources unsustainably and no development at all. In many cases it is not even development, but rather servicing of onerous debtloads, which drives environmentally damaging exports, as debtor nations race madly to simply stay in place.

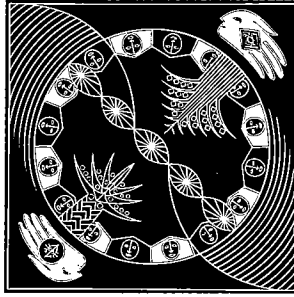
It is senseless for Northern countries to spend scarce resources on aid and development programs in the Third World which are then undermined by trade policies with equal or greater negative effects. Rather, trade and development policies must work in harmony. There is great potential for an open, multilateral trading system to foster development in the South, and provide the means for more sustainable practices.

At the same time, however, we must recognize that more open systems of trade must be accompanied by a reform of economic activity, so that increased flows of goods and services do not mean increased environmental and social damage. If we focus exclusively on liberalizing trade without reshaping the way our goods and services are produced and consumed, we have in many ways doomed ourselves to an expanded version of the status quo. This would clearly be disastrous.

Trade is thus a primary concern in the transformation of global systems to achieve sustainable development. But it is one of many interrelated areas; Agenda 21 lays out the need for change on numerous other fronts. This document is a timely exploration of the ways in which trade and these other areas are linked, and an argument that the current trade-environment debate must evolve into an effort to ensure that trade, environment and development policies strive for the common goal of sustainable development.

The authors have focused attention on our knowledge gaps and on questions of increasingly obvious import. The well-being of future generations globally will depend on our recognizing and understanding the issues raised in this document, and on our ability to find ways to make our systems of trade foster, rather than frustrate, sustainable development.

Dr. Emil Salim  
Minister of State for Population and Environment  
Indonesia



# **Introduction**

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## **Introduction**

Never before has international trade been the focus of so much attention. The current interest is understandable; trade is critical to global economic development, and it has major implications for ecological sustainability and equity issues.

In 1990, international trade flows amounted to US \$4.3 trillion. Negotiations are underway that will have substantial impacts on those flows, and on the economies they weave together. They will also undoubtedly have impacts on the environment, a fact which has created no small amount of controversy between the trade and environment communities. But the debates and discussions are fragmented, and the various players often do not address the same issues. This is further complicated by the wide-ranging nature of the trade-environment debate, which makes it difficult for anyone to have indepth knowledge of all the relevant areas.

Even among the experts, there is little agreement on basic policy goals. Are they related primarily to economic efficiency, which can lead to greater prosperity, or do they aim first for environmental sustainability, which can lead to long term security?

This report brings together research and viewpoints from the fields of trade, the environment and sustainable development. It is intended to advance the debate by exploring the relationships among these fields through:

- ▶ an examination of the current issues, with a brief history, covering the wide range of topics now under discussion. All are addressed from the perspective of sustainable development.
- ▶ a new research agenda, of work needed in order to understand and bring about a positive link between trade and sustainable development.
- ▶ an outline of the activities of major international institutions, and selected North American research groups.
- ▶ an extended bibliography.

This document is the first major publication of IISD's Trade and Investment Program, much of whose research centres on trade and sustainable development issues. It represents an extensive collaborative effort; papers were commissioned from several experts in the field, both in Canada and abroad. There was a process of wide consultation, through circulation of background papers to experts, and through workshops, held in Washington D.C., and in Winnipeg, Canada. These workshops were attended by experts in both the trade and environment fields, and included representatives of both industrialized and developing countries.

The report has four principal parts, the first of which is a discussion of the issues and an exploration of their evolution, while the second presents the new trade and sustainable development research agenda. Following the discussion and research agenda, the third part briefly lists the major research institutions active in the field, and some of the work they have underway. Finally, there is a bibliography that brings together literature from trade, sustainable development, and environmental sources.

#### ► PART I

Within the first part, section one argues that the trade-environment debate has been characterized by a lack of common perspectives on the issues, or by incompatible goals. The concept of sustainable development is put forward as a framework within which the various positions can be understood in common terms. This will not necessarily lead to agreement, but rather to a single analytical framework which allows the viewpoints to be evaluated on a consistent basis. It should lead to a more constructive approach and to much-needed research.

The second section, *A History of the Issue*, then reviews the evolution of the debate, from the 1972 Stockholm conference to the present. Historical trends in both trade policy and environment policy are discussed. While there has been a great deal of activity in both over the last 20 years, and while both have made acknowledgements to the other, it is only recently that many people have begun to see them as critically interrelated issues.

Following the history, the third section, *Effects of Trade on the Environment and Sustainable Development*, explores the ways in which trade flows may either foster or frustrate sustainable development, given the context of poverty and debt in many Southern countries. There is also some analysis of the implications of the Uruguay Round's new issues: intellectual property rights, trade-related investment measures and trade in services.

The fourth section, *Effects of Environmental Policies on Trade*, discusses the complex questions raised by uneven international standards for products and production, and looks at how environmentally-based standards can affect trade flows and the global economy. The context of North-South inequity makes these issues more complicated still.

The final section, *Institutions for Trade and Sustainable Development*, makes the case that the existing structures are being forced to respond to issues which were not foreseen in their design. An exploration of the obstacles to sustainable development as exposed by the UNCED process makes it clear that the tasks that lie ahead are not simple. This section examines some of the new possibilities being discussed — both in terms of changing existing institutions and creating new ones.

**▶ PART II**

The result of the foregoing survey of issues is The New Research Agenda. Expanding the focus of discussion from trade and environment to trade and sustainable development brings to light major gaps in our knowledge of trade, environment and development linkages, which will have to be addressed by researchers worldwide if we are to make appropriate institutional and policy choices.

**▶ PART III**

We have included a listing of major organizations which are currently doing research in the fields discussed above, along with a brief discussion of some specific initiatives. The list is not meant to be exhaustive, but is a current snapshot of a field in which there is a rapidly increasing level of interest. It deals primarily with international institutions, and those currently dealing with issues raised in the North American Free Trade Agreement negotiations.

**▶ PART IV**

The fourth major section of the report is an extended bibliography, which covers the rapidly growing literature on as up-to-date a basis as possible. This should be a valuable resource for those interested in various aspects of the field. Those coming at it from the trade side will find a good list of sources on the environment and sustainable development side, and vice-versa. The entries are arranged in topical groupings, in order to assist in finding relevant material.

Finally, in a field that seems to be leading the world in developing new acronyms and obscure abbreviations, some explanation of terms is essential. At the end of the book is a brief list of some of the terms that will be found throughout the literature on this topic.

**▶ WORK PROGRAM AND ACKNOWLEDGEMENTS**

This report was prepared under the supervision of David Runnalls, of the Institute for Research on Public Policy, in Ottawa, Canada. He helped to develop the framework, organized the workshops, and did much of the writing. Aaron Cosbey, of IISD, contributed extensive research and writing.

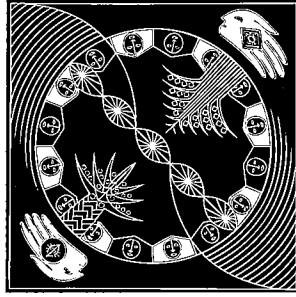
The text is based in part on research by Murray Smith, of the Centre for Trade Policy and Law, in Ottawa, and Nurul Islam, of the International Food Policy Research Institute, in Washington, D.C. They provided the core of the analytical content, and they supervised the research and the preparation of background materials. We are grateful for their major contribution.

Research assistance at the Centre for Trade Policy and Law was provided by Wenguo Cai and Maria Isolda P. Guevara.

Project direction from IISD was provided by Arthur Hanson and Stephan Barg.

The work was enriched by the comments and suggestions of Konrad von Moltke of Dartmouth College, U.S.A., and several members of IISD staff, including Gilberto Gallopin, Gabriel Regallet, Marnie Jull, Julie Wagemakers, Zonny Woods and Chris Loly, to all of whom we are indebted.

Finally, we are grateful for the observations of the participants from both the Winnipeg and Washington, D.C. workshops, and from various IISD Board Members who have commented on earlier drafts.



# **Issues in Trade and Sustainable Development**

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## The Trade-Environment Debate And Sustainable Development

This publication is not about trade and the environment. Or rather, it is about more than that; it sets out the issues relating to trade and *sustainable development*. It outlines what we mean by sustainable development, and shows what the concept might add to the current trade-environment debate. Our goal is to change the nature of that debate to make it more productive of positive solutions. After exploring some of the history behind current trade and environmental policy, it looks at how environmental policies affect trade, and trade policies affect the environment and sustainable development. In concluding, it argues the need for new institutions to help ensure that trade serves sustainable development, and examines some of the options for reform currently being discussed.

But this is more than a survey. It tries to convey the urgency, for both developed and developing countries, of making the current environment-trade debate more productive. And it sets out a research agenda: questions that arise from the focus on sustainable development which need to be explored by researchers worldwide. The fruits of such research will be a crucial basis for policies to reconcile international trade and sustainable development.

The interested reader (and prospective researcher) will find, in the sections that follow this one, an extensive bibliography, and a survey of major institutions with interests in trade and sustainable development, with some indication of what each is doing in the area.

### ► WHAT IS SUSTAINABLE DEVELOPMENT?

The World Commission on Environment and Development (WCED), better known as the Brundtland Commission, pointed out forcefully in its 1987 report that an essentially open human economic system was pushing against an essentially closed ecological system, with frightening results. There is certainly no mistaking the evidence of global environmental degradation; the Worldwatch Institute's "State of the World Report" for 1992 offers us a glimpse of some of the major trends:

- *The protective ozone shield in heavily populated latitudes of the Northern Hemisphere is thinning twice as fast as scientists thought just a few years ago.*
- *A minimum of 140 plant and animal species are condemned to extinction each day.*
- *Atmospheric levels of heat-trapping carbon dioxide are now 26% higher than the pre-industrial concentration, and continue to climb.*
- *Forests are vanishing at a rate of some 17 million hectares per year, an area about half the size of Finland.<sup>1</sup>*

■ ■ ■

<sup>1</sup> Worldwatch Institute. *State of the World 1992*. New York: W.W. Norton & Company, 1992, p 3.

The trends in these areas parallel the trends in human degradation. More than 1.5 billion of the world's people live in wretched poverty in garbage dumps, shanty towns or resourceless rural areas. In the last 15 years, the number of poor people have increased by 81% in Africa, 55% in Asia and more than doubled in Latin America. The United Nations estimates that 500 million people in the Third World are either unemployed or underemployed - equal to the entire work force of the developed world. At the same time, the demographers tell us that we cannot escape a doubling of world population by the middle of the next century.

The fundamental question facing the Brundtland Commission was how to provide an adequate standard of living for the 10 billion people who will be living on the planet by the mid 21st century without destroying the planet's vital life support systems. It should be obvious from the data above that industrial expansion on the present model is simply not an option — the growth in fossil fuel use alone would be enough to produce climate change at an unacceptable level.

The Brundtland solution, sustainable development, provides for meeting the needs of the global population, "in particular the essential needs of the world's poor, to which overriding priority should be given,"<sup>2</sup> but does so within certain constraints, or limitations. First, any growth and development will be necessarily limited by the current state of technology. Second, the current state of our social organizations will determine such things as the rate of technical change, and how equitably we distribute the fruits of growth. And third, all growth and development must respect the limitations imposed by the environment.

Sustainable development, then, implies both greater equity and continued growth. But this is growth of a different kind. It is growth which consumes far less energy and raw material than current patterns. It is growth which is far more equitably distributed both within and between nations. It is growth which places a premium on the quality of the output rather than the quantity. It is growth which increases or maintains the quantity and quality of ecological capital, rather than running it down. The Brundtland conception of growth is environmentally, socially and economically sustainable.

Perhaps the two most important insights of Brundtland's Report, "Our Common Future," are the need to integrate environment and economics at the highest level of the decision-making process and the need to perform this integration *before* decisions are taken in order to anticipate and prevent environmental damage.

This new kind of development will cost a great deal of money. Estimates by the World Institute for Development Economics Research and by the Secretariat of the recently concluded Earth Summit range from \$600 to \$750 billion annually by the turn of the century. No one believes that this will come entirely from Official Development Assistance or private investment flows. Although much of the funding for sustainable development must be derived from reallocation of existing budgets, new sources of wealth are critical.

■ ■ ■

<sup>2</sup> WCED, *Our Common Future*. Oxford: Oxford University Press, 1987, p 43.

Hence, international trade is integral to the type of sustainable development envisioned by Brundtland. Fair trading arrangements enrich those on both ends of the exchange, and enable producers to engage in those activities they do most efficiently.<sup>3</sup> Because this creates more wealth, trading countries may in turn be able to invest more in social infrastructure such as education, nutrition and health, and may relieve pressures to sacrifice long-term environmental integrity for short-term “desperation” economics.

However, these desirable possibilities are just that — possibilities. They depend crucially on recognition of the links connecting the environment, the economy and human well-being, and, more than that, on institutions which embody that recognition in their decision-making processes. The disturbing trends enumerated above are examples of what happens in absence of such recognition. They represent the aggregate environmental results of myriad small decisions made in the world’s households, farm lots, boardrooms and chambers of government — all based narrowly on their economic or political effects.

If international trade is to fulfil its potential to serve sustainable development, trade policy will have to be formulated in the knowledge that, along with its powerful potential to affect the economies of trading nations, trade has an equally powerful potential to affect the environment and well-being of the world’s citizens. This is the challenge posed by the Brundtland concept of sustainable development.

#### ▶ **TRADE AND ENVIRONMENT: DIALOGUE OF THE DEAF**

For the most part, this challenge has not yet been taken up. Certainly there are those in both the trade and the environmental communities who have come to recognize the need for change. They are searching for ways to have trade and environmental policies take account of their wider effects, and ensure that both will work towards achieving sustainable development. But they have far to go. For the most part the traditional view, which sees trade policy as concerned only with trade, and environmental policy with the environment, still prevails.

Many advocates of liberalized trade see it as almost an end in itself, with few justifications for its restriction. If trade flows impinge on the environment or on human well-being, then governments are obviously not doing their jobs in properly regulating polluters, or distributing the gains from trade. They argue that if raising crops for export in California or Western Europe results in overuse of water, fertilizers and pesticides, for example, then the government should stop subsidizing these inputs, and should consider taxing them. If that leaves foreign competitors with an unfair advantage, international agreements should be reached to follow harmonized standards for agricultural production. The problem is one of reforming domestic policy, or reaching international agreements for reform, not of restricting trade, the engine of economic growth which can provide the resources for enhanced environmental protection.

■ ■ ■

<sup>3</sup> In a sense, this whole document is about trying to define what constitutes “fairness” in trading arrangements. Some obvious elements might be, for example, the lack of external costs and a lack of market power by buyers and sellers. Since “fair” trade is voluntary, both sides of the exchange must necessarily be better off for the transaction.

**MOST OF THE DISCUSSION IN THE UNITED STATES HAS BEEN OVER THE PREVENTION OF POLLUTION THAT RESULTS FROM, OR MIGHT RESULT FROM THE NORTH AMERICAN TRADE REGIME. ... IMPORTANT AS THESE ISSUES AND PALLIATIVES ARE, ALL OF THE DISCUSSION ABOUT THEM MISSES A MUCH MORE IMPORTANT POINT: THAT TRADE MUST SERVE SUSTAINABLE DEVELOPMENT.**

JANET WELSH BROWN AND LEE KIMBALL (WORLD RESOURCES INSTITUTE). *NEEDED: NEW RULES AND MECHANISMS FOR DEALING WITH TRADE AND ENVIRONMENT ISSUES IN THE WESTERN HEMISPHERE*. 1992, pp 10-11.



**FREE TRADE IS NOT UNLIKE THE  
FREE MARKET: IT REQUIRES RULES  
TO PROTECT IT FROM EXCESSES  
IMPLICIT IN ITS CONSTRUCTION.  
THE PARADOX IS THAT WITHOUT  
REGULATION THERE IS NO FREE  
TRADE, BUT EXCESS REGULATION  
REMOVES THE DISCIPLINE OF  
COMPETITION.**

KONRAD VON MOLTKE. "FREE TRADE AND  
MUTUAL TARIFFS: A PRACTICAL APPROACH TO  
SUSTAINABLE DEVELOPMENT." *EcoDECISION* 5,  
(JUNE 1992): 45.

While liberal trade advocates tend to evaluate policy on its effects on trade flows, many of their critics, mostly drawn from Non-Governmental Organizations (NGOs) involved in environmental or social issues, focus their attention on trade policy's effects on the environment. This view holds that if trade policy impinges on the environment, or on human well-being, then governments may need to restrict trade flows (or at least not to further liberalize existing trade flows), to alleviate the problem, especially since international agreement to follow harmonized standards is difficult, if not impossible, to reach. The assumption is that there are few efficiency losses from restricted trade, or that the losses which do occur are outweighed by the gains from improved environmental and social conditions.

Both communities bring legitimate concerns to the discussion. On the one hand, advocates of free trade feel that environmentalists underestimate the dangers of protectionism, and they fear that legitimate environmental concerns will be used by protectionist interests operating under the more politically acceptable guise of "green" trade restrictions. These concerns stem from a sense of history; many economic historians consider the Great Depression of the 1930s to have been largely a product of a slow-down of world economic activity in the wake of crippling protectionist trade wars. And the strength of present-day pressures for protectionism are clearly demonstrated by the massive support for textiles and agriculture in the developed world – two key sectors in which the GATT's (General Agreement on Tariffs and Trade) efforts to achieve liberalized trade have yet to bear fruit.

Environmentalists, on the other hand, worry that countries which liberalize trade will lose the right to determine their own environmental standards, since free trade is often accompanied by calls for a harmonized international system, or may lead to competitive international underbidding of standards. In the words of Steven Shrybman,

*In the language of multilateral trade, the agenda of current negotiations is to 'liberalize' international trade by reducing import and export controls, and by eliminating 'non-tariff trade barriers'. In many ways the objectives of liberalized or free trade represent an agenda for de-regulation, and the consequences of such a policy for the environment are very problematic. Because trade policies are being pursued without any assessment of, or effort to mitigate potential environmental effects, the results are quite likely to undermine environmental initiatives.<sup>4</sup>*

In either case, regions with high standards, such as Germany and Japan, may be pressured to become more lax. Concerned groups in the United States have pointed out that if the U.S. were forced to adopt the standards of The Codex Alimentarius<sup>5</sup>, it would have to allow levels of DDT residue on food imports 50 times as high as those currently allowed.

■ ■ ■

<sup>4</sup> U.S. Congress, Hearing before the Subcommittee on Health and the Environment of the Committee on Energy and Commerce, House of Representatives, September 27, 1991, Serial No. 102-53, p 77.

<sup>5</sup> The Codex Alimentarius is a U.N. based regulatory commission which sets sanitary and phytosanitary standards. The Draft Final Act of the Uruguay Round of GATT negotiations (The "Dunkel Text") proposes to give this group full enforceable authority in this area.

They also worry that free trade may hasten environmental destruction, by increasing environmentally damaging economic activity at a time when many of the thresholds of the world's ecosystems are already being reached or broached. According to this argument, if current patterns of economic production are destroying the environment, and trade means greater efficiency and therefore more production and growth, then freer trade is undesirable. The increased transportation activity alone that would accompany freer trade might have significant impacts on global warming and depletion of fossil fuels.

#### ► SUSTAINABLE DEVELOPMENT: A COMMON LANGUAGE OF DISCUSSION

What is needed is a common frame of reference, a common language, which can be used to analyze the issues and evaluate policy. As the Brundtland Commission counselled, environment and economics must be integrated in institutions, and in processes of decision-making. To do so requires a new conceptual framework for evaluating trade and environment policy, which recognizes the objectives of both sides of the debate.

The concept of sustainable development can provide the necessary framework for analysis. Essentially this would mean that the bottom line for trade and environment policy would be three-fold: the economy, the environment and human well-being. Using sustainable development as a base of reference thus incorporates the concerns of both the environmentalists (i.e., environmental integrity should be maintained or strengthened) and the trade advocates (i.e., economic development should occur). And it brings to the table crucial development issues, such as poverty and community, which are ignored by the current trade-environment debate.

## Evolution of the Debate

#### ► A HISTORY OF THE ISSUE

Environment and Trade has become a major issue in international fora. The most recent annual report of the GATT Secretariat is largely devoted to it, as is the second chapter of Agenda 21, the action program which emerged from the Earth Summit.

*An open, equitable, secure, non-discriminatory and predictable multilateral trading system, that is consistent with the goals of sustainable development, and leads to the optimal distribution of global production in accordance with comparative advantage, is of benefit to all trading partners. Moreover, improved market access for developing countries' exports in conjunction with sound macroeconomic and environmental policies would have a positive environmental impact and therefore make an important contribution toward sustainable development.<sup>6</sup>*

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<sup>6</sup> UNCED, Agenda 21, Chapter 2, para 2.5. Page references not available because final version of the document not yet published.

**[THERE IS A] NEED TO INTEGRATE TRADE AND ENVIRONMENT CONCERNS IN THE SERVICE OF A HIGHER GOAL: THE PROMOTION OF SUSTAINABLE DEVELOPMENT. THOUGH OFTEN UNWIELDY, (AND CERTAINLY ILL-DEFINED), THE CONCEPT OF SUSTAINABLE DEVELOPMENT OFFERS AN INTELLECTUAL FRAMEWORK FOR UNDERSTANDING THE NEED FOR, AND THE BENEFITS OBTAINED FROM, UNITING TRADE AND ENVIRONMENT CONCERNS.**

STEWART HUDSON. "TRADE, ENVIRONMENT AND THE PURSUIT OF SUSTAINABLE DEVELOPMENT." IN *INTERNATIONAL TRADE AND THE ENVIRONMENT*, WORLD BANK DISCUSSION PAPER NO. 159. EDITED BY PATRICK LOW. WASHINGTON: WORLD BANK, 1992: 55.

**MANY THIRD WORLD POLICYMAKERS ... REGARD ANY PRESSURE [TO INTERNALIZE POLLUTION COSTS] AS A FORM OF DISGUISED PROTECTIONISM FROM ESTABLISHED PRODUCERS. YET IT IS IN THE DEVELOPING COUNTRIES' OWN LONG-TERM INTERESTS THAT MORE OF THE ENVIRONMENTAL AND RESOURCE COSTS ASSOCIATED WITH PRODUCTION BE REFLECTED IN PRICES.**

WCED. *OUR COMMON FUTURE*. OXFORD: OXFORD UNIVERSITY PRESS, 1987, P 84.

There is a good deal of discussion about the next round of global trade negotiations becoming a "green round". In a speech prior to the Rio Conference, Prime Minister Brian Mulroney of Canada pledged his country's support for such a "round". The United Nations Conference on Trade and Development (UNCTAD) and the Organization for Economic Cooperation and Development (OECD) have identified trade and environment as a key research priority, and both OECD and the World Bank have also recently held meetings on the subject. The Bush Administration, in promoting the North American Free Trade Agreement (NAFTA), was forced to expend much of its energy responding to the concerns of the U.S. environmental community, through the development of a parallel environmental agreement, and by pressing the Mexican government to dramatically increase its spending on environmental protection and to strengthen its enforcement of existing legislation. Reaction to the preliminary draft of NAFTA by the Canadian and American environmental communities indicates that this issue will continue to play a major role in the discussions leading to the ratification of the pact.

Despite all of the recent attention devoted to it, the issue is not new. In fact, many of the concerns raised in the debate have arisen in other forms over the 20 years since the first United Nations Conference on the Human Environment. The Stockholm Conference was proposed in the General Assembly by the OECD countries, led by Sweden. At first, the developing countries were reluctant to participate in the preparatory process. They felt that environmental problems, as defined by the developed countries, were largely byproducts of industrialization and irrelevant to their interests.

Furthermore, they feared that environmental concern in the North would slow down their development plans by imposing new preconditions for development projects which would not be accompanied by new financial resources (the question of additionality, which resurfaced constantly throughout the Earth Summit). Many were also concerned with the possibility that developed country concerns over the environment and health would lead to a raft of new restrictions on their exports to the North (the emergence of the issue of effects on international trade of domestic environmental policy). Paradoxically, many fear that these restrictions are likely to multiply if the Uruguay Round is successful in reducing agricultural protectionism, as the protectionist forces seek to dress their restrictions in more fashionable green clothes. It is ironic that the contemporary example of just such a restriction, the U.S. ban on imports of tuna from Mexico<sup>7</sup>, was paralleled in the run up to Stockholm by an American ban on the same fish from the Philippines (it was feared that these tuna contained excessively high levels of mercury). Some Third World governments also feared that multinational corporations would be driven by higher standards in the North to locate their dirtiest and most toxic facilities in Southern "pollution havens".

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<sup>7</sup> This dispute raises an interesting distinction. The issue at stake is actually as much an animal rights issue as an environmental one; the dolphins in question are not an endangered species.

These concerns were partially allayed by the Founex Declaration, prepared at the suggestion of Maurice Strong, the Conference's Secretary-General, by a group of young and well respected economists from the developing world.<sup>8</sup> The document was drafted by Mahbub ul Haq, later to become Finance Minister of Pakistan and Gamani Corea, Governor of the Central Bank of Ceylon, later to become Secretary-General of UNCTAD. It pointed out that environment and development could be mutually reinforcing, and not opposing, concepts. The Declaration also reaffirmed the importance of lowering trade barriers in the North if the developing countries were to have the financial resources necessary for environmental protection. This and other efforts by Strong to engage developing countries in the preparatory process proved so successful that a Conference which the Third World at one time threatened to boycott was eventually dominated by an eloquent plea by Mrs. Gandhi that the worst form of pollution was poverty.<sup>9</sup>

While trade and the environment was not a major issue at Stockholm, it did persuade both UNCTAD and GATT to take it up. GATT even went so far as to establish a Committee on Trade and the Environment. But the members showed their real degree of concern for the issue by delaying its first meeting for almost 20 years.

Elements of the trade and environment debate re-emerged on a number of occasions in the years after Stockholm. The effect of environmental policy on trade was demonstrated by the Convention on International Trade in Endangered Species (1975). CITES contains appendices which list species in danger, which are updated every two years. If a species is listed in Appendix 1, all parties to the convention are required to ban trade in those goods. Items listed in Appendix 2 require a permit system for their entry into trade.

While CITES dealt with species that were by common consent endangered, the issue of the rights of non-endangered species arose with the 1972 European ban on seal pelts imported from Canada. This issue is once again in the news with the controversy over furs from animals caught in leg hold traps. These boycotts may represent the first emergence of a form of "green consumerism" in which consumers voice their disapproval of the environmental policies of another country by boycotting selected products from that country. Consumers may also voice their *approval* of particular products, or their method of production (e.g., organic produce) by buying them in preference to other goods.

The need for harmonization of national environmental rules and regulations is a clarion call of many engaged in the debate. This issue emerged in all of its complexity when the Commission of the European Communities first began to assume some responsibility for community-wide environmental policy in the 1970s. It has re-emerged in subsequent discussions of other trading blocs such as

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<sup>8</sup> *Development and Environment*, Report and Working Papers of a Panel of Experts Convened by the Secretary General of the United Nations Conference on the Human Environment (Founex, Switzerland, June 4-12, 1971). Geneva: The United Nations, 1972.

<sup>9</sup> Mrs. Gandhi's point was that the poor, because they have few choices, are forced to degrade their environment. Any solution to pollution therefore must address the underdevelopment and poverty which are so often its root causes.

**TRADE IS SEEN ... AS A  
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TRADE PROMOTES DEVELOPMENT  
THAT IS SUSTAINABLE.  
ALTERNATIVELY, IF SUCH POLICIES  
ARE LACKING, THE COUNTRY’S  
INTERNATIONAL TRADE MAY  
CONTRIBUTE TO A SKEWING OF  
THE COUNTRY’S DEVELOPMENT IN  
AN ENVIRONMENTALLY DAMAGING  
DIRECTION, BUT THEN SO WILL  
MOST OF THE OTHER ECONOMIC  
ACTIVITIES IN THE COUNTRY.**

GATT. *INTERNATIONAL TRADE 90-91*, VOL. I.  
GENEVA: GATT, 1992, P 20.

the Canada/U.S. Free Trade Agreement and the proposed North American agreement between the United States, Canada and Mexico. Many in the environmental community fear that the pressures for harmonization in such agreements will be to “harmonize down” to the lowest standards, although this has not been the experience of the European Community.

Rather than concentrate on the effects of environmental policy on trade as illustrated in the previous examples, the 1987 report of the WCED pointed out the dangers to the environment of the current trading arrangements. The Brundtland report stated what many in the environmental community had suspected, namely that pressures on developing countries to earn foreign exchange (often under World Bank and the International Monetary Fund (IMF) structural adjustment plans) were forcing undue reliance on increasing commodity exports. By overexploiting the natural resource base, these exports were helping to undermine the ecological capital of many developing countries. The Commission went on to state that

*...such processes have been at work in ranching for beef, fishing in both coastal and deep sea waters, forestry, and the growing of some cash crops. Moreover, the prices of commodity exports do not fully reflect the environment costs to the resource base. In a sense, then, poor developing countries are being caused to subsidize the wealthier importers of their products.<sup>10</sup>*

The WCED continued in this vein when it pointed out that where developing countries had succeeded in moving up the value-added chain to the processing of raw materials, they were again subsidizing the wealthier consumers. The argument here is that most developed countries have succeeded to at least a moderate degree in internalizing some of the externalities<sup>11</sup> associated with processing raw materials in their own countries. The environmental costs were therefore partially borne by wealthy consumers. Since most developing countries have weaker environmental protection regulations, their residents were bearing most of the costs associated with the externalities or raw material processing for the North.

This relationship — the North as subsidized by the South — can conversely be thought of in terms of the North as heavily *dependent* on the South. In “Beyond Interdependence”, MacNeill, Winsemius and Yakushiji introduce the concept of *shadow ecology* thus:

*Today...the major urban/industrial centers of the world are locked into complex international networks for trade in goods and services of all kinds, including primary and processed energy, food, materials and other resources...This ecological capital, which may be found thousands of miles from the regions in which it is used, forms the shadow ecology of an economy.<sup>12</sup>*

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<sup>10</sup> WCED. *Our Common Future*. Oxford: Oxford University Press, 1987, p 81.

<sup>11</sup> The concepts of externalities and external costs are explained below, as well as in the appended glossary.

<sup>12</sup> MacNeil, Jim, Pieter Winsemius and Taizo Yakushiji. *Beyond Interdependence*. New York: Oxford University Press, 1991, p 58.

The authors cite Japan as the prime example of a country with a vast shadow ecology. They point out that 70% of all cereals and 95% of soybeans consumed in Japan are imported, as is more than 50% of its wood.<sup>13</sup> The high levels at which Japan consumes these commodities are adding to the pressure on developing countries to develop them as quickly as possible. Japan is therefore especially vulnerable to disruptions in supplies from developing countries due to environmental deterioration. Although Japan may well be an extreme example, these dependencies can be found in Northern countries.

#### ► PLUS ÇA CHANGE — THE TRADE COMMUNITY

The GATT was never intended to be an institution governing trade, but was rather an interim agreement, the product of the second session of the Preparatory Committee for the International Trade Organization (ITO). The ITO was to be the third pillar of international post-war co-operation (along with the IMF and the World Bank), charged with fostering free international trade, and preventing the types of protectionism and trade wars that had devastated the international economy during the depression years. The ITO was never ratified, primarily because of U.S. resistance, but the GATT persevered, albeit without the full status of an international organization.

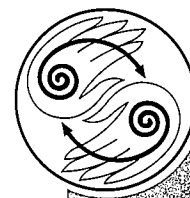
Contracting parties to the agreement are obliged to meet “from time to time” to review and expand policy, a process which usually lasts several years, and has occurred eight times since the initial round in 1947. The eighth round, the “Uruguay Round”, was to have concluded in 1990, but as of 1992 is still underway. GATT’s membership consists of almost 100 countries (original signatories numbered 23), who in aggregate account for about 90% of world trade.

The GATT has enjoyed remarkable success on its own terms; since its inception, tariffs have been reduced from an average of 40% to about 5%, and world trade has increased by roughly 500% (twice the rate of increase in global GDP). The steady increases in global income enjoyed by many countries in the post-war period would not have been possible without this explosion of global trade. GATT’s detractors point out that the decrease in tariffs has been accompanied by a corresponding increase in non-tariff barriers and subsidies. They also point out that the spoils of increased global trade have not been evenly distributed, with the income gap between North and South increasing.

Many of the issues raised by concerns for the environment are far from new to trade rules and regulations. As far back as the turn of the century, the nations of the world were using trade mechanisms to enforce “environmental” conventions. The 1900 Convention for the Preservation of Wild Animals, Birds and Fish in Africa, for example, called for a system of restrictive export licenses. And a treaty signed in 1911 by the world’s major seal-hunting nations, which outlawed pelagic sealing for conservation reasons, compelled signatories to ban the import of seal skins harvested in violation of the Convention.

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<sup>13</sup> *Ibid.* p 59.



#### Trade Measures: A History

Utilizing trade tools to achieve environmental measures is not a new idea. From the advent of international environmental cooperation, governments have recognized how effective trade measures could be in dealing with problems that transcend national borders. Some early examples included treaties for the preservation of wildlife in Africa (1900), the banning of matches made of white phosphorous (1906), the preservation of fur seals and sea otters (1911), and the protection of migratory birds (1916). By 1927, there were about one dozen U.S. Federal Acts that used trade instruments for environmental purposes. More recent environmental agreements incorporating trade measures include:

- Basel Convention on the Control of Trans-boundary Movement of Hazardous Wastes (1989)
- Montreal Protocol on Substances that Deplete the Ozone Layer (1987)
- International Tropical Timber Agreement (1982)
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (1973)
- Convention for the Establishment of an Inter-American Tropical Tuna Commission (1949)
- International Convention for the Regulation of Whaling (1946)

CHARNOVITZ, STEVE. “EXPLORING THE ENVIRONMENTAL EXCEPTIONS IN GATT ARTICLE XX.” *JOURNAL OF WORLD TRADE* 25, No. 5 (OCTOBER 1991): 37-55.



### Carbon Taxes: Who Pays What?

One way of internalizing the full costs of carbon use is through taxation. Piggott, Whalley and Wigle have explored the international cost and payment effects of alternate carbon tax schemes, using a general equilibrium model comprised of three regions: developed, developing and oil-exporting. By capturing the economy-wide effect of energy price changes as they feed through the model, they evaluate the global economic cost of reducing carbon emissions by 50% in the range of \$280 billion per year (1986 dollars), or about 2% of world product. Effects by region however, differ dramatically across various tax options, suggesting that any carbon limitation could have major distributive implications for the global economy and that negotiations could be politically difficult. In the case of production-based taxes, energy producers will collect tax revenues, and oil exporters will gain. Under a consumption-based tax, oil importers will collect revenues, and hence developed countries will lose less. Under a global tax, the revenues would be redistributed according to a per capita basis and developing countries and centrally-planned countries gain substantially.

PIGGOTT, JOHN, JOHN WHALLEY AND RANDALL WIGLE. "INTERNATIONAL LINKAGES AND CARBON REDUCTION INITIATIVES." IN *THE GREENING OF WORLD TRADE ISSUES*. EDITED BY K. ANDERSON AND R. BLACKHURST. LONDON: HARVESTER WHEATSEAF, 1991.

The most interesting examples of early trade negotiations were those involving sanitary or phyto-sanitary restrictions (restrictions aimed at preserving human, plant or animal health). These were primarily intended to safeguard against the importation of infectious diseases, insects and parasites from other countries, but could also extend to general public health concerns. For example, the United Kingdom in the 1920s banned imports of fruit from the U.S., citing excess residues of arsenical pesticides (thereby forcing the U.S. to regulate pesticide use). The trade agreements of the day commonly allowed governments the discretion to set such standards unilaterally.

### ► TRENDS IN TRADE POLICY

The calls for environmentally-based trade restrictions go against an established trend towards trade liberalization — a trend many in the trade community are reluctant to reverse. The rules of the GATT were negotiated over many years, and with much wrangling and wresting of concessions. The current deadlock of the Uruguay Round over agricultural subsidies shows just how protracted and complex such negotiations can be. The broad new exceptions to those rules proposed by some environmentalists, based on inherently difficult notions such as environmental costs and sustainability, present a host of new problems that makers of trade policy are hesitant to address.

The chapter on trade and the environment in the most recent annual report of the GATT clearly demonstrates this reluctance.<sup>14</sup> For the first time, the report does highlight the relationship between trade and the environment, arguing that trade may in fact be environmentally beneficial, since it increases incomes and therefore the capacity to be environmentally conscientious. It also points out that restrictions on trade are a less efficient way to protect or improve the environment than are international agreements on common goals and standards. And it warns of the risks to the present trading system of "environmental issues and concerns being exploited by protectionists for their own benefit."<sup>15</sup>

These arguments all contain elements of truth, but they do not address some of the most difficult issues raised by environmental concerns over trade. The report does not consider, for example, what should be done when nations cannot agree on common environmental goals and standards. If it is impossible to reach agreement on a global convention on forestry, is there any place for trade measures to deal with unsustainable rainforest destruction? Or if polluting industries migrate to countries which refuse to regulate to international standards, is there a role for trade measures as enforcement mechanisms?

The Uruguay Round is GATT's most comprehensive negotiation to date, encompassing new issues such as trade in services, and coming to grips with old ones, such as agricultural protection. Developed countries would like to see services, such as communications, consulting, transportation and financial

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<sup>14</sup> GATT. *International Trade 90/91*, Vol. I. Geneva: GATT, 1992.

<sup>15</sup> *Ibid.* p 21.

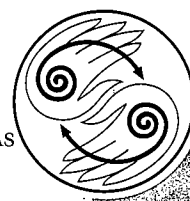
services, liberalized, since these are the fastest-expanding sectors of global production, and since their capacity in these sectors is already well-developed. As well, developed countries are pressing for tougher, and more strictly-enforced, protection of intellectual property, such as patents, copyrights and trademarks, and a liberalization of trade-related investment measures. Third World countries insist that before such broad new issues are dealt with, old ones should first be resolved. Long-standing tariff and non-tariff barriers combined with subsidies for the agricultural and textiles sectors in the North have historically shut off an important avenue for their development.

The development of multilateral trade frameworks has been accompanied by the creation of bilateral or regional free trade agreements. Most prominent among these is the European Community, created from the vision of Jean Monet and others who wanted to insure Western Europe against the dangers of renewed war. Its success influenced the development of the Canada-U.S. Free Trade Agreement and the proposed NAFTA. Early experiments in the developing world with common markets ended in failure with the East African and Central American agreements collapsing. They are now regaining favour, particularly in Latin America with the revival of the Central American agreement, the MERCOSUR in South America, and arrangements involving the northern tier of Andean countries, and in Asia, with the recent signing of the Singapore Declaration by the Association of Southeast Asian Nations (ASEAN).

This trend towards trade liberalization has been accompanied by attempts on the part of many countries to rely more on the market for economic decision-making. Privatization of state owned industries, cutbacks in government expenditure and the reduction of government regulation are being carried out throughout the First and Second Worlds and are the staples of advice rendered to developing countries by the World Bank and the International Monetary Fund. Indeed, they have often become preconditions for Bank and Fund assistance. Most structural adjustment packages negotiated with these institutions contain provisions for liberalized access for foreign capital, cutting budget deficits, reducing the size and role of the civil service, changing internal pricing policies, adopting more realistic exchange rates and altering macroeconomic policies.

#### ► TRENDS IN ENVIRONMENTAL POLICY

While the tendency in trade policy has been toward increased reliance on the market and a reduction in the regulatory activities of the state, the trend in environmental policy-making (at least until recently), has been exactly the opposite. Much of environmental policy in the OECD countries has concentrated on legislating the government's role in ensuring the careful management of the "common property resources." Air, soils and water have long been thought of as "free goods". While they are as essential to most production as are other inputs like steel and petroleum, those who use them, usually as sinks for pollution, do not have to pay for their services. Since they are common property, there is no owner to pay. This gives rise to two problems. First, because the private cost of using these free goods is so low (often zero) they tend to be overused, leading to excess pollution of waterways, soils and the atmosphere. Second, the costs of that



#### Carbon Permit Proposals

The most difficult part of a system of tradeable carbon emission entitlements in a climate change treaty would be establishing allocation rules. A number of possibilities have been identified:

1. Negotiate a global limit on carbon emissions, and allocate this limit on the basis of carbon emissions per capita.
2. Negotiate a global limit on carbon emissions, and allocate this limit on the basis of carbon emissions per unit of GNP.
3. To allow for a minimal disruption of the status quo, and hence the smallest transfers emissions might be reduced by a uniform percentage.
4. Since the rich have been the chief polluters, permits might be granted outright to poorer countries.
5. As an implicit reward for the use of renewable energy, entitlements might be allocated in inverse proportion to per capita consumption of fossil fuels.
6. Agree on a total quantity of emissions entitlements, and then have an international agency auction these off to the highest bidder and thus allocate permits to countries with the greatest willingness (and ability) to pay.

SCOTT BARRETT IN UNCTAD.  
*Combating Global Warming: Studies on Global Systems of Tradeable Carbon Emissions Entitlement.* NEW YORK: UNCTAD, 1992.



**WE CANNOT ALLOW GATT TO  
BECOME A SHIELD FOR NATIONS  
THAT SHUN INTERNATIONALLY  
RECOGNIZED NORMS FOR  
ENVIRONMENTAL PROTECTION.  
GATT MUST RECOGNIZE  
ENVIRONMENTAL PROTECTION  
AS A LEGITIMATE OBJECTIVE OF  
TRADE POLICY.**

SENATOR MAX BAUCUS, SENATE FINANCE  
INTERNATIONAL TRADE SUBCOMMITTEE  
CHAIRMAN (QUOTED IN *FINANCIAL TIMES*,  
DEC. 5, 1991)

pollution, in terms of health risks, loss of soil productivity, etc., are borne by society at large, rather than the polluter. These are called “external” costs, or “externalities”, since they are not reflected in the price of the finished good. And they can be quite high. The costs of environmental damage in West Germany alone have been estimated at DM100 to DM500 billion per year.

The most common approach to dealing with externalities is direct regulation by government. Environmental policy has traditionally been characterized by command and control approaches which are so detailed that they may effectively specify the technologies by which the regulations will be met. These regulations have often been accompanied by vigorous enforcement and prosecution and have resulted in substantial amounts of litigation, especially in the U.S. In some cases, polluters are granted subsidies or tax concessions to install abatement equipment or to upgrade their facilities to prevent pollution.

Recently, there has been a good deal of discussion of potential changes in the role of government in the implementation of environmental policy. Cutbacks in government expenditure, lax enforcement of environmental regulations in many countries and an increasing realization that the command and control approach may well stifle the development of new technology has led to an increasing popularity of “economic instruments.” The idea of taxes or charges to force producers to internalize some of these externalities has begun to find favour, particularly in Western Europe, where governments have introduced a whole range of these market-based instruments, covering everything from carbon and sulphur dioxide emissions to the disposal of batteries and tires, as well as a series of deposit refund schemes on everything from bottles to cars.

The theoretical basis for these market-based approaches comes from the economist Ronald Coase. He argues that common property resources will continue to be abused until they are treated more like private property. Once property rights have been determined, and someone has to be paid for the use of air as a pollution sink, for example, externalities can be internalized. Perhaps the most prominent example of this approach is the U.S. Clean Air Act. Under this Act, emitters of sulphur dioxide are given a permit to emit a certain amount of pollution. Those who emit less will be able to sell the remaining portion of their quota to other companies. Recent discussions of regimes to control carbon dioxide emissions have explored the use of these tradable emission permits on a global basis.

It is only in the past 3 or 4 years that environmental policymakers have taken an interest in the trade issue and its relationship to their concerns. Many point out that trade liberalization negotiations have not been directed to encourage the internalization of these externalities either through regulation or economic instruments. Indeed, some forms of subsidization of environmentally sound practice, and some domestic efforts to protect the natural resource base of a country (government-sponsored replanting of trees in the forestry sector, for example), may already be against GATT rules. Under the present international trade regime, countries or firms which attempt to raise prices to cover the environmental costs of production are likely to be priced out of the market by “free riders” who feel no obligation to bear their full environmental costs. The

underpricing of the environmental costs of transportation (ocean pollution, global warming) increases the external costs of free-riders' exports even further.

This leads to calls for trade policy measures specifically directed at the internalization of these costs. In the words of the World Wildlife Fund,

*Trade measures designed in accordance with the Polluter Pays Principle offer an important adjunct and in some cases the only feasible option for internalizing costs. In the most urgent cases it may be necessary to suspend implementation or negotiation of trade policies or agreements, until such time as environmental considerations have been fully investigated and incorporated. In some, interim trade policies or instruments to internalize environmental costs externalized at an earlier or later stage of a traded product's "life cycle" could prove most appropriate. In others, trade measures will have to be permanently in place to regulate trade in, for example, materials or products which are environmentally hazardous. International environmental institutions, with greater powers than at present, and with clear mandates to set environmental priorities, will be necessary to coordinate and implement such work.*<sup>16</sup>

Many worry about the loss of sovereignty implied by multilateral (or bilateral) trade negotiations. They feel that freer trade regimes will remove from national governments some of the powers they require to manage their environments and natural resource bases. Others advocate allowing new exceptions to the GATT for any action deemed necessary to protect the environment, including subsidies, and import or export restrictions.<sup>17</sup> This advocacy of "unilateral" solutions at the expense of the traditional post war multilateral trade institutions is one of the trends that most worries the trade community.

As an alternative, some have suggested the concept of "mutual tariffs". Importing and exporting countries would agree on the environmental costs of producing the good in question. Exporters would force their producers to bear this cost, and would have their market share protected by importers, who would levy offsetting tariffs against imports from other nations.<sup>18</sup>

Finally, the environmental community is concerned with the lack of transparency in trade negotiations. For if the prevention of a return to protectionism is the touchstone of most advocates of liberalized trade, the need for open decision-making processes is an irreducible minimum for most environmentalists. And the reasons for this are clear. No post war society has succeeded in pursuing sound

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<sup>16</sup> Arden-Clarke, Charles. *South-North Terms of Trade: Environmental Protection and Sustainable Development*. Gland: WWF, 1992, p 7.

<sup>17</sup> Shrybman, Steven. *International Trade and the Environment: An Environmental Assessment of the Present GATT Negotiations*. Toronto: Canadian Environmental Law Association, 1989.

<sup>18</sup> Von Moltke, Konrad. "Free Trade and Mutual Tariffs: A Practical Approach to Sustainable Development." *EcoDecision* 5 (June, 1992): 45-46.

## INTERNATIONAL TRADE POLICIES

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RICHARD SNAPE. "THE ENVIRONMENT, INTERNATIONAL TRADE AND COMPETITIVENESS." IN *THE GREENING OF WORLD TRADE ISSUES*. EDITED BY KYM ANDERSON AND RICHARD BLACKHURST. NEW YORK: HARVESTER WHEATSEAF, 1992, P 90.

environmental policies without the active involvement of public opinion. Environmental groups depend for their survival and success on access to legislators, the media and public opinion. This in turn depends on reasonably open processes, access to information and public debate. They are deeply suspicious of protracted in-camera trade negotiations among specialists:

*Participation is restricted to large corporations and trade associations which pursue an agenda of economic growth, profit maximization and deregulation. The shroud of secrecy which surrounds trade negotiations allows these objectives to be advanced in private and without regard to their environmental consequences.<sup>19</sup>*

#### ► THE INTEGRATION OF ENVIRONMENT AND ECONOMICS

The 1992 UNCED meeting faced the same dilemma as the Brundtland Commission. If present day society cannot adequately provide for the present population of the planet without placing undue strains on the environment, is it realistic to expect to be able to furnish a decent standard of living for twice as many?

Few would deny that our present population is already putting severe strains on many of the planet's vital systems. Yet many of the almost 5.5 billion people in the world place relatively small burdens on the environment. Per capita energy use in the developing countries is less than one sixteenth that of the industrial countries.<sup>20</sup> Emissions of greenhouse gases, ozone-depleting chemicals and industrial pollutants are similarly low.

At the same time, the demands placed on the global ecosystems by the consumption habits of the rich are enormous. The industrial nations, with just 25% of the world's population, consume 70% of its energy, 75% of its metals, 85% of its wood and 60% of its food.<sup>21</sup> And these demands are increasing; in the U.S., the average person in 1990 owned twice as many cars, drove two and a half times as far, and used 21 times as much plastic, compared to 40 years earlier.<sup>22</sup> Trends in Japan and Western Europe are similar, and the same development path is now being trod by middle income developing countries like China and India.

Multiply these demands by what demographers tell us will inevitably be a doubling of world population by the middle of the next century, and we have a system which is unsustainable. The increase in energy use alone to cope with these demands would be enough to cause climate change of unprecedented magnitude.

These trends illustrate the fact — stressed time and again by the Brundtland Commission — that economics, development and the environment are fundamentally inseparable issues. However, this reality is not reflected in our institutions, particularly those which deal with international trade.

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<sup>19</sup> Shrybman, Steven. *International Trade and the Environment: An Environmental Assessment of the Present GATT Negotiations*. Toronto: Canadian Environmental Law Association, 1989, p. i.

<sup>20</sup> UNDP. *Human Development Report 1992*. New York: Oxford University Press, 1992, p. 204.

<sup>21</sup> *Ibid.*

<sup>22</sup> Durning, Alan. "Asking How Much is Enough." in Worldwatch Institute. *State of the World 1991*. New York: W.W. Norton & Co., 1991, p. 154.

In the Brundtland view, the environment becomes a mainstream economic issue which must be considered by CEOs and Finance Ministers along with such traditional concerns as job creation, export growth and regional development in the formulation of their budgets and spending decisions. The key to the popularity of this new “sustainable development” agenda is that it appears to be a “win-win” program. It points to a world which is better off, as well as ecologically more sustainable, by merging elements of the traditional economic agenda with elements of the traditional environmental agenda. The result is growth of a radically different kind: growth which is far less energy and raw material intensive, which helps to preserve the world’s ecological capital rather than run it down, and which is far more equitably distributed both within and between nations.

Trade liberalization is a critical part of this agenda, although it must be integrated with a tough environmental policy. In the Commission’s own words, “the sustainability of ecosystems on which the global economy depends must be guaranteed.” Agenda 21 takes the analysis one step further:

*Environment and trade policies should be mutually supportive. An open, multilateral trading system makes possible a more efficient allocation and use of resources and thereby contributes to an increase in production and incomes and to lessening demands on the environment. It thus provides additional resources needed to economic growth and development and improved environmental protection. A sound environment, on the other hand, provides the ecological and other resources needed to sustain growth and underpin a continuing expansion of trade. An open, multilateral trading system, supported by the adoption of sound environmental policies, would have a positive impact on the environment and contribute to sustainable development.<sup>23</sup>*

As Agenda 21 also points out, however, the way in which the fruits of an open, multilateral trading system are distributed is one of the other keys to sustainable development. The mutuality identified here requires an examination of the relationship between environmental policies and trade as well as an analysis of the effects of trade policies on the environment and sustainable development.

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<sup>23</sup> UNCED, Agenda 21. Chapter 2 B, para 2.19.



### The World Bank: Trade Policy and the Environment

The World Bank believes that the use of trade restrictions to achieve environmental goals is inefficient and frequently ineffective, tending to influence the use of environmental resources only indirectly. The Bank views market failure and the lack of appropriate environmental pricing by local governments — not trade itself — as the primary causes of environmental problems. Therefore, it argues, direct instruments — not trade restrictions — should be used to combat such problems as deforestation, soil erosion and industrial pollution. Combining such policy reform with trade liberalization would not only deal more directly with the problems, but would also avoid restricting trade, which can foster greater efficiency and higher productivity and may actually reduce pollution by encouraging the adoption of cleaner production technologies.

THE WORLD BANK. *WORLD DEVELOPMENT REPORT 1992*. NEW YORK: OXFORD UNIVERSITY PRESS, 1992.

## Effects of Trade Policy on the Environment and Sustainable Development

When an environmental case is made against trade liberalization, the argument is usually that it is a magnifier of existing problems. For example, if a country is supporting unsustainable agricultural practices, then liberalizing trade may allow it to increase its agricultural exports, magnifying the problem. Or if the external pollution costs of producing a good are not internalized, then liberalizing trade may increase pollution problems by allowing more of the good to be produced for export. The implication is that sustainable development will not be achieved by trade liberalizing policies alone; such policies must be accompanied by reform of other existing problems.

### ► THE UNDERLYING PROBLEMS: POVERTY AND DEBT

In the 20 years since Indira Gandhi declared poverty to be the worst form of pollution, the circumstances of many in the Third World have not greatly improved. Despite the success of a number of newly industrialized countries, most of the developing world has been in a state of continual economic crisis for over a decade. In Africa, food production per capita has been steadily dropping, infant mortality rates rising, life expectancy becoming shorter and the AIDs pandemic accelerating. Standards of living throughout Latin America, Africa and much of Asia have dropped dramatically, with many countries experiencing negligible or negative growth of per-capita GNP.

Debt is a serious problem facing most developing countries. The World Bank and the IMF estimate that the developing world is remitting over \$50 billion more per year to the developed countries than it receives in capital transfers. The United Nations Development Programme (UNDP)'s Human Development Report for 1992 estimates the total transfer of resources from South to North between 1983 (when the poor first starting paying more to the rich than they received) and 1989 at \$241 billion.<sup>24</sup> Debt service payments by low-income countries, as a percentage of exports, almost doubled between 1980 and 1990, rising from 10.3 to 20.1%<sup>25</sup> Moreover, although new sources of foreign exchange are needed to assist in development initiatives, private lending to most of the Third World has virtually dried up.

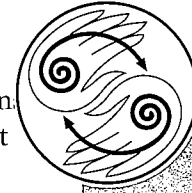
There seems to be little hope on the aid front either. As Maurice Strong repeatedly said in the run up to the Rio Earth Summit, "never have the rich felt so poor." Concessional financing levels seem to be stuck at one half the target of 0.7% of developed world GDP set by the Pearson Commission<sup>26</sup> 20 years ago, and the attendance at Rio of more than 100 Heads of State seems to have failed to translate into any real commitment to improve that record. After all the creative bookkeeping has been swept aside, the collective promises of the OECD members are likely to amount to no more than a few billion dollars in new and additional aid resources.

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<sup>24</sup> UNDP. *Human Development Report 1991*. New York: Oxford University Press, 1992, p 22.

<sup>25</sup> The World Bank. *World Development Report 1992*. New York: Oxford University Press, 1992, p 264.

<sup>26</sup> *Partners in Development: Report of the Commission on International Development*. Lester B. Pearson, Chairman. New York: Praeger, 1969.



This needs to be measured against the magnitude of the need. The United Nations Conference on Environment and Development (UNCED) Secretariat put the cost of Agenda 21 at about \$600 billion per year, with one fourth of that amount coming from the developed world. Meeting the month before the Conference, the Brundtland Commission estimated that at least \$10 billion in new and additional resources would be needed to maintain the momentum after Rio.

One of the most often overlooked causes of poverty and debt is the diversion of scarce resources to military buildup. Arms expenditures currently constitute between 15 to 20% of the Third World's accumulated debt.<sup>27</sup> Although the IMF and the World Bank have put increasing pressure on debtor countries to reduce their expenditure on weaponry, the international community as a whole has been unable to directly address the question of militarism. Following the suggestion of the Brundtland Commission, the UNCED process was to have addressed militarism as well as environment and development. The subject was dropped, however, in order to ensure maximum attendance at the Earth Summit.

Poverty and debt mean a lack of societal capacity to deal with current problems and an inability to undertake long-range policy planning. Most Third World countries are severely restricted in their ability to deal with problems of environment and development; the industrial development path that most have chosen demands access to technological and financial resources, as well as an institutional capacity to manage natural resources and protect the environment, both of which are often lacking.

Under such conditions long range policy planning becomes not only difficult, but largely irrelevant. For many rural dwellers, long term planning means how to survive the next 5 days. Poverty forces people to focus on short term issues of survival, even if this means worsening conditions for the next generation. Thus, although the crisis of fuelwood in many parts of the world should lead people to harvest less and replant more, they simply cannot; survival today demands that they consume dwindling supplies, and there is little capacity for management and replanting. In the language of economics, the lower peoples' income levels, the more they tend to discount the future.

#### ► A SOLUTION? STRUCTURAL ADJUSTMENT AND SUSTAINABLE DEVELOPMENT

Many countries have attempted to deal with the debt problem through structural adjustment. Such plans are generally associated with imposed programs administered by the IMF and World Bank, but may also be undertaken voluntarily. Mexico's new economic strategy is a case in point. These programs typically involve measures to decrease domestic demand, such as exchange rate devaluation, wage reductions and increases in real interest rates. These will normally be accompanied by measures designed to improve the efficiency of market mechanisms and increase investment, such as trade liberalization, liberalization of trade-related investment measures, privatization of public

#### Debt-Free Human Development

In pointing out the importance of "human development" the United Nations Development Programme has made the call for a new concept of economic growth wherein economic, fiscal, trade, energy, agricultural and industrial policies are all designed to bring about a process that is economically, socially, and ecologically sustainable. They argue that current consumption should not create any form of debt – financial debt, the debt of human neglect, or the debt of environmental degradation – that others may be required to repay in the future. The minimum requirements for achieving debt-free sustainable development would include: the elimination of poverty; the reduction of population growth; more equitable distribution of resources; healthier, more educated and better-trained people; more equitable trading systems, including increased production for local consumption; better understanding of the diversity of ecosystems; locally adapted solutions to environmental problems; and better monitoring of the environmental impact of development activities.

UNDP. HUMAN DEVELOPMENT REPORT 1992. NEW YORK: OXFORD UNIVERSITY PRESS, 1992.

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<sup>27</sup> Adams, Patricia. *Odious Debts: Loose Lending, Corruption and the Third World's Environmental Legacy*. London: Earthscan, 1991. p 119.

**THERE IS LITTLE DOUBT THAT [PROTECTIONIST] POLICIES ARE BEING USED TO PROTECT BUSINESS INTERESTS IN THE NORTH IN A WAY THAT IS DAMAGING TO PRODUCERS IN THE SOUTH. HOWEVER, ... SELECTED PROTECTIONIST MEASURES CAN BE USED POSITIVELY. THEY CAN HELP TO PROMOTE FOOD SECURITY IN DEVELOPING COUNTRIES. ... [THEY] HAVE A ROLE IN SUPPORTING INFANT INDUSTRIES ... [AND] CAN ALSO BE USED TO PROTECT CONSUMERS FROM HARMFUL PRODUCTS, AND CAN PLAY A VITAL ROLE IN PROTECTING THE ENVIRONMENT. THIS MAKES IT DIFFICULT TO DEFINE WHAT CONSTITUTES A HARMFUL TRADE BARRIER AND WHAT CONSTITUTES A BENEFICIAL TRADE BARRIER.**

BELINDA COOTE. *THE TRADE TRAP: POVERTY AND THE GLOBAL COMMODITY MARKETS*. OXFORD: OXFAM UK AND IRELAND, 1992, PP 102-3.

enterprises, fiscal restraints, and removal of price distortions for outputs and inputs in the agricultural, forestry and energy sectors.

Perhaps the most telling criticism of the environmental impacts of these programs has come from a series of case studies recently conducted by the WWF and the London Environmental Economics Centre. They conclude that

*No effort has been made to address either inherent market failures in the natural resource sector or the failure of government policy as it pertains to that sector. Hence, it is hardly surprising that the consequences of the reform process do not reveal a systematic trend linking policies of structural adjustment to developments in the environmental sector.*<sup>28</sup>

### **Protectionism and the Commodity Trap**

A key aim of structural adjustment measures is to increase export revenues, decrease expenditures on imports, and thus help decrease balance of payments pressures from external debt. In terms of effects on sustainable development, the end results of such a change will depend on several factors.

First, the drive to increase exports may cause unsustainable depletion of renewable natural resources, because developing country exporters typically find their options limited by protectionist policies in the large markets of the developed world. Their exports face “escalating tariffs.” These are tariffs which become stiffer as the degree of processing increases. The effect is to bias exports of developing countries towards unprocessed resource-based commodities, on which they earn little in the way of value-added.

Southern exporters also must compete with heavy Northern domestic protection in sectors like textiles and agriculture, two areas in which GATT liberalization has been unable to make much headway. In agriculture, for example, the U.S. alone has devoted \$300 billion over the last decade to domestic subsidies.<sup>29</sup> This policy, in concert with similar programs in the European Community, floods world markets with overproduced subsidized products and seriously depresses prices. The result is lost development opportunities in the South. The UNDP has estimated the cost to developing countries of restricted market access for Southern manufactures, agricultural, tropical and resource-based products at \$40 billion per year.<sup>30</sup> This compares to North-South flows of official development assistance of just over \$50 billion per year.

In addition, recent years have seen a rise in the importance of non-tariff barriers to Southern exports. The most common are voluntary export restraints — bilaterally negotiated restraints to the flow of certain goods, usually propelled by threat of

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<sup>28</sup> David Reed, Ed. *Structural Adjustment and the Environment*. Boulder: Westview Press, 1992, p 150.

<sup>29</sup> “America’s Farm Subsidies.” *The Economist*, (June 27, 1992): 21.

<sup>30</sup> UNDP. *Human Development Report 1992*, New York: Oxford University Press, 1992, p 67. According to UNDP’s analysis, the total costs of “unequal access” for the South are comprised of such elements as poor access to finance, higher interest rates and restricted access for labour and technology, as well as traditional calculations of the costs of protectionism. They are estimated to equal \$500 billion per year.

trade sanctions — and import quotas. A 1986 survey found that in the U.S. market, such special deals covered over 20% of total imports, including such major sectors as automobiles, sugar and steel.<sup>31</sup> Another U.S. study found that, in terms of overall protectionist impact, “QRs [quantitative restraints] have taken [the U.S.] back to pre-World War II levels.”<sup>32</sup> Such measures are gaining in popularity in the North as trade negotiations force reductions in tariffs, since their “voluntary” nature puts them beyond the reach of agreements like the GATT.

Northern protectionism has serious negative consequences for sustainable development in the countries of the South, forcing them toward a dilemma known as “the commodity trap.” In 1987, over half of the world’s low-income countries depended on primary products for more than 85% of their exports. For a third of them this figure was over 95%.<sup>33</sup> On a regional basis, primary commodities account for the vast majority of export earnings in Latin America (67%), West Asia (84%), developing Oceania (76%) and Sub-Saharan Africa (92%).<sup>34</sup>

The number of these commodities is fairly small. As a result, increased exports from many producers — the result of many countries simultaneously trying to expand exports — leads to declining prices. Southern exporters end up competing with each other in the export of the same primary commodities. Yet the pressing need for foreign exchange leads to further increases in production in order to keep revenues up: a vicious circle.<sup>35</sup> Even where production may be polluting and unsustainable, many countries see little choice; short term considerations must prevail.

In 1951 the index of purchasing power for primary commodities stood at 153. By 1961, it had declined to 100, to 92 in 1971, to 91 in 1981 and to 73 in 1985. This deterioration in the terms of trade, when combined with the increase in real interest rates during the 1980s, has been severe for developing countries as a group, particularly for several of the poorest countries. The World Bank has estimated that the combined effect for the countries in Sub-Saharan Africa is equivalent to a cost of 14.4% of GDP, if changes during 1985-88 are compared with the average for the 1970s. This can create a kind of treadmill effect, in which countries are forced to squeeze more and more from the natural resource base in order to stand still in terms of importing goods from abroad. In the words of the Indonesian Environment Minister, Emil Salim: “Today we have to export three times as much timber, for example, to buy one tractor as we did in the 1970s...We

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<sup>31</sup> Hufbauer, Gary Clyde, Diane T. Berlinger and Kimberly Ann Elliot, *Trade Protection in the United States: 31 Case Studies*. Washington: Institute for International Economics, 1986, p 21.

<sup>32</sup> Cited in Destler, I.M., *American Trade Politics (2nd ed)*. Washington: International Institute for Economics, 1992, p 206.

<sup>33</sup> World Bank. *World Development Report 1992*. Oxford University Press, 1992. Based on countries for which data was available. Primary products are composed of agricultural products (agriculture, forestry, fishing and hunting) fuels, minerals and metals.

<sup>34</sup> Arden-Clarke, Charles. *South-North Terms of Trade: Environmental Protection and Sustainable Development*. Gland: WWF, 1992, p 3.

<sup>35</sup> This “desperation production” is not the only factor responsible for the decline in commodity prices. It is complemented by falling demand in many developed countries because of the development of substitutes, the shift to more knowledge-based and service industries, and less material-intensive industrial growth. But it is unquestionably a significant contributor to the problem.

**THE LOW PRICES OF COMMODITIES  
AND LOW REVENUE CAPTURE BY  
DEVELOPING COUNTRIES DEPRIVE  
DEVELOPING COUNTRIES OF THE  
FINANCIAL (AND THUS  
TECHNICAL) RESOURCES WHICH  
COULD OTHERWISE BE INVESTED IN  
SUSTAINABLE METHODS OF  
COMMODITY PRODUCTION.**

CHARLES ARDEN-CLARKE. *SOUTH-NORTH TERMS OF TRADE, ENVIRONMENTAL PROTECTION AND SUSTAINABLE DEVELOPMENT (A WWF INTERNATIONAL DISCUSSION PAPER)*. GLAND: WWF, FEB. 1992, P 6.



can't just say, hands off the tropical forests...We do what we can to conserve resources, but in the end we have to export in order to develop."<sup>36</sup>

A removal of protectionist barriers offers hope for breaking this vicious cycle, as it would allow for more export diversification in the South, increasing incomes and easing pressures on resource bases. Whether or not this would result in more sustainable development is a ripe topic for research; in most cases it would probably need to be accompanied by reform of domestic policies.

### **Reforming Input Pricing**

Some elements of structural adjustment programs have good potential for moving toward more sustainable forms of development. For example, removing subsidies to pesticides and chemical fertilizers will discourage their overuse, and could encourage more environmentally sound alternatives. Similarly, removing the water subsidies implicit in many irrigation projects, and eliminating subsidized credit to inappropriate practices such as ranching in former rainforest lands, can discourage unsustainable agricultural practices.

But unless complementary policies are also implemented, the results may be less desirable. For example, many of the poorest farmers *underuse* inputs such as fertilizer and credit. Unless programs are put in place to target the poor, and shelter them from the effects of increases in input prices, they are further impoverished by structural adjustment. Land rights are another significant domestic policy; even if inputs are properly priced, unless farmers have secure long term tenure to their land, they have little incentive to manage it sustainably.

### **Switching to Cash Crops**

Structural adjustment usually increases prices for agricultural export commodities which were previously controlled, and devalues the exchange rate. Both measures create strong incentives to switch from food crops to the cultivation of cash crops for export. As with the reform of input pricing, this may have positive or negative effects in terms of sustainable development.

First, it depends on the crops in question. Some crops are more environmentally sustainable than others in particular ecosystems, and there is no clear breakdown between crops raised for export and crops raised for food. On terrain subject to erosion, tree crops such as coffee, cocoa, rubber, palm oil and bananas (all cash crops) may be preferable because their root structures and canopies protect the soil. Other cash crops, such as cotton and groundnuts will be inappropriate, but so will certain food crops, such as cassava, sorghum and millet.

Second, it depends on current patterns of input use. The standard argument holds that a switch to cash crops will involve heavier use of pesticides, chemical fertilizers and water. This obviously depends on the type of input pricing reforms that are undertaken, but will also depend on the current use of these inputs by subsistence farmers; their use of such inputs has historically been low, but has steadily risen since the advent of the Green Revolution.

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<sup>36</sup> Don Hinrichsen. *Our Common Seas*. London: Earthscan, 1990.

Third, it depends how the patterns of production change. If no protection is put in place for poor farmers, they may be squeezed out by lack of access to credit and higher input prices<sup>37</sup>, as well as other policies favouring large-scale export farming. This has been the case for the small-scale Mexican *ejidos* under current reforms. The result could be a concentration of ownership in the agricultural sector which increases income inequities and urban migration, thus increasing impoverishment. It might also force small subsistence farmers on to more and more marginal land to raise their food crops, thus increasing soil erosion and deforestation.<sup>38</sup> As well, the advent of large-scale agriculture can lead to a serious loss of genetic diversity of cultivated crops.

In addition to the environmental effects considered above, a widespread switch to cash crops can lead to deep and pervasive changes in socio-economic structure. Most of these have been the subject of extensive research, the results of which will not be repeated at length here.<sup>39</sup> The switch means a loss of food self-sufficiency, and the creation of dependencies, both on globally-determined prices for exports, and on globally determined prices for food imports. The switch from subsistence farming to wage labour makes the labourers dependent on employers and the cash economy. As well, depending on the new patterns of production, it may mean dependency on imported agricultural technology and inputs.

There may also be adverse effects on women. As land becomes valuable, it is necessary to assign official title to farmers, who often have no previous formal claims to their plots. This will usually go to the men of the household, though the women tend to be the actual farmers. Without official title, women have no access to credit or extension programs, and lose control of the income stream created by their work. In fact, the transition means a fundamental change of economic decision-making power from women to men. These effects have been particularly prevalent in African societies.<sup>40</sup>

As with environmental effects, the nature of socio-economic structural changes brought on by structural adjustment will depend largely on other domestic policies, such as land tenure systems, incentives for different scales of agricultural production, marketing systems, and so on. Although its historical record is poor, the lesson is that if the appropriate supporting policies are in place, structural adjustment-induced trade may serve sustainable development.

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<sup>37</sup> David Reed, Ed. *Structural Adjustment and the Environment*. Boulder: Westview Press, 1992, p 151.

<sup>38</sup> *Ibid.* See also Cruz, Wilfredo and Robert Repetto. *The Environmental Effects of Stabilization and Structural Adjustment Programs: The Philippines Case*. Washington: World Resources Institute, 1992.

<sup>39</sup> As well as the works cited above, see Cornia, Giovanni Andrea *et al.*, *Adjustment with a Human Face: Protecting the Vulnerable and Promoting Growth, Vols. I and II* (a study by UNICEF), Oxford: Clarendon Press, 1987; World Bank, *Adjustment Lending: An Evaluation of 10 Years of Experience*, Washington: World Bank, 1989; and Barkin, David *et al.*, *Food Crops vs. Feed Crops: Global Substitution of Grains in Production*, Boulder: Lynne Rienner, 1990.

<sup>40</sup> For a fuller discussion, see Stamp, Patricia. *Technology, Gender, and Power in Africa*. Ottawa: IDRC.



#### NAFTA International Externalities

The National Wildlife Federation has highlighted the extent of environmental degradation in the trade-generated, maquiladora zone on the Mexico-U.S. border. At present, 25 million gallons of raw sewage flow into the Rio Grande daily at Nuevo Laredo - Laredo, producing contamination levels 1650 times recreational-use standards. Contaminated cross-border aquifers at San Elizario have resulted in 90 percent of the adults contracting Hepatitis A by age 35. High levels of cadmium, arsenic and other pollutants were found in ground waters on both sides of the Nogales, Arizona border. Sulphur emissions from Monterrey have impacts on National Parks as far north as the Grand Canyon.

NATIONAL WILDLIFE FEDERATION,  
CITED IN WEST, PAUL AND PAUL  
SENEZ. ENVIRONMENTAL ASSESSMENT OF  
THE NAFTA: THE MEXICAN  
ENVIRONMENTAL REGULATION POSITION.  
STUDY PREPARED FOR THE MINISTRY OF  
ECONOMIC DEVELOPMENT, SMALL  
BUSINESS AND TRADE, BRITISH  
COLUMBIA, CANADA, 1992.

#### ► GLOBALIZATION AND SUSTAINABLE DEVELOPMENT

A completely global economy would involve a high degree of specialization; any particular good or service would only be produced in that region which does so most efficiently, and traded for the goods and services in which others specialize.<sup>41</sup> There would be no border restrictions on the movements of such goods, or regulatory restrictions on investment or the provision of services.

In some ways, this is an attractive ideal, since it allows for the greatest possible production of goods and services, given the world's existing resources and technology. Economists call this "allocative efficiency": every bit of land or capital or labour is allocated to its most efficient use. Increases in allocative efficiency, and the attendant increases in total global production, are the principle gains from free trade, and the main *raison d'être* for free trade agreements.

But freer trade will not lead to allocative efficiency unless certain prerequisites are satisfied. And even then, increased allocative efficiency will not always translate directly to increased human well-being, or to the still more elusive goal of sustainable development.

#### Externalities and Subsidies

The argument that free trade increases allocative efficiency relies heavily on the prices being right, to provide accurate signals to where the most efficient production should take place. If it is cheaper to grow oranges in Morocco and ship them to Spain than it is to grow them in Spain, then oranges are more efficiently grown in Morocco. But if Moroccan prices are lower because costs of production are not all paid by domestic producers (that is, there exist external costs), then prices may have given a false signal. Were the external costs (e.g., the environmental costs of inappropriate pesticide use) to be internalized, it might be that the cost of producing oranges is lower in Spain.

As long as there remain such externalities, freer trade will not necessarily lead to increased allocative efficiencies, but may rather lead to inefficiency and increased external costs. For example, if fossil fuel prices do not reflect the full cost of the increasing atmospheric carbon concentrations, or of depleting non-renewable resource stocks, then increased trade based on artificially low transport costs will lead to an inefficient solution, involving too much oil consumed, and too much carbon released.

This leads to a controversy over what actually constitutes a legitimate cost, since unpaid costs can be thought of as subsidies. Is allowing pollution a subsidy? Is allowing unsustainable management of renewable resources a subsidy? All of these measures will lower costs of production, but are they fair or unfair competition?

Current GATT rules do not consider any costs incurred in the production or transport process as legitimate grounds for trade discrimination. Historically this policy made perfect sense, since it meant legislators could not protect domestic industries from foreign competitors who had innovated to make their production

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<sup>41</sup> This is a simplification, since it ignores costs of transport, marketing and other non-production-related activities.

processes more efficient. But in the current global context, where external environmental costs become more and more important, it is increasingly controversial. Clearly, neither allocative efficiency nor sustainable development will result from free trade if there are significant external costs; the prices must first be made right. The question to be resolved is: what price is right?

### Social Subsidies

In the same way that lax environmental standards are regarded by some as a subsidy to domestic producers, lax social standards are targeted by many groups as unfair "social subsidies." Most of these standards concern the treatment of the labour force, and some degree of international consensus has been reached on many of them in the conventions of the International Labour Organization (ILO). Examples of such standards include maximum hours per work week, rights to bargain collectively, minimum wages, health and safety regulations and prohibitions on child labour.<sup>42</sup>

Some developing countries have serious reservations about raising the issue at all. In the same way that they see the potential for a "new protectionism" in some Northern environmental regulations, they fear that trade restrictions based on social standards will present yet more opportunities to erect Northern non-tariff barriers. They argue that some social standards followed in the North are simply inappropriate for their current institutional contexts and levels of development.

This argument seems to lack force for standards based on human rights, such as the prohibition on child labour, and the right to bargain collectively. It does become more powerful, however, when applied to the question of wage rates. Here the call from the Northern importing countries has been for wage rates "appropriate" to the levels of development in the country of export. This may involve mandating a minimum wage at a fixed percentage of average wage, or determining a minimum wage based on harmonized purchasing power. While there is some intuitive appeal to the idea that "appropriate" minimum wages be implemented by all, such a recommendation is a political bombshell; not only would the loss of sovereignty involved be repugnant to both Northern and Southern countries, but determining what is "appropriate" for the various national contexts would be imposingly difficult.

The debate over social subsidies often overlooks the fact that the poor conditions faced by many Southern workers are not solely the product of domestic policy. Wage rates on the sugar plantations of Dominica, for example, may be just as strongly affected by market access for sugar in the North, and by the fairness of the system for international pricing. If the bottom line is sustainable development, and a focus on trade which will foster development and human well-being, trying to force an end to social subsidies may not be enough. Northern countries may at the same time have to improve their poor records on such things as removing protectionist barriers and supporting commodity pricing agreements.

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<sup>42</sup> Some have argued that government social *support* also constitutes social subsidies, if it covers costs usually covered by industry or workers themselves. Examples of such policies might be government-sponsored health care and day care, and government contributions to pension funds and social security.



### The Hidden Subsidies — A South-North Transfer?

The debate over unpaid costs, or "environmental subsidies" usually centres on whether or not they should be considered elements of unfair competition. But in situations where there is no domestic industry competing with the producers in question, environmental subsidies can alternatively be thought of as a form of transfer from producing to consuming country.

Brundtland made the argument, and MacNeill has developed it further, that the South is heavily subsidizing the North, since the prices of Southern exports seldom reflect the environmental costs of their production. A study conducted for the WCED used 1980 data to calculate that developing country export industries would have incurred added costs of \$5.5 billion, had they been regulated by U.S. pollution control standards.<sup>1</sup> If the industries supplying those exporters with raw materials and energy had been under similar regulation, the bill would have been over \$15 billion. These figures reflect substantial amounts of unabated pollution, the costs of which are borne by Third World citizens and ecosystems rather than Third World producers.

The same argument will apply when renewable resources, such as fisheries, agricultural crops and forests, are harvested unsustainably. Such practices result in lower-cost products than does sustainable

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management, with future generations footing the bill. One of the most obvious examples of this kind of subsidy occurs in the tropical timber industry. In a number of countries in Southeast Asia, the export trade is driving large-scale deforestation. Poor logging practices, rampant corruption in the assignment of licenses, and inadequate rents contribute to the problem. Figures from the Asian Development Bank give an idea of the magnitude of the hidden subsidies involved; they calculate the "true" value of Southeast Asian forests to be of the order of \$20-42 per cubic metre, whereas in the mid-eighties stumpage fees in the Philippines stood at \$3, in Malaysia at \$11 and in Indonesia at \$4 per cubic metre.<sup>2</sup>

While the existence of hidden subsidies is widely acknowledged, the actual calculation of those subsidies is not straightforward. How should we measure the external cost component of traded goods, in order to pay the unpaid bills? Some research has been done into modelling approaches which calculate the full life-cycle costs of goods, and on calculating the value of lax labour laws as subsidies, but much more is needed before the idea of hidden subsidies can become an operational concept.

<sup>1</sup> WALTER, INGO. "ENVIRONMENTAL RESOURCE COSTS AND THE PATTERN OF NORTH-SOUTH TRADE." SUBMITTED TO THE 28-30 MAY 1986 FIFTH MEETING OF THE WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT. APRIL 1986.

<sup>2</sup> ASIAN DEVELOPMENT BANK. ECONOMIC POLICIES FOR SUSTAINABLE DEVELOPMENT. MANILA: ADB, 1989, P 58.

## Socio-Political Effects of Globalization

In a world free of the above external costs and subsidies, liberalized trade would lead to allocative efficiency. But allocative efficiency is not the only determinant of human well-being or sustainable development. There may be socio-political costs or benefits, arising as effects of globalization, which need to be added to the equation. These effects may be in terms of community resilience and self-reliance, national and sub-national sovereignty, or the social organization of communities.

Taking such effects into account is inherently difficult, especially if there are trade-offs with economic effects, since they are not easily boiled down into monetary terms. But this is not a reason to ignore such trade-offs; rather, it underscores the need for solid analysis, to feed into informed judgements by policy-makers.

### RESILIENCE/SELF RELIANCE

The concept of ecosystem resilience can be applied analogously to human communities, regions and countries. Resilience in an ecosystem implies a certain amount of redundancy; if some natural disaster or cyclical change in conditions wipes out a few particular species, the system as a whole perseveres. A non-resilient, or fragile, ecosystem, by contrast, would have no redundancy at all; if even one species were removed, the whole system would collapse.

Such a fragile interdependent system is in some ways similar to a human community which has specialized, by trading, to the point of producing almost none of its own goods and services. The extinction of the food- or energy-supplying communities, or disruptions of transportation or financial systems, would be disastrous. Of course human communities would have to be at an unrealistically high level of specialization to experience the equivalent of ecosystem collapse, but the point is that as trade flows increase, so also does the community's degree of fragility — its vulnerability to outside circumstances.

Such circumstances might be political; war, upheaval or strategic political sparring might interfere with the flows of goods and services as in the case of Middle East oil exports during the Gulf War. Or they might be natural: floods, earthquakes, droughts, etc. Or they may be economic; the more specialized and interdependent an economy, the more it is influenced by prices and markets beyond its control. For example, many countries are heavily dependent on commodity exports like coffee and sugar, whose prices are subject to great swings.

### SOVEREIGNTY

Globalization implies a loss of national sovereignty. As the world's economies become further meshed, the pressure will be on them to play by a commonly accepted set of rules, be they administered by the GATT or by environmental accords such as CITES or the Montreal Protocol. This will necessarily curtail the freedom of governments to set their own rules at home, in such areas as environmental regulation, social policies, regional development, and resource development.

During the Uruguay Round of GATT negotiations, for example, it has been suggested that phyto-sanitary standards (governing, for example, levels of pesticide residues allowed on foodstuffs) be set by an international body. This would remove the sovereign power of national and sub-national bodies to decide such matters. Loss of this sovereignty is one of the key problems Northern environmentalists have with free trade agreements, both as an issue in its own right, and because it means an end to the “regulatory leader” effect, wherein regulators in such places as Germany and California set high standards which others eventually follow.

At the same time, there may be advantages to removing the sovereign ability to set rules of play. The rules by which Northern agricultural producers abide are an excellent example. Export subsidies to agriculture in the U.S. totalled over \$900 million in 1991, and were increased more than \$1 billion in 1992.<sup>43</sup> These and other Northern subsidies to agricultural producers often encourage practices which are not environmentally sustainable. In countries such as the Netherlands, agricultural intensification promoted by price subsidies leads to problems of nitrites in water supplies, enormous loadings of biological oxygen demand from animal wastes in watercourses, and land degradation.

This system of rules also penalizes the South. Perhaps the most obvious example, frequently cited by the World Bank and others, is the case of international trade in sugar. Sugar is an environmentally sustainable tropical crop. Were it not for the abhorrent labour and other social practices with which it is usually associated, it could be an ideal engine of development for many countries. But governments in Western Europe (now one of the largest sugar exporters in the world) and North America heavily subsidize domestic producers of beet sugar and restrict their imports of imported cane sugar. This is estimated to cost developing countries up to \$7.4 billion in 1983 in lost income.<sup>44</sup> Beet sugar is not only an inefficient use of temperate land, but the processing of the beet is one of the most polluting food processing activities.

Domestic control of social and development policies can also be affected by globalization. Some Southern countries, for example, have run into trouble with their attempts to escape the “commodity trap” by promoting more domestic processing of resources. Indonesia banned the export of raw logs in 1985 and rattan in 1988, in moves it defended as environmentally-motivated. (Most observers agreed the move was at least as much an effort to create a domestic wood processing industry.) The initiative, though cloaked in green, was challenged as unfair practice by several European nations, and was recently scrapped under pressure from the GATT.

The implications for sustainable development of such a ban are unclear. According to WWF International, the Indonesian case led to a marked decrease in rainforest logging. By their argument, if developing countries can earn more for

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<sup>43</sup> “America’s Farm Subsidies.” *The Economist*, (June 27, 1992): 21.

<sup>44</sup> World Bank, *World Development Report 1986*, New York: Oxford University Press, 1986.



### Aboriginal Peoples and Globalization

A variety of authors have emphasized how trade can transform entire cultures. Loxley notes that in Canada, trade was the main form of capitalist expansion, through a monopoly company chartered by the British crown. Self-reliant Indian producers were made dependent on overseas fur markets for economic survival, and the intense competition for production very quickly pressed up against the environmental limits. "New world" interest in forests, minerals and other natural resources likewise did little for aboriginal peoples, displacing them from their land and destroying their environment. The expansion of oil and gas enterprises and of "modern" mineral production has continued to deprive them of their lands and destroy the animal and vegetable species upon which they depend for survival. Throughout the Third World similar examples of the effects of trade can be found. Globalization cannot be separated, therefore, from the historic process of the impoverishment of Aboriginal peoples. On the contrary, for some observers, it is the principal explanation.

ADAPTED FROM J. LOXLEY IN CLARKSON, LINDA, VERN MORRISSETTE AND GABRIEL REGALLET. *OUR RESPONSIBILITY TO THE SEVENTH*

their resources, they will be under less pressure to deplete them unsustainably. Greater income from the resource, the argument goes, allows countries to take a longer-term view of their resource bases. The economic potential seems impressive; a recent study of the exports of six countries pointed out that exporters of raw logs capture only 9% of the final product price. When processing is done in country, the recapture figure rises to about 35%.<sup>45</sup> By 1990, Indonesia had nearly quadrupled the value of its finished wood product exports.<sup>46</sup> But others point out that such processing in the Third World is often carried out with out-dated equipment at sub-optimal scales of operation, and is therefore wasteful of energy and resources. The result may actually be a net cost to the environment.

In the North, the fear is that existing social and development policies may be either targeted by other governments as unfair trade practices, or competed away by other countries without such policies. Either case would amount to a loss of sovereign control over domestic affairs, in key areas such as regional development, national health care, social security, and so on. In the North, the challenge is to keep the competition with LDC industries based on efficiency, rather than on social standards. The issue of "social subsidies" was explored above.

Sovereign control of policy may also be compromised if globalization brings investment from economically and politically influential firms. Land reform, for example, is universally difficult to achieve but will be even more so if it adversely affects powerful TNCs, as several Latin American governments have discovered. Thus globalization may tend to lengthen the list of powerful vested interests to be reckoned with when drafting policy.

Sustainable development may demand some loss of national sovereignty, for example where issues of the global commons are involved, or where Northern protectionism frustrates LDC development. It may at the same time demand some protection and strengthening of sovereignty, to protect social and development policies and standards that contribute to well-being. The difficulty will be in finding just where to draw the line between fair and unfair national policies.

#### COMMUNITIES AND THE PROCESS OF CHANGE

Globalization is a process of change, in the course of which many traditional relations are transformed. For groups and communities which have not been previously involved in the cash economy, there are two typical effects. One is the loss (voluntary or forced) of self-sufficiency and traditional ways of life, and a dependence on the cash economy. While this often brings higher income levels, some studies have questioned whether it always brings higher levels of satisfaction.<sup>47</sup>

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<sup>45</sup> Oxford Forestry Institute. *Incentives in Producer and Consumer Countries to Promote Sustainable Development of Tropical Forests*. Oxford: OFI, 1991.

<sup>46</sup> Sartika, Dewi. "Log Export Ban Gets the Chop." *Panoscope*. No. 32, (September 1992):15.

<sup>47</sup> Clarkson, Linda, Vern Morrisette and Gabriel Regallet. *Our Responsibility to the Seventh Generation*. Winnipeg, Canada: IISD, 1992.

Another is the removal of communities from their land, which may be valued for mineral resources or agriculture. Communities outside the cash economy rarely have the strength to oppose such moves. This has been the fate of many aboriginal communities worldwide, as national governments seek to make more productive use of “underexploited” resources, often for export purposes.

For groups and communities which were already involved in the cash economy, there will also be changed relations. Competition at a global level demands competitiveness at the local level. Local firms which produce less efficiently than their foreign counterparts are doomed to extinction, and even those that are efficient will need to constantly innovate and improve to maintain that edge.

In one sense, this state of constant flux is good, in that it seeks ways to produce the same goods using fewer resources — a basic element of sustainable development. It may also, however, involve a disquieting amount of change in traditional ways of life. Family farms may disappear *en masse*, one-industry towns and regions may lose their traditional livelihoods, and there may be large-scale migration to urban centres where economies of scale can be achieved. Given that people derive satisfaction from their communities, and the ties of tradition that bind them together, such changes may imply a great deal of suffering. So while sustainable development demands more efficient production of goods and services, the quest for that efficiency may adversely affect human well-being, a determinant of sustainable development.

There is a need to search for creative alternatives to this dilemma. Where there are no alternatives, however, tough political choices must be made. Sustainable development seems to demand change in both the North, which needs to use fewer resources, and the South, which needs to develop rapidly. Preventing change in the North may imply environmental disaster, and doing so in the South may imply continuing poverty. Globalization thus seems to have potential to serve sustainable development. The challenge may be to manage change such that disruption of communities causes minimal amounts of suffering.

### Distributional Considerations

Allocative efficiency assures that there will be more goods and services produced. But where the production and consumption takes place is quite a different issue. The global distribution of the wealth and employment created by free trade need not be equitable to be efficient.

As economies become globalized, resources will shift away from some sectors to be put to more efficient use elsewhere. Investment in textile manufacturing in the United States, for example, may be reallocated to achieve higher returns elsewhere. But as capital moves out of the affected region, there may be no reason for new capital to replace it. For any given production activity, there may be a region elsewhere which is more efficient, meaning that unless the population migrates to areas where higher returns on capital, technology and skilled labour are possible, there will be unemployment. In the global economy, with high mobility of capital and skills, there is no guarantee that a given region will be attractive to any sort of investment at all. One-industry towns and regions

**WHAT I WOULD ULTIMATELY LIKE  
TO BE ABLE TO DO IS SET UP A  
PERFECT EXAMPLE OF HONEST  
TRADING IN A FRAGILE  
COMMUNITY AND MAKE IT A  
BENCHMARK OF HOW WE SHOULD  
CONDUCT SUCH TRADE IN FUTURE.  
THE RULES ARE PRETTY SIMPLE.  
FIRST, WE HAVE TO BE INVITED IN.  
SECOND, WE MUST NOT MESS  
WITH THE ENVIRONMENT OR THE  
CULTURE. THIRD, WE MUST  
REWARD THE PRIMARY  
PRODUCERS.**

ANITA RODDICK. (FOUNDER, THE BODY SHOP) *BODY AND SOUL*. LONDON: EDBURY PRESS, 1991, p 213.



**THERE MAY BE GOOD ARGUMENTS FOR FREE TRADE BUT, IN A WORLD OF CAPITAL MOBILITY, COMPARATIVE ADVANTAGE CANNOT BE ONE OF THEM. THE CONFIDENT ASSERTION THAT AN OPEN TRADING SYSTEM WILL BENEFIT ALL TRADING PARTNERS IS UTTERLY UNFOUNDED.**

HERMAN E. DALY. "FREE TRADE, SUSTAINABLE DEVELOPMENT AND GROWTH: SOME SERIOUS CONTRADICTIONS." *INDEPENDENT SECTORS NETWORK '92* No. 1, 1992 (SPECIAL NETWORK SUPPLEMENT: REVIEWS OF AGENDA 21).

highly dependent on certain sectors are most vulnerable to this type of dilemma. (This argument is explored in more detail in *Appendix A: Absolute and Comparative Advantage in the Global Economy*.)

The central problem is one of distribution. Suppose, for example, that a single country could most efficiently produce all the world's goods and services. Or that, within a given country, one region was similarly the most efficient producer. This would imply a highly skewed distribution of the gains from trade on a nation-to-nation basis, and the possibility of large pockets of unemployment and poverty among and within nations.

While such extreme examples are improbable, they are quite compatible with allocative efficiency. They are also quite incompatible with sustainable development and human well-being. Sustainable development therefore may involve finding an appropriate balance between the policy extremes of autarky and globalization. This is necessary not only on equity grounds, but also because inequitable distributions will be politically difficult to sell, and any free trade agreement must ultimately meet with public approval. Thus, the question many citizens of the European Community have asked themselves in referendums on the Maastricht Treaty is "How will it affect *me* and *my* region?"

There is a great need for research here. While there have been many studies focusing on the negative social and development effects of globalization, and many studies focusing on the economic benefits, there has been little attempt to compare the two — to define the trade-offs involved. Since equity of distribution is a key element of sustainable development, such research will need to look not only at the larger picture, but also at the trade-offs for specific groups and regions. Without such information on the distributional effects of globalization, it will be difficult to ensure that trade policies actually serve to increase human well-being and achieve sustainable development.

### **TNCs, Balance of Payments and Technology Transfer**

Globalization tends to bring about increased activity by transnational corporations (TNCs), since the removal of barriers to trade flows and investment create an atmosphere which is hospitable to their operations. Presently, many countries strictly regulate foreign investment activities within their borders.<sup>48</sup>

It is difficult to say whether this will foster or frustrate sustainable development. Most of the restrictions now in place (primarily, but not exclusively, in developing countries) on TNC activities are motivated by evidence that, unregulated, many will engage in a wide variety of restrictive business practices harmful to local producers and disruptive of host-country balance of payments. There is also evidence, however, that TNCs can increase efficiency of domestic operations, and transfer both environmental technology and environmental ethics to host countries.

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<sup>48</sup> Trade-related investment measures, as a new issue in the GATT discussions, are discussed in more detail in the following sections.

Restrictive business practices are deviations from purely competitive pricing and marketing, usually undertaken by branch plants for the benefit of the home country operations. One such practice is market allocation. Parent firms may set up branch plants specifically to produce for certain shares of the global market, prohibiting them from competing directly with home country plants. During cyclical downswings in market demand, branch plants may even be required to cede market “space” to home country plants, to maintain production levels there. Such behaviour robs the host country of the balance-of-payments and spin-off benefits that would result from real global competition.

Branch plants may also purchase inputs from established suppliers of their home-country plants, or from the parent company itself, even if local suppliers could have met their needs at similar costs. There may also be a policy of conducting all or most research and development in the home country. Or new TNC entrants to a market may practice predatory pricing — temporarily maintaining artificially low prices to drive local competitors out of business.

As well, it may be more difficult to tax TNCs than local firms. Business tax rates in less developed countries (LDCs) tend to be high, since income tax provides governments with relatively little revenue. To avoid such taxes, TNCs may hide or repatriate their profits in a number of ways. Transfer pricing, for example, involves overpaying the parent company for imports of machinery and other inputs. This may occur in concert with a systematic underpricing of exports, bought again by the parent company. As well as depriving the host country of tax revenue, such practices will contribute to balance of payment deficits.

Finally, the presence of TNCs, whose magnitude of global operations frequently exceeds that of their host country governments, may restrict the scope for government policy making. The most extreme examples are the Latin American governments which have been destabilized after undertaking reforms that involved expropriating TNC property. In most cases, simply the threat of pull-outs or retaliation by TNCs suffice to influence government policy.

There are, however, several potential benefits to allowing freedom of investment to TNCs. Many branch plants now follow the high environmental standards set by home-country plants, which are sensitive to pressure from environmental NGOs about their business practices abroad. Those firms that do follow such guidelines are transferring not only more environmentally friendly technology, but also an awareness of environmental problems to the host country.

There may also be efficiency benefits. TNCs tend to have the most advanced technology available, and may use this in branch plants. As well, they will be less concerned than state-run firms about creating local development benefits through less efficient production methods. The results will not only be increased competitiveness, but also a reduced pressure on resources, since less will be needed per unit of output.



### Intellectual Property Rights in Free Trade Negotiations

In 1989, ranked fourth-worst by U.S. authorities in terms of overall patent, trademark, trade secret and proprietary technical data protection, Mexico was placed upon the "priority watch" list under the Special 301 provision regarding intellectual property. In a 1991 concession designed to facilitate the signing of the NAFTA, Mexico enacted legislation to eliminate the vast majority of problems being cited by U.S. pharmaceutical manufacturers, computer software producers, and recording industries. Patent life, for example, was extended from 10 to 14 years and the period within which a patent must be worked in order to obtain protection was extended from one to three years. Key areas to be granted stronger protection include pharmaceutical and chemical products, beverage and food for animal consumption, fertilizers and pesticides, herbicides, fungicides, biologically active products and the biotechnical processes that produce them. Attention has now shifted to the question of enforcement, where new regulations give the authorities the right to seize goods, impose fines, and close businesses engaged in piracy.

ADAPTED FROM HUFBAUER, GARY CLYDE AND JEFFREY SCHOTT. *NORTH AMERICAN FREE TRADE: ISSUES AND RECOMMENDATIONS*. WASHINGTON: INSTITUTE FOR INTERNATIONAL ECONOMICS, 1992, CHAPTER 9.

Finally, TNCs bring investment capital to countries in which this may be a scarce commodity. The alternative for many countries is to finance industrial development with foreign debt — a strategy which has often resulted in unmanageable debtloads. It is not clear that foreign direct investment is necessarily superior to debt; restrictive business practices may end up exacting a heavier price than debt-service payments. But in cases where creditors are put off by unmanageable existing debt it may be the only available alternative.

Like other elements of globalization, increased freedom of TNC investment may either foster or frustrate sustainable development. The uncertainty derives from the fact that TNCs are not a homogeneous group; while some practise a wide variety of restrictive business practices, others operate quite ethically. While some actively transfer cutting-edge technology and a sense of environmental awareness, others may simply seek pollution havens, and dumping grounds for obsolete equipment. More research is needed to clarify what role TNCs now play in globalized markets, and how they could contribute to achieving sustainable development.

#### ► THE URUGUAY ROUND'S NEW ISSUES

##### Intellectual Property Rights

Futurologists have been telling us for years that the world is entering the information age — an age in which knowledge and access to information will be more important to competitive success than resource endowments, military prowess or investment in plant and equipment. Even the automobile, it is estimated, now takes 80% of its value-added from knowledge and innovation, rather than materials and manufacturing processes.<sup>49</sup>

If developing countries are to compete in this new world and if they are to move toward more sustainable forms of energy development, there is general agreement that they will need access to more and better technology. The question is whether they will get it, and if so, how. The debate over trade-related intellectual property rights (TRIPS) was badly stalled in the preparatory process for UNCED by disagreement over these issues. The technology transfer sections of the final Conference documents were perhaps the least satisfactory outcomes of the Summit.

Current negotiations at the GATT on trade-related aspects of intellectual property rights aim to extend protection for intellectual property to all countries, preferably in a harmonized fashion. Many (mostly Southern) countries do not have such protection, especially in areas such as pharmaceuticals and computer software, making it possible for their producers to pirate foreign innovations. Northern innovators claim that this creates unfair competition for their products, since pirated goods can be sold at prices which do not reflect the original research and development costs. The prospect of lower sales then stifles innovation, by reducing the incentives to undertake lengthy and costly research and development.

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<sup>49</sup> Dian Cohen, personal communication.

These issues have several implications for sustainable development. One argument holds that in the absence of innovation both the North and the South will suffer, so it is in everyone's interest to tighten up international protection of intellectual property rights (IPRs). Sustainable development, after all, depends heavily on innovations, perhaps most obviously in the areas of energy efficiency and agriculture.

Another argument holds that, in the new knowledge-based economy, only those countries with knowledge-based value added will face improving terms of trade. Commodity producers and exporters of raw materials will be doomed to worsening conditions. If developing countries want to foster knowledge-based development, the argument goes, they will have to offer protection to intellectual property. Absence of such protection may be one of the elements leading to the flight from the South of scientists and innovators. There is certainly no shortage in the South of raw material for knowledge-based development, in the form of genetic information both from cultivated and wild strains of plants. (The issues of biological diversity and intellectual property rights are developed in more detail in Appendix B: *Biological Diversity*.)

For their part, many developing countries fear that stronger protection of IPRs will mean a widening of the gap between North and South, since the North will be better able to monopolize the world's cutting-edge technology. Currently, less than 1% of patents world wide are held by Third World nationals.<sup>50</sup> They also point out that it is already difficult enough for most developing countries to afford the kind of "green" development being called for by the North, without having to foot even higher bills for new technologies. Some estimates predict that current IPR proposals, if enacted, would double or triple the current South-North financial flow.<sup>51</sup> Developing countries argue that, far from restricting the transfer of technology, developed countries should be making it available at concessional rates.

They have a point; as mentioned earlier, the gap between rich and poor has been widening in the 20 years since the first world environment conference. Not only will sustainable development in the South require the substantial sums of money that dominated the debate in Rio; it will also require the technological transformation of the South. Furthermore, they maintain, to cope with the threats of climate change, deforestation and the loss of biodiversity which face the world as a whole, the Third World is being asked to forgo certain aspects of the development path that enriched the North (and polluted the global ecosystem). A revised global climate change convention, for example, could restrict China in the use of its abundant coal reserves as an engine of development (the very engine that powered the industrial revolution in the West), and ask it instead to use new energy technologies developed in the industrialized



### A Clock Ticking: But Which Way?

Of all the negotiating issues that have been brought to the table during the Uruguay Round, Raghavan argues that intellectual property rights have seen the most determined effort of the industrialized countries deployed against the Third World. Through these negotiations, he argues, industrialized countries are seeking to establish new international rules to protect the monopoly rentier incomes of their transnationals, deny Third World countries access to knowledge and block their own innovation and technical change, and thereby prevent any rise in the competitive capacity of these countries. This represents for Raghavan a complete reversal of the industrialized countries prior commitments to assist in promoting development within the Third World. "The clock is not simply being put back. It is to be remade to move only backwards."

RAGHAVAN, CHAKRAVARTHI.  
*RECOLONIZATION: GATT, THE URUGUAY  
ROUND AND THE THIRD WORLD.*  
LONDON: ZED BOOKS LTD., 1990.

<sup>50</sup> Patel, Surrendra J. "Intellectual Property Rights in the Uruguay Round: A Disaster for the South?" *Economic and Political Weekly*. (May 6, 1989).

<sup>51</sup> Rural Advancement Fund International. *Farmers' Rights: The Informal Innovation System at GATT (TRIPS) and in Intellectual Property Negotiations in the Context of New Biotechnologies*. RAFI Communique, May/June 1989.



### Trade-Related Investment Measures

A variety of investment measures have traditionally been used by developing countries to regulate the behaviour of foreign investors in their economies.

Some important ones include:

- Export requirements, intended to stem the outflow of foreign exchange, oblige an investor to export a fixed percentage of production. In addition, the measures seek to counter international cartels that distort trade through deliberate allocation of global markets.
- Local content requirements oblige firms to purchase a certain fixed percentage of the value of their production from local sources. These measures are intended to stem the outflow of foreign exchange, reduce the scope for transfer pricing, and provide a countervailing force to transnationals who might preferentially purchase from their own subsidiaries abroad.
- Technology transfer and licensing requirements oblige international firms to release to domestic firms certain technology in areas unrelated to the transnational's own production, but of use elsewhere in the economy.

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countries. It may be possible that China can be persuaded to forgo the development of its coal, but not if it has to pay dearly for the alternatives.<sup>52</sup>

### APPROPRIATE TECHNOLOGY

Up to this point, it has been assumed that environmental technology was a tangible, existing body of intellectual property, which the South could usefully apply to its development problems, if only the ownership and licensing problems could be overcome. This may not in fact be the case. A study by the International Development Research Centre maintained that current discussions, based on this premise, had

*...been narrowly bounded, focusing on the supply side and in particular on the financial, institutional, and legal mechanisms by which technologies currently applied in the North can be transferred to developing countries. As a result, a whole range of "demand side" questions regarding the nature of developing country technology needs, the role of developing country research systems, and the factors affecting the adoption of technology have been downplayed.<sup>53</sup>*

The point is that while developing countries may indeed need new technologies, their best course may not be to simply import them from the North ready-made. All the familiar arguments for appropriate technology apply here, but with a new twist added: it is ironic that the North, whose industrial base is so clearly unsustainable, should see itself in the business of selling "clean" technology to the Third World.

The IDRC study argues that the important considerations for spreading the adoption of environmentally sound technology in the Third World are:

- *clarifying the rules of the game governing the international transfer of environmentally sound technologies;*
- *increasing the supply of such technologies from both local and foreign sources;*
- *promoting the adoption and assimilation of environmentally sound technologies; and*
- *strengthening the technological capacities of developing countries.<sup>54</sup>*

The need for research here is clear. What types of technology does the Third World need to achieve sustainable development? Is existing Northern technology adequate? The analysis should also focus on the question of Southern capacity to develop appropriate green technologies. If this is desirable, what support could be offered from the North?

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<sup>52</sup> It is not always a clear-cut issue of not being able to afford greener development paths. For example, one alternative to coal-based development in China may be investments in energy efficiency, many of which could pay for themselves.

<sup>53</sup> Rath and Herbert Copley. *Technology and the International Environmental Agenda: Lessons for UNCED and Beyond*. Ottawa: IDRC, 1992.

<sup>54</sup> *Ibid.* p ix.

### TRIMs and Trade in Services

Services are different from goods in that they are intangible, but like goods they can be exchanged for payment. And if the payment crosses national boundaries, the service can be spoken of as “traded”. These services include banking, insurance, transportation, communications, media, and professional and business services such as engineering and consulting.

For a number of years, services have constituted the fastest growing sector in most Northern countries, and so the North has pressed to have services included in the GATT negotiations. The Uruguay Round marks the first time these issues have been discussed by GATT’s contracting parties.

Since a supplier of services usually has to set up shop in the vicinity of the consumer, the Northern countries also want to see restrictions on foreign direct investment loosened considerably. It does foreign bankers little good to have the freedom to sell their services in a host country if national regulations restrict them from actually establishing branches there. Thus, again at the insistence of several Northern countries, trade-related investment measures (TRIMs) are also being discussed for the first time in the Uruguay Round.

To bring these issues into the GATT negotiations would offer the possibility of “cross-retaliation.” If a country did not respect the rules laid down by the GATT on trade in services and TRIMs, the home of the affected company might eventually be able to retaliate with countervailing measures against goods, not services, imported from the offending country. This prospect is important to Northern countries, since retaliation against services would probably not be much of a threat to most Third World countries—they export very few of them. To the South, the idea is threatening enough that trade in services is actually being discussed separately from the GATT, in a forum appropriately called the General Agreement on Trade in Services.<sup>55</sup>

#### SOUTHERN CONCERNS

Third World countries express three basic concerns with the GATT negotiations on trade in services and TRIMs. First, they argue that current comparative advantage in service industries lies overwhelmingly in the North, and point out that there exist long-standing protectionist barriers in sectors where the comparative advantage is in the South. Agriculture and textiles are the prime examples; both are allowed to function under discriminatory rules that punish Southern producers. They argue that such barriers should be addressed before any liberalization of trade in services is discussed, especially in view of the South’s urgent need for development.

Second, they contend that TRIMs are necessary both to prevent restrictive business practices by TNCs and to prevent balance-of-payments deficits. Local content requirements, for example, dictate that the firm must use a certain

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- Domestic sales requirements impose upon firms an obligation to sell in domestic markets and to ensure that products are available in sufficient quantities and at appropriate prices for local industry. These measures are generally intended to counter practices that hurt competition by restricting the supply of intermediate inputs on global markets.
- Investment incentives are used by governments of developed and developing countries to attract foreign investments in areas coinciding with national development priorities.
- Manufacturing requirements are used to provide domestic firms with some countervailing power by allocating certain markets to local investors. Measures such as these are used to counter international market allocations, as well as predatory pricing practices used to eliminate competition.
- Local equity requirements specify a minimum amount of local equity in enterprises created by foreign investors as an attempt to provide a degree of local management and sovereignty.

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<sup>55</sup> Having services discussed separately may ultimately be of little significance. The proposed Multilateral Trade Organization would bring together the rules outlined in the GATT, the GATS, and the Agreement on Trade-Related Aspects of Intellectual Property Rights in an integrated framework, which would allow for cross-retaliation.

minimum percentage of locally purchased inputs. Such regulations attempt to prevent firms from systematically importing inputs from foreign affiliates of their parent firms, even when local inputs are available at comparable prices. Other types of investment measures seek to avoid balance-of-payments problems, specifying the amount of profits a firm may remit, or fixing the firm's imports as a percentage of its exports. Without the ability to control investor behaviour, Southern governments would be vulnerable to a host of restrictive business practices by TNCs, and would face aggravated balance-of-payments deficits.

Third, many countries (and not just in the Third World) use investment measures to achieve social and development policies. Examples are measures that require foreign firms to transfer needed technology, or to create forward and backward linkages, as conditions for investment. Such measures will clearly affect trade, since they promote production and possibly exports in the host country. But the South argues that some countries, because of their clear need for economic development, should be allowed to undertake such measures. This they claim is in accordance with the GATT-espoused principle of "special and differential treatment" for LDCs.

Any form of trade-liberalizing agreement trades off some domestic sovereignty for some domestic economic benefits. In this case, the Northern countries are asking that the sovereign control over foreign direct investment be curtailed, and that markets be opened up to trade in services. There are three questions which will help determine whether or not this is an appropriate policy move: what are the costs of protectionism? what are the costs of losing local control of services? and what are the costs of losing sovereign control over foreign investment?

The major cost of protectionism falls on potential exporters of services who are not allowed into protected markets. There may also be costs to consumers of services in such countries, if protectionism works to keep out efficient foreign competition, and therefore keeps prices higher and quality of service lower than they would otherwise be. There is a need for research into just how great these costs might be, and on whom they fall.

The costs of losing local control of services may be hard to specify, and harder to quantify. In the case of most services, it may matter little, other things being equal, whether the job is done by a foreigner or a national. It has been argued by some that foreign multinationals seldom have the interests of the people at heart and work solely for profits, but foreign bankers, for example, may be no different than national bankers in this regard. It may be that local service industries remit fewer of those profits abroad, but this then depends on the existing trade-related investment measures; strict measures might reduce this problem. Balance-of-payments costs of foreign firms should thus be seen as costs of losing sovereign control over foreign investment, rather than costs of losing local control over services.

Finally, the costs of losing sovereign control over foreign investment may be quite high. In large part, however, this boils down to a question of how TNCs behave abroad. If they typically engage in the sorts of restrictive business practices of which they are accused, then there is no doubt that removing TRIMs would be a

serious mistake, resulting in balance-of-payments problems and losses to local intermediate industries. If they do not, and if they instead bring with them needed investment capital, know-how and technology, then removing TRIMs would be advantageous, allowing more such investment to flow into the country. Reality probably lies somewhere between the two extreme cases, but research is needed to help determine just where that point might be.

Losing sovereign control over foreign investment also curtails options for social and economic development policy. Governments often offer investment incentives, or require technology transfer, in critical sectors or regions. South Korea's move into automobile exports, for example, was aided by such measures. And many less-developed states in the U.S. offer rich investment incentives to TNCs as part of a regional development policy. Since few would argue that the free market by itself is good at such things as regional development, or anticipating and responding to long-term needs for broad economic structural adjustment, the consequences of prohibiting governments from doing so should be carefully thought out.

#### ► INAPPROPRIATE TRADE

To this point, the argument has been made that trade has potential to be either a positive or a negative force for sustainable development, depending on other factors such as domestic or global macroeconomic policies. There is, however, another class of trade flows which tend to work directly against sustainable development. These forms of inappropriate trade include trade in arms, illegal drugs and toxic wastes.

#### Trade in Illegal Drugs

The trade in illegal drugs is damaging to both importers and exporters, though it represents a considerable portion of the economies of some Latin American and Asian countries. Aside from the damaging effects of actual use of addictive substances, trade in such drugs creates a sub-culture of lawlessness and corruption, with users frequently resorting to crime to support their habits, producers in a state of *de facto* war with their governments, and successful traffickers assuming vast amounts of political and economic power. As well, growers often become in effect sharecroppers on their own lands, while assuming most of the risks of production. And efforts at agricultural development in drug-growing regions are usually futile, if not dangerous.

Production of illegal drugs is often environmentally damaging, consuming vast quantities of agro-chemicals, and causing widespread water pollution in processing. It is estimated that two tonnes of such chemicals as kerosene, ammonia and sulphuric acid are released in the initial processing of every hectare of coca.<sup>56</sup> Opium growers in tropical rainforests usually deplete the soil of nutrients within 3 years, and move on to clear new land. And the aerial spraying conducted by anti-narcotic enforcement agencies pollutes soils and water with such powerful herbicides as Paraquat, 2,4-D and glyphosate.

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<sup>56</sup> Smith, Michael, Ed. *Why People Grow Drugs: Narcotics and Development in the Third World*. London: Panos Books, 1992.

**WHAT THE THIRD WORLD  
SHOULD BE FIGHTING FOR IS FAIR  
TRADE, NOT FREE TRADE. WHAT  
IT DESPERATELY NEEDS IS AN  
INTERNATIONAL ECONOMIC ORDER  
THAT RECOGNIZES AND CATERS TO  
ITS DEVELOPMENT NEEDS.**

MARTIN KHOR KOK PENG. *THE URUGUAY  
ROUND AND THIRD WORLD SOVEREIGNTY*.  
PENANG: THIRD WORLD NETWORK,  
1990, P 42.



Apart from its illegality, the trade in drugs is not unlike other forms of “desperation production”, in that it is born of circumstances of poverty and underdevelopment, and a consequent lack of alternatives. The prices for other cash crops are a fraction of those paid for narcotics, and are usually far more volatile. As well, traffickers often engage in the type of agricultural support so neglected by many LDC governments, offering micro-credit, guaranteeing purchase of harvests, and setting up demonstration plots. Any lasting solution will have to deal with these underlying problems.

Another part of the solution may lie in international agreement on regulation of finance. Global trade in illegal drugs could not begin to approach its current scale without the cooperation of certain banking centres in “laundering” the huge sums of money involved. Many small states deliberately use secrecy laws and lax regulations to encourage off-shore banking and evasion of taxes, incidentally providing the means by which an estimated \$100 billion per year in drug money is “recycled” into the U.S. alone.<sup>57</sup>

### Trade in Arms

The Brundtland Commission clearly portrayed the vicious circle that links military spending, the environment and development:

*Arms competition and armed conflict create major obstacles to sustainable development. They make huge claims on scarce resources and wealth that could be used to combat the collapse of environmental support systems, the poverty, and the underdevelopment that in combination contribute so much to contemporary political insecurity.<sup>58</sup>*

Trade in arms constitutes a significant share of global economic activity, making up 7.2% of developing country imports, and 2.2% of OECD exports.<sup>59</sup> The most potent objection to this expenditure is the lost opportunity it represents for investment in sustainable development. Almost half of the world’s expenditure on research and development, employing some half a million scientists in a colossal misdirection of potential, is for military purposes.<sup>60</sup> Developing countries spend over one and a half times on the military what they spend on education and health care combined, and military spending as a percentage of GDP has doubled in the last two decades in the least developed countries.<sup>61</sup>

The global buildup of arms has serious environmental consequences as well. Not only is there increased threat of environmental disaster as a result of warfare, as the Gulf War so starkly illustrated, but the manufacture of nuclear and biological weapons themselves represent serious threats to the global environment.

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<sup>57</sup> Beaty, Jonathan and Richard Hornik. “A Torrent of Dirty Dollars.” *Time*, (December 18, 1989): 44.

<sup>58</sup> WCED. *Our Common Future*. Oxford: Oxford University Press, 1987, p 294.

<sup>59</sup> UNDP. *Human Development Report 1992*. New York: Oxford University Press, 1992, Tables 20 and 41. Figures cited are 1989 data.

<sup>60</sup> WCED. *Our Common Future*. Oxford: Oxford University Press, 1987, p 298.

<sup>61</sup> UNDP. *Human Development Report 1992*. New York: Oxford University Press, 1992, Tables 20

Far from working to reduce the global trade in arms, however, most Northern governments are actively promoting it, with massive subsidies and export support programs. In promoting such trade, the governments involved are working effectively against sustainable development. The more arms purchased, and the less spent on social and environmental investments, the more arms will need to be sold, to quell the insecurity bred by the presence of arms, the effects of external debt, and the deterioration of social and environmental conditions.

### Trade in Toxic Waste

Trade in toxic waste may appear not to be trade at all, since the receiving country or region gets both the goods and the payment. It is more easily understood as a trade in waste treatment services, with the country or region which receives waste *exporting* those services for a price.

Such trade is entirely appropriate if the exporting country is actually an efficient treater of wastes, if it undertakes such treatment, and if it is paid the full cost of its services. Many countries lack the facilities to properly dispose of their domestic toxic waste streams. Often, however, particularly in less developed regions, shipments of waste end up being dumped or stored rather than treated, leaving a legacy of environmental destruction for future generations. Unscrupulous firms or corrupt officials may accept waste without public knowledge, or official sanction may be given to what could be the most extreme form of “desperation production.”

Environmentalists dislike the idea of trade in toxic wastes, reasoning that the easier it is to ship waste elsewhere, the less incentive there is to stop producing it at the source. As well, they note the hazards associated with transportation of toxic waste, which increase with increased trade. There are also formidable problems with the monitoring of toxic wastes once they are transported, and many shipments are falsely documented, or simply dumped illegally at sea.

Many countries are insisting on *prior informed consent* on the part of countries receiving toxic wastes, a principle enshrined in the Basel Convention.<sup>62</sup> This would go a long way toward eliminating the most repugnant manifestations of the international waste trade (i.e., dumping in underdeveloped regions), but does not address the underlying problems of underdevelopment and poverty which give rise to such trade in the first place, and thus will probably fail to prevent it. Many nations, in particular the developing countries of Africa, have called for outright bans on transboundary movements of hazardous waste.

### Other Forms of Inappropriate Trade

There are several other forms of inappropriate trade which occur on a somewhat smaller scale. The international trade in endangered species, for example, works directly against sustainable development, and has been amply documented.<sup>63</sup>

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<sup>62</sup> Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (March 1989). Prior informed consent would mean that before waste could be shipped, the receiving country would have to be informed of the contents and the risks involved, and would have to grant official approval.

<sup>63</sup> See the large body of literature produced by TRAFFIC (U.S.A.).



### Polluters' Havens

West and Senez conclude in their recent Canadian study that the premise attributing industrial reallocation to the flight from environmental regulation is a deceptively simple perspective. Capital investments may actually be deterred by other factors associated with lax regulatory regimes, such as social stress and the need for crisis management of environmental emergencies. Companies, they suggest, will increasingly seek locations with stable environmental infrastructure, that facilitate modern technologically advanced operations, with the work force necessary to operate them. Market forces, such as swings towards green consumerism, will further detract from pollution haven gains. As well, international pressures from countries affected by environmental spillover, and what they perceive to be "unfair" advantage, will eventually force destabilizing changes in countries with lax regulations.

WEST, PAUL AND PAUL SENEZ. ENVIRONMENTAL ASSESSMENT OF THE NAFTA: THE MEXICAN ENVIRONMENTAL REGULATION POSITION. STUDY PREPARED FOR THE MINISTRY OF ECONOMIC DEVELOPMENT, SMALL BUSINESS AND TRADE, BRITISH COLUMBIA, CANADA, 1992.

As well, there is a large body of inappropriate trade which results from "tied" bilateral aid. Many donor countries link their official development assistance to the purchase of specific goods from domestic industries. Since this type of trade has more to do with export promotion than with development needs, it often leaves the purchaser with some combination of inappropriate goods, a dependency on foreign inputs and outstanding external debt, and seldom addresses the development needs supposedly being targetted.<sup>64</sup>

Finally, some trade consists of goods which are outright damaging to consumers, and which may therefore be restricted or even banned in the country of export. While Canada has banned the use of lead in gasoline, for example, it is still a major exporter of tetraethyl lead to the Third World. Pesticides such as DDT, banned in many Northern countries, are still exported to the South. The export of cigarettes and infant formula may also fall into this category of trade, and both illustrate the powerful role that advertising plays in promoting exports of this type. The issue is complex, however; many claim that restricting this type of trade infringes on the sovereignty of the importing countries.

## Effects of Environmental Policies on Trade

There are a number of ways in which domestic environmental policies can influence trade flows. By attempting to internalize external costs, they may cause regulated firms to become less competitive relative to foreign competitors, or even lead to migration of firms to escape high costs of compliance. On the other hand, there seem to be cases where strict environmental regulation leads to innovation, efficiency and, ultimately, greater competitiveness.

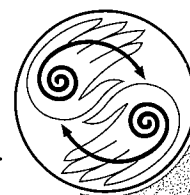
The growing trend toward green consumerism in developed countries may also have significant trade impacts, especially if a multitude of differing standards in various countries acts as a trade barrier to exporters. Also gaining popularity is the call for global conventions to deal with problems of pollution of the global commons. The recently concluded conventions on biodiversity and climate change may eventually affect trade by using trade measures as methods of enforcement, employing bans and trade restrictions on non-signatories. They may also give rise to charges of eco-imperialism from the Third World, which may see such trade measures as Northern coercion.

### ► ENVIRONMENTAL REGULATION AND COMPETITIVENESS

Business interests in both developed and developing countries have expressed concern that national regulations on production procedures and levels of polluting emissions are too prescriptive for domestic manufacturing and resource industries. It is argued that these regulations result in substantial compliance costs and that they can lead to producers from countries with weaker regulations capturing a larger share of both domestic and world markets. This raises the

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<sup>64</sup> For a fuller discussion of the issues, see Cassen, Robert *et al.*, *Does Aid Work?* Don Mills, Ontario: Oxford University Press, 1986; and Adams, Patricia, and Lawrence Solomon. *In the Name of Progress: The Underside of Foreign Aid* (2nd ed.) Toronto: Energy Probe Research Foundation, 1991.



question of the legitimacy of restricting the import of goods, where it can be shown that these are not compatible with what is expected of domestic producers.

The negative reaction of the pulp and paper industry to the recent British Columbia government decision to effectively ban the use of chlorine in the paper making process is the most recent Canadian example of the concern of some industries that tighter environmental standards will make them uncompetitive. The fact that such issues have had little discussion in the current round of consultations on the Canadian government's "prosperity" initiative seems to confirm that there is a widespread sense that competitiveness and tough environmental and energy conservation standards are often enemies.

Concern over competitiveness can lead to calls for relaxed regulations. It can also lead to requests for subsidies from the affected industries. It has led to fears from environmentalists that there will be pressures to "harmonize down" to the lower standards in any trade negotiations. This was one of their principal objections to the Canada/U.S. Free Trade Agreement, under which U.S. standards for asbestos and Canadian standards for pesticide registration are under strong pressures to fall to meet standards in the other country. But it is not clear whether this always need be the case; there is some evidence to the contrary from the European Community.

Many also worry about the migration of industry to so-called "pollution havens" in the developing world where standards are thought to be low and enforcement more lax. The pollution havens argument is often based upon a simplistic view of overall business strategy in a world of global competition. In his examination of this question, for example, Leonard concluded in a 1988 study that many elements other than cost of compliance influence a firm's decision to stay or relocate.<sup>65</sup> These include such factors as market access, availability of raw materials and substitutes, political stability, the availability of labour and supporting infrastructure, technical innovations and quality control. In a joint study with Duerkson, using U.S. trade and investment data, Leonard concluded that the most pollution-intensive industries such as chemicals, paper, metals and petroleum refining favoured highly industrial and heavily regulated host countries.<sup>66</sup> Also, U.S. foreign direct investments in pollution-intensive industries did not increase much over a period of time. Knodgen reached the same conclusions with respect to West German firms.<sup>67</sup>

Other studies arrived at similar conclusions. In a 1982 study, Ingo Walter examined foreign direct investments by firms from Western Europe, Japan and the U.S. between 1970 and 1978.<sup>68</sup> He found no evidence that differing environmental costs were responsible for the existence of dirty industries around the world.

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<sup>65</sup> Leonard, Jeffrey. *Pollution and the Struggle for the World Product*. New York: Cambridge University Press, 1988.

<sup>66</sup> Duerkson, C. and H.J. Leonard. "Environmental Regulations and the Location of Industries: an International Perspective." *Columbia Journal of World Business* 15 (Summer 1980): 52-68.

<sup>67</sup> Knodgen, G. "Environment and Industrial Siting: Results of an Empirical Survey of Investment by West German Industry in Developing Countries." *Zeitschrift für Umweltpolitik* 2.

<sup>68</sup> Walter, Ingo. "Environmentally Induced Industrial Restructuring in Developing Countries." In S. Rubin, Ed. *Environment and Trade*. New Jersey: Allanheld, Osmun, and Co., 1982.

### Pollution: Mexico City

While much research indicates that firms do not relocate production solely on the basis of lax environmental standards, they may in fact take full advantage of those standards after relocating, whatever the motives for the move. A recent environmental and pollution study of the world's largest city reported 33,000 industrial sources of air pollution, of which half were considered severe. The important sources included:

- electrical energy generation plants
- smelters and foundries
- pulp and paper mills
- soap and detergent manufacturers
- asbestos plants
- chemical plants
- refineries
- plastic producers
- ceramics producers
- paint and solvent producers
- food processing plants
- textile industries
- sugar refineries.

CANADIAN EMBASSY, *MARKET STUDY ON POLLUTION AND ENVIRONMENTAL CONTROL IN MEXICO*. COMMERCIAL DIVISION, CANADIAN EMBASSY, MEXICO CITY. APRIL 1990.

**WHEN THE COUNTRIES  
CONCERNED IN AN AGREEMENT  
ARE AT SIMILAR STAGES OF  
DEVELOPMENT, [HARMONIZATION]  
NEED NOT POSE AN INSUPERABLE  
PROBLEM. BUT WHEN THEY ARE AT  
WIDELY DIFFERENT STAGES OF  
DEVELOPMENT ... HARMONIZATION  
CAN RAISE ENORMOUS PROBLEMS.**

JIM MACNEILL. "TRADE AND DEVELOPMENT:  
THE GLOBAL DIMENSION." ADDRESS TO THE  
CANADIAN NATIONAL ROUND TABLE  
CONFERENCE ON TRADE, ENVIRONMENT AND  
COMPETITIVENESS, TORONTO, NOV. 4, 1991.

Available studies have reached the common conclusion that on an economy-wide scale, there has not been much serious and significant relocation on environmental grounds. However, caveats have been expressed which are worth considering when further in-depth and empirical studies need to be conducted. First, the conclusions reached by existing studies cannot be considered conclusive because of the time frame of the data used and the fact that circumstances have changed since the 1970s and 1980s. Second, anecdotal evidence, case studies and surveys of individual firms suggest that environmental regulations have played a role in relocation decisions. These referred to specific industries in the maquiladoras, mineral processing, toxic products and intermediate organic chemicals. Third, even if industrial relocation has been limited so far, it could become more significant in the future as environmental regulations become more stringent.

### **Regulation and Competitiveness**

There is, however, another side to these competitiveness arguments. Michael Porter argues convincingly that often those countries with the toughest environmental regulations are also the most competitive in the regulated sectors. As examples he cites Japan and Germany, where a number of the principles of sustainable development (particularly environmental and energy efficiency standards) are being consciously used as engines of economic and technological innovation.<sup>69</sup>

The German strategy is clear. Regulations which are imposed and standards set first in Germany will spread to the European Community (EC) as a whole, thus giving German industry a certain advantage over its competitors. Volkswagen, for instance, is currently involved in the design of German standards for car recycling. The knowledge it gains will undoubtedly help in its own design processes. Similarly, the German government has pledged a 25% reduction in CO<sub>2</sub> emissions by the year 2005. This will force its industry to become even more competitive and may create barriers to the import of less efficient goods into the domestic (and eventually, perhaps, European) marketplace. The German government is already attempting to persuade its partners to develop a European-wide standard for CO<sub>2</sub> emissions and energy efficiency.

The Germans and Japanese believe that these standards will enable them to invent the new resource efficient and energy efficient technologies of the 21st century. Many have also cited the case of California, a state whose economy would be the fifth largest in the world were it to be independent. This large and affluent market has allowed the state to develop substantial market niches in areas such as energy conservation and the use of new and renewable sources of energy-areas in which the state has been a regulatory leader. It is not an overstatement that development of electric car technology in the world is now driven by the need for improved air quality in Los Angeles.

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<sup>69</sup> Edda Müller, chief aide to Germany's minister for the Environment, put it most succinctly: "What we are doing here is economic policy, not environmental policy." cited in Curtis A. Moore, "Down Germany's Road to a Clean Tomorrow." *International Wildlife*. (Sept./Oct. 1992): 20.

► **TOLERANCE OF POLLUTION:  
THE COMPARATIVE ADVANTAGE OF THE POOR?**

The search for the famous level playing field has led to repeated calls for international standards. This call has been met with little enthusiasm from diplomats and economists. The former cite the extreme difficulties of negotiating even the simplest of standards. They cite the lengthy discussions within GATT about the subsidies code. Economists question whether it is either efficient or equitable to have uniform environmental standards; the notion only makes sense if the costs of pollution are also uniform worldwide. There would be little point, for example, in globally enforcing Southern California's emission standards for volatile organics (which contribute to low-level ozone and smog).

This is the argument made by many who maintain that pollution in developing countries is less "costly" than the same pollution in developed countries. They claim that Southern ecosystems, being relatively untouched by the waste products of industrialization, will be able to absorb more pollution than the ecosystems of developed countries. Also, they argue that their citizens, being poorer, are forced to give lower priority to environmental quality than are the affluent citizens of Northern countries. If the trade-off is between a cleaner environment in the future, and basic necessities such as food and shelter in the present, citizens of poor countries will choose more of the latter.

Therefore, the argument goes, it is unfair to demand that standards in LDCs be as strict as those in developed countries. To do so is to prevent them from exploiting their comparative advantage, born of low costs, in pollution-intensive products.

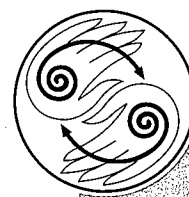
In an article about harmonization as it relates to the NAFTA, Diana Ponce-Neva, a Senior Mexican official, put it this way:

*The various countries involved may reach different conclusions as to the appropriate methods and extent of environment protection and natural resource exploitation. Factors which generate such diverse decisions include the following:*

- *Most countries possess different pollution assimilation capacities.*
- *Scientific uncertainty remains over the amount of environmental damage caused by most pollutants.*
- *The cost-benefit equation for environmental protection will vary between countries. Common policies and standards are difficult to justify when a disproportionate share of the costs would be borne by the poor and benefits received by the rich.*
- *Environmental problem solvers must make decisions through local political institutions. Their decisions are therefore coloured by political considerations, even when strong scientific evidence is available.*
- *Finally, even when standards are agreed, there may be differences as to the best method of achieving these standards in local circumstances.<sup>70</sup>*

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<sup>70</sup> Ponce-Neva, Diana L. "The North American Free Trade Agreement: Comment From a Mexican Perspective." *Review of European Community and International Environmental Law* 1, No. 1 (1992): 52.



**Environmental  
Demands of the Poor**

It is frequently suggested that poor people care less for the environment than the better-off. Anderson suggests that it may be more reasonable to assume that both groups, the rich and the poor, have similar preferences for goods and services, including those for a clean environment. What differs between the two is their income, and therefore, their capacity to trade off greater "goods" consumption for a cleaner environment. Over time, higher rates of pollution abatement will result from higher levels of per capita income and the increasing level of general economic development. Anderson argues, therefore, that just as trade liberalization calls for the reduction of price distortions caused by tariff and non-tariff barriers, the natural movement towards stricter environmental regulation should not be disrupted by imposing strict developed-country standards on LDC producers.

ANDERSON, KYM "THE STANDARD WELFARE ECONOMICS OF POLICIES AFFECTING TRADE AND THE ENVIRONMENT." IN THE GREENING WORLD TRADE ISSUES. EDITED BY K. ANDERSON AND R. BLACKHURST. LONDON: HARVESTER WHEATSEAF, 1992.



### The Tuna Saga

Trade in tuna has raised a series of issues about the application of trade rules to trade restrictions imposed on environmental or resource management grounds. In the early 1970s the United States imposed restrictions on imports of tuna from the Philippines, because of the alleged mercury content. Although the dispute over mercury content did not go to the GATT, it is likely that such restrictions would be upheld as long as the same product standards were applied to tuna harvested by the U.S. fleet.

Another trade dispute over tuna arose between Canada and the United States in the late 1970s, when Canada seized 19 U.S. fishing boats found to be fishing with the 200 mile limit claimed by Canada. The United States did not recognize the 200 hundred mile limit and retaliated by banning imports of tuna from Canada. A GATT panel ruled that the import ban on tuna from Canada was contrary to Article XI of the GATT.

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There is, however, little in the way of empirical evidence one way or the other on the argument that ecosystems in the South are able to absorb more pollution than their Northern counterparts. Moreover, there are concerns that some forms of pollution, such as those responsible for ozone depletion and the greenhouse effect, are global, not local, problems. And some studies suggest that the rural poor, if not the urban poor, depend more heavily on their environment than do the rich, relying on it to supplement their cash incomes through subsistence farming, hunting, gathering, etc. Finally, many question the morality and wisdom of a Northern decision to let the South make desperate choices between development and the environment. They argue that by removing protectionist barriers, and transferring technology and resources, Northern countries could help make the choice unnecessary.

Even if it were agreed somehow that it was desirable to reduce the differences in environmental standards between various countries, the relevant question is still whether a search for uniformity should be made through trade measures or through international agreement on environmental regulations. Economists argue that trade restrictions against developing country exports, aimed at improving their environmental standards, will be counterproductive; they would delay growth in developing countries and, consequently, the ability to deal with environmental problems through acquisition of better technology and higher investment.

This argument, that liberalized trade will increase incomes, and will therefore allow for strengthened protection for the environment, is one of the main themes of the recent GATT annual report. It cites studies showing that environmental pollution rises with rising per-capita income levels up to a point (about \$5000 per year), but thereafter declines rapidly. But these studies have been criticized as far from conclusive. Further research is needed to determine what causes this effect, and whether it holds for all types of pollution. Most important is to determine whether it is feasible to recommend such "pollute now, go green later" strategies in view of the stresses already placed on global ecosystems. If the pollution in question were reversible, there would be less cause for concern. But reaching the necessary level of income may result in irreversible damage to global biodiversity and atmospheric integrity. And even in the case of reversible pollution, the experience of the North clearly shows that a strategy of polluting first and cleaning up later is monumentally costly compared to prevention.

### ► GREEN CONSUMERISM

Green consumerism is growing rapidly in the developed countries. Recent European polls have shown that 66% of Germans would buy a less environmentally harmful product, even if it costs more.<sup>71</sup> And fully three quarters of consumers in the UK, France and Germany strongly agreed that there should be detailed information on packaging, explaining environmental claims.

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<sup>71</sup> *European Consumer Power*, a survey conducted by McCann-Erickson Advertising Ltd., London, England, January 1992.

Similar figures are available for Northern Europe, North America and Japan — the world's biggest consumer regions. And they are leading to calls for trustworthy environmental labelling and for tougher regulations governing residues and additives in foods (the hormone dispute between the EC and the U.S. is a good example of this). They are also leading some countries to strengthen their packaging and recycling regulations (here Germany and the Netherlands are the best examples). As the GATT Secretariat states in its annual review, the international trading rules are quite specific on this point. Any country has the right to "protect its environment against damage from either domestic production or the consumption of domestically produced or imported products. Generally speaking, a country can do anything to imports or exports that it does to its own products."<sup>72</sup>

This having been said, few would agree that a plethora of such standards with no attempt to develop criteria for mutual recognition or equivalency would be desirable. At the moment, the hotch potch of regulations from country to country increases costs dramatically for exporters. Any attempt to harmonize standards, however, faces formidable obstacles. The scientific evidence in support of standards is never absolute, and there are always areas of disagreement about acceptable levels of risk. And this sort of science is always subject to political override. The international negotiations on such standards are usually dominated by the powerful, both domestically and internationally. The process is seldom transparent, usually leaving out some of the most vocal groups in this era of green consumerism. Therefore, the result is often suspect.

The GATT has no objections to "green labelling", since it is a voluntary practice. Problems arise when the importing country seeks to influence the environmental policies of another country. In the tuna-dolphin case, the United States tried to force the Mexican tuna fleet to change its fishing practices by banning imports of tuna from that country. This kind of unilateral action is part of a trend that the developing countries have feared from the time of the Stockholm conference and is generally against accepted trade practices (a GATT Dispute Panel report sided with the Mexicans on the unfairness of the ban, but allowed the American labelling scheme).

Nevertheless, many environmental groups in North America and Europe are committed to using unilateral boycotts and other kinds of formal and informal restrictions against countries whose environmental policies are felt to be unacceptable. Environmental groups in Europe, for example, have sought to impose sanctions on tropical timber exporting countries to force them to practice more sustainable forms of forestry. They have also lobbied local authorities throughout the continent to change their building codes to prohibit the use of tropical timber in construction.

CONTINUED FROM PAGE 50

The most recent tuna dispute involves a ban of imports of tuna into the United States under a provision of the 1972 Marine Mammals Protection Act as amended in 1990, which stipulates that foreign tuna fishing fleets should not have a higher attrition rate for dolphins than that experienced by the U.S. tuna fleet. An import ban was applied to yellowfin tuna from Mexico and Mexico complained to the GATT in December 1990, arguing that the U.S. was in effect legislating production standards outside of its own borders. In September 1991 a GATT panel prepared a report, which has yet to be submitted to the GATT Council. The preliminary GATT panel ruling finds that the exceptions in Article XX do not permit the extra-jurisdictional imposition of an environmental standard about the dolphin attrition rate on the Mexican fishing fleet, in the absence of an effective international environmental or resource management agreement.

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<sup>72</sup> GATT. *International Trade 90/91*, Vol. I. Geneva: GATT, 1992, p 23.



This general approach has two drawbacks. First, it seldom deals directly with the problem. It fails to achieve sustainable management of the resource, since it does not discriminate between good and bad management systems, but penalizes all producers in equal measure. The CITES ban on trade in ivory has been heavily criticized on these grounds.

Second, it is politically unacceptable in the developing world. Developed countries have overexploited their forests for centuries. Now, when biodiversity and global warming are major problems, developing countries feel as if they are being forced to assume an unfair share of the burden. This sentiment is one of the reasons for the controversy surrounding forest issues throughout the UNCED negotiations. As well, many in the South see such boycotts as part of an ongoing pattern of Northern protectionism. The developing world is already subject to frequent unilateral trade actions by larger trading nations, loosely justified on the grounds of unfair competition or dumping. Many feel that consumer boycotts, whether instigated by governments or not, are merely a disguised form of protection.

#### ► GLOBAL ENVIRONMENTAL CONVENTIONS

CITES and the Montreal Protocol pioneered the modern use of multilateral trade measures to deal with global environmental problems. The 1990 amendments to the Montreal accord, for example, envision signatories restricting imports of goods produced using ozone depleting compounds. A strict interpretation of the GATT might not allow such restrictions since they involve discriminating among goods on the basis of their methods of production. So far, this use of trade measures to enforce environmental conventions has not been challenged.

But the issue will come to a head with the negotiation of international agreements to preserve forests or biodiversity, or to control emissions of greenhouse gases. None of these conventions will be successful without some sort of enforcement mechanism to control “free riders”, those who would reap the benefits of international cooperation, but without incurring the costs that go along with actually signing. The most likely mechanisms to be used include trade measures.

The 1989 Hague summit provided a foretaste of some of the remedies that may be proposed. At that summit, the Governments of France, the Netherlands and Norway came forward with a proposal to create an international agency to regulate greenhouse gas emissions. Decisions of the authority would not depend on unanimous approval (i.e., no one country would have veto power). And the authority would have the power to bring violators before the World Court. The Court would have the power to invoke trade sanctions. The proposal was watered down for the final communiqué and watered down even more when presented by President Mitterand at the G-7 summit later that year. But it does confirm the political support for effective trade measures to accompany these international agreements, and the attractiveness of trade measures as the most effective likely enforcement mechanism.

### ► “ENVIRONMENTAL IMPERIALISM”

The prospect of trade-related threats to enforce global environmental standards understandably worries many developing countries. The convention on biodiversity, for example, may eventually effect the use of tropical rainforest land, and the convention on climate change could restrict development based on the burning of fossil fuels.

These agreements, like many multilateral efforts, could ultimately reflect the interests of countries who wield power in international affairs, whose bargaining positions will be stronger. There is a fear among some that international environmental agreements, on global conventions or on harmonized standards, will be used by the North to force its priorities onto the rest of the world.

As the discussions in both the official and unofficial meetings in Rio demonstrated, many in the Third World see hypocrisy in First World demands for “green” development paths. Brazil, for example, under pressure for its policies of rainforest development, lashed out at Northern critics, pointing out that developed countries had long ago cleared almost all their forest cover. Those that still had significant amounts of cover, such as Canada and the U.S., were well on the way to eliminating even that, through unsustainable logging affecting even old growth areas and temperate rainforests.

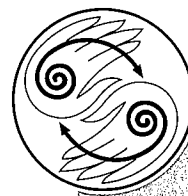
From another perspective however, if it is true that tougher environmental regulations create competitive industries, and that strict regulation and increased green consumerism are the way of the future in the world’s major consumer markets, the country which most strongly resists internalizing its environmental costs is worse off in the long run. Quite aside from the pollution it would have to bear, its industries would be inefficient, and out of sync with consumer demand and regulatory requirements.

## **Institutions for Trade and Sustainable Development**

### ► UNCED AND THE INTEGRATION OF ECONOMICS AND THE ENVIRONMENT

Sustainable Development is a potentially radical concept, requiring fundamental changes in economic systems within countries and in the relations between the North and the South. The discussions at UNCED have illustrated just how difficult these changes will be and how far away they are from being made.

Take the matter of financing. As noted above, the annual costs of global development to meet basic human needs, and additional resources for the transition to sustainable development, have been estimated at \$600 to \$750 billion. And this figure excludes the massive costs of rebuilding Eastern Europe and the former Soviet Union. Even if the resources of the Global Environmental Facility are increased several fold, and money is provided for the development of indigenous technological and policy capacity in developing countries, the sums



### **Financing Development Through Efficient Reallocation**

The United Nations Development Programme in a recent report has emphasized that lack of political will, not lack of financial resources is more often than not the real cause of underdevelopment. There exists tremendous potential for restructuring national expenditures to promote more sustainable levels of development. Government priorities require urgent review in areas related to military expenditures, internal and external debt repayment, inefficient parastatal production, unnecessary government controls and mistargeted social subsidies. Additional savings could result from reversing capital flight, combatting corruption, limiting prestige projects and reducing internal policing. Frequently, new resources can be made available through tax reforms, discriminatory user fees, and voluntary community contributions. Efficient reallocation of resources will go far to help finance the effort for sustainable development.

UNDP. *HUMAN DEVELOPMENT REPORT 1991*. NEW YORK: OXFORD UNIVERSITY PRESS, 1991.

will be far short of what the Third World feels is needed. Twenty years after the landmark report of the first of the world commissions, headed by Lester B. Pearson, official development assistance from the North to the South, has barely reached half of the figure of 0.7% of GNP recommended by the former Canadian Prime Minister and his colleagues. And many of the large economies are suffering from “aid fatigue” even at this level.

Debt reduction could free up substantial resources for sustainable development, yet the debt crisis has practically vanished as a topic for concern. With most Northern banks having by now built up reserves against bad Third World loans, much of the steam seems to have gone out of efforts to substantially reduce the debt of the developing countries.

Developing countries therefore are pushing hard for trade liberalization, in the belief that freer access to Northern markets will be a far more reliable source of revenues for development than continued dependence on parsimonious developed country legislatures.

Take the matter of the environmental effects of consumption. The contributions of the North to global environmental degradation either directly (up to 75% of CO<sub>2</sub> emissions, over 90% of ozone destroying CFCs) or indirectly through the trading and financial systems,<sup>73</sup> are at present far greater than those of the developing world, though this may change dramatically in the future. Yet the U.S. and other Northern governments have been unwilling to even admit to the need to alter patterns of consumption, let alone to set plans in motion to do anything about them. And here the developing world is not blameless either. At the Earth Summit, the OPEC countries strenuously resisted any attempts to curtail the use of fossil fuels and few developing country politicians have been willing to discuss economic futures which entail anything other than an emulation of current Northern standards.

Take the matter of population which was and continues to be a virtually taboo subject in UNCED and other international gatherings. Just as Northern governments seem unwilling to face up to the consequences of overconsumption, leaders of the Third World bowed to pressure from the Vatican and many of the conservative Muslim states to resist attempts at meaningful discussions of the relationships between population growth and environmental degradation.

Take the issue of technology transfer and the role of the multinational corporations. The capital and technology necessary for sustainable development will not come entirely, or even largely, from official sources. It will come from the private sector and from local sources. Yet the Rio discussion about technology transfer was bogged down on ideological grounds with the developed world insisting on the absolute sanctity of intellectual property and the developing world insisting on “the transfer of environmentally sound technologies to the developing countries on preferential, most favourable, concessional and non-commercial terms,” and that this transfer should be seen as “a contribution to the

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<sup>73</sup> Here Jim MacNeill's concept of the ecological shadow is a major breakthrough.

common interests of mankind [sic].”<sup>74</sup> Although elements of the corporate community and its various trade associations have been involved in the UNCED discussions, there has been little creative discussion of the role of private capital in filling the gap left by the failure of governments to meet the Pearson (or any other) targets.

Take the matter of institutional change within the international system. The Commission on Sustainable Development recommended by UNCED may well make some marginal improvements in the coordination within the international system, but it will surely not be up to the task of merging environment and economics in decision-making if it is composed of Ambassadors to the United Nations, or even of Ministers of the Environment, as many have proposed.

The lesson of the Brundtland Report is clear: sustainable development will only work if it becomes a very high priority of the economic and political decision-makers — the CEOs and Prime Ministers. That is the reason for Maurice Strong’s gamble in making UNCED a summit, and his rationale for persuading the Swiss industrialist Stefan Schmidheiny to bring together a group of some 40 corporate heads to issue their own report on sustainable development. It is also the reason why Strong recommended to the Secretary General in his final report that the Commission on Sustainable Development be constituted at the Head of State level.

If the UNCED follow-up fails to institutionalize sustainable development at a high level, it will fall to later gatherings of economic and political decision-makers to make these links. Some have called for the Security Council to assume special responsibility for sustainable development, others prefer the rejuvenation of the Trusteeship Council, one of the original main organs of the U.N. system. Others have called for the establishment of a “non-institution” similar to the G-7 summit or the Group of 20 developing countries.<sup>75</sup> These summits have no legal existence and no international bureaucracy to serve it. A similar grouping could be constituted on the initiative of a half dozen existing Heads of State (as was The Hague Summit, mentioned earlier). It could include suitable members from the developing world, from Russia and Eastern Europe and the G-7 or part thereof. It could meet on an annual or biennial basis by invitation from one Head of State.

What is the role of trade policies in this institutional mix? As the OECD reminds us; “Unlike sustainable development, free trade is not an end in itself”<sup>76</sup> Environment and trade policies can work either for or against sustainable development.

Constructing trade policies that work to promote sustainable development will be much easier and more effective if the key economic and political decision makers are prepared to meet to discuss these issues on a regular basis.

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<sup>74</sup> *Beijing Ministerial Declaration on Environment and Development*. Ministerial Conference of Developing Countries on Environment and Development. ED/Conf G 2, 18 June 1991.

<sup>75</sup> Runnalls, David. “What Should be Said at UNCED? Institutional Questions for the Rio Conference.” Paper for the National Round Table on the Environment and the Economy (Canada), 1992.

<sup>76</sup> OECD. Joint Report on Trade and the Environment. COM/ENV/EC/TD (91).



#### POLLUTION CONTROL INDICES: THE U.S. CASE

The use of unilateral legislation seeking to use trade laws as a way of achieving environmental objectives seems likely to grow in coming years. One prominent proposal by Senator Boren in the United States seeks to introduce legislation to help domestic firms compete with foreign manufacturers operating in lax environmental regimes, and thereby encourage countries with lower standards to enforce more stringent pollution control measures. The Trade Representatives Office in the United States would monitor environmental compliance in the 50 largest trading partners of the nation on an annual basis. A pollution control index would measure each country's attainment in areas of air, water, solid and hazardous waste disposal compared to U.S. standards in similar areas. The proposal would amend countervailing duty laws for the United States, declaring the imposition and enforcement of effective pollution control measures below those compatible to U.S. law as equivalent to a subsidy and therefore subject to countervailing duty law. Revenues raised through such measures would be used to promote pollution control and research and development and to assist the purchase of control equipment by developing countries.

There is obviously a fundamental need for trade policy to take account of its effects on the environment and sustainable development. But, as all sides of the debate agree, existing institutions are not up to the task.

Developing countries are keenly sensitive to the danger that, in absence of multilateral agreement on institutional change, the nations of the North will continue to resort to unilateral measures (such as the Section 301 procedures that the U.S. has been using to pressure other countries to strengthen IPRs<sup>77</sup>) to do the job. Smaller nations lose out in such a trading environment; the size of their markets deprives them of the option to use trade measures as threats or retaliation. They therefore prefer a rules-based approach — a negotiated agreement on new rules and institutions that binds all countries.

Several sorts of institutional change might fit the bill, including reform of the GATT, either through reinterpretation of existing text or through amendment, or the creation of new institutions.

#### ► REFORMING THE GATT

There have been a number of proposals for the reform of the GATT. The Agreement was negotiated in 1947, well before sustainable development was a popular concern, and in fact the word “environment” never appears in the text.

Some have suggested reinterpreting the current language of the GATT.<sup>78</sup> For example, it has been proposed that the definition of “like” goods be extended to cover the production process. The U.S. was not allowed to discriminate against Mexican tuna, despite the fact that it was produced differently (caught by different methods). It was still considered to be just “like” U.S. tuna as a finished product. Such a reinterpretation would allow countries to discriminate against products which were produced in a polluting or resource-degrading manner.

Another example is the proposal to reinterpret the subsidies code so that lax regulation or unsustainable management of resources would constitute a subsidy. This would allow countries worried about “eco-dumping” to levy countervailing duties on imported goods carrying unpaid environmental bills.

There has been a host of recommendations for reinterpreting parts of Article XX, which sets out the exceptions to the rules of the GATT, to include environmental concerns. It has been suggested that the exception for measures aimed at protecting human, plant and animal life or health be interpreted more broadly than simply a concern for quarantine restrictions, to include a concern for environmental threats to health. It has also been proposed that this exception, along with the exception for measures related to the conservation of natural resources, be interpreted as applying extraterritorially. In other words, the GATT should allow exceptions to its rules, based on a concern for human, plant and

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<sup>77</sup> The U.S. *Omnibus Trade and Competitiveness Act of 1988* directs the U.S. Trade Representative to identify and target “unfair” trade practices (including lax protection for IPRs) by U.S. trading partners.

<sup>78</sup> For a thorough discussion of the needs and possibilities, from the environmentalist perspective, see Arden-Clarke, Charles. *The General Agreement on Tariffs and Trade, Environmental Protection and Sustainable Development*. Gland: WWF, 1991.

animal health, and for conservation of natural resources, in *other countries*. Under such an exception, for example, the EC could restrict tropical timber imports in an effort to conserve natural resources in the tropics, whereas the current interpretation would only allow restrictions for the conservation of resources within the Community itself.

Some have proposed that the GATT be amended to allow subsidies designed to promote sustainability to be placed in a “green box” of allowable measures. Others suggest adding another category of exception to Article XX, devoted exclusively to environmental concerns. Any attempt to systematically re-work the GATT in this way could involve a protracted period of redrafting and renegotiation of existing principles.<sup>79</sup>

The GATT Secretariat feels that this type of reform could lead to a resurgence of protectionism. They point out that if subsidies are reinterpreted to include lax environmental regulation, this opens the door for considering all sorts of domestic policy as subsidization — lax worker safety legislation, low taxation, no minimum wage, etc. This does not negate the argument that such lax standards are subsidies, but it does point to some of the practical difficulties inherent in defining them as such. Any such changes would, at a minimum, have to be accompanied by improved dispute settlement mechanisms, which currently lack any real capacity to deal with environmental matters.

#### ► THE MULTILATERAL TRADE ORGANIZATION

The Draft Final Act of the Uruguay Round of Multilateral Negotiations (otherwise known as the “Dunkel Text”, after its author, the Director-General of the GATT Secretariat) is a proposed agreement on the final text, intended to end the Uruguay Round of talks. As well as summarizing agreement to date, and proposing compromise positions on issues still under negotiation, it includes an annex which would create a Multilateral Trade Organization (MTO).

This new organization, with institutional status at the same level as the IMF and the World Bank, would greatly strengthen the ability to enforce multilateral trade agreements. It would encompass GATT, GATS and TRIPs under one organization, and would allow for cross-retaliation among the sectors. If countries did not comply with MTO mandates on trade in services, for example, retaliation could cross over into trade in goods — a threat to which LDCs and others with low volumes of services exports would be much more sensitive. It also changes the procedure for dispute settlement; whereas under the GATT the results of Dispute Resolution Panels had to be adopted by consensus, and sometimes never actually went to the Council for consideration (such is the case with the U.S.-Mexico tuna dispute), the new mechanism would automatically send the panel results to Council, where they could only be rejected by unanimous decisions. This would give much more force to Panel decisions than the existing system.

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<sup>79</sup> See discussion in Whalley, John and Peter Uimonen. *Trade and Environment*, Washington D.C.: Institute for International Economics (forthcoming).

**ALL TRADE IS REGULATED. MUCH TRADE IS MANAGED. THE GATT IS A FLEXIBLE INSTRUMENT AND CAN ACCOMMODATE THE MANAGEMENT OF TRADE FOR LEGITIMATE REASONS. IN THE FUTURE, PROTECTION OF THE ENVIRONMENT MUST BE CLEARLY STATED TO BE ONE OF THOSE BASIC LEGITIMATE REASONS.**

BERNARD O'CONNOR. "GATT AND THE ENVIRONMENT." *REVIEW OF EC AND INTERNATIONAL ENVIRONMENTAL LAW* 1, No. 1, (1992): 13.



## GATT Article XX

Article XX of the GATT provides a series of general exceptions to GATT obligations including those under Article III, which provides for national treatment (non-discriminatory treatment) for imported products, and the prohibition of import quotas or restrictions under Article XI.

Article XX states:

"Subject to the requirement that such measures 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, nothing in this agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures: (Only those relating to the environment are cited in the following provisions.)

...

(b) necessary to protect human, animal or plant life or health;

...

(g) relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption;

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Other ways in which the MTO would have more muscle than the GATT include: the burden of proof in disputes would be on the defendant, rather than the other way around; national governments would be mandated to force lower-level governments to comply with harmonized standards set by MTO-approved bodies; and unilateral assessment and punishment of trade violations (such as those embodied in the U.S.'s section 301 legislation) would be prohibited.

On the face of it, strengthening the multilateral nature of trade rules may be a worthy objective. Certainly most of the weaker contracting parties to the GATT have been vocal in their support of a rules-based approach, since it protects them from unfair unilateral measures taken by stronger parties. But strengthened enforcement of any policy is only as desirable as the policy itself.

The Dunkel text, reflecting the state of the Uruguay round as of December 1991, contains no significant provisions for dealing with the trade-sustainable development relationship.<sup>80</sup> It is basically a strengthened version of the GATT, and addresses trade concerns almost exclusively. Until these inadequacies are faced, and the multilateral system works to promote sustainable development, many environmentalists feel that a strengthened approach such as the MTO might end up doing more harm than good.

### ► OTHER OPTIONS

One alternative to the reform of the GATT is the creation of a new institution (e.g., a General Agreement on Trade and the Environment). Such an organization would be specifically directed from the outset to deal with issues of trade, the environment and sustainable development and might therefore be more successful than the GATT in dealing with such issues. Such an institution would need to be based upon a new conceptual framework which integrates the fields of trade, economics and environmental science, as well as development.

Such a focus, because it has multiple objectives, would lead to a search for "win-win" solutions which achieve more than one goal at a time. One such possibility was offered by the GATT Secretariat. Their most recent annual report points out that countries with a high ratio of forests to domestic carbon emissions effectively export carbon absorption services to the rest of the world. But because they are not paid for the exported services, they have little incentive to take such services into account when deciding how to use their forests. The result is most likely a faster rate of deforestation than would otherwise occur, which in turn creates concern among other countries.

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<sup>80</sup> There is some evidence that the GATT Secretariat is starting to look seriously at how they might come to grips with environmental concerns, including recent unpublicized meetings with representatives from environmental NGOs.

If worked out carefully, a payment scheme for carbon absorption services would have positive effects on the environment, the economy and development. There would be incentive to preserve forests (and incidentally biodiversity), meaning less carbon dioxide in the atmosphere. There would be a flow of funds from North to South, since most carbon emissions are in the former, and most forests are in the latter, which could have positive effects on global development. And there could be incentives for Northern carbon producers to be more efficient.

There have been a number of calls for new approaches to dealing with issues of trade, the environment and sustainable development, which might become either elements of a new institution or part of the changes to existing regimes. One such proposal is that any trade agreement, whether regional such as the NAFTA, or multilateral such as the MTO, be subjected to an environmental impact assessment. Some countries already require that any major national policy initiative be subject to such scrutiny. This would at least point out the areas of conflict between trade and environment in any agreements, and might help avoid them.

Many interested observers and NGOs have decried the fundamentally undemocratic nature of the negotiations for trade agreements. These are normally conducted behind closed doors by government representatives, and the final results are often not subject to debate or amendment in the constituent countries, beyond a simple yes or no vote. Given that such agreements will have powerful economic, environmental and social effects, many have called for a greater transparency of the process, insisting that the public has a right to be represented at the negotiating stage, to ensure that the wider policy effects are considered up front.

Others have complained of a lack of information about domestic environmental policies in many countries, and their impacts on trade and investment flows. The trend toward unilateral measures and the advent of eco-labelling schemes makes it difficult for exporters to even be aware of requirements in their various markets, much less comply. Clearly there is a need for greater transparency of trade-related environmental measures. Some have suggested a monitoring institution as a part of, or along the lines of, the Trade Policy Review mechanism which has been incorporated into the GATT.

Finally, there is concern about the relationship between trading regimes such as the GATT and other multilateral accords with environmental objectives, such as the Montreal Protocol and the Basel Convention. The Montreal Protocol, it was previously noted, contains trade restricting measures which have not yet been challenged under GATT rules, but which would likely be ruled unfair practice if they were. Given the need for, and the trend toward, multilateral accords in areas such as climate change, biodiversity and forests, and the probability that they will contain trade-related enforcement mechanisms, there is clearly a need to define where these stand in relation to trade agreements. Many have suggested that such multilateral accords be given special status, similar to that accorded commodity agreements under the GATT. The International Tropical Timber Organization, which has elements of both a commodity agreement and an environmental agreement, might be an instructive model, although its actual success has been rather limited.

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(h) undertaken in pursuance of obligations under any intergovernmental commodity agreement which conforms to criteria submitted to the CONTRACTING PARTIES and not disapproved by them or which is itself so submitted and not so disapproved;

(i) involving restrictions on exports of domestic materials necessary to ensure essential quantities of such materials to a domestic processing industry during periods when the domestic price of such materials is held below the world price as part of a governmental stabilization plan; Provided that such restrictions shall not operate to increase the exports of or the protection afforded to such domestic industry, and shall not depart from the provisions of this Agreement relating to non-discrimination;

(j) essential to the acquisition or distribution of such products in general or local short supply; Provided that any such measures shall be consistent with the principle that all contracting parties are entitled to an equitable share of the international supply of such product and that any such measures, which are inconsistent with the other provisions of this Agreement shall be discontinued as soon as the conditions giving rise to them have ceased to exist.



**WE DON'T WANT AID. WE WANT  
THE OPPORTUNITY TO GENERATE  
THE RESOURCES TO FACE OUR  
ENVIRONMENTAL CHALLENGE. ...  
WE WANT TRADE.**

CARLOS SALINAS DE GORTARI, PRESIDENT OF  
MEXICO, IN "WE ARE TALKING ABOUT OUR  
CHILDREN." *INTERNATIONAL WILDLIFE*  
(NOV./DEC. 1992): 42.

## **Conclusions**

As individual nations acting unilaterally, or as cooperating participants in multilateral agreements, the way we conduct global trade directly affects our ability to achieve sustainable development. It affects the way pollution standards are set and the levels which result. It affects the rates at which we exploit our renewable resources and the efficiency with which we do so. It affects the mechanisms we may use for protecting the global commons, and the rate of innovation and diffusion of green technologies. It affects the structure and character of national economies, by influencing aggregate decisions over who will produce what where, and how. It affects the abilities of nation states to undertake social and regional development investment. And it affects income and employment levels, and distribution of income both within and between countries.

With such wide-ranging effects, trade is a powerful potential force for sustainable development. Properly conducted, it could drive Third World development in a way that foreign aid never has. Flows of official development assistance are stuck at levels much lower than what is needed, and frequently are tied to inappropriate purchases which foster dependency rather than development. Trade, on the other hand, has the potential for real economic development born of domestic initiative, and the income it generates will be limited only by the markets it finds.

Trade could also be a force for environmental improvement. Along with increases in LDC income could come increased ability to undertake long-term planning that preserves or enhances natural capital such as soils, forests and fisheries. And trade in cutting-edge environmental technologies promises to be the wave of the future; certainly Germany and Japan are betting on it.

However this same force, which manifests in wide-ranging environmental, economic and development effects, could just as easily be powerfully negative. If there is no attempt to incorporate sustainable development objectives in trade policy, liberalized trade could simply mean increased efficiency at shifting environmental costs to foreigners and future generations, and increased inequities within and between nations. Trade among nations which unsustainably harvest non-renewables and ignore external costs, and which allow the powerful to act unilaterally and set up unfair protectionist barriers, will not lead to sustainable development.

But it is not trade policy alone that must change. In the same way that trade policy must take account of its wider effects on the environment and human well-being, trade-related environmental policy must be concerned with how it affects the economy and with *its* human-face effects. Policies which displace large numbers of workers or adversely impact on the world's poor must be re-thought and re-cast in such a way as to achieve the desired environmental effect without the adverse wider effects. This is simply a question of a wider focus, and is no more unreasonable or difficult a demand than is asking trade policy-makers to consider *trade's* wider effects.

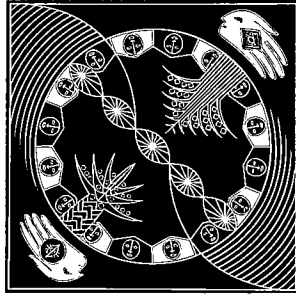
The trade-environment debate, then, should be put to rest. In its stead we need a discussion of how both trade and environment policies can serve sustainable development. This broader focus catches development issues missed by both sides in most current discussions — issues of equity and community integrity, reflected in discussions of poverty, structural adjustment, regional unemployment and scope for government social and development policy. Both trade and environment communities are finding out that they ignore such issues at their peril. In so doing they risk backlash such as the anti-environmentalist “Brown Movement” in the U.S., and the massive multi-sectoral labour opposition to free trade agreements in Europe and North America.

The focus on sustainable development can be the beginning of a productive dialogue between the trade and environment communities, since in addition to the critical concern for development and human well-being, it encompasses the concerns for integrity of both the environment and the economy. It provides the possibility of a common framework by which trade, environment and development policy can be assessed.

But the difficulty of achieving consensus, even once a common objective is identified, should not be understated. There is widespread disagreement on basic empirical questions: Is there a pollution haven effect? Do harmonized standards mean reaching the lowest common denominator? There has been little research on the issues which arise as a result of integrating trade, the environment and development — largely because until recently very few people considered such an integration to be important. But if we hope to create a trading system which supports sustainable development, the answers to such questions are critical. The research agenda which follows sets out some of the areas where the gaps in our knowledge exist.

In the final analysis, trade is simply economic activity which crosses national borders. Brundtland’s message that we must integrate economics, environment and development at all levels of decision-making is thus completely appropriate. The linkages between a fair trading regime, a healthy environment and increased human well-being are fundamental, and in the long run all three will either sink or swim as one.





# **The New Research Agenda**

## **The New Research Agenda**

It should be clear from the preceding overview of trade and sustainable development issues that we need a radical change in the way we deal with global trade, environment and development; in too many ways the status quo pits the three against each other in a zero sum game. What we need are new institutional approaches globally, regionally, nationally and at the local level, to allow us to integrate the objectives of a healthy environment and economy, and increased human well-being.

Some suggestions have been made as to the possible nature of these reforms. But institutional changes alone will not suffice; they merely give us proper frameworks for decision-making. The grist for such mills is knowledge, about how the current trading system works, about how ecosystems function, about what fosters and frustrates development and human well-being, and the interlinkages which weave these concerns together. There are major gaps in our knowledge in all these areas.

Our institutions will also need new tools of analysis, to accommodate their widening sphere of concern; even in the isolated fields of economics, ecology and development the analytical tools are not perfected, but when we link the three, the inadequacies become even more pronounced.

Finally, we need to apply these analytical tools and the knowledge of present systems to predictions about the future. What would the effects be on economy, the environment and human well-being of following policy X, as compared to policy Y? What new trends are likely to affect trade and sustainable development? These are critical questions; until we have a clear idea of what are the best vehicles, we will have little chance of attaining our ultimate objective: sustainable development.

What follows is a research agenda designed to fill the gaps. It addresses the need for knowledge about present systems, for new tools of analysis, and for predictions of the sustainable development implications of key trade policy options.

## **Knowledge: How Does The Current System Work?**

### ► HARMONIZATION OF STANDARDS

*Will harmonization of standards cause them to fall to the lowest common denominator?* This is taken on faith by many, but no solid research has yet justified that faith. Analysis of existing cases, including the EC and the Canada-U.S. FTA, could help to clarify the issue. Researchers should look not only for a raising or lowering of standards with harmonization, but also for possible inflexibility of existing harmonized standards even in light of new evidence of the need for change.

Research should also focus on the nature of standard-setting in the past. Environmentalists maintain that current high standards in the North are a result of a “regulatory leader” effect, where one trend-setter raises standards above the norm and others eventually must follow. To the extent that this is true, harmonization would muffle the capacity for further increases.

*In what cases is harmonization of standards appropriate?* Standards cover a wide variety of sectors, all of which present different obstacles and opportunities for sustainable development. As well, those sectors operate in different countries and regions, each of which have different environments, and social and development priorities. Finally, the term “standards” can mean both standards for products and standards for production processes. Clearly harmonization will be more appropriate in some cases than in others, but to date there has been little analysis which clarifies these important distinctions.

Researchers should first assess the claims by many Southern countries that they have higher environmental assimilative capacities (EACs), and therefore should not be subject to harmonized process standards. Such claims will make or break the argument for harmonization. Research should centre on the two main determinants of EAC: ecosystem capacity and public demand for environmental quality. First, we must determine whether Southern ecosystems are in fact capable of absorbing various types of pollutants with less attendant degradation than would occur in their Northern counterparts. Second, we must try to assess the demand in the South for environmental quality. The measures of demand currently used, such as willingness to pay, or loss of lifetime income from health hazards, are based on income levels and are therefore inappropriate for North-South comparisons.

The other key issue is to determine which forms of pollution are contained domestically, and which cause transnational or global effects. Some forms of pollution—like groundwater contamination—have highly localized effects, while others—carbon dioxide emissions, for example—are clearly global. The more global the effects of a product or a production process, the better the argument for harmonized standards or some other form of multilateral agreement to control it.

### ► POLLUTION HAVENS

Many believe that in the absence of harmonized standards, multilateral agreement, or countervailing “environmental tariffs,” industries will migrate to those countries where environmental regulation is most lax, thereby gaining an advantage over competitors in more strictly regulated countries. If this is so, it is an excellent argument for harmonization, countervailing tariffs or multilateral accords; it may lead to “regulatory chill”—the fear of enacting legislation which might chase firms away—and it may undermine the effectiveness of existing legislation.<sup>1</sup>

*Is there a pollution haven effect?* What little research has been done on this topic has cast doubt on the pollution haven theory, but the argument is far from settled. Most studies have focused on the manufacturing sector, ignoring such important sectors as resource extraction and processing. And the methodology is often shaky, relying on survey-type data from the firms themselves, many of whom might hesitate to admit to exploiting weak environmental law abroad. Strong cross-sectoral data are needed on the importance of environmental regulation in firms’ decisions to relocate.

*Is there a “regulatory chill” effect?* There has been little research on the pervasiveness of regulatory chill. This may, however, be a more important effect than the actual migration of firms which most studies look for. It may be that for every firm that migrates to escape regulation, a score of others have weakened or prevented regulation by simply threatening to do so. If so, this adds force to the arguments for multilateral accords or offsetting tariffs.

### ► INCOME LEVELS AND ENVIRONMENTAL QUALITY

Some make the argument that freer trade will increase incomes in LDCs, and thereby give them the capacity to enact stricter environmental regulation; environmental quality is thus a type of luxury good, to be attained only after basic human needs. If this is so, it helps make the case for lower process standards in LDCs, who will gradually harmonize standards voluntarily, as a result of public demand, as income levels rise.

*What is the relationship between free trade and income?* One of the main arguments for freer trade is that it increases incomes, by increasing allocative and productive efficiencies. If we are to consider sacrificing some of those efficiency gains in the name of sustainable development, we should have some idea what we are giving up. Some research has been done to show what the gains from trade have been historically, and what they would be in specific cases in the future, such as under the NAFTA. More should be done though, examining not only effects on *aggregate* income and employment levels, but also *distribution* of income and employment, both within countries and particularly among them.

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<sup>1</sup> The intent of the existing legislation will determine whether or not it is undermined by the migration of a polluting firm. If legislation is intended to reduce local pollution, then it will have been effective; the polluter has left. If, on the other hand, it is intended to reduce pollution globally, it will have failed. If it is intended to do either without affecting local levels of employment it will, again, have failed.

*What is the relationship between income levels and environmental quality?*

Some studies have shown that as income levels rise, so does pollution, but only up to a point, after which pollution begins to fall again. But they have focused on a very narrow range of pollutants. Some pollutants, such as CFCs and CO<sub>2</sub>, are symptomatic of a wealthy society, and the income levels at which they would fall may be relatively high. Existing research needs to be broadened to give a fuller picture of this relationship.

If our objective is improved environmental quality, it may be that increasing average incomes alone is not enough. Other variables will certainly be important, such as equity of income distribution or democratic accountability of governments. Research should aim to clarify how important these and other considerations are in the equation.

*What is the demand for environmental quality?* It was argued above that we need new tools for assessing demand for environmental quality. Measures based on income levels—like willingness-to-pay surveys—will always show low demand in low-income countries. Yet some studies have shown that poorer people, especially in rural areas, derive a far greater portion of their incomes from the natural environment, for example as non-monetary income from hunting, gathering, fishing and subsistence agriculture. If we want to show how income levels affect demand for environmental quality, we need to devise measures which are sensitive to such possibilities.

*What are the implications of increasing incomes in order to increase environmental quality?* If research shows that a policy of free trade to increase incomes will eventually benefit the environment, what environmental degradation will be suffered before coming to the turning point? Reversible degradation can be dealt with by wealthy citizens, but how many of the by-products of becoming wealthy will be irreversible? Research is needed to show what types of degradation can be expected under various development scenarios, and to show what the aggregate global effects will be of many developing countries following these paths. There are important policy implications for both North and South if, for example, sea levels must rise by several metres before the world becomes “rich” enough to curtail carbon emissions. Also, we need estimates of the cost of post-wealth remedial action versus up-front prevention of damage. The lesson of unsustainable development in the North (and in some of the NICs) is that the former is many times more costly than the latter.

#### ► ENVIRONMENTAL REGULATION AS A SOURCE OF COMPETITIVENESS

The argument has been made that, since the world’s most competitive firms are also those facing the toughest environmental regulations, such legislation can actually be used to increase the competitiveness of a country’s industries. This seems to be a “win-win” situation ripe for exploitation by national governments, but there remain many unanswered questions about this effect.



*Does tough environmental regulation foster competitiveness?* What is the link between competitiveness and tough environmental regulations? The observed *correlation* tells us very little; it could be argued that competitive firms create enough wealth to allow their country's people the luxury of strict standards. What little case study research has been done seems to show that tough regulations do in fact create competitive firms. Another question for research is whether tough environmental regulation ultimately fosters *competition*. If larger firms are better able to seize the opportunities presented, the tendency may be towards more concentration of firms into global oligopolies.

*If it does, what are the implications for pollution havens?* If in fact the link is as purported, it is probably driven by three forces: increased efficiency and innovation, increasing green consumerism (meaning the firm can market its products at a premium), and the trend towards increasingly tough global legislation (meaning those who stay ahead of such trends will have an edge over those who are driven by them after the fact). This could imply that intentional pollution havens will be losers in the long run, saddled with uncompetitive industries and dwindling market shares in addition to high levels of pollution. Research is needed to assess and predict the strength of these forces, to help guide policy. This may be particularly relevant for those developing countries which argue that their higher environmental absorptive capacities give them a comparative advantage in pollution-intensive production.

#### ► TRANSNATIONAL CORPORATIONS AND TECHNOLOGY TRANSFER

Globalization leads to increased activity of TNCs, since the removal of barriers to trade flows and investment create an atmosphere which is hospitable to their activities. But there is a chasm of disagreement over whether this fosters or frustrates sustainable development, largely because of disagreement about how TNCs behave abroad. Because they represent such a powerful economic force globally, it is crucial to better understand how the role played by TNCs impacts on sustainable development.

*Do TNCs follow worldwide standards?* Some TNCs compel all of their subsidiaries to follow a harmonized standard, often determined by the strict regulations laid down in home countries. How pervasive a practice is this? If widespread, it means the marginalization of the pollution haven argument, and implies that TNCs may transfer not only cutting edge technology to host countries, but also environmental awareness. If not widespread, it implies an even more urgent need to find other methods of North-South technology transfer. And it means that even if firms do not move operations specifically to relocate in pollution havens, they will nonetheless pollute more heavily once they get there.

*Is Northern environmental technology appropriate for the South?*

Technological innovation plays a critical role in Brundtland's conception of sustainable development. But while much research has centred on how to get Northern technology to the South, less has focused on what is actually needed, the factors affecting its adoption, and the possibilities for building Southern capacity to develop indigenous technology. Some suggest that Northern environmental technology is both too focused on end-of-pipe solutions, and too costly, measured against Southern demands for environmental quality. Regional and sectoral research is needed to determine what the needs are, and whether they are being served by TNC technology transfers, and how indigenous alternatives might be fostered.

*Is foreign direct investment preferable to debt?* Countries short of investment capital basically face two options for investment in development: borrow funds, or attract foreign direct investment in the form of TNCs. While debt implies repayment with interest, with which many Southern countries are struggling, and perhaps inefficient parastatal industries, foreign direct investment may imply balance of payments problems and a lack of forward and backward linkages. Research is needed to determine how the two options, on balance, affect prospects for sustainable development.

**► STRUCTURAL ADJUSTMENT, TRADE AND SUSTAINABLE DEVELOPMENT**

Structural adjustment of some sort, whether mandated or voluntary, is underway in almost all of the countries of the world, and constitutes a powerful and widespread force for economic, political and social change. Though there has been much research focused on the economic effectiveness of structural adjustment, or focused on its human and environmental effects, the challenge is to integrate these concerns. Research of a broader nature is critical if adjustment programs are to serve sustainable development or, at a minimum, avoid frustrating it.

*What are the links between structural adjustment, trade and the environment?* The environmental effects of structural adjustment depend on a complex host of considerations which we need to better understand. In the Southern agricultural context, there tends to be a switch to cash crops. Has this meant more or less ecologically appropriate crops? Has use of agrochemicals tended to go up (perhaps because of larger holdings) or down (perhaps because of higher input prices)? Research should particularly focus on the effects of crop price increases, since this will be a general effect of liberalization in the South; have they meant that farmers can afford to use sustainable practices on current lands, or have they simply doomed more land to clearing for cultivation?

With non-agricultural natural resources such as forests, fisheries and biodiversity the linkages are somewhat less complex. The main question in this case is whether adjustment program-mandated export drives end up being fuelled by unsustainable harvests of resources.

*What are the global macro effects of structural adjustment?* It is not enough, from a sustainable development viewpoint, to evaluate structural adjustment programs from a national perspective. The global effects of the aggregate of programs should also be evaluated. What are the implications for international distribution of income? What are the effects on the global commons? What are the economic effects; is there any evidence to support the argument that falling commodity prices have been caused by many countries simultaneously following structural adjustment policies? Research of this type is scarce.

*What are the other relevant variables?* Research must go beyond identifying the effects of past structural adjustment programs if it is to be useful for the design of future programs which respect sustainable development. We need to know what other variables have been important in making some programs more successful than others. For example, increased crop price may lead to more equitable income distribution only if it is accompanied by land reform and access to micro-credit. And export drives may relieve pressures on natural resources only if there is also a drive to diversify, and decreased protectionism in export markets. Answers to these questions will allow us to identify key policy conditions which must accompany structural adjustment if it is to achieve sustainable development.

## **New Tools**

### ▶ **MEASURING THE ECOLOGICAL CONTENT OF TRADE**

Whether trading nations eventually choose to use offsetting tariffs, commodity agreements or multilateral accords to deal with trade-related environmental damage, we will somehow have to come to grips with forcing the payment of unpaid environmental costs embedded in traded goods. To do so, we first have to devise methods of calculating that cost. Costs are of two types: the costs of unsustainable resource management, and the pollution costs of production or consumption of traded goods.

*How can we measure the costs of unsustainable resource management?*

Unsustainable resource management—for example, harvesting forests at a greater rate than they regenerate—places real costs on future generations, by destroying their stock of productive natural capital. Whatever method is chosen to incorporate these costs in traded goods will have to start from a *definition* of what is and is not sustainable practice. Research has been done in this area, but should continue to explore the various sectors in different regional contexts; without consensus on what is sustainability, there will be no consensus on how to deal with traded resource-based goods.

Defining sustainability is as far as we need go, if we choose to negotiate multilateral accords on production standards (this is the type of negotiation the U.S. and Mexico are currently undertaking over methods for tuna fishing). If we choose to use countervailing “environmental tariffs,” or commodity agreements, however, we may need to determine the actual cost of unsustainable methods of production. Research is needed to devise methods for calculating the costs inherent in unsustainably produced goods, so regulators can levy appropriate charges against them.

*How can we measure the costs of pollution?* Unless we can devise agreed-upon methods for full-cost pricing, we will not be able to internalize the external costs of traded goods. And as long as such costs exist, liberalized trade will lead not to increased allocative efficiency, but rather to increased global ecological debt. Several attempts have been made to conduct cradle-to-grave analyses of the costs of different goods, based on varying methods of production, consumption and disposal, but much more research is needed.

A related area of research would look at who bears what incidence of cost under a full-cost pricing regime. Who would be the gainers and who the losers if external costs were internalized on a global scale? Some research of this nature has already been done in relation to carbon taxes. The results will help identify the obstacles to, and opportunities for, full-cost pricing.

#### ► MEASURING SOCIAL SUBSIDIES IN TRADE

For many of the same reasons that we need to measure the costs of pollution and unsustainable resource use, we need to devise methods for measuring the production costs saved by lax labour and human rights legislation, and other “social subsidies.” How much does an exporter save, for example, by not having to let workers bargain collectively?

Measuring social subsidies would illustrate the magnitudes of the differences among countries, and draw attention to the countries whose standards are lower than global norms, in an attempt to force multilateral accords. In the event of failed multilateral action, the new methods of measurement could serve as the basis for unilateral compensating actions at the point of import.

#### ► NEW ANALYTICAL MODELS

In the fields of economics and environmental sciences, the tendency is towards the construction of ever more sophisticated models of reality. This is one way of dealing with the complexities of large systems such as the earthly atmosphere and national economies. We need similar models to encompass the complex linkages connecting economy, environment and development which characterize the issues of trade and sustainable development.

For example, we need models which can show us the cost incidences among nations of various policy options. Existing work on incidences of carbon taxes was noted above. Similar work should be done on global trade-related schemes to deal with degradation of forests, biodiversity, the ozone layer and other global or regional commons. Who gains, who loses, and by how much, are critical questions in the negotiation of these politically charged agreements.

Ideally, new models would transcend the boundaries of any one discipline, going “beyond interdependence” to marry environmental, economic and development concerns. When we describe incidence of costs, for example, we should be able to consider environmental as well as financial costs. To go even further, it might be possible to combine atmospheric modelling with econometric analysis of trade, growth and development in LDCs, to predict the greenhouse effects of various development paths or trade regimes. We are a long way from such integrated general equilibrium models, but with the information garnered by the research proposed above, work could begin on less general integration.

## **New Institutions**

The integration of trade and sustainable development will require major institutional change; either we must create new institutions to handle the broadened nature of policy and decision-making, or we must amend the charters of our existing institutions. There has been good policy research on the types of changes needed in the GATT to make it compatible with environmental concerns, but there needs to be more, and it must focus on the larger question of sustainable development, as opposed to environment.

### **► PRINCIPLES FOR TRADE AND SUSTAINABLE DEVELOPMENT**

Whether we change existing institutions or create new ones, there will have to be a thoughtful analysis of the principles which will guide them in simultaneously considering economic, environmental and human well-being concerns. Current trading arrangements are guided by principles such as legitimacy, proportionality and transparency. Incorporating the objectives of sustainable development will mean changing the meanings of some of these (transparency, for example, may come to mean public input and accountability in decision-making), and adding and deleting others. What is needed is a set of principles for trade and sustainable development, to inform attempts at institutional change, to help in the drafting of future trade agreements, and to act as a standard by which such agreements may be measured.

*What types of change are implied for existing trade regimes?* Given principles for trade and sustainable development, there will be a need to work out their implications for existing trading regimes such as the GATT, the Treaty of Rome and the Canada-U.S. Free Trade Agreement. Particularly in light of the evolving nature of the GATT, it will be vital to inform future negotiating rounds of what specific types of changes should be made.

*What types of new institutions could incorporate the principles into future trade regimes?* The trend worldwide is towards the formation of new trade regimes, in regions such as South-East Asia, North America, South America and Africa. What new types of institutions could be used in these nascent agreements to ensure the incorporation of the principles for trade and sustainable development? The trilateral Commission on Environmental Cooperation under the proposed NAFTA is one example of such a new institutional approach.

### ► THE IMPLICATIONS OF REGIONAL TRADING AGREEMENTS

Regional trading agreements are emerging in every part of the world, but there has been little analysis of their implications for sustainable development. If such agreements are trade-diverting, as opposed to trade-creating, a continent like Africa, outside of the major agreements, may lose chances for development through international trade. And it may be that such agreements will undermine the GATT, damaging any chance that it will evolve to become an authoritative vehicle for multilateral accord on trade and sustainable development issues. Conversely, regional agreements may have a “regulatory leader” effect on global environmental standards in a way the GATT could not. Research is needed to explore the ways in which the increase in regional agreements will affect the chances for achieving global sustainable development.

### ► GLOBALIZATION AND THE PROCESS OF CHANGE

*How can globalization be managed for sustainable development?*

Fundamental change is the nature of sustainable development; to oversimplify, the economies of the North need to reduce consumption, while those of the South need to increase theirs. Globalization, the removing of barriers separating the economies of the world, may be one way of accomplishing this, through open trading systems which redistribute wealth between North and South (for example, through removal of Northern protection against Southern imports, and a levelling of wage rates).<sup>2</sup> But this also implies social problems—suffering and dislocation on a global scale—if the transitions are not well managed, and human well-being is an essential element of sustainable development.

Research is needed to identify ways to minimize or avoid the negative impacts of fundamental change, while preserving the benefits it might bring to present and future generations. We need new institutions and innovative solutions to the problems of unmanaged globalization—problems such as the tendency of communities and regions to become less self-reliant and more vulnerable to outside circumstances, the erosion of the traditional relations that constitute human communities and, particularly in the North, the social strains of adjusting to lower levels of resource consumption.

*What is the proper distribution of sovereign responsibilities?* Globalization and sustainable development imply new forms of local-global linkages. On the one hand, in a global economy local sovereignty must be eclipsed to ensure that local authorities do not unfairly damage the environment, the economy, or human well-being in other jurisdictions. On the other hand, differing local ecologies and development priorities point to a need for local authority in the setting of environmental and social standards. As well, the negative effects of globalization (particularly its effects on communities) call for creative management at the local level.

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<sup>2</sup> Another way of accomplishing this is through technological improvements, which some hope will negate the need for reduced consumption in the North. Historically, however, such improvements have been used to increase consumption with given resources, rather than to maintain consumption using fewer resources.

Research is needed to design new institutional forms of sovereignty sharing, to achieve sustainable development in a global economy; we need to find ways to simultaneously accommodate autonomy and interdependence. The EC's principle of subsidiarity, or delegating responsibility to the lowest appropriate level of governance, may be an important starting point.

## **Policy Effects and Future Trends**

### ► GREEN CONSUMERISM

Green consumerism has the potential to become both a positive force, by furthering global sustainability, and as well a negative force, by impeding global trade. If each country sets up its own system of green labelling (such as the Blue Angel in Germany and Environmental Choice in Canada) foreign exporters will be hard pressed simply to keep informed of what is required in the various different markets, much less actually conduct all the required testing and analysis. The end effect will be to favour domestic producers over foreign ones which must meet the costs of supplying many different markets.

*Will trends in green consumerism continue?* Exporters, particularly from the South, have not been quick to jump on the green bandwagon. Research is needed to determine whether green consumerism is going to continue to change the markets of the world, and how; what are the implications for the various exporting sectors? There may be a valuable opportunity in this trend for increasing Southern exports, but by the same token misjudging the trend may be a critical mistake.

*What are the options for handling green consumerism multilaterally?* Are there ways in which the labelling and testing of "green" products could be internationally coordinated? A coordinated system would preserve the environmental benefits of green consumerism, while greatly reducing the impediments to trade. Research is needed to explore such new forms of multilateral cooperation. Who would set the standards? Who would verify the claims of processors/manufacturers? Would there be different "shades" of green, to accommodate differing national preferences?

*Can information on green standards be systematically made available to exporters?* Failing the possibility of multilateral cooperation for handling green consumerism, there must be at least a global system for disseminating information on the standards and requirements in the various national markets. Some pioneering work is being done in this area by UNCTAD, which aims to make all national trade regulations available to potential exporters on a PC-compatible database. Such a system, if it also included information on green standards, would be invaluable.

### ► **STRENGTHENING TRADE-RELATED INTELLECTUAL PROPERTY RIGHTS**

Innovation and new technology are essential elements of sustainable development; they allow for satisfaction of the needs of a growing and developing global population while relieving pressure on the earth's resources. And trends in de-materialization of economic activity may intensify the importance of intellectual value-added in trade flows. But there is widespread disagreement about the implications of strengthening the laws that protect their developers.

*What are the distributional implications of strengthened TRIPs?* It has been argued that strengthened TRIPs would benefit Northern TNCs, who hold most of the world's patents, and damage Southern industries based on free use of Northern intellectual property. Is this an accurate scenario? What is the nature of Northern control of intellectual property, and how would it be affected by strengthened IPRs? In the final analysis, would the spread of technology be blocked or enhanced?

What would the financial costs (in terms of royalties) be to Southern countries of complying with IPRs as strict as those favoured by the Northern countries? Some have suggested that these may in fact outweigh current flows of aid from North to South, but no reliable figures are available. If IPRs were extended to cover informal innovation by Southern cultivators and genetic intellectual property (in which the tropical forests are rich) would the net flow of royalties still be from South to North?

### ► **THE NEW GLOBAL INFORMATION ECONOMY**

As global economic activity becomes less material-intensive and more information-intensive, the rules for handling intellectual property will take on ever greater significance. Many argue that more and more value-added comes from knowledge, rather than from materials or labour. If information value-added is the competitive edge of the future, this has major implications for government policy, in the South and North alike.

*Are we entering an information age?* How real is the trend to de-materialization? Lower material/GNP ratios in the North may simply indicate a migration of material-intensive industry to the South, or less need to satisfy basic material needs that are still a priority in LDCs. In either case, the implication for the South would be that they will not soon experience the environmental relief brought to the North by de-materialization. The converse, however, would imply a possibility for less pressure on natural resources, and less industrial pollution. Research is needed to identify how important the trend to information-based production will be, particularly for Southern countries.



*Information as a competitive edge.* However real or illusory the dematerialization effect, the argument still stands that terms of trade will more and more tend to favour goods with a high percentage of information value-added. The implication is that propping up or wooing dying material-intensive industries not only taxes the environment, but is also a poor long-run recipe for development. Research should attempt to assess the potential for development of new industries in the South, based on untapped pools of information such as traditional knowledge and genetic information. There should also be a focus on the types of infrastructure and institutions that would be needed to develop these nationally. It may be, for example, that strong IPRs are an important factor in stanching the out-migration of needed innovator/scientists.

► **TRADE-RELATED INVESTMENT MEASURES (TRIMs)  
AND TRADE IN SERVICES**

Developing countries are under intense pressure in the Uruguay Round to liberalize trade in services and cut back on restrictive measures to control foreign investment. But the arguments back and forth on this topic are being waged largely in absence of any solid figures on the costs and benefits of the various policy options, in terms both financial and non-financial.

*What are the financial costs and benefits of protecting services?* It is generally known who benefits and who loses from protectionism. What is not known is by how much. In the context of trade in services, making policy to achieve sustainable development depends heavily on this knowledge; do Southern citizens lose more by supporting protected service industries, which may be inefficient, or by allowing foreign direct investment, which may have fewer backward and forward linkages and be conducive to restrictive business practices?

*What are the non-financial costs and benefits?* Arguments for protectionism assume that foreign firms have the interests of the people further from their hearts, and service is thus more exploitative. Arguments against assume that increased global competition brings increased quality of service. Case study analysis is needed to clarify this issue. Do domestic firms really behave any more benevolently than foreign ones? Does foreign investment actually lead to greater competition, and does this then mean better quality of product?

In the context of media services, there may be good arguments for claiming a qualitative difference between foreign and domestic firms, since media is such a powerful shaper of culture. Social science research is needed to identify what types of cultural change are brought about by liberalized trade in media services. How strong is the trend towards cultural homogenization resulting from cross-cultural media?

Removal of TRIMs means less scope for government-led social and development policies. Exactly what will this mean? Have such policies typically been abused as shields for wasteful industries bloated on patronage, or have they been legitimately used as protection for infant industries and sectors consistent with national development priorities? There is a need for thoughtful analysis on the full implications for sustainable development of this loss of sovereign power.

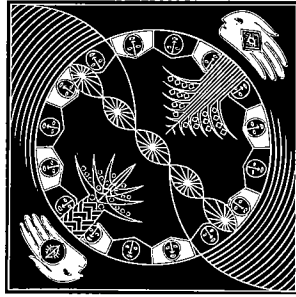
## **Conclusions**

The research agenda described above involves a wide mix of such disciplines as development economics, political science, ecology, econometrics, sociology, and natural sciences. This is to be expected in an area as broadly-spread as trade and sustainable development. Sustainable development, since it involves an integration of the concerns of environment, economics and development, should by nature involve an eclectic mix of disciplines.

Again, this highlights the implications of moving beyond a debate bounded by trade-environment disputes. Such a debate ignores important issues of equity and human well-being—questions of development which may be analytically “messy”, but which are politically impossible to ignore, and morally essential to address. The key to beginning a productive dialogue among the various stakeholders will be a commitment at the outset to have as the ultimate objective neither simply increased trade flows nor simply a healthy environment, but rather a process which can envision both: sustainable development.

But beginning the dialogue is not enough. Agreeing that we want to reach a common destination still begs the question where it is and how to get there. To move towards sustainable development we must know how present systems frustrate or foster it. We must have the tools to explore environment, economy and development linkages. And we must have some notion of how prospects for sustainable development will be affected by future trends, and by the various policy options. These are the questions posed above.

We must move quickly to answer them. Trade is a powerful force for global change economically and environmentally, and in terms of human well-being. In today’s context of gross inequities and environmental degradation on a global scale, we cannot afford to have that force acting as anything but a strong supporter of sustainable development.



**Organizations  
Active in  
International  
Trade and  
Sustainable  
Development**

## **Organizations Active In International Trade And Sustainable Development: Their Interests And Activities**

In assembling what follows, we have not aimed at an encyclopedic listing of all organizations working in the field of trade and sustainable development. Rather, we attempted to survey some of the major international institutions, to demonstrate research directions currently underway. We have devoted part of the coverage to North American institutions, to reflect the current interest in the sustainable development issues surrounding the NAFTA negotiations. We recognize the substantial number of other institutions, particularly in Asia and Latin America, working on similar issues in different contexts, and we would hope to include more of them in a future electronic version of this listing.

All over the world, quality research and analysis is being conducted by regional NGOs whose efforts are not reflected here. The Institute is interested in expanding its information base to include more of these organizations. Any helpful input from readers or interested institutions will be most welcome.

## **International**

### ▶ **BUSINESS COUNCIL FOR SUSTAINABLE DEVELOPMENT**

#### Geneva, Switzerland

BCSD is a global group of 48 CEOs from major corporations worldwide, formed to provide a business perspective on sustainable development issues during the UNCED process. Its report *Changing Course* proposes both new public policies and new corporate practices to progress towards the goal of sustainable development.

### ▶ **CENTER FOR DEVELOPMENT OF INTERNATIONAL LAW (CDIL)**

#### Washington, D.C., USA

CDI, *inter alia*, is working on the follow-up to UNCED, especially the establishment of the new U.N. Commission on Sustainable Development (CSD). CDIL serves as the secretariat for the International NGO Task Group on Legal and Institutional Matters (INTGLIM), a large network of groups involved in sustainable development legal and institutional issues (GATT, SEF, intellectual property rights, etc.). CDIL is also involved researching the links between the CSD, the promised "enhanced" involvement of NGOs in the U.N. and in related U.N. restructuring and reform.

### ▶ **CENTER FOR STRATEGIC AND INTERNATIONAL STUDIES**

#### Washington, D.C., USA

The mission of CSIS is to advance the understanding of emerging world issues in the areas of international economics, politics, security, and business. The program in Economic and Business Policy studies such issues as the future of the multilateral trading system, foreign direct investment, and the emergence of regional blocs. The program in International Economic and Social Development studies how bilateral and multilateral cooperation can reduce threats to human and ecological well-being arising from a variety of causes, such as drugs, disease, population pressures, migration, and conflict over scarce resources; it undertakes projects relating to the environment, demographic changes, national and ethnic conflict, and international social policy.

### ▶ **GENERAL AGREEMENT ON TARIFFS AND TRADE (GATT)**

#### Geneva, Switzerland

The GATT, to which 104 countries are participating members, provides (a) a set of multilateral rules and disciplines governing countries' trade policies, (b) procedures for settlement of trade disputes between governments, and (c) a forum for negotiating both reductions in trade barriers and revisions/extensions of the rules. The Working Group on Environmental Measures and International Trade, with a mandate to examine environmental regulations as they affect trade flows, convened for the first time in 1991, almost 20 years after its inception. In June 1991 the Secretariat sponsored a workshop on Trade and the Environment. Chapter 3 of its *International Trade 90-91* (Vol. I) contains an extensive discussion of trade and the environment.

▶ **INSTITUTE FOR EUROPEAN ENVIRONMENTAL POLICY, LONDON****London, England**

The Institute for European Environmental Policy (IEEP) is an independent body for the analysis of environmental policies in Europe. The main centres of IEEP's work are its permanent offices in four countries: Germany, France, the United Kingdom and Belgium.

Its London office published *Environmental Policy and 1992* which discusses environmental implications of the completion of the single market within the European Community (EC). Work on tropical timber and the role of the EC has included consideration of the Treaty of Rome and GATT provisions in relation to the scope for limiting imports according to the criteria of 'sustainability'. It is also monitoring debate about conflicts between free trade and environmental protection in the EC. A paper has been written on the way in which the EC, as a common market, has addressed environmental issues.

▶ **INSTITUTE FOR INTERNATIONAL ECONOMICS (IIE)****Washington, D.C., USA**

The IIE undertakes and publishes research on international trade, finance and debt issues. Recent publications relevant to trade and the environment include such topics as the treatment of environmental issues in NAFTA (March 1992), global warming (June 1992) and trading for the environment (forthcoming).

▶ **INTERNATIONAL CHAMBER OF COMMERCE****Paris, France**

The ICC serves business by providing a worldwide forum in which senior representatives of all business interests and sectors can meet to exchange views on environmental issues. It has a Commission on the Environment to promulgate environmental policies for industry and to prepare business inputs for projects of international organizations.

It recently produced the Business Charter for Sustainable Development which lays out 16 principles for integrating sustainable development principles with business practices. It has also published "Environmental Auditing" and "Guide to Effective Environmental Auditing."

▶ **INTERNATIONAL INSTITUTE FOR APPLIED SYSTEMS ANALYSIS (IIASA)****Laxenburg, Austria**

IIASA is a non-governmental research institute which draws on the resources of scientific organizations in its member countries in Europe, North America and Japan, to conduct independent research on topics of transnational interest, such as global warming and acid deposition. In April 1991, it sponsored a workshop on Trade and Environment from which several papers have been submitted. In the same year, along with the Austrian Association for Agricultural Research, IIASA undertook a major study, *Trade and Environment*, but the 1991 draft document was not published in final form.

► **INTERNATIONAL INSTITUTE FOR ENVIRONMENT AND DEVELOPMENT (IIED)**

**London, England**

The IIED is the largest environment and development think-tank in Europe and a leading non-governmental organization engaged in the promotion of sustainable development in the Third World through research, policy studies, advocacy and information. The Institute is divided into different Programmes focusing on Environmental Economics, Forestry and Land Use, Sustainable Agriculture, Human Settlements, Drylands Management, Climate Change and Field Services and produces around 100 technical papers, journals and research reports a year.

IIED's researchers advise governments, UN bodies and aid agencies and work closely with local communities and decision-makers in the developing world. IIED has also had close links with the Business Council for Sustainable Development from 1990-92.

Established in 1971, IIED is a charity funded by international organizations, governments, private and corporate foundations.

► **INTERNATIONAL INSTITUTE FOR SUSTAINABLE DEVELOPMENT**

**Winnipeg, Manitoba, Canada**

IISD promotes sustainable development at all levels of decision-making, both in Canada and internationally. Its program areas include poverty alleviation, communications and partnerships, corporate and government budgeting for sustainable development, and trade and investment.

The Institute's objectives in the program area of trade and investment are to inform and improve the current debate, to point out research directions, and to carry out its own specific research, with a focus on developing countries. As well as undertaking and commissioning research in the area, it has convened both consultative and informative workshops on the issues and the present document represents the result of those efforts and work carried out with IRPP. The long term program goal is to use the concept of sustainable development to work toward a reconciliation of the various positions, leading to positive solutions.

IISD is currently working on developing a *set of principles for trade and sustainable development*, through a multi-stakeholder drafting and review process. The *principles* would guide the formulation of trade policy in light of the reality that trade, the environment and development are inextricably linked. They would also serve as a standard by which trading arrangements could be judged.

▶ **ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT (OECD)**

Paris, France

Exploring linkages between trade and the environment has become a priority issue in the OECD work programme for 1992. Joint sessions of trade and environment experts, held under the aegis of the Trade and Environment Policy Committees, have been given the mandate to analyze the various facets of these interrelationships and to prepare guidelines on ways to avoid conflicts between the objectives of trade and environmental policies. This work is ongoing and it is hoped that a draft set of guidelines will be ready for approval by Ministers in 1994.

Other directorates of the OECD also undertake studies of relevance to trade and sustainable development. The Economics Department has a current study on the macroeconomic effects of carbon taxes on trade. The Development Cooperation Directorate has analyzed the ways and means by which technology is disseminated through international trade and investment and continues to monitor the export credit practices of participating OECD Member countries with a view to ensuring the financial and developmental value of related aid flows. The OECD Development Centre may also include trade and sustainable development among its research topics for 1993.

▶ **UNITED NATIONS CONFERENCE ON TRADE & DEVELOPMENT (UNCTAD)**

Geneva, Switzerland

UNCTAD has undertaken a major project: "Reconciliation of Environmental and Trade Policies," which focuses primarily on issues relevant to developing countries. The project is based on country studies which analyze the linkages between trade and the environment in LDCs. Attention will be devoted to the implications of increasingly strict environmental regulations in export markets. As well, the impacts of trade liberalization on developing country environments and sustainable development will be examined. Emphasis will also be given to technology transfer issues and national policies for developing environmentally friendly technologies.

UNCTAD is also in the process of developing a PC-usable database for LDC governments and exporters, encompassing all relevant trade regulations in their various export markets.



► **UNITED NATIONS CENTER ON TRANSNATIONAL CORPORATIONS (UNCTC)**

New York, USA

In the new U.N. structure, the UNCTC is now the Transnational Corporations and Management Division of the Department of Economic and Social Development. Its work program includes efforts at negotiating a code of conduct for transnational corporations and their effects on home and host countries and international relations. In preparation for UNCED 1992, it has recommended ways for multinational corporations to integrate environmental and trade considerations in their operations.

Its Environment Unit will be focusing, among other things, on the linkages between trade, investment flows and the environment, with particular focus on foreign direct investment. It is also interested in undertaking research on regional trade arrangements, harmonization and the environment.

► **UNITED NATIONS ENVIRONMENT PROGRAMME (UNEP)**

Nairobi, Kenya

Following the United Nations conference on the Human Environment in Stockholm in 1972, UNEP was established in December 1972. Its main functions are catalysis, coordination, consensus-building, codification and stimulation of action to protect and improve the human environment at global, regional and national levels. It is also responsible for monitoring the state of the environment and alerting the world community to emerging environmental issues.

UNEP, in collaboration with the UNCTAD, carried out a number of studies on environmental implications of trade policies to promote awareness of trade-environment linkages. Its current trade-related work programme includes the following activities:

- Monitoring of trade aspects of international environmental agreements: e.g. CITES, Montreal Protocol, Basel Convention.
- Clearing house of information on actions taken by countries to implement the London Guidelines for the Exchange of Information on Chemicals in International Trade.
- Providing guidance to countries on establishing legislation to regulate international trade in chemicals: establishing Code of Ethics for Industry in regard to international trade in chemicals.

► **UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION (UNIDO)**

Vienna, Austria

UNIDO provides technical assistance and training as well as conducting research on promoting industries in developing countries. Among its interests are the environmental impacts of industrial development. Along with the Danish government, the Organization sponsored a ministerial-level conference in October 1991 on Ecologically Sustainable Industrial Development, which focused on the hurdles facing such development, particularly in developing countries. Trade-related impediments were among those considered.

▶ **WORLD BANK**

Washington, D.C., USA

The World Bank (IBRD) may be the world's largest producer of research on international finance and development. It carries out in-depth country studies on any member state requesting lending, and conducts research and analysis on trade flows and trade liberalization, finance and debt, structural adjustment, poverty, natural resource accounting, ecological sustainability and environmental management, as well as sectoral studies in areas such as forestry and agriculture. It convenes numerous international workshops, seminars and conferences, notably including a November 1991 symposium on International Trade and the Environment.

In its role as lender, it provides low-interest loans for infrastructure and development projects in developing countries. These are often contingent on economic reforms similar to the IMF's structural adjustment programs. The Bank has responded to criticism of its environmental record by expanding its Environmental Department, and requiring an environmental impact assessment on all Bank-assisted projects. As noted above, it produces considerable research and analysis on environmental topics.

## **North America**

### ▶ **CANADIAN ENVIRONMENTAL LAW ASSOCIATION (CELA)**

Toronto, Ontario, Canada

CELA focuses its research on the environmental impacts of regional and multilateral trading agreements, from a trade law perspective. It has conducted and published research on the GATT, NAFTA, the Canada-U.S. Free Trade Agreement, and the European Community (Single European Act).

### ▶ **CANADIAN INSTITUTE FOR ENVIRONMENTAL LAW AND POLICY (CIELAP)**

Toronto, Ontario, Canada

CIELAP analyzes current environmental trends and policy issues relevant to public and private sectors, both in Canada and internationally. Its published research results are aimed at both lay and professional audiences.

### ▶ **CENTRE FOR TRADE POLICY AND LAW**

**CARLETON UNIVERSITY AND UNIVERSITY OF OTTAWA**

Ottawa, Ontario, Canada

As part of its research program on trade negotiations and international economic relations, and in collaboration with the IRPP and IFPRI, the Centre is examining the implications of international trade rules and trade negotiations for international environmental cooperation and sustainable development.

### ▶ **ENVIRONMENTAL LAW INSTITUTE (ELI)**

Washington, D.C., USA

The Institute searches for pragmatic solutions to environmental problems, and makes policy recommendations for achievement of national environmental goals. It also provides information services, training courses and seminars, and research programs. ELI staff has given testimony before Mexican, Canadian and U.S. governments on the NAFTA.

▶ **INSTITUTE FOR RESEARCH ON PUBLIC POLICY (IRPP)**

Montreal, Quebec, Canada

IRPP is a non-profit, non-partisan body specializing in policy-relevant research in the areas of economics, trade policy, social policy, agriculture and governance. It has a joint project underway with the National Round Table on Environment and Economy which examines the relationship between sustainable development and competitiveness. The Institute has an Environment and Sustainable Development program which is collaborating with the Centre for Trade Policy and Law on a research project on International Trade and Sustainable Development.

One of the significant results of the Institute's program is the book *Beyond Interdependence: The Meshing of the World's Economy and the Earth's Ecology*, authored by Jim MacNeill, Peter Winsemius and Taizo Yakushiji. *Beyond Interdependence* introduced the term "shadow ecologies," to illustrate how trade allows the large cities of the developed world to impact on distant ecosystems, on which they depend critically for energy, raw materials and waste sinks.

▶ **CANADIAN COUNCIL FOR INTERNATIONAL BUSINESS (CCIB)**

Ottawa, Ontario, Canada

The CCIB serves as the National Committee in Canada for the International Chamber of Commerce and the Business Industry Advisory Committee to OECD, both based in Paris. These two organizations formulate policies on behalf of international business and present these to intergovernmental organizations including the U.N. agencies, OECD and the GATT.

CCIB assisted in developing business inputs for the Preparatory Committee IV meeting of UNCED, and provided advice to Canadian negotiators and representatives at the preparatory meetings and UNCED itself. BIAC is involved in the OECD program for the reduction of risks from chemicals, and transboundary movement of hazardous wastes and toxic substances. CCIB has several sectoral committees, including committees for Trade Policy and for Environment. While independent of each other, these committees collaborate to address certain international environmental issues. CCIB is also involved in the promotion in Canada of the ICC's Business Charter for Sustainable Development.

► **NATIONAL ROUND TABLE ON THE ENVIRONMENT AND THE ECONOMY  
(NRTEE)**

**Ottawa, Canada**

Established in 1988 as an advisory body to the Prime Minister, the National Round Table “has a special catalytic role to play in Canadian society in identifying, explaining and promoting the concept of sustainable development for all sectors and regions of the nation.”

NRTEE members represent a broad spectrum of Canadian social, political and economic life including the corporate sector, academia and research institutes, the scientific community, the various levels of government and a variety of public interest and professional groups.

In preparation for UNCED 1992, the NRTEE created four regional workshops to tackle three areas considered significant: resources, changes in international institutions and their funding, and the issue of technology transfer.

In November 1991, the NRTEE sponsored the conference “Trade, Environment and Competitiveness” with IISD, Environment Canada and Industry, Science and Technology Canada. This conference brought together the major Canadian and international stakeholders from the government, business, environmental, and academic communities to discuss the multifaceted linkages between trade and the environment.

The National Round Table is compiling a book based on the edited version of the 21 major presentations made at the conference. This volume seeks to make available to a larger audience the November exchange on an issue which now constitutes a critical component of Canada’s national initiatives — to increase its competitiveness and promote sustainable development. *Trade, the Environment and Competitiveness* was released in October 1992.

▶ **NATIONAL WILDLIFE FEDERATION****Washington, D.C., USA**

NWF is the largest not-for-profit conservation organization in the U.S. It works to educate individuals and organizations, to conserve natural resources, to protect the environment and to build a globally sustainable future. It maintains an International Affairs Department, which coordinates with non-governmental organizations, and lobbies the U.S. Congress and Administration to ensure that environmental considerations are incorporated in negotiation processes and trade fora such as NAFTA, OECD, GATT, UNCED and the Enterprise for the Americas Initiative.

The International Affairs Division has presented testimony before the U.S. Congress on several occasions regarding trade issues, and regularly advises the Congress, as well as the Administration, on environmental and trade policy matters. The Department also works closely with NGOs in other countries who have become involved in trade issues, particularly in Canada and Mexico. As part of its Program on Trade and Environment, the Department conducts on-going research and analysis of trade and environment policy issues with an emphasis on how trade policy and the conduct of trade, and the negotiation and implementation of trade agreements, can promote sustainable development.

▶ **NATURAL RESOURCES DEFENSE COUNCIL****Washington, D.C., USA**

The NRDC encourages international policy-makers to develop environmentally sound policies, and to consider long-term environmental factors as important as short-term political pressures. It also focuses on U.S. foreign policy (especially on international development assistance) and the multilateral development banks. It is an environmental advocacy group working with trade representatives and the U.S. Congress on the U.S. participation in the NAFTA and on the Uruguay Round GATT provisions on the environment.

▶ **NORTH-SOUTH INSTITUTE****Ottawa, Ontario, Canada**

The Institute conducts and publishes policy-relevant research on relations between industrialized and developing countries. Major program areas are international finance, trade and adjustment, development assistance, progress of women, and human rights and democratic government.

The Institute's work includes analysis of the social impacts of the NAFTA, exploring the concept of "social dumping," and some environmental concerns. It has also undertaken analysis of the Uruguay Round of GATT, particularly as it might impact on developing countries, and prepared a brief on the issues to be raised at UNCED 1992.

▶ **OVERSEAS DEVELOPMENT COUNCIL**

Washington, D.C., USA

Among its other areas of interest, the ODC conducts some policy research on, and analysis of, international trade. In February 1991 it sponsored a conference on trade and environment with the objective of specifically defining the linkages between the two.

Though there is not much research work currently underway on trade and the environment, the monitoring of the environment is ongoing. In the area of trade, research efforts are being focused on the NAFTA.

▶ **RESOURCES FOR THE FUTURE (RFF)**

Washington, D.C., USA

RFF conducts research and public education on natural resources and the environment and informs as well as improves policy debates about resources and environmental issues. It has three major divisions. The Quality of the Environment Division deals with environmental issues and economic instruments such as tradeable permits. Its Centre for Risk Management deals with environmental risk assessment and management. Its Energy and Renewable Resources Division devotes some attention to trade issues, as they relate to energy and forestry.

▶ **SIERRA CLUB LEGAL DEFENSE FUND**

San Francisco, California, USA

The Sierra Club Legal Defense Fund is a non-profit, public-interest, environmental law firm with offices in eight cities in the United States, and an affiliate in Vancouver, Canada. It cooperates with, but is not a part of, the Sierra Club. The Fund styles itself as “the law firm for the environmental movement.” To that end, it represents environmental advocacy organizations in state courts, federal courts, and administrative proceedings throughout the U.S. It pursues cases on wilderness, endangered species, pollution, transportation, land use, forest policy, energy policy, and many other matters. It has made numerous submissions to U.S. Congress on the environmental aspects of the NAFTA.

▶ **UNIVERSITY OF WESTERN ONTARIO CENTRE FOR THE STUDY OF INTERNATIONAL ECONOMIC RELATIONS**

London, Ontario, Canada

The Centre conducts studies on international trade and economic development including development of global general equilibrium models. Researchers with the Centre are in the process of preparing a major analytical paper on trade and the environment, while preliminary quantitative analysis of the effects of carbon taxes on global production and trade has been completed.

▶ **WORLD RESOURCES INSTITUTE**

Washington, D.C., USA

WRI provides information about global resources and environmental conditions as well as analysis of emerging issues, and develops workable policy responses. It has produced reports and special papers on trade and environment. WRI focused on the agenda for UNCED with “Compact for a New World”, a pan-American initiative on trade, development and environmental issues as they affect the Americas. As well, WRI has done work on technology transfer that integrates the issues of trade and sustainable development.

▶ **WORLD WILDLIFE FUND AND CONSERVATION FOUNDATION**

Washington, D.C., USA

World Wildlife Fund works for conservation as an end objective but recognizes the need to link its activities to issues of poverty and broader economic policy. Its International Environment program provides technical and financial assistance to governments and NGOs. It has research underway on the interaction between structural adjustment and the environment. WWF is a member of a federation whose international headquarters, World Wide Fund for Nature (formerly World Wildlife Fund), has produced several excellent pieces on the sustainable development implications of the GATT and proposed changes to the rules of international trade.

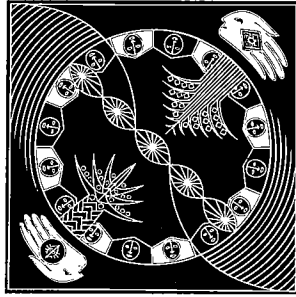
▶ **WORLDWATCH INSTITUTE**

Washington, D.C., USA

WWI informs policy-makers and the general public about the interdependence of the world economy and environmental support systems. It has done work on international trade and the environment; recent related titles include “Green Revolution — Environmental Reconstruction, Eastern Europe and the Soviet Union” as well as the 1992 edition of “State of the World.”







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## **Bibliography**

What follows is a guide to the literature on trade and sustainable development. It casts its net broadly, to cover works in areas of specific and sectoral interest such as trade in endangered species, technology transfer, intellectual property, and so on, as well as the more general discussions. While no such bibliography can be completely all-encompassing, we trust that this one covers the topics broadly enough to be of value to readers from all backgrounds.

References have been grouped in six categories, for ease of location. Those looking for information of a specific nature are advised to search in more than one section however, since some references may touch on many of the topics described in the remaining categories.

The sections are organized as follows:

### ▶ **GENERAL ISSUES OF TRADE AND SUSTAINABLE DEVELOPMENT**

This section covers broad analyses of trade, the environment and sustainable development issues; issues from UNCED 1992; and references on specific issues such as intellectual property rights, trade in toxics wastes, biodiversity, and technology transfer, as they apply to trade and sustainable development.

### ▶ **INTERNATIONAL ORGANIZATIONS**

Topics covered include the roles, impacts of international organizations such as IMF, World Bank, OECD, UNCTAD and national aid agencies, including analyses of structural adjustment programs (The GATT, as a trading arrangement, is covered separately. See *Trade Regimes and Sustainable Development* below); transnational corporations; and the international politics of trade and sustainable development.

### ▶ **ENVIRONMENTAL POLICIES, REGULATIONS AND INSTRUMENTS**

Included are works on regulations/economic instruments for integrating trade and sustainable development, such as property rights, subsidies, deposit/refund schemes, carbon taxes, tradeable permits, fees, standards, and quotas; conventions and protocols such as CITES, the Montréal Protocol, and the Basel Convention; harmonization of standards; migration of polluting industries; and the competitiveness effects of environmental regulation.

### ▶ **TRADE REGIMES AND SUSTAINABLE DEVELOPMENT**

This section includes analyses of existing or proposed trading regimes such as GATT, the EC and the NAFTA, as relevant to sustainable development; proposals for reform of existing regimes; and proposals for new institutions for the integration of trade and sustainable development.

### ▶ **SECTORAL ISSUES**

Issues covered include trade in agricultural products; trade in forest and fisheries products; sanitary and phyto-sanitary restrictions; trade, production and use of energy; and natural resource use.

► **THEORETICAL, ANALYTICAL AND METHODOLOGICAL ISSUES**

This section covers economics of trade, the environment and sustainable development; accounting for environmental costs; theories of trade as applicable to sustainable development issues; and modelling work on trade-sustainable development linkages.

## General Issues Of Trade And Sustainable Development

This section contains references not neatly fitting under other headings. They deal with topics such as the issues and concerns for the UNCED 1992, the linkages between environment, development and trade, definitions of sustainable development in the context of trade, and analyses of the underlying causes of environmental degradation. As well, issues such as intellectual property rights, trade in toxics wastes, biodiversity and technology transfer are covered.

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## International Organizations

References in this section deal with the roles and impacts of international organizations whose activities affect trade, the environment or sustainable development. Institutions such as the IMF, the World Bank, OECD and UNCTAD, for example, are covered, as are transnational corporations. The GATT, as a trading arrangement, is accorded its own heading (see Trade Regimes and the Environment, below), and is not dealt with here. This section also covers works on the international politics of trade and sustainable development, including issues of multilateralism and diplomacy.

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## **Environmental Policies, Regulations and Instruments**

This category includes all types of trade-related measures (legislated or negotiated) for the achievement of environmental protection or sustainable development. This includes regulations and economic instruments, such as property rights, subsidies, deposit/refund schemes, carbon taxes, tradeable permits, fees, standards, and quotas. It also encompasses relevant conventions and protocols, such as the Montreal Protocol, the Basel Convention and CITES. Issues of harmonization of standards and migration of polluting industries are also covered.

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## Trade Regimes and Sustainable Development

Under this heading come references to trading regimes as they affect the environment or sustainable development, and to discussions over the reform of their rules to conform to sustainable development principles. This consists of works on existing regimes, such as the GATT, regimes under negotiation, such as the NAFTA, and proposals for alternate institutions to deal with trade and the environment.

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## **Glossary of Terms and Acronyms**

**Actionable:** Unfair, in the context of a trading arrangement, and therefore liable to retaliation such as *countervailing duties*.

**Additionality:** In the context of North-South resource flows, the adding of new resources to the flow, as opposed to the repackaging of existing flows. The South claims it is being asked to adopt costly sustainable development paths, to be financed by existing resource flows which have now been re-tagged as “green.”

**ASEAN:** Association of South-East Asian Nations.

**Basel Convention:** The Basel Convention on the Transboundary Movement of Hazardous Wastes and their Disposal.

**CAP:** Common Agricultural Policy. The EC agricultural policy, which provides for stability of income and production levels, but which also acts as a damaging price support mechanism.

**CITES:** Convention on International Trade in Endangered Species of Flora and Fauna.

**Comparative Advantage:** See *Appendix A*.

**Countervailing Duties:** These are import duties, which may be applied to goods from a country which has been found to be violating the terms of a trading arrangement by subsidizing the goods in question.

**Domestic Content Requirements:** The requirement that certain goods must have a specified portion of the materials and/or value-added derived domestically.

**Dumping:** Selling goods in export markets at prices which are lower than the cost of production, usually to gain or maintain market share. If it harms producers in the importing country, this is an *actionable* trade practice.

**Escalating Tariffs:** Import tariffs rates which increase with the degree of processing of the goods. For example, raw logs might be subject to much lower tariff rates than wooden furniture.

**Export Quotas:** Ceilings placed on the volume or value of exports of certain goods. These are usually applied either as part of a commodity agreement, which tries to stabilize supply and thereby stabilize prices, or as part of a *voluntary export restraint*.

**Extraterritoriality:** The application of laws beyond the borders in which they have jurisdiction. For example, a country might try to regulate the behaviour of its firms' foreign branch offices.

**EAC:** Environmental Assimilative Capacity. The capacity of a given area to absorb pollution or environmental degradation. This is determined by the willingness of the public to accept pollution, and the ability of the eco-system to absorb it.

**EC:** European Community.

**External costs:** Costs of production or consumption not directly paid by the producer or consumer. When a factory emits air pollution, this is a cost to the environment and the surrounding population, but the producer may not have to compensate for the damage. Internalizing external costs means demanding compensation be paid (usually in the form of taxes).

**Free-rider:** A person or country which gets the benefits of some sort of agreement without paying the costs. For example, a given country may not agree to limit CO<sub>2</sub> emissions if it knows that an agreement will be reached without it — it will enjoy security from global warming without having to contribute.

**GATT:** General Agreement on Tariffs and Trade.

**GDP:** Gross Domestic Product. A measure of a nation's annual production of goods and services.

**Generalized System of Preferences:** The system under which industrialized countries grant non-reciprocal trade preferences to developing countries. This might include, for example, low import tariffs.

**Harmonization** (of standards): The agreement on a common set of standards. In the present context, this usually refers to standards for pollution in production or consumption of goods.

**IMF:** International Monetary Fund.

**Internalize:** See *external costs*.

**IPRs:** Intellectual Property Rights. The rights of an innovator or developer of intellectual property (such as software, a brand name, or a production process) to exercise control over how and by whom it is used. Usually enforced with patents, copyrights, trademarks etc. See also *TRIPs*.

**ITO:** The International Trade Organization, originally to have been the third pillar of international cooperation with the *IMF* and the World Bank. When its charter was not ratified by the US, the chapter on commercial policy — the *GATT* — was salvaged.

**LDC:** Less-Developed Country.

**Legitimacy:** The principle that measures to restrict trade, for reasons such as environmental concerns, must be backed up by scientific evidence of the need for such measures, and their potential effectiveness.

**Montreal Protocol:** The Montreal Protocol on Substances that Deplete the Ozone Layer.

**MFA:** Multi-Fibre Agreement. An arrangement which allows textiles to be excepted from the normal rules of trade as specified in the *GATT*, allowing countries to restrict low-cost imports.

**Most-Favoured-Nation (MFN):** A privilege extended to all contracting parties to the *GATT*, by which any preferential treatment granted one party must be granted all parties. Exceptions are the *Generalized System of Preferences* and regional trading arrangements.



**Multilateral:** Involving agreement by three or more countries. Multilateral trade agreements, such as the *GATT*, set out rules to which all contracting parties must abide. See also *Unilateral*.

**NAFTA:** North American Free Trade Agreement.

**National Treatment:** One of the fundamental requirements of the GATT for treatment of other contracting parties: the extension to foreign producers of goods and services of the same rights, privileges and requirements accorded to domestic producers.

**Newly Industrialized Countries (NICs):** Refers to developing countries, particularly such Asian countries as Singapore, Taiwan, South Korea and Hong Kong, which have recently experienced rapid development of their export industries for industrial products.

**NGO:** Non-Governmental Organization.

**Non-tariff Barriers:** Measures, other than tariffs, used to restrict imports. Examples include *VERs*, *OMAs* and import quotas. With the GATT-initiated reduction of tariffs over the last several decades, these have gained increasing importance.

**OECD:** Organization for Economic Cooperation and Development.

**ODA:** Official Development Assistance. The funds granted, or loaned at concessional rates, by governments to other governments. The flow is traditionally from North to South.

**OMAs:** See *Orderly Marketing Agreements*.

**Orderly Marketing Agreements:** An agreement by an exporter to limit the volume or value of exports in particular sectors which are “sensitive” for the importing country. Usually this is non-compensated, and is carried out under threat of retaliation. See *Non-tariff Barriers*.

**Phytosanitary Standards:** Standards with reference to health concerns for plants, including produce. *Sanitary standards* similarly are concerned with health standards for animals, including livestock. These include, for example, standards for levels of pesticide residues on produce, and for levels of carcinogens in livestock.

**PPMs:** Process and Production Methods. The methods whereby a good is produced.

**PPP:** Polluter Pays Principle. The principle that *external costs* should be *internalized*, and payment should come from the producers themselves (without government assistance).

**Predatory Pricing:** The practice, widely prohibited, of selling goods below the cost of production for a long enough period to drive competitors out of a market. See also *dumping*.

**Producer Subsidy Equivalent (PSE):** A measure of the support given to a producer by government intervention such as subsidies and import tariffs.

**Proportionality:** The principle that any trade-restricting measure must not be overly disruptive of trade in proportion to the benefit it is intended to achieve. Any such measures will necessarily be the least trade-restricting option available.

**Reciprocity:** The practice, long used at GATT negotiations, of securing trade-liberalizing concessions from one party in return for similar concessions from other party(s).

**Sanitary Standards:** See *Phytosanitary Standards*.

**Second-best:** A policy which does not treat the root cause of a problem, and therefore is inefficient. For example, if the problem is air pollution, distributing gas masks is second-best policy. Eliminating pollution would be first-best.

**Section 301:** Also *Super 301*. A section of the U.S. Omnibus Trade and Competitiveness Act of 1988, which *inter alia* strengthens the US government's power to retaliate unilaterally against foreign producers which discriminate against US producers, or who subsidize producers to the detriment of US producers.

**Subsidiarity:** In the context of the EC debates, the principle of delegating decisions to the lowest appropriate level of political body. Also, especially for the trade community, the principle that the least trade-restrictive option for achieving policy goals is preferable, other things being equal.

**Tariff Escalation:** See *Escalating Tariffs*.

**Terms of Trade:** The value of a country's exports relative to the value of its imports. One argument holds that LDC terms of trade have been steadily falling for decades, since they tend to export commodities and import manufactures.

**TNCs:** Transnational Corporations. Also known as multinationals.

**TRIMs:** Trade-Related Investment Measures. Measures which dictate how foreign investment may enter into and operate within a country, affecting the conditions under which production and export from that country take place.

**TRIPs:** Trade-Related Intellectual Property Rights. A delineation how countries should treat the *IPRs* (see above) of other countries, with whom they are potentially linked by trade.

**Transparency:** For the trade community, this means the extent to which a country's trade restrictions are made known to and are easily followed by potential importers. For the environmental community, it means the extent to which the formulation of trade policy and trade arrangements are open to public view and public input.

**UNCTAD:** United Nations Conference on Trade and Development.

**Unilateral:** Conducted by one or two countries alone. Unilateral trade restrictions, such as the U.S.'s *Section 301*, while they may be effective in changing practices abroad, are seen as undesirable by smaller countries, who lack the market power to make them work. As a rule, they prefer *multilateral* agreements.

**Uruguay Round:** The current and eighth round of multilateral negotiations of the *GATT* since its 1947 inception. Such rounds are convened at the request of the contracting parties whenever it is felt that they are necessary.

**USTR:** United States Trade Representative. The executive office-level official in the U.S. government charged with overseeing U.S. trade interests abroad and with developing U.S. trade policy. Also refers to the department serving under the official.

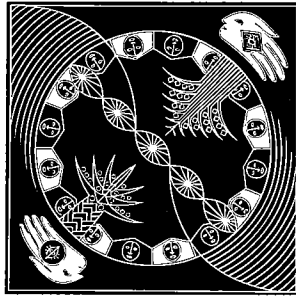
**VER:** See *Voluntary Export Restraint*.

**Voluntary Export Restraint (VER):** Voluntary Export Restraint. These are agreements which cap the volume or value of a good being exported to a particular country or region, usually under threat of some retaliatory action. See *Non-tariff Barriers*.

**Voluntary Restraint Arrangement (VRA):** See *Voluntary Export Restraint*.

**VPP:** Victim Pays Principle. As in contrast to the *PPP* (Polluter Pays Principle). The principle that the victim of pollution or environmental degradation shall pay the party responsible not to engage in the offending activity.





# Appendices

## **Appendix A**

### **ABSOLUTE AND COMPARATIVE ADVANTAGE IN THE GLOBAL ECONOMY**

Comparative advantage is the cornerstone of the argument for free trade. It explains why countries trade by demonstrating how trade increases allocative efficiency, meaning more goods may be produced. But in the global economy it may be absolute advantage, not comparative advantage, which is most relevant. This has serious implications for sustainable development, particularly if we are concerned with equitable distributions of wealth.

The example used by the economist David Ricardo, in his original demonstration of the concept, used two countries — England and Portugal — and two goods — wine and cloth.<sup>1</sup> Suppose, to begin, that England is more efficient at producing cloth than is Portugal, and Portugal more efficient at producing wine. This may be due, in England's case, to having modern loom technology, having more skilled factory managers, or having access to cheaper raw materials. In Portugal's case, the advantage in wine-producing may be due to a more suitable climate, cheaper labour, or more skilled vintners. It is easy to see why the two countries would trade in such a case. Given limited resources to allocate to production, England would be foolish to allocate any to producing wine. It would be better to allocate everything to producing cloth, which could be traded for efficiently-produced (and thus cheap) Portuguese wine. This is the case of absolute advantage, wherein a country is more efficient at producing a good than another country.

The case of comparative advantage is more complex. Suppose now that Portugal is more efficient at producing both wine and textiles: that it has an absolute advantage over England in both goods. Ricardo argues that trade will still take place. To see this, start from a situation in which both countries produce their own cloth and wine. Let us say that if Portugal were to reallocate some of its resources from production of textiles to production of wine, it would have to give up one yard of cloth to produce one more bottle of wine. At the same time, let us say this ratio for England would be slightly different (it would be the merest fluke if it were exactly the same). Let us say that England would have to give up two yards of cloth to produce one more bottle of wine. In such a case, Portugal should produce one more bottle of wine, and trade it to the English, who would be happy to give in exchange up to two yards of cloth. Anything greater than one yard makes Portugal better off, so trade benefits both parties. The key point is that it doesn't matter that Portugal has an absolute advantage in both goods. Because the ratios of wine gained per cloth sacrificed in each country will differ, trade will still take place, and will result in more efficient allocation of resources. In this case, Portugal has a comparative advantage in wine (relative to cloth) and England has a comparative advantage in cloth (relative to wine).

■ ■ ■

<sup>1</sup> Ricardo, David. *Principles of Political Economy and Taxation*. Sraffa Edition, Cambridge, 1951, p 15.

The relevant point in the global economy is that it seems trade will make everybody better off, even if some countries are far more industrially developed than others, and have absolute advantages in production of most goods. But there are two reasons why this point is off the mark: mobility of resources, and unemployment.

The global economy is characterized by a mobility of productive resources among countries that simply did not exist in Ricardo's day. Even by today's trading rules capital is almost completely mobile, and skilled labour and technological processes move relatively freely as well. This changes an underlying assumption from the comparative advantage example used above: that England and Portugal each had a set stock of resources to invest in productive activities. If it is possible for these stocks to move internationally, of course this assumption no longer holds. The choice faced by English owners of resources is no longer whether to invest them in wine or cloth within England, but now is expanded to include a choice between England and Portugal as the base of production. If it is more efficient to produce both goods in Portugal, then the decision is straightforward: move the financial capital, the looms, and the skilled managers from England to Portugal, which will now produce enough wine and cloth for both countries, and export both goods to England. The more mobile the resources of production, the more it is absolute advantage, not comparative advantage, which matters.

Does this leave England high and dry? It depends. Another assumption implicit in the theory of comparative advantage is that all resources will be fully employed; all of England's labour, land and capital will be used in production of one good or another. Under this assumption, even if some production moves to Portugal, the English economy will adjust by shifting its production to the next most efficient output. If England cannot compete in wine and cloth, perhaps its resources will instead be channelled into high-tech and service industries (to bring the analogy up to date). But this assumption of automatic adjustment seems to have little to do with today's economies, which often have large amounts of unemployed labour and machinery. What if England does not have an absolute advantage in high-tech industries or, for that matter, in anything? If we stop assuming all resources will be fully employed, then England is indeed high and dry, saddled with large pools of unemployed immobile resources such as unskilled labour and old factory buildings, while all the mobile resources flee the country to pursue greater returns elsewhere.

It may be unrealistic to posit a country without any absolute advantages, and exchange-rate effects will to some extent offset out-migration of resources. But it becomes less unrealistic as we shrink the size of the region under consideration. There is no reason to suppose, for example, that parts of Western Scotland need have an absolute advantage in production of any good, and therefore no reason that, in a global economy, mobile productive resources should not abandon those regions, leaving pockets of unemployment and under-development. Even if a region or country were to have an absolute advantage in one or two goods, there is no reason to suppose that this would naturally result in full employment of resources. Those left over would flee if they could, or sit idle if they could not.

In a global economy with high mobility of resources like capital, technology and labour, absolute advantage — not comparative advantage — is the basis for international trade. This implies far more than a mere adjustment of the language of economics textbooks; it has serious implications for trade policy, if we are to have trade serve sustainable development. Whereas trade based on comparative advantage ensures that both parties will benefit, trade in the global economy, based on absolute advantage, holds out no such guarantees. Less developed countries with fewer absolute advantages may lose out under liberalized trade regimes, relative to developed countries with better developed infrastructure, freer access to financial credit, a more educated workforce, etc. Such a magnification of inequities is clearly inconsistent with sustainable development.



## **Appendix B**

### **BIOLOGICAL DIVERSITY**

The Convention on Biological Diversity, negotiated in the months leading up to the Earth Summit and signed by 153 countries in Rio, may provide an interesting prototype of how other intellectual property rights questions are resolved in the future.

Most of the world's plant and animal species can be found in the tropics, in an astonishing richness of concentration. Ecuador, a small Latin American country with a land area about 3% of Western Europe's, has up to 50% more species than all of Europe in its rapidly disappearing forests. And most of these species have yet to be described, let alone catalogued. The potential value of these plants is incalculable. Already, more than a quarter of all prescription drugs sold in the U.S. originate from tropical plants. And the emergence of the biotechnology industry as one of the engines of growth and discovery for the 21st century makes these resources even more valuable. Biotechnology has become big business. In the U.S. alone, more than 70 major corporations have either founded, acquired or merged with a biotechnology company in the past decade. These investments will result in an estimated \$4 billion in annual sales in 1992. According to the U.S. Commerce Department, this could reach \$50 billion by the end of the decade.<sup>2</sup>

Yet, this diversity is rapidly disappearing. The Food and Agriculture Organization (FAO) estimates that the world is losing forest cover at the rate of 17 million hectares per year, leading to the loss of many species. Estimates understandably vary, as no one knows the exact number of species in the world. But Harvard biologist E.O. Wilson estimates that nearly 140 species of plants and animals become extinct every day. This is even more alarming considering that the pharmaceutical industry estimates that it must test at least 5000 chemical compounds to discover one marketable drug.

In addition to their value as ingredients for medicines, tropical plants are the basis for most of the world's food crops. Roughly 90% of the world's food supply comes from 20 major plants. Access to wild cultivars and diverse strains cultivated by Third World farmers is critical to the ability of plant breeders to continue to innovate for drought, pest resistance and other desirable characteristics.

Under the present system, plant breeders have the right to a patent-like protection of their products. Developing new strains with desirable characteristics is an intense and continuing process; every crop grown in the developed world is the product of cross-breeding, genetic manipulation and selection. This is an expensive and lengthy process, and could not take place without some protection which guaranteed that breeders could recoup their costs.

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<sup>2</sup> "Biodiversity Battle". *National Journal* (August 8, 1992): 1827.

But this is not the only type of innovation. The basic material used in the laboratories for manipulation comes almost entirely from strains cultured, protected and developed over many centuries by farmers in developing countries practising “informal innovation.” Every Canadian wheat variety, for example, contains material from Third World strains – in some cases from up to 14 countries.

The transfer of this resource from the South to the North is on the whole unpaid. There are few economic incentives to developing countries who preserve their biological diversity. And within developing countries, there are virtually no incentives to local communities or individual farmers to preserve traditional crops or tree varieties. At the same time, developing countries frequently have to pay substantial royalty fees to innovators whose crop varieties and pharmaceuticals are based on germplasm originally collected in the South.

The Biodiversity Convention represents a tentative first step toward correcting some of these inequities and toward providing some incentives for developing countries to preserve their remaining biological diversity. For instance, it requires countries using the biological resources of another country to “...share in a fair and equitable way the results of research and development and the benefits arising from the commercial and other utilization of genetic resources with the contracting party providing such resources.”<sup>3</sup>

It also requires countries to provide or facilitate access to technologies that “...are relevant to the conservation and sustainable use of biological diversity or make use of genetic resources and do not cause significant damage to the environment.”<sup>4</sup> It requires that the access to these technologies by developing countries be provided under fair and “most favourable terms, including on concessional and preferential terms where mutually agreed....” Further, the convention calls upon the developed countries to change their policies and legislation to provide developing countries with “...access to and transfer of technology which makes use of those resources, including technology protected by patents and other intellectual property rights....”

A number of the developed countries agreed to the final version of the convention with reservations. After the final negotiating session in Nairobi in May of 1992, the U.S. indicated that it would not sign the convention. President Bush reiterated this decision before his departure for the Rio Conference in June. And the American delegation attempted to persuade the other OECD members to follow suit. The U.S. objections centered on two aspects of the treaty. The first, related to the financial aspects and the Governance of the Global Environmental Facility, although important, is marginal to this issue.

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<sup>3</sup> *Convention on Biological Diversity*. Article 15.7

<sup>4</sup> *Ibid.* Article 16.1.

The second objection concerned the language related to technology transfer and the protection of intellectual property. The Administration, egged on by the biotechnology industry, argued that the Treaty eroded the protection offered to intellectual property. According to one industry official, "There is too much language in the convention about making technology available to developing nations, in effect, on an unrestricted basis to make us comfortable that our rights would be protected."<sup>5</sup>

But many disagree with the Bush Administration position. Much of the American press coverage of the issue centered on the industry's influence on Vice-President Quayle and his Council on Competitiveness, and the need for the President to appeal to the supporters of Ross Perot by distancing himself from the environmentalists. William Reilly, Head of the U.S. delegation, and other members of the group in Rio, all felt that a few minor modifications to the convention would make it acceptable to the U.S.

Lawyers for the other main biotechnology countries maintain that the convention offers more than adequate protection for intellectual property rights. And environmentalists have repeatedly pointed out that developing countries need economic incentives to preserve their remaining biological diversity from the bulldozer or the peasant farmer. They point to a pioneering arrangement between the multinational pharmaceutical giant Merck and Co. and the Costa Rican National Biodiversity Institute. Under this arrangement, Merck paid INBio \$1 million for the right (over 2 years) to take samples of plant, insect and animal samples to analyze for its use. Merck will retain the patent rights to any products produced, but it has agreed to pay INBio royalties on any successful products.

Many observers think that the U.S. Government overreacted to zealous lobbying from the industry and that efforts will be made to modify the treaty slightly to overcome American objections. Many also feel that the treaty and the Merck experiment in Costa Rica may provide the first modest steps toward a more reasonable arrangement which both provides incentives for the Third World and protects the legitimate rights of inventors.

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<sup>5</sup> Michael Roth of Pioneer Hi-Bred International, quoted in *Diversity* 8, No. 2, (1992): 8.

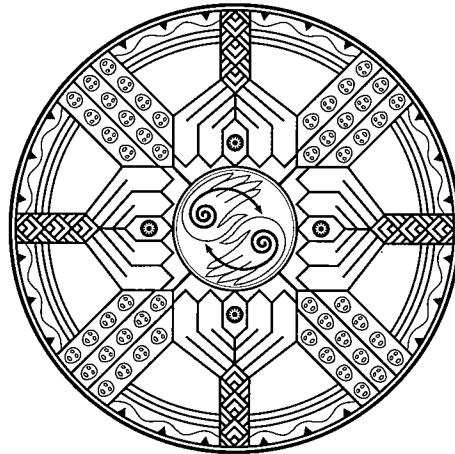
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161 Portage Avenue East  
Winnipeg, Manitoba, Canada R3B 0Y4

Phone: (204) 958-7700  
Fax: (204) 958-7710