

STOMPING ON THE EARTH: TRADE, TRADE LAW, AND
CANADA'S ECOLOGICAL FOOTPRINTS

1. Introduction:

Deregulation of trade, misnamed "free" trade, is the cornerstone of current economic, political and legal strategies world wide, operating in tandem with privatization and de-regulation of many sectors of social and economic activity. North America was the first area in the world to adopt the prototype international trade agreement of our time, the Canada-United States Free Trade Agreement of 1988. This was followed by the North American Free Trade Agreement of 1993, and then the Marrakesh Agreement Establishing the World Trade Organization of April 1994, which globalized the results of the Uruguay Round negotiations of the General Agreement on Tariffs and Trade.

The agreements rest on a strategy and belief in perpetual economic growth, as justified even by the apparently environmentally-conscious Brundtland Commission. The Commission called for "a five to ten fold expansion of world industrial output by the time world population stabilizes [at twice the present level] sometime in the next century"¹

An emphasis on trade de-regulation is allied with the elevation of competitiveness, as the basis of human economic and social policy decision-making. This ideology and economic strategy had been developed without regard to environmental concerns or constraints.

Free traders have argued that free trade is necessarily good for the environment as it increases GDP and therefore resources available for environmental protection.² The argument is patently lacking in credibility and the Canadian example shows

¹World Commission on Environment and Development, Our Common Future, Oxford University Press, 1987, p.231.

²GATT, "Trade and the Environment," part of the GATT annual report entitled International Trade 1990-91, March 1992.

that no such necessary correlation exists. During the ten-year era of free trade in Canada, governmental resources for environmental protection have decreased.³ If the argument had any validity, increased global trade and GDP should have been accompanied by an improvement in indicators of environmental health. However, many such indicators show increasingly negative trends:

Every major indicator shows a deterioration in natural systems: forests are shrinking, deserts are expanding, croplands are losing topsoil, the stratospheric ozone layer continues to thin, greenhouse gases are accumulating, the number of plant and animal species is diminishing, air pollution has reached health threatening levels in hundreds of cities, and damage from acid rain can be seen on every continent.⁴

A more balanced perspective on trade and sustainability suggests:

...trade should be seen as a tool of sustainable development, not an end in itself. Trade may bring gains, but trade does not necessarily bring gains. Trade may bring an increase in growth and with it an increase in financial resources which may be used for environment protection and the reduction of pollution. But neither of these effects follows automatically...The converse may also be true. That is, trade may reduce growth or contribute to recession. Or trade-induced growth may result in a distribution of financial resources that does not contribute to increased environmental protection and pollution reduction, or might not otherwise be sustainable...Since it cannot be assumed that trade is automatically good, it follows that neither is more trade necessarily better. Nor does it follow that less

³Between 1996 and 1998, budget cuts to environmental ministries in Canada were significant: approximately 30% for the federal Environment Canada; 65% for the Newfoundland ministry; 65% for the Quebec ministry; 44% for the Ontario ministry; and 37% for Alberta's ministry. Cited in Canadian Institute for Environmental Law and Policy, CIELAP NEWSLETTER, Vol. 6, No. 1, Toronto, 1998.

⁴Lester Brown, "Economics versus Ecology: Two contrasting Views of the World," EcoDecision, June 1992, p.19.

trade is necessarily bad.⁵

From the perspective of Canada and many Southern countries, whose economic wealth depends on exploitation and export of domestic natural resources, it is important to recall that resource management is a fundamental element of both environmental protection and community stability.⁶ Strategies to lessen reliance on raw resource exports, by increased local processing and diversification of resource use, are important for sustainable resource management and conservation. To Canadian environmentalists, the exclusion of natural resource issues from the complaints jurisdiction of the Commission on Environmental Co-operation (the NAFTA Environment Commission) reflected a serious deficiency in any potential utility of the Commission.⁷

The majority of Canadian environmentalists opposed the signing of NAFTA and the FTA because of concerns that they would inhibit improved environmental protection by limiting governmental powers to manage resources sustainably and to set appropriate environmental standards, and by reducing public participation and governmental accountability for environmental protection.⁸

⁵Bruce Campbell, "Globalization, Trade Agreements and Sustainability", in The Environmental Implications of Trade Agreements, Canadian Environmental Law Association, Toronto, 1993, pp. 8,9.

⁶For example, of the top twenty-five Canadian export commodities listed in April 1997, twelve were resource related: lumber, petroleum and bituminous minerals-extract oils, newsprint, natural gas, chemical woodpulp, non-crude petroleum oils, unwrought gold, coal, aluminum, fine paper, potassium chloride. Reported at http://strategis.ic.gc.ca/cgi-bin/tdst-bin/wow/wow.prepare_report April 16, 1997, Government of Canada.

⁷North American Agreement on Environmental Co-operation, Article 45 excludes from the definition of "environmental law" "...any statute or regulation, or provision thereof, the primary purpose of which is managing the commercial harvest or exploitation, or subsistence or aboriginal harvesting, of natural resources." This exclusion pertains to the circumstances in which a Party to the Agreement may be found to have effectively failed to enforce its environmental laws.

⁸See, for example, the letter to Michael Wilson, Minister of International Trade, signed by over 80 Canadian environmental groups, May 1993.

Resource management⁹

Building on the Canada-US FTA, NAFTA confirms the de-regulation of trade in resources by constraining the powers of governments to enact measures restricting such trade.

It prescribes that parties may not increase duties (tariffs) or adopt new ones, except as specifically provided by NAFTA.¹⁰

With regard to non-tariff measures, it specifically addresses import/export restrictions, providing that parties may not "adopt or maintain any prohibition or restriction on the importation of any good of another Party or on the exportation or sale for export of any good destined for" the other Party, except in accordance with GATT Article XI, which is incorporated into NAFTA.¹¹ This prohibition includes export and import price requirements.

GATT Article XI permits restrictions through "duties, taxes or other charges whether made effective through quotas, import or export licences or other measures" but these possible policy options are limited by Article 315 of NAFTA: such measures are permissible only if also applied to all other parties to NAFTA and to domestic consumption of the good. Canadian exceptions to these requirements include the right to maintain controls on exports of raw logs and some unprocessed fish, some agricultural products including imports of grain from the US, and preferential grain freight rates.¹²

NAFTA further limits the governmental powers available under GATT Article XI(2a) regarding temporary export restrictions to prevent shortages of food and other essential materials, and under GATT

⁹Discussions of Resource management and NAFTA provisions for Standard-setting are based on Swenarchuk, Michelle, "The Environmental Implications of NAFTA: A Legal Analysis," in The Environmental Implications of Trade Agreements, pp. 101-132, Canadian Environmental Law Association, 1993.

¹⁰NAFTA Article 302.

¹¹NAFTA Article 309.

¹²NAFTA Annex 301.3.

Article XX (g to j) which permits measures for conservation of natural resources, a domestic two-price system for essential materials, and acquisition of products in short supply.¹³

Specifically, a party may not reduce the proportion of its production of a given product that is exported to another Party below the amount available to the receiving Party in the previous 36 months (or other period, if the parties agree.) Nor may Parties have a two-price system which charges a foreign Party a higher price than is paid for domestic consumption of the good.

All traded resources, including water and energy, are covered by the terms, and the energy provisions are explicitly repeated in relation to Canada-US trade.¹⁴

The effect of these articles, first negotiated in the Canada-US FTA, is that trade between Canada and the US, including trade in resources, effectively cannot be limited by governmental policy using import or export limits or price differentials.¹⁵

From the perspective of resource conservation for environmental protection purposes, Canadian governments gave up important tools for conservation through control of the rate of exploitation and the pricing of Canadian natural resources.

NAFTA provisions on standard-setting

NAFTA was the first trade agreement to establish a comprehensive scheme for the harmonization and internationalization of health and environmental standards. The relevant provisions are found

¹³NAFTA Article 315, from which Mexico is exempted by Annex 315.

¹⁴NAFTA Articles 603 to 606. NAFTA also permits the continuation of incentives for oil and gas exploration and development. (Article 608)

¹⁵These provisions, particularly regarding energy trade, were key goals of the US negotiators in the Canada-US FTA negotiations, particularly since the Canadian government, under Prime Minister Trudeau, had instituted the National Energy Program, which included higher prices for foreign purchasers of Canadian energy products. As the late Peter Murphy, chief US negotiator for the Canada-US Free Trade Agreement stated, "We didn't enter the agreement over tariffs. The Canadian agreement is a political one - to make sure you don't go back to those policies like the National Energy Policy." (Quoted in McDonald, Marchi, Yankee Doodle Dandy: Brian Mulroney and the American Agenda, Stoddart, 1995, p.227.

in the chapters on Sanitary and Phytosanitary Standards (SPS) and Technical Barriers to Trade (TBT).¹⁶

Sanitary and Phytosanitary Measures

These are measures which relate to plant and animal health, and include pesticides, food additives, product-related processing and production methods, testing, risk assessment and labelling.

Parties have the right to adopt any SPS measures necessary to protect human, animal or plant life or health within their own territory, including measures more stringent than international standards, and may establish their own "appropriate level of protection". However, they must do so in accordance with the procedures and rules in the SPS chapter, using scientific principles, risk assessment, non-discrimination between goods from different parties, and no measures that have the effect of creating a disguised restriction on trade.¹⁷

This wording echoed the language of Article XX of the GATT¹⁸ while adding requirements for risk assessment in establishing standards. The SPS chapter also introduced a requirement that Parties base their standards on relevant international standards, guidelines or recommendations with the objective...of making its

¹⁶NAFTA Chapter 7, Section B, Sanitary and Phytosanitary Measures, and Chapter 9, Technical Barriers to Trade. For a detailed analysis of the provisions, see Michelle Swenarchuk, "The Environmental Implications of NAFTA: A Legal Analysis," in The Environmental Implications of Trade Agreements, CELA, 1993, pp. 110 -124.

¹⁷For a more detailed analysis of the legal issues raised by the SPS wording, see Swenarchuk, op. cit. pp.112-119.

¹⁸Since 1947, the GATT has included a "General Exception" in Article XX providing that: "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...:(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..."

sanitary and phytosanitary measures equivalent or, where appropriate, identical to those of other Parties.¹⁹

Standards which conform to international ones are presumed to be consistent with NAFTA SPS requirements, although the requirement for internationalization does not prevent a Party from establishing a more stringent standard if it conforms, in other respects, to the NAFTA SPS chapter.

The international standardizing organizations promoted as standard-setters for SPS include the Codex Alimentarius Commission, the International Office of Epizootics, the International Plant Protection Convention, and the North American Plant Protection Organization.²⁰

Technical Barriers to Trade (TBT)

Chapter Nine of NAFTA applies to standard-setting for non SPS matters including a wide range of environmental standards such as auto emissions, pulp and paper effluent, hazardous waste management, and fisheries conservation. Like the provisions on SPS, this chapter provides for a comprehensive approach to harmonization of technical standards, including those pertaining to environmental and consumer protection and human, plant, and animal health. A broader right is left to Parties to set their own standards than is true of SPS standards, but it remains a qualified right.

International bodies named for a role in these standards include the International Organization for Standardization (ISO), the International Electrotechnical Commission (IEC), Codex Alimentarius Commission, the World Health Organization, the Food and Agriculture Organization, and the International Telecommunication Union.

Subsequent to the conclusion of NAFTA, the implementation of the new World Trade Organization/GATT 1994 agreements included

¹⁹NAFTA Article 713.

²⁰See CELA, The Environmental Implications of Trade Agreements, Appendix A, for a description of the structure and composition of these bodies.

expanded SPS and TBT chapters with terms similar to those of NAFTA.²¹

Trade agreement impacts on standard-setting

Since the implementation of the Canada-US Free Trade Agreement, NAFTA, and GATT/WTO 1994, an increased number of trade disputes have arisen in which environmental or health standards have been in issue.²² These disputes have been arbitrated pursuant to the Dispute Settlement processes of the trade agreements, which are accessible only to the disputing countries, and not to other countries, citizens, or public interest groups. In every case, the domestic standard that was at issue has been found incompatible with GATT (or the FTA) leading to a requirement that it be rescinded.

It must be understood that trade law could have accommodated environmental and health concerns from the beginning, given the wording of GATT Article XX. However, every case has gone against national standards, leading to the systematic elimination of governmental options previously thought available under the GATT article and incorporated into NAFTA and the 1994 World Trade Organization agreement.

The proliferating trade law jurisprudence underlines that a wholesale shift in jurisdiction over environmental and health regulations has occurred through the establishment of the globalized free trade regimes. Trade law requirements, international standard-setting bodies, and secret dispute processes now constitute powerful barriers confronting governments considering public interest measures.

²¹World Trade Organization Agreement 1994; Agreement on the Application of Sanitary and Phytosanitary Measures and Agreement on Technical Barriers to Trade.

²²In the Matter of Canada's Landing Requirement for Pacific Coast Salmon and Herring, 1989; US Restrictions on Imports of Tuna, GATT doc. DS21/R Sept. 3, 1991; Thailand - Restrictions on Importation of and Internal Taxes on Cigarettes, GATT Doc. 375/200; US Standards for Reformulated and Conventional Gasoline WT/DS2/AB/R 1996 and WT/DS2/R/1996: EC Measures Concerning Meat and Meat Products (Hormones), Complaint by Canada, WTO WT/DS48/R/Can, August 18, 1997 (Panel Report) and WT/DS48/AB/R, 16 January 1998. (WTO Appellate Body decision)

At this time in Canada, the de-regulation of trade is accompanied by de-regulation in other sectors, including the field of environmental protection. Consistent with the promotion of voluntary, industry-based standardization organizations like the International Standardization Organization (ISO) in NAFTA and GATT, Canadian governments are replacing numerous environmental legal requirements with voluntary programs. Further, environmental ministries have experienced drastic budget cuts across the country, and wholesale rollbacks of environmental laws have occurred.²³

Investment, Services, and Related Matters

In de-regulating investment decisions, the NAFTA parties limited the powers of governments to require public benefits as conditions of foreign investment, and exposed governments to compensation claims from corporations exceeding those available in Canadian domestic law.

Limits to investment regulatory powers.

The NAFTA investment chapter requires application of national treatment and most-favoured-nation treatment regarding of foreign investors,²⁴ and limits the performance requirements which governments may institute for approval of foreign investments. Prohibited requirements include: given levels of exports or domestic content in production; local purchasing of supplies; given levels of imports or exports in relation to the amount of foreign exchange inflows or earnings; and technology transfer (except to meet applicable health, safety or environmental

²³For a review of the staggering pace of removal of environmental regulation in Ontario, see Environmental Commissioner of Ontario, Annual Report 1996: Keep the Doors Open to Better Environmental Decision Making, Toronto, April 1997; and Intervenor, Canadian Environmental Law Association, Vol. 22, No. 5 & 6. At the federal level, despite campaign commitments to improve the Canadian Environmental Protection Act and to adopt an Endangered Species Act, the Liberal government has failed to keep either commitment. In signing a recent "harmonization" accord with the provinces, the federal government has seriously fettered its discretion to initiate future environmental protection laws.

²⁴NAFTA chapter 11, particularly Articles 1102-1105.

requirements.)²⁵

Historically, Canadian governments have used such requirements in order to foster job creation, local development and local processing of resources. These strategies are important tools for reducing the reliance on exploitation of raw resources, and for promoting conservation and for ensuring that renewable resources are harvested only at a renewable rate.

NAFTA expropriation and compensation

Although investment treaties have long been used to protect foreign investors from nationalization of assets without compensation, NAFTA investors gained protection beyond that normally contemplated by such provisions. Article 1110 provides that Parties may not "directly or indirectly nationalize or expropriate" foreign investments or take measures tantamount to expropriation, except: for a public purpose, without discrimination, with due process, **and** on payment of compensation.²⁶

In Canada, the issue of expropriation generally arises in relation to real estate, and not other forms of property. However, given the broad definition of investment in NAFTA,²⁷ the effect of Article 1110 is to cast a wide net, introducing considerable uncertainty and risk for governments considering regulations, including for environmental purposes, which may affect investor returns.

The Canadian Environmental Law Association (CELA) has written on

²⁵NAFTA Article 1106 and 1108. These Articles are subject to extensive "Reservations and Exceptions" in country-specific Annexes to the agreement. Canadian reservations include some related to the energy and fisheries sectors.

²⁶NAFTA Article 1110.

²⁷NAFTA Article 1139. "Investment" includes, in various circumstances, a business, share, debt security, loan, income-sharing arrangement, real estate and other tangible or intangible property, and contract.

the meaning of "expropriation" in Canadian law:²⁸

...the term "expropriation" traditionally refers to a landowner's loss of use, title or benefit of property and a transfer of the value of use, title or benefit to a public authority. Thus, an aggrieved landowner must be able to demonstrate that not only has property been taken, but that the taking has also benefitted the expropriating authority.

However, Canadian courts have long recognized that land use regulation is not "expropriation," primarily because zoning by-laws or other planning instruments do not generally involve a taking or transfer of the full use, title or benefit of property. Therefore, if a landowner's ability to use or develop his or her property is constrained by a properly enacted zoning by-law, the landowner is not entitled to compensation, even if the zoning by-law causes a diminution in property value.

The distinction between expropriation and land use regulation has been noted by the Supreme Court of Canada on several occasions. For example in Soo Mill & Lumber Co. Ltd. v. City of Sault Ste. Marie, the Supreme Court of Canada rejected arguments that a municipal by-law was invalid because its effect was to prohibit any practical use of the appellant's land. In this case, Chief Justice Laskin went on to state that it is open to a municipality to freeze development in accordance with the purposes of official plans and zoning by-laws, provided the municipality has not acted in bad faith. This principle was also expressed by Chief Justice Laskin in Sanbay Developments Ltd. v. City of London, where a municipal development freeze was again upheld by the court.

Similarly, in Hartel Holdings Co. Ltd. v. Council of the City of Calgary, the Supreme Court of Canada refused to grant an order directing a municipality to expropriate land which had been

²⁸Lindgren, Richard and Clark, Karen, "Property Rights vs. Land Use Regulation: Debunking the Myth of "Expropriation Without Compensation", Canadian Environmental Law Association, February 3, 1994, pp. 5-8. Cases cited in this discussion include: Manitoba Fisheries Limited v. R., (1978) 6. WWR 496 (SCC); The Queen in Right of British Columbia v. Tener et al (1985) 17 DLR (4th) 1 (SCC); Soo Mill & Lumber Co. Ltd. v. City of Sault Ste. Marie, (1975) 47 DLR (3rd)1; Sanbay Developments Ltd. v. City of London, (1975) 45 DLR (3rd) 403; Hartel Holdings Co. Ltd v. Council of the City of Calgary, (1984) 8 DLR (4th) 321.

designated as a proposed park:

In addition, the Supreme Court of Canada has clearly rejected the suggestion that municipalities must compensate landowners who are subject to land use restrictions such as "downsizing":

"Ordinarily, in this country, the United States and the United Kingdom, compensation does not follow zoning either up or down.".....

Lindgren and Clark concluded:

The important principle which emerges from these cases may be stated as follows:

planning authorities may regulate, restrict or prohibit land use or development without triggering the remedy of compensation for affected landowners, provided that such measures are undertaken in good faith for a proper planning purpose.

Thus, Canadian law maintains the principle that legislatures may legitimately regulate property use in the public interest, without having to pay compensation if the measures are undertaken in good faith and do not involve a change in title.

In contrast, the NAFTA Investment chapter extends the concept of expropriation, with a requirement of compensation so broad that a governmental regulatory action which reduces the potential for generating profits may apparently generate a claim for compensation.

Public attention in Canada has been drawn to the claim by US-based Ethyl Corporation against the Canadian government for \$350 million (Canadian) compensation for enacting an effective ban on the use of MMT, a neuro-toxin, in gasoline. The claim arises under NAFTA Article 1110. It is indeed unprecedented and sobering that the right of the Parliament of Canada to pass an environmental and health protection can now give rise to a claim from the polluter for a huge amount of compensation.

It is less well known that other claims are currently being processed under the NAFTA chapter, including one by Metalclad Corporation against Mexico.

In January 1997, the U.S.-based waste disposal company Metalclad Corporation filed a grievance with ICSID, alleging that the Mexican state of San Luis Potosi violated a number of provisions of NAFTA when it prevented the company from opening its waste disposal plant. On the basis of a geological audit performed by environmental impact analysts at the University of San Luis Potosi, the Governor deemed the plant an environmental hazard to surrounding communities, and ordered it closed down. The study had found that the facility is located on an alluvial stream and therefore could contaminate the local water supply. Eventually, the Governor declared the site part of a 600,000 acre ecological zone. Metalclad seeks compensation of some \$90 million for expropriation and for violations of national treatment, most favored nation treatment and prohibitions on performance requirements. This figure is larger than the combined annual income of every family in the county where Metalclad's facility is located...

The Metalclad case raises other alarming questions. Metalclad claims the Mexican federal government is (unofficially) encouraging the company's NAFTA lawsuit so that it can deflect the political fall-out of forcing the state to open the facility. If Metalclad's claims are indeed accurate, this case raises the disturbing possibility that investors can use their rights to collude with governments to force unwanted or even dangerous investments on unwilling populations.²⁹

There is at least one other NAFTA-based current case, Robert Azinian et al. v. Mexico, which also relates to waste disposal.³⁰

²⁹Sforza, Michelle, and Nova, Scott, "The Multilateral Agreement on Investment and the Environment," The Preamble Collective/The Preamble Center for Public Policy, Washington D.C., 1997, p.12.

³⁰Personal Communication from Michelle Sforza, Preamble Collective, November 19, 1997.

These claims are being processed in the entirely confidential arbitration panels established in accordance with the NAFTA investment dispute settlement process³¹ rather than in the public judicial system of Canada. The public has no access to the process, has no right to obtain the documentation filed by the parties, and no right to intervene.

Canadian law would not treat these legitimate governmental regulatory actions to protect the environment and human health as expropriation giving rise to compensation. Indeed, the Supreme Court of Canada has recently emphasized the importance of environmental protection as a value in Canada, in upholding the constitutionality of the Canadian Environmental Protection Act.³²

The NAFTA "expropriation" clause constitutes a serious threat to environmental and public health regulations, and has a considerable "chilling effect." No government will take lightly the prospect of a huge financial claim against it for legislation, however high the public support for the measure. This is especially true in this historical moment.

Loss of citizens' rights of participation

To North American environmentalists, both in Canada and the US, increasing the rights of citizens to participate in corporate and governmental decisions that affect the environment has been fundamental to improving green protections. This participation has included strategies from neighbourhood organizing to obtaining intervenor funding for environmental assessment hearings. It has fostered the capacity of citizens to require improved environmental decisions locally, including by the "leap frog" strategy of requiring local officials to enact reforms once they have been obtained elsewhere.

Trade de-regulation has proceeded using strategies that directly limit the possibilities of effective citizen action. Secrecy in negotiations and dispute panels has been important in excluding

³¹NAFTA Articles 1115 to 1138.

³²Hydro Quebec v. Attorney General of Canada, (1997) 151 DLR (4th) 32 (S.C.C.).

citizen demands. The internationalization of processes of standard setting and economic decision-making makes them inaccessible to most citizens and non-governmental groups, due to distance and financial constraints, though not to well-resourced corporate interests.

Summary of trade law impacts

In summary, the current trade regime is a comprehensive and powerful tool which fosters unregulated corporate access to natural resources, reduced government capacity for environmental and health standard-setting, inappropriately-enhanced investor protections, and reduced citizen participation in decision-making.

Lessons for trade law from the theory of ecological footprints³³

The usefulness of ecological footprints theory is that it reminds us of questions that are not even asked in relation to trade law and trade deregulation, questions which contest the ideological bases and underlying assumptions of trade deregulation.

Humans are part of nature, and are dependent on nature

First, footprints theory reminds us that humans are part of nature and encourages us to end the "mental apartheid³⁴" that is a basis of Western religious and philosophical thought. As humans, we frequently see ourselves as the pinnacle of evolution

³³See: the accompanying article by Mathis Wackernagel and: Wackernagel, Mathis and Rees, William, Our Ecological Footprint: Reducing Human Impact on the Earth, New Society Publishers, Gabriola Island, BC and Philadelphia, PA, 1996;

Wackernagel et al "Ecological Footprints of Nations: How Much Nature do They Use? How Much Nature Do They Have?" Centro de Estudios para la Sustentabilidad, Universidad Anahuac de Xalapa, Mexico, commissioned by the Earth Council for the Rio+5 Forum: Toronto: International Council for Local Environmental Initiatives;

Rees, William, "Pressing Global Limits: Trade as the Appropriation of Carrying Capacity", in Schrecker, Ted and Dalgleish, Jean, eds, Growth, Trade and Environmental Values, Westminster Institute for Ethics and Human Values, London, Ontario 1994, pp.29-56.

³⁴Mathis Wackernagel, lecture at the University of Toronto, April 23, 1997.

and denigrate nature as dark, savage, and uncivilized. Footprints also reminds us that we are, despite our built-up environments, utterly dependent on nature for life.

Human capital v. natural capital

Footprints theory reminds us of the economic concepts of human capital versus natural capital, and of their respective roles in achieving sustainable development.

Promoting the goal of sustainable development is mentioned in the preambles to both NAFTA and The Marrakesh Agreement Establishing the World Trade Organization. However, no definition of the concept is included. Rees and Wackernagel adopt the definition of sustainability articulated by the World Conservation Union, being "improving the quality of human life while living within the carrying capacity of supporting eco-systems."³⁵

Daly and Cobb have provided a meaningful definition of sustainable development, in terms of two different kinds of capital, humanly created capital (equipment, machines, etc.) and natural capital (forests, oceans, natural resources and ecological services). They conclude that development is only sustainable to the extent that it lives off the "interest" flow generated by stocks of natural capital.³⁶

In practical terms, this means, for renewable resources, use that is no greater than the rate of regeneration. For non-renewable resources, it means use no greater than the rate at which a renewable resource is substituted for it (ie. solar energy for fossil energy.) For wastes, it means emission rates no greater than the rate at which they can be recycled, absorbed or rendered harmless by the environment. To the extent that "trade liberalization tends to expand the scale of economic activity and

³⁵World Conservation Union, United Nations Environment Programme and the World Wide Fund for Nature; Caring for the Earth: A Strategy for Living Sustainably, Gland Switzerland, 1991, p 10.

³⁶H. Daly and J. Cobb, For the Common Good, Beacon Press, 1989, p.72, discussed by Bruce Campbell in The Environmental Implications of Trade Agreements, op cit. p.9.

this increases the throughput of matter and energy,"³⁷ it has depleted natural capital stocks worldwide.

Nor does conventional economic accounting acknowledge the real impact of depletion of natural resources:

Under the current system of national accounting, a country could exhaust its mineral resources, cut down its forests, erode its soils, pollute its aquifers, and hunt its wildlife and fisheries to extinction, but measured income would not be affected as these assets disappeared... (The) difference in the treatment of natural resources and other tangible assets confuses the depletion of valuable assets with the generation of income ... The result can be illusory gains in incomes and permanent losses in wealth.³⁸

If trade negotiators were constructing agreements to implement Daly and Cobb's practical definition of sustainable development, the agreements would have a substantially different focus than they now have.

The concept of carrying capacity

Carrying capacity is conventionally defined as the maximum population of a given species that an area can support without reducing its ability to support the same species in the future, or, as defined by William Catton, it is the maximum "load" (population x per capita impact) that can safely and persistently be imposed on the environment by people. Rees and Wackernagel further explain it:

For a population of human beings living in (a) place, carrying capacity could be interpreted as the maximum rates of resource consumption and waste discharge that could be

³⁷H. Daly and R. Goodland, An Ecological-Economic Assessment of Deregulation of International Commerce under GATT, World Bank, Environmental Dept. 1992 (mimeo) p.8, and H. Daly, "Toward Some Operational Principles of Sustainable Development," Ecological Economics 2, 1990, pp.1-6, cited in Campbell, op.cit, p.9.

³⁸R. Repetto, quoted in Abramovitz, Janet, "Putting a Value on Nature's 'Free' Services", World-Watch, January/February 1998.

sustained indefinitely in their home region without progressively impairing the functional integrity and productivity of essential ecosystems.³⁹

The concept of "carrying capacity" for human activities reminds us that humans have impacts on nature, and that nature's capacity to continue providing for us is limited. The very recognition of these limits is a contrast to the ideology and legal regimes that promote unlimited and sustained growth in trade.

Trade disguises the problem that our consumption exceeds local carrying capacity.

Trade allows us to consume in excess of local biological productivity by removing or compensating for factors that would otherwise limit local economic expansion. This factor is a basic rationale for expanded trade, according to conventional economics, which does not consider how this may contribute to natural capital depletion, especially when globalized.⁴⁰

Further, people who live on ecological goods imported from afar (and on "common-pool" ecological functions such as climate control, which are shared by everyone) are spatially and psychologically disconnected from the resources that sustain them.⁴¹

The apparently limitless flow of foreign resources reduces the incentive for local resource conservation, and local people's realization of the ecological effects of consumption.

As discussed above, current trade law, by constraining domestic powers to regulate resource use and export, entrench these problems, even when consumption surpasses sustainable levels.

Trade causes appropriation of distant carrying capacity

³⁹Rees and Wackernagel, op cit, p.158.

⁴⁰See accompanying Wackernagel article and Rees, William, op.cit.

⁴¹Wackernagel and Rees, op cit. p.21.

Trade that exceeds sustainable limits robs other peoples and natural areas of their life-sustaining biological productivity. Supported by trade, populations of cities and whole countries are living beyond their domestic carrying capacity. They are running "an unaccounted ecological deficit-their populations are appropriating carrying capacity from elsewhere."⁴² In other words, the ecosystems that actually support typical industrial regions lie invisibly far beyond their political or geographic boundaries.⁴³

Unregulated trade acts like a fertilizer, removing constraints to countries' use of domestic resources; it exposes all local resource stocks to the largest possible market; and allows populations to "pool risks," lowering local incentives to conserve resources.⁴⁴

The hidden ecological impacts of cities

Footprints theory focuses our attention on ecological impacts of cities which we often either ignore or cannot see.⁴⁵ We forget that our cities are dependent for sustenance on the land and resources from which we obtain our energy, water, food and other goods, and to which we ship our wastes. By identifying the size or area required to sustain a city, wherever on Earth that land is located, the footprint accounts remind us of our continuing dependence on nature, despite our "built" environments, and of the global reach of our urban impacts. They do not only include water pollution, paving of agricultural land, and greenhouse gas releases associated with auto transportation and urban sprawl, however serious those are. In addition, by relying on goods and services imported from distant ecosystems, cities have ecological

⁴²Rees, William, op. cit. p.41.

⁴³Wackernagel and Rees, op.cit., p.15.

⁴⁴See accompanying Wackernagel article.

⁴⁵See, for example, International Institute for Environment and Development, Citizen Action to Lighten Britain's Ecological Footprints, London, 1995. "What is 120 times the size of London? the answer: the land area or ecological footprint required to supply London's environmental needs," cited in Wackernagel and Rees, op.cit. p.91

impacts far beyond their boundaries.

Trade, domestic and international, is the life blood of every city. It would be difficult, if not impossible, to identify any city in human history which was self-sufficient in providing for human physical needs. Therefore, the degree to which trade patterns are sustainable (or not) is an important question for urban dwellers.

Current terms of trade entrench the unconscionable appropriation of carrying capacity from the South to the North

As the ecological footprints calculations verify, there are great disparities between Northern and Southern consumption, and, given appropriated carrying capacity, "a quasi-parasitic relationship between advanced economies and the rest of the world".⁴⁶ Some areas constantly give up ecological productivity, while others constantly draw on it (Hong Kong, Switzerland, Japan.) Not everyone can be a net importer of ecological goods and services; for every importer there must be an exporter.⁴⁷ The increasing polarization of wealth appears to prevent implementation of sustainable development as defined by the World Conservation Union.

Since a considerable proportion of Southern goods traded globally are natural resources, whose extraction frequently causes damage to the ecosystems from which they originate, Southern trading nations are particularly prone to the illusory gains in income and long term depletion of wealth (natural capital) identified by Repetto.

Nevertheless, increased access to Northern markets remains a predominant goal of Southern trade diplomats.⁴⁸ Given global economic inequities, the discussions of environmental issues in trade fora raise concerns amongst Southerners that environmental

⁴⁶Wackernagel and Rees, op.cit. p. 97.

⁴⁷Wackernagel and Rees, op.cit. p.21.

⁴⁸See, for example, World Trade Organization, Report (1996) of the Committee On Trade and Environment, PRESS/TE 014, 18 November 1996.

requirements will constitute further threats to already impoverished Southern countries.

The Earth cannot provide for all humans at current Northern consumption levels

Renato Ruggiero, Director-General of the World Trade Organization, has recently stated:

How you have in the course of a generation billions of people changing their lives. And so long as we have the right management, the right global governance, this can be an incredible opportunity because we will be confronted with an unprecedented demand for everything from 3 billion people who are going more and more into the market, into production and into consumption...the opportunities in front of us are incredible."⁴⁹

An examination of the Canadian ecological footprint helps put this belief in perspective. Wackernagel and Rees calculations suggest that Canadians require approximately 4.3 hectares of land (10.7 acres) per capita, or roughly the area of three city blocks. However, the amount available per capita, globally, has decreased constantly in this century to 1.5 hectares (3.7 acres) per person. To support the entire present world population at the Canadian ecological level, assuming present technology and current efficiency levels, would require two additional Earths.⁵⁰ Other industrialized countries have similarly high consumption levels, while Southern ones consume much less.⁵¹

⁴⁹Quoted in the Toronto Star, February 11, 1998. Mr. Ruggiero is a proponent of the current regime of global governance, of which the World Trade Organization/GATT 1994 is the linchpin.

⁵⁰Wackernagel and Rees, op cit. The calculation of available land includes wilderness areas, which arguably should be excluded, reducing the available land area further. More recent calculations, reported in the accompanying Wackernagel article make the Canadian consumption factor even higher. As the human population continues to increase, the land available per capita further decreases, increasing the gap between what is consumed and what will be available.

⁵¹For example, the ecological footprint for the USA is 5.1 hectares (11.4 acres); for Holland 4.4 ha. (9.85 acres); for Japan 2.5 ha (5.6 acres); for India

As Rees and Wackernagel reflect:

The notion that the current lifestyle of industrialized countries cannot be extended safely to everyone on Earth will be disturbing to some. However, simply ignoring this possibility by blindly perpetuating conventional approaches to economic development invites both eco-catastrophe and subsequent geopolitical chaos. To recognize that not everybody can live like people do in industrialized countries today is not to argue that the poor should remain poor. It is to say that there must be adjustments all round and that, if our ecological analyses are correct, continuing on the current development path will actually hit the less fortunate hardest.⁵²

Those who support and implement the current regime for de-regulated trade continue to share Renato Ruggiero's apparent belief that unlimited demand for material growth provides incredible opportunities.

However,

Blind belief in the expansionists' cornucopian dream does not make it come true - rather, it side-tracks us from learning to live within the means of nature and ultimately becomes ecologically and socially destructive.⁵³

The need for alternatives

A full discussion of alternative economic strategies to achieve sustainability and improvement in human quality of life is beyond the scope of this work. Rees refers to the need for: greater use of full cost pricing; an emphasis on community responsibility and social capital formation to restore balance with the present weight of individual rights and private capital formation; the explicit promotion of cooperative activity to balance the

0.4 ha (.89 acres).

⁵²Wackernagel and Rees, op.cit. p.16.

⁵³Ibid. p.16.

"worship" of competition; a move to intra-regional ecological balance and self-reliance; the exploration of the concept of bioregionalism; development and use of regional ecological accounts for planning purposes; regulation of commodity flows on a sustainable basis; and international agreements for more equitable wealth distribution.⁵⁴ Others have proposed specific reforms to the trade regime.⁵⁵

Some may argue that given the momentum of trade expansion and globalization in our time, the lessons of ecological footprints analysis are simply too remote from mainstream economics to be applicable to trade policy. To the contrary, it may be argued that worsening economic inequities and related ecological crises are likely to lead to a quest for perspectives which examine the fundamental and underlying impacts of unregulated economic growth. Footprints analysis can contribute substantially to that examination.

In the short-term, it would be useful to incorporate ecological footprints theory into environmental assessment of trade and trade law⁵⁶. The free trade agenda is unfolding in the Asia-Pacific area through APEC, and across the Western Hemisphere with the Free Trade Area of the Americas. Rigorous analyses of the associated anticipated trade patterns and their impacts on natural capital, local and global carrying capacity would demonstrate whether or not the resulting trade will be sustainable and contribute to improved quality of human life in the long term.

As Rees and Wackernagel have identified:

⁵⁴Rees op.cit. p.50.

⁵⁵Shrybman, Stephen, et al, The Marrakesh Proposals for Sustainable Trade, November 1994, available at the Canadian Environmental Law Association.

⁵⁶The Government of Canada released a limited environmental "review" of NAFTA which did not meet the standards of a rigorous environmental assessment. See Government of Canada, North American Free Trade Agreement: Canadian Environmental Review, Ottawa, 1992.

On a finite planet, at human carrying capacity, a society driven mainly by selfish individualism has all the potential for sustainability of a collection of angry scorpions in a bottle.⁵⁷

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⁵⁷Wackernagel and Rees, *op.cit.* p.xi.