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ENVIRONMENTAL TARIFFS: PROTECTIONISM OR ECOLOGICAL IMPERATIVE.
A Unilateral Approach to International Public Policy
Recognizing the Failure of International Environmental
Treaties in a Realist/Mercantilist World.

by

Dominic A.C. Darmanin

M.A., Simon Fraser University, 1993

Original Degree

THESIS SUBMITTED IN PARTIAL FULFILMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
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of
Political Science

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ABSTRACT

International environmental reform has been a topical subject for several decades which has resulted in a multitude of treaties being instigated, yet environmental degradation persists. This thesis focus is on the role of states in international relations as the principal enforcers of multilateral environmental treaties. It examines why multilateral treaties have proven to be an ineffective environmental public policy instrument at the international level and recommends, as a possible alternative, a unilateral policy approach to confronting environmental degradation.

An analysis of states' possible rationale for failing to honour their environmental treaty commitments is undertaken under the realist/mercantilist perspectives as postulated in political science and economics respectively. Building upon this analytical foundation, further examination of the role of the state in the market system is pursued with the aim of determining more effective means of initiating international environmental reform through the market system as opposed to unenforceable international treaties. To this end, the concepts of nonmarket failure and market failure are employed together with the realist/mercantilist theories, to evaluate some of the obstacles which hinder the implementation of international environmental treaties, and alternately to

assist in the formulation of instrument which may overcome these deficiencies.

A market-based solution in the form of an "Environmental Pollution Index" is recommended as one possible policy alternative. The Environmental Pollution Index is a rating system composed of specific indices readily available through national statistical information. A country's rating is determined by randomly selecting proxy variables from a pool of economic and scientific indicators derived from national and international statistics from which a mean will be calculated to designate its environmental status in relation to other countries. A relatively nominal "environmental tariff" would be incurred by severe environmental infractors and by those states who do not comply with their treaty obligations. This, as yet untried Environmental Pollution Index/unilateral approach may offer a viable alternate strategy to redressing environmental degradation which persists under the prevailing multilateral approach.

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CHAPTER I: INTRODUCTION

International environmental reform is hampered by indecision, cheating and the general difficulty of implementing multilateral treaties. Consequently, the time has come to consider other means of initiating effective environmental policies. One such alternative measure, environmental tariffs, may be an idea whose time has come.

The consideration of unilaterally imposing ecological tariffs as a means of addressing environmental problems necessitates an inquiry into the disciplines of politics and economics. In matters of trade and tariffs neither can be mutually exclusive from the other. While contemplating the interconnectedness of politics and economics hence, "political economy", John Herz explains;

...economic theories have been theories of the functioning, actual or potential, of economic facts or "laws" in the concrete reality of life of society. [the]...economy is an inseparable part of the whole of society, and that economic theories form part of the broader realm of socio-political ideas.¹

A discussion of the intertwined roles of politics and economics--both on a practical and theoretical level--in international trade and environmental relations among states is central to this thesis. Typical of the thinking of some neoclassical economists, David Gould examines trade reform and the important role government must play to convey a sense of stability and consistency to foster confidence in a states'

¹. John H. Herz, Political Realism and Political Idealism, Chicago: The University of Chicago Press, 1964, pp. 102-103.

economic competence. Gould sees free trade as being inherently good and governments as indecisive amateurs. This position illustrates a myopic understanding of how the world functions outside the boundaries of a single discipline.²

One of modern liberal economics' greatest failings has been its inability to harmonize economics and the ecology, which is due in part to their being treated as distinct and unrelated disciplines.³ The United Nations Environment Programme report (1992) acknowledges this peculiarity and suggests that ecology lacks the prominence of economics because ecological researchers have been unable to show the socio-economic benefits of nature conservation whereas economists can easily demonstrate how nature provides for our socio-economic wants and needs.⁴ This polarization of views only serves to impede resolving the profound negative effects both realms have upon our environment.

². David M. Gould, "Free Trade Agreements and the Credibility of Trade Reforms", Economic Review, First Quarter 1992.

³. "The field of environmental economics is an exception but has focused almost exclusively on means to internalize pollution damage and avoidance costs. Even recent economic prescriptions see 'environmental policy' largely as a matter of pollution control subject to variable "environmental conditions and local tastes" among jurisdictions." William Rees, "The Ecology of Sustainable Development", The Ecologist, Vol. 20, No, 1, January/February 1990, p.23n23.

⁴. Mostafa K. Tolba, et al. (ed.) The World Environment 1972-1992, London: Chapman & Hall, 1992, p.199.

All organisms, whether human, animal, insect, or plant, extract resources from their biophysical environment where they consume, process and put out waste. Economists tend to contemplate the human element in this process while ecologists are inclined to ponder the non-human component. In recent times, human beings have posed a greater problem to the biosphere because we consume, process and waste on a much larger and more destructive scale than other organisms.⁵ As a result we are endangering the earth that nurtures us all.⁶ Action must be taken to curb this trend until knowledge of our economic activities corresponds to the actual impact these activities have on the environment.

Implicit in this assertion is a statement which transcends all others in this thesis; namely that the well-being of the environment supersedes all political organizations and economic endeavours. This declaration is premised on the certainty that humanity must live and function within the confines of the biophysical environment and not

⁵. Jim MacNeil, et al. Beyond Interdependence. The Meshing of the World's Economy and the Earth's Ecology, New York: Oxford University Press, 1991, p.8.

⁶. The 1992 report by the United Nations Environment Programme (UNEP) chronicles the increasing devastation inflicted upon the biosphere through human activities. Part One of the report provides extensive details of the negative impact humanity is inflicting upon the biosphere. The epilogue of the report ends with this warning. "It is no exaggeration to say that the ability of the biosphere to continue to support human life is now in question. That fact should compel us to implement what we say we should do." Mostafa K. Tolba, et al. p.818.

vice versa.⁷ The focus of this work is to explain why, given this obvious truth, there has been a lack of effective policy implementation by the international community to protect the environment.

The theoretical context against which this problem hypothesis will be analyzed is the classic realist theory in political science complemented by the mercantilist perspective

⁷. A Report by the Canadian Federal Parliament's Standing Committee on the Environment quoted several renowned experts on their opinions as to the state of the world environment. Here are two such responses. Lester B. Brown (President of Worldwatch Institute) stated:

Yet on the environmental front, the situation could hardly be worse. (...)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 animals 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.

Maurice Strong asserts:

I believe that if we continue on our present course, life as we know it will not survive the 21st century. Indeed our grandchildren, even in this blessed nation, will be experiencing a very severely deteriorated quality of life if we continue on our present course. (65:35) Mr. Chairman, the present course we are on is like a cancer headed for terminality. We simply cannot survive the pathway we are on. (65:44) Report of the Standing Committee on Environment, Our Planet...Our Future, Chairperson: David MacDonald, Ottawa: Ministry of Supply and Services Canada, June 1993, p.9.

Mostafa K. Tolba, Executive Director of the United Nations Environment Programme (UNEP), referring specifically to desertification warned:

Desertification is accelerating. The cost of combating it rise with each passing year. And if it is not controlled soon, we can expect a dramatic increase in world food shortage. Any one of these factors is reason to take urgent action. Taken together, they represent an unarguable case for global concern, and global action. United Nations Environment Programme, World Atlas of Desertification, London: Edward Arnold, 1992, p.IV.

in economics. In light of the failure of states to unite and concertedly tackle environmental problems, realism offers the most plausible explanation to account for this apparent apathy.⁸

An explicit definition of realism is elusive because each major proponent of the theory understands or interprets it differently given their personal perspective. Keohane and Nye⁹ provide four primary assumptions about realism which they presented in the form of ideal types. Viotti and Kauppi's synthesis of these assumptions is utilized because of their simplicity. These assumptions will be utilized as analytical

⁸. This does not repudiate the applicability of other political theories to explain the phenomenon of international relations. The contention here is that, within the confines of this thesis' hypothesis--that states are the principal negotiators and enforcers of international treaties--realism provides the most parsimonious explanation.

Gareth Porter and Janet W. Brown explain the central role of states in international environmental agreements.

States enter into the bargaining that produces the international legal instruments creating global environmental regimes. States also decide which issues are considered by the global community both directly--by arguing for international action on issues--and indirectly--through their membership in the governing councils of international organizations. And donor states influence environmental policies through their bilateral aid programs and donations to multilateral banks. Gareth Porter and Janet W. Brown, Global Environmental Politics, San Francisco: Westview Press, 1991, p.35.

⁹. In an effort to provide a theoretical spectrum by which any set of conditions within the realm of international relations could be explained, Keohane and Nye constructed Complex Interdependence as an another ideal theoretical type opposite to realism. This proposition is examined in detail in Robert O. Keohane and Joseph S. Nye, Power and Interdependence: World in Transition, Boston: Little, Brown, 1989.

reference points in examining the condition of international relations as it pertains to environmental agreements and their ineffective implementation.¹⁰

The four key assumptions include the following propositions. First, states are the principal or most important actors; states are immoral (not bound by an individuals' sense of morality); states always act in their national self-interest; and states function in an anarchical international system. Second, the state is viewed as a unitary actor, where the government speaks with one voice for the state. Third, realists assume the state is essentially a rational actor. Each decision made by the state is the optimum decision arrived at after carefully weighing options given the capability of the state. Finally, realists assume that national security is the overriding imperative in international relations. In a hierarchy of imperatives national security (high politics) ranks supreme emphasizing the nucleus of "power" in realist thinking, that is, primarily military power. Socio-economic issues (low politics) like trade, foreign aid and human rights have been conventionally seen as less important than the national security of the

¹⁰. Hans Morgenthau who coined the phrase "realism" sets forth six principles of political realism. Viotti and Kauppi's four assumptions encapsulate Morgenthau's principles having had time to contemplate and refine realist theory from discussions initiated decades earlier.

state.¹¹ As characteristics of an ideal type these four assumptions are not always directly applicable in practice, though they do provide a starting point from which to understand the international relations of trade and the environment.

Applying these assumptions to the real world illustrates the difficulty encountered in attempting to employ social science theory¹² to understand reality; it cannot be done literally but rather figuratively. Nevertheless, the subject of this thesis can be most parsimoniously explained in general realist terminology.

In classic realist terms international environmental agreements are ineffective because states are too protective of their national interests. These interests can only be preserved if states maintain the power¹³ necessary to determine

¹¹. Paul R. Viotti and Mark V. Kauppi, International Relations Theory: Realism, Pluralism, Globalism, New York: Macmillan Publishing Company, 1987, pp.6-7.

¹². Alan C. Isaak undertakes a careful analysis of the meaning of political theory and arrives at this conclusion: "The simplest interpretation of theory, then, views it as a set of related empirical generalizations. Therefore, several generalizations about a particular area of politics can be classified as a theory." Isaak goes on to remark that though theories are based on generalizations, they can to some extent, be tested and evaluated. Alan C. Isaak, Scope and Methods of Political Science, London: The Dorsey Press, 1975, pp.137-138.

¹³. For realists "power" is the essence of politics. States compete to attain power over other states "...so that traditional ends of politics among nations may be accomplished - i.e. international autonomy, military security, diplomatic influences and heightened prestige." Donald J. Puchala, "Of Blind Men, Elephants and International Integration",

their own destiny. Giving up such power would be seen as a threat to national security by becoming more dependent upon other states and therefore vulnerable to the actions of those states.¹⁴ Realists cite the intrinsic nature of this self-help or anarchical international system, as further evidence that each state must endeavour to maximize its own interest. In this view, international environmental agreements would only be effective if they coincided with the national interests of states.

Perspectives on World Politics, London: Croom Helm Ltd, 1981, pp. 237-238.

¹⁴. Realists do not see interdependence as a desirable outcome. David Baldwin argues that interdependence is a fact of life that has to be endured and not revered. He offers the example of Hungary's and Czechoslovakia's economic and political relationship with the Soviet Union in the 1960s as an asymmetrical relationship which should not be celebrated. David A. Baldwin, "Power Analysis and World Politics: New Trends Versus Old Tendencies", World Politics, No. 31 (January 1979), pp. 169 & 181.

Kenneth Waltz describes the world system as one of 'international anarchy' in which interdependence is decreasing as inequality increases between the North and South. He maintains that the South's relationship to the North is one of vulnerability and dependency, not interdependence. Waltz argues that lessening of interdependence is desirable to decrease chances of world conflict. Kenneth N. Waltz, "The Myth of National Interdependence", in Charles Kindleberger (ed.) International Cooperation, Cambridge MA: MIT Press, 1970, pp. 205-206.

Hedley Bull, another realist, takes exception to some aspects of interdependence. He points out that transnational relations are not new, only their contemporary world-wide character is new. Furthermore, Bull contends that it is not enough to speak of the emergence of an integrated world society if it is not built upon common interest and common values, on the basis of which common rules and institutions may be built. Hedley Bull, The Anarchical Society, New York: Columbia University Press, 1977, p.227.

Like the economy, the environment is not considered an overriding imperative in international relations by realists. However, just as some economic events, such as the 1973 oil embargo by the Organization of Oil Exporting Countries (OPEC), have been elevated to the status of high politics¹⁵, continued environmental degradation may also achieve this status. Since the United Nations General Assembly introduced the concept of environmental or ecological security in 1987;

...there is a growing clamour from academics, politicians, and activists to raise environmental problems to the level of "high politics," and these theorists use the term "environmental security" to challenge the monopoly that political and military security analysts have exercised on interstate politics.¹⁶

¹⁵. Viotti and Kauppi, p.57.

¹⁶. Peter H. Gleick, "Environment and Security: The Clear Connections", The Bulletin of the Atomic Scientists, Vol. 47, No. 3, April 1991, p.18.

Matthias Finger proposes that governments and the military are seeking to give the military-industrial complex a new raison d'etre, hence designating environmental degradation as a threat to national security. Finger suggests that the Partial Test Ban Treaty and the Montreal Protocol among others, have attained the status of high politics. Matthias Finger, "The Military, the Nation State and the Environment", The Ecologist, Vol. 21, No. 5, September/October 1991, pp.220-225.

Some realists like Daniel Deudney see little in common between national security and environmental problems. National security deals with interstate violence and not environmental degradation, therefore they are not capable of being incorporated. Nevertheless, there can be little doubt of the security risks a depleting world resource base can pose in prompting states to become belligerent in an effort to gain access to those diminishing resources for their survival. Daniel Deudney, "The Case Against Linking Environmental Degradation and National Security", Millenium, No. 3, Winter 1990, pp. 461-476.

Realists will need to redefine power and national security in broader terms to reflect the potential dangers to state sovereignty posed by environmental degradation. Similarly, the political manipulation of a state's trade practices may need to be shifted from furthering its national economic interests alone to achieving national environmental objectives.

The inherently mercantilist nature of the world trading system can not be overlooked when attempting to understand the failure of multilateral environmental policies. Trade and the environment are inextricably linked. In economics, mercantilism¹⁷ epitomizes how realist thinking has for centuries dictated trade policies among states. Mercantilism, otherwise referred to as the 'economic nationalism of states', was overtly practised from the sixteenth through to the

¹⁷. Barry Jones provides this distinction between mercantilism and neo-mercantilism. "Within early modern Europe, mercantilism's external objectives were promoted through the proliferation of the state's regulative and enforcement organizations and the granting of official monopolies to state-approved trading companies, corporations and associations. Modern neo-mercantilism can be distinguished by the political pressure from a well-educated voting public to influence sensitive national economic systems which impact on their day-to-day lives." R.J. Barry Jones, "Perspectives on International Political Economy", Perspectives on Political Economy, R.J. Barry Jones, (ed.), New York: St. Martin's Press, 1983, pp.185-186.

Above all, like the mercantilists of old, neo-mercantilists "...would argue that political independence and state security are best served by economic strength and productive self-sufficiency." Ralph Pettman, International Politics: Balance of Power, Balance of Productivity, Balance of Ideologies, Melbourne: Longman Cheshire, 1991, p.80.

nineteenth centuries. Nation-states sought to increase their military power around the world by creating greater wealth and vice versa. Some of mercantilism's basic tenets included: the stimulation of domestic industrial and agricultural production; an effort to export more than was imported; efforts to secure a steady supply of raw materials; interest in foreigners as customers, but not suppliers (the potential of manufacturing was to be maximized in the home state); and finally, maximization of state holdings of precious metals (gold and silver), which were deemed indispensable to a nation's wealth and power.¹⁸ Like the realist assumptions, these mercantilist tenets also serve as reference points in attempting to understand states' dispositions towards contemporary international trade and environmental relations.

Robert Libby notes that due to the domination of classical trade theory, contemporary studies of mercantilist

¹⁸. Ibid. pp.80-83.

Among many other examples, Friedrich List recounts England's mercantilist trade policy with India from whom raw cotton and silk were imported then processed and manufactured in England into various commodities. List notes "[England] ... strove for commercial supremacy, and felt that of two countries maintaining free trade between one another, that one would be supreme which sold manufactured goods, while that one would be subservient which could only sell agricultural products." England adopted a similar policy in North America where horseshoe nails were prohibited from being manufactured and moreover, that no such nails made there should be imported into England. Friedrich List, The National System of Political Economy, [1885], New York: Augustus M. Kelley Publishers, 1966, p.42.

trade policies (particularly with regard to the United States) have been neglected.¹⁹ Libby argues:

The mercantilist position expects conflicts of interest among nations over trade. Mercantilists assume that it is the duty of governments, particularly democratic ones, to protect important domestic economic and political groups; hence free trade can never be the sole consideration in forming trade policy.²⁰

Mercantilism draws heavily on the realist belief that the world arena is conflictual, necessitating continual concern for national security. Like realists, proponents of mercantilism see economics as subordinate to politics.²¹

Stephen Krasner poignantly describes the relationship between realism and mercantilism when he states that mercantilists "...brought Machiavelli from the political to

¹⁹. Ronald T. Libby, Protecting Markets: U.S. Policy and the World Grain Trade, Ithaca: Cornell University Press, 1992. p.xi. Libby exposes the U.S. free trade rhetoric and convincingly demonstrates the true "mercantilist" nature of U.S. trade policy, which Libby claims is also being practised by most other nations. Libby proceeds to establish his case by citing U.S. practices with regard to the world grain trade.

²⁰. Ibid. p.19.

²¹. Mercantilism is often seen as synonymous with protectionism in that the latter is believed to be an integral policy instrument in achieving mercantilist and therefore, state objectives. Protectionism can be generally defined as "...intervention by government in markets for internationally traded goods and services in order to provide an artificial competitive advantage to a domestic industry vis-a-vis foreign competition." P. H. Grey, and I. Walter, "The Issue of Protection", International Economics, Officer, Lawrence H. (ed.), Boston: Clair Academic Publishers, 1987, p.65.

the economic arena."²² In economic terms, mercantilism "...encouraged governments to intervene in economic life in an attempt to encourage the export of goods and in the hope of restricting imports."²³ Mercantilism is shunned by contemporary liberal economists, and yet it continues to be an important policy instrument for many governments.

Robin Gaster for example, defends the propriety of government intervention in the market system to negate the "...long-run threat to American economic and military security..."²⁴ that foreign direct investment may bring. Gaster does not acknowledge the mercantilist tenets which permeate his argument but the ongoing negotiations--or more specifically, haggling--within the General Agreement on Tariffs and Trade (GATT) illustrates the great effort exerted by states to manage and protect their domestic economies.²⁵

²². Stephen D. Krasner, Defending the National Interest: Raw Materials Investment and U.S. Foreign Policy, Princeton N.J.: Princeton University Press, 1978, pp. 37-38.

²³. Andrew Heywood, Political Ideologies: An Introduction, London: Macmillan, 1992, p.36.

President Clinton recently described the international trading system in mercantilist terms. "Yet, it is clear that our markets are more open to your [Japanese] products and your investment than yours are to ours. And it is clear that governmental policies consistently promoting production over consumption, exports over domestic sales, and protection of the home market...", "Excerpts From Clinton Talk in Tokyo", The New York Times, July 7, 1993, p. A4.

²⁴. Robin Gaster, 'Protectionism With Purpose: Guiding Foreign Investment', Foreign Policy, No. 88, Fall 1992, p. 91.

²⁵. Rising unemployment, declining economic growth and the rise of nationalism are some of the major events that have fuelled protectionist threats from the United States, the

Managed trade has long been a feature of the international trade system. Harry Shutt discussed the inevitability of managed trade which he bases on the total lack of solid evidence for the existence of international free trade.²⁶ In analyzing the rapid growth of the four tigers--

European Community (particularly France), Japan and Canada to name but a few. Protectionist measures have most recently been applied or threatened in the steel industry (June 21, 1993). Currently Canada is concerned with subsidized wheat shipments from the U.S. to Mexico (June 25, 1993). The long and bitter farm trade dispute between the U.S. and the European Community (EC)--particularly France--apparently resolved June 9, 1993 averted a U.S. duty of 200% against French wine and dairy products in exchange for a transatlantic soybean trade deal. This is just one episode in the continuing saga of the Uruguay round (began 1986) of trade talks which have languished for much of six years. U.S. claims that Canada was subsidizing domestic softwood lumber production led to protectionist measures against Canada in October 1991. A Canada-U.S. panel established under the Free Trade Agreement found in favour of Canada (May 1993). Most indicative of the mercantilist nature of the international trading system are the current negotiations between the U.S. and Japan to set numerical targets to reduce Japan's trade surplus with the U.S. (June 25, 1993). This practice has become known as "managed trade".

²⁶. Furthermore, Shutt argues that if tariffs are indeed equated with trade expansion (and prosperity in general)"...then one has to explain why the recession took hold in the middle of the protracted series of tariff cuts which occurred at regular intervals under the GATT from the time of its inception..."(p. 114). Shutt's contention is that tariffs were lowered only because state intervention in national economies gained widespread legitimization which made neo-protectionism possible "...and the lowering of conventional tariff barriers acceptable."(Page 114). Carried over into more recent times, Shutt's argument remains equally valid as world tariff barriers are decreasing yet most countries are experiencing sluggish economic growth. Harry Shutt, The Myth of Free Trade, London: Basil Blackwell, 1985, p.159.

Lester C. Thurow, argues that managed trade is not only a feature of contemporary international trade relations--particularly by Japan and Germany--moreover, in order for such relations to continue into the twenty-first century, trade

South Korea, Taiwan, Hong Kong and Singapore--Umesh Gulati notes that "...mercantilism, pure and simple" dominated the trade policies of these nations.²⁷ Furthermore, Gulati draws economists' attention "...to the reality that economic decisions cannot be made in a political vacuum."²⁸ Jagdish Bhagwati notes that the GATT system is currently being challenged especially by those who advocate managed trade. Bhagwati describes managed trade as that practised by those who resort to aggressive unilateralism and as evidenced by the pronounced movement towards the formation of preferential trading blocs.²⁹ The Clinton administration was accused of adopting managed trade as policy by Japan's former Prime Minister Kiichi Miyazawa after diplomatically coercive American attempts to narrow Japan's \$49.6 billion (U.S.) trade surplus with the U.S.³⁰ There can be no doubt that managed

must become managed to achieve a fine balance between competition and cooperation. Lester C. Thurow, Head to Head, New York: William Morrow and Company, Inc., 1992.

²⁷. Umesh C. Gulati, "The Foundations of Rapid Economic Growth: The Case of the Four Tigers", The American Journal of Economics and Sociology, Vol. 51, No. 2, April 1992, p.168.

²⁸. Ibid. p.170.

²⁹. Jagdish Bhagwati, "The Threats to the World Trading System", The World Economy, Vol. 15, No. 4, July 1992, pp. 446-447.

³⁰. B. Milner, "Japanese PM rejects demand for managed trade", The Globe and Mail, June 12, 1993 pp.B1 - B3. President Clinton denies that he is promoting managed trade, rather he seeks "...better results from better rules of trade." It seems paradoxical that "free" trade requires better rules. If it were truly free, there would be no rules at all. Furthermore, President Clinton would also need to adjust non-

trade, according to Bhagwati's definition is currently an active policy among both the U.S. and Japan.³¹

In the realm of international environmental reform real substantive change is obstructed by international anarchy and a prevailing liberal economic system that places minimal or no value on the preservation of our biosphere. This hypothesis may appear incongruent in its coupling of the two divergent concepts "international anarchy" and "liberal economic system". However, viewed with the analytical aid of market and nonmarket failures,³² both become mutually dependent as the political process attempts to rectify the failures of the market economy and the latter attempts to operate within an international system that is politically motivated, if not dominated. Furthermore, it is the contention of this thesis that a possible solution for the ineffectiveness of international agreements (expanded upon in Chapter III) lies in utilizing economic measures for environmental protection by instituting environmental tariffs.

tariff barriers such as environmental regulations, health protection and safety standards which are all part of the 'rules of trade'. "Excerpts From Clinton Talk in Tokyo", New York Times, July 7, 1993, p.A4.

³¹. Lester Thurow discusses Japan's trade policies in detail in his book Head to Head (*supra*). Although Thurow does not refer to Japan's trade policies as being mercantilist, his depiction of Japan trade strategy conforms to mercantilist tenets.

³². The theories of market and nonmarket failure have conventionally been applied at the state level of analysis. For the purpose of this thesis they will be applied at the international level mutatis mutandis.

Although the important roles nongovernmental organizations (NGOs) play in the international arena is acknowledged this thesis will focus upon the state as a principal political actor. NGOs do not enter into treaties nor do they necessarily have the means of enforcing treaty obligations as states do. The role of the state as a member of the international community will occupy centre stage in this thesis.

Nonmarket failures (public sector) primarily refer to the role governments play on behalf of society to compensate for market failures, as government remedies themselves can create their own "performance shortfalls" or failures in the market place.³³ In the environmental arena these initiatives may consist of charges, for example effluent charges, product charges or subsidies, such as tax allowances for environmentally friendly firms, deposit-refund systems and marketable pollution rights.³⁴

³³. Charles Wolf, Jr., "A Theory of Nonmarket Failure: Framework for Implementation and Analysis", The Journal of Law and Economics, Vol. XXII(1), April 1979, p.112n14.

³⁴. Frank J. Dietz and Jan Van Der Stratten, "Rethinking Environmental Economics: Missing Links Between Economic Theory and Environmental Policy", Journal of Economic Issues, Vol. XXVI, No. 1 March 1992, p.30.

Deposit-refund system are described in these terms: "... a surcharge is laid on the price of potentially polluting products. When pollution is avoided by returning these products or their residuals to a collection system, a refund of the surcharge follows." (p.30).

Marketable pollution rights are rights which "...might be bought in artificially created markets, to be used for actual or potential pollution. Unused pollution rights may be sold to the highest bidder." (p.30).

Charles Wolf Jr. identifies four nonmarket failures resulting from government involvement in the market. These include: internalities and private goals which allude to governments prescribing their own internal standards, objectives and self-regulatory procedures without the performance and cost scrutinizing influences of the market place; redundant and rising costs describe governments' inability or apathy to embrace cost saving measures--due to technological advancements for example--which would reduce program costs; derived externalities are the unanticipated negative side effects upon a separate sector of the economy as a result of government intervention in another, finally; distributional inequity occurs when public policy measures "...place authority in the hands of some to be exercised over others" (this exercise of authority or power can be scrupulous or corrupt).³⁵

Wolf argues there are also four areas in which the market system (or private sector) may fail to provide essential

³⁵. Wolf, (1977), p.128.

According to Wolf there are four ways governments can effect markets. They are: regulatory services (international environmental treaties, Security Council resolutions); "pure" public goods (international peace-keeping forces, embassies); quasi-public goods (various United Nations Organizations for example the World Health Organization, United Nations Educational, Scientific and Cultural Organization); and administering transfer payments or on a global level administering international aid (International Monetary Fund, International Bank for Reconstruction and Development). Charles Wolf Jr., Markets or Governments: Choosing between Imperfect Alternatives, Cambridge, Massachusetts: The MIT Press, 1988, pp.38-39.

services and, once again, these areas will be raised to the international level of analysis. Market failures describe the situations where the market system exhibits inherent shortcomings, such as: an inability to provide certain public goods (universal inoculation against disease, peacekeeping forces); an inadequate method of accounting for externalities (transboundary water and air pollution, deforestation); an inability of markets to overcome "imperfections" of various kinds (trade imbalances, national income inequalities and the allocation of natural resources), or lastly, a failure to rectify or avoid social inequity (for example, the growing gap between developed and developing countries).³⁶ These failures of the market system provide justification for states to intervene in the market because, if left unchecked, such failures would have severe detrimental effects on humanity. However, not all failures stemming from human activity can be easily accounted for within the non-market/market framework.

Neva Goodwin identifies several global trends and issues which highlight "grey-areas" that are neither non-market or

37. Ibid. pp.3-4.

Wolf is not alone in attempting to understand market failures and the role that government assumes to alleviate these deficiencies of the market system. George Stigler for instance, breaks down market failure under externalities, public goods and erroneous decisions. "These three types of "market failures" provide the agenda for the state in economic life, according to welfare economics...each allow an improvement in economic affairs to be achieved by an intelligent and efficient government." G.J. Stigler, The Citizen and the State, Chicago: The University of Chicago Press, 1975, p.110.

market failures. These trends and issues are often beyond the immediate scope of non-market or market failures and thereby emphasize the limitations inherent in this kind of analysis.

Among these she lists;

"...many aspects of the relationship between humanity and its environment; demographic trends; the spread and effects of science and technology; the research and development (R&D) race (the choice between sharing and competing in advances in science and technology); the arms race and military conflict; the effort to retain ethnic, religious, and cultural identities..."³⁷

Interestingly, these trends and issues have a profound effect upon the environment in general. Governments have the ability to expand their reaches to encompass trends and issues previously not within their domain. The market system may not possess the same ability to envelop such broad facets of human activity even though many adherents proclaim the superiority of free market capitalism to organize human activity.

On the state level at least, Galbraith and Friedman both acknowledge the necessity for government intervention to compensate for market failures. Galbraith favours government involvement in the market to make up for possible abuse by the private sector and to compensate for its deficiencies.³⁸

³⁷. Neva R. Goodwin, "Global Commons: Site of Peril, Source of Hope. Introduction", World Development, Vol. 19, No. 1, January 1991, p.5.

³⁸. David Reisman, Galbraith and Market Capitalism, New York: New York University Press, 1980, pp. 112-115.

David Reisman summarizes six instances in which Galbraith advocates government intervention; restrictive practices; nationalisation; defence of the environment; national economic planning; protection of disadvantaged minorities and; macroeconomic planning. pp. 112-115.

Friedman contends that the marketplace should be given every opportunity to respond to human needs and wants; he emphasises that the "political marketplace" creates inefficiency which must be addressed by governments.³⁹ Unlike Galbraith, Friedman would maintain that environmental problems are best left to the market to resolve and not government. However, Richard Ablin, a liberal economist, maintains that classic liberal economics as expounded by Friedman and Adam Smith before him, is unable to account for the social costs of environmental degradation through the existing pricing system. According to Ablin, only government interaction can counteract the trend towards environmental destruction.⁴⁰

³⁹. Eamonn Butler, Milton Friedman: A Guide to his Economic Thought, Aldershot, England: Gower Publishing Company Limited, 1985, pp. 202-203.

Butler cites four areas in which Friedman concedes government involvement is necessary, building upon Adam Smith's list of two centuries ago. These include: protection of individuals in society from coercion; responsibility for assuming the role of a rule-maker and umpire; the provision of public goods which the voluntary exchange system is unable to provide and; a responsibility to protect the infirm, principally children and the insane. Ibid. pp. 204-206.

⁴⁰. Ablin argues that the pricing system is unable to preserve what used to be regarded as "free goods". Excessive demand for water, for instance, which is valued against the alternative uses to which it can be otherwise put (for example, drinking or swimming), has a depreciating alternative use value as water quality deteriorates thereby, accelerating the degradation of the alternative uses themselves. Government intervention is therefore necessary to preserve the quality of water for what ever use it is utilized. Richard Ablin, "Saving the Environment: The Shrinking Realm of Laissez-Faire", International Political Economy. Perspectives on Global Power and Wealth, J. Frieden, and D.A. Lake, (ed.). New York: St.

Pigou leaves no doubt what the role of government should be to ensure intergenerational equity and effective resource allocation:

It is the clear duty of Government, which is the trustee for unborn generations as well as for its present citizens, to watch over, and, if need be, by legislative enactment, to defend, the exhaustible natural resources of the country from rash and reckless spoliation.⁴¹

Pigou's formula for correcting this problem involves internalizing an externality. It is essentially a market-based solution initiated by government. This is succinctly interpreted by Dietz and Straaten:

The state corrects the market failure by imposing a tax on the production of external diseconomies (for example, charging the emission of processing water) and by subsidizing the production of external economies (for example purification of processing water).⁴²

Specifically concerning the implementation of policies to improve and protect the environment, governments also have the option of directly regulating private sector activities by imposing pollution standards that producers must meet. Martin Jänicke's work supports the notion that direct government involvement in environmental policy formulation and

Martin's Press, 1991, p.454.

⁴¹. A.C. Pigou, The Economics of Welfare. London: Macmillian & Co Ltd. fourth edition 1960, pp. 29-30.

⁴². Frank Dietz and Jan Straaten, loc. cit. p.29. External (or negative) diseconomies refers to the undesirable side-effect of the production processes for example, dioxins from pulp mills. External (or positive) economies occur when a man-made lake for instance, may not only supply drinking water but additionally facilitates the pursuit of recreational activities.

implementation is more effective than a laissez-faire approach.⁴³

Lester Thurow questions the wisdom of maintaining a liberal economic market system (or in his terms, "traditional Anglo-Saxon capitalism") into the next century, as he considers it to be inefficient and outdated. He admonishes the U.S. in particular to begin examining its economic path and consider adapting to the new economic realities. This entails forming quasi-regional trade blocs in which trade would be managed by governments to optimize economic advantages created by such blocs.⁴⁴ Thurow argues that Japan and Germany's managed, communitarian and production (rather than profit) maximization approach will prevail in the twenty-first century. This prognosis does not diminish the fact that the current world trade system operates along liberal free market principles, whose attributes environmentalists must seek to utilize for the betterment of the earth's biophysical environment.

In order to understand what corrective environmental policies need to be implemented, it is necessary to understand

⁴³. Martin Jänicke, "Conditions for Environmental Policy Success: An International Comparison", The Environmentalist, Vol. 12, No. 1, Spring 1992, p.54. Jänicke found that Western countries which have a consensual rather than a conflictual style of governance, countries where governments, industry and other societal mechanisms mobilize to deal with pollution have the highest success rate of implementing and enforcing environmental policies. He found that welfare states generally are more effective guardians of the environment.

⁴⁴. Thurow, p.82.

some of the obstacles hindering the implementation of existing environmental policies within the context of nonmarket and market failures. Chapter II provides preliminary commentary on the economic and political implications of the concept of intergenerational equity as the ethical objective states and their institutions should strive towards in making decisions about natural resource utilization. It continues by examining the nature of the global commons and the persistence of state sovereignty in the context of nonmarket failures. The notion of intergenerational equity is addressed; and the negative effects of ecological free-ridership are examined followed by an analysis of international externalities as they pertain to the environment. An examination of the Montreal Protocol points out that international environmental agreements have not been able to overcome many of these obstacles. On the contrary, it is argued that only a rare convergence of circumstances made the Protocol possible.

In Chapter III some other policy prescriptions which have been recommended to confront environmental degradation will be critiqued. Among these are various types of international commodity agreements and the "polluter pays" principle. The advice of various advocates who propose the need to fortify or establish new international agencies will also be addressed. The ubiquitous concept of 'sustainable development' requires special attention as the prevailing conceptual environmental policy instrument. The chapter establishes why the high

expectations that all these proposals place in international co-operation is not warranted given past and present experiences.

Chapter IV submits an alternative expeditious mechanism which addresses the obstructions cited in Chapter II. The imposition of environmental or ecological tariffs by individual states is based on the realist and mercantilist disposition of international trade relations. Environmental concerns provide a benevolent medium for instituting mercantilist policies in these economically difficult times.⁴⁵ States which wilfully neglect to honour their commitment to important international environmental agreements to which they are signatories would be subject to an ecological tariff. The economic and political implications to the imposition of such a tariff would further heighten awareness of the interdependent character of trade and the environment.

Chapter V explores the negotiations of the NAFTA environmental provisions and its side deal on the environment which involved active consideration of a form of ecological tariffs. Utilizing analytical tools employed throughout the

⁴⁵.Although the exact contours of the tariff are further refined in many scenarios determining which state is to pay the environmental tariff, it will be based upon an Environmental Pollution Index (EPI) which operates much like the well established Consumer Price Index (CPI). The CPI is an index that measures changes in the prices of consumption of goods and services. The CPI is adjusted from time to time to take account of changing patterns of consumption. Thomas, Robert P. and Weber, William V. Economic Principles and Applications. The Dryden Press, 1990, p.885.

thesis, the side deal is examined to see how it addresses nonmarket failures as they relate to the global commons and state sovereignty, and how NAFTA confronts market failures derived from free-ridership and international externalities. The NAFTA arrangement is particularly relevant because, unlike the strategy of "sustainable development" put forward on a multilateral basis, it follows a specific agenda and will theoretically be an enforceable treaty given the importance Canada, the United States and Mexico place on the deal. The purpose of this exercise is to gauge the theoretical and practical foundation upon which the NAFTA environmental side deal is predicated and in doing so attempt to project the prospects for success of implementation of an environmental tariff arrangement.

CHAPTER II: OBSTACLES HINDERING THE EFFECTIVE IMPLEMENTATION
OF EXISTING INTERNATIONAL ENVIRONMENTAL POLICIES:
MARKET AND NON-MARKET FAILURES.

(i). Preliminary Observations On Short-term Exploitation Vs.
Intergenerational Equity.

There is an inherent normative value judgement when decisions regarding natural resource consumption and allocation are made which pertain to environmental protection and preservation. The concept of intergenerational equity attempts to draw attention to the close relationship between preserving the biophysical environment and natural resources for the enjoyment and benefit of future generations. A salient attribute of Western society in the past few decades has been its growing indebtedness, shortsighted business planning and the advent of the "me generation" all of which suggest that as a society we place less value on what is left for future generations. Conversely, proponents of intergenerational equity maintain that future generations are entitled to a fair share of natural resources and a healthy atmosphere to survive and prosper. Tom Oberhofer offers demographic, social, political and economic reasons for the emergence of the "me generation" and implies that the United States specifically, suffers from myopia and a penchant for instant self-gratification which, combined, inclines American society in particular to place less value on natural resources for future

use and enjoyment.¹ Furthermore, this condition is prevalent from the individual through to the state level of society.

Neoclassical economists are often criticised for failing to acknowledge that the earth's resources are finite and for failing to plan for intergenerational distribution of wealth. The political process acquiesces in economists' apparent disregard for future generations as politicians have generally avoided resource distribution issues which economists have taken up. The short terms for which politicians govern induces short-term thinking and planning which in turn significantly influence both state and private economic policies.

Whereas the intergenerational equity principle encompasses a grand normative concept which may serve as an ethical guide when making natural resource utilization decisions, discount rate² theory offers some methodological instruction on resource consumption and, therefore, inadvertently assumes an ethical attribute because of the choices it generates for utilizing resources. In his acclaimed

¹. Tom Oberhofer, "The Changing Cultural Discount Rate", Review of Social Economy, Vol.XLVII, No.1, Spring 1989, p.53.

². The discount rate is often explained by using an interest rate analogy such as the one used in The Economist May 9, 1992 page 87. "If interest rates are 6.5, 94 cents today (94.34, to be precise) is worth the same as a dollar next year: a deposit in a savings account would yield the difference." What is lacking in such an explanation is the fact that the discount rate reflects more than simply anticipating a greater future financial return; moreover the discount rate is ostensibly a normative concept reflecting the degree of hope and concern for the future consumption of resources.

article "Economics of Forestry in an Evolving Society" (1976) Nobel Laureate Paul Samuelson hesitantly tackles the question, "What interest [discount] rate is appropriate for forestry?"³ He notes that economic forestry literature has favoured a low discount rate usually of four or five percent. However, given the annual inflation rate and relatively high interest rates at the time the article was written Samuelson was more inclined to favour a 12 percent or more discount rate on "lumber".⁴

Although Samuelson certainly did not mean to impart a value judgement on forestry conservation, nevertheless, the application of a discount rate essentially embodies an ethical choice even though the procedure is intended to be purely econometric. In passing Samuelson mentions the interconnectedness and dependence ecologists know exists between all physical and living elements in the world and touches on the notion of intergenerational decision-making.⁵ Unfortunately, these are not expounded upon though their importance is certainly acknowledged. The high discount rate Samuelson assigns forestry is perhaps indicative of his emphasis on the economics of forestry as opposed to the

³. Paul A. Samuelson, "Economics of Forestry in an Evolving Society", Economic Inquiry, Vol. XIV, No. 4. December 1976, p. 474

⁴. Ibid.

⁵. Ibid. p.487.

ecological and intergenerational value of forestry which is understandable from a liberal economist's perspective.

Richard Norgaard contends that conventional economic thought bestows upon the present generation ownership rights over environmental resources.⁶ Norgaard maintains that neoclassical environmental economic thought has failed to fully acknowledge the rights of future generations to their share of the earth's resources. Furthermore, economists have also failed to seriously apply the discount rate to achieve an intergenerational distribution of wealth, choosing instead to think in the short term.⁷ As it stands, there is no guarantee that environmental wealth will "trickle ahead" given our current approach.⁸ Norgaard⁹ along with Daly and Cobb¹⁰ believe economists should question discounting as a means of allocating resources to future generations and contend that intergenerational resource distribution is as much an ethical issue as it is an economic one.

⁶. Ibid. p.92.

⁷. Ibid. pp.92-93.

⁸. "The Price of Green", The Economist, Vol. 323, No.7758, May 9, 1992, p.87.

⁹. Richard B. Norgaard and Richard B. Howarth, "Sustainability and Discounting the Future", Ecological Economics, Robert Costanza (ed.), New York: Columbia University Press, 1991, p.90.

¹⁰. Herman E. Daly and John B. Cobb, For the Common Good, Boston: Beacon Press, 1989, p.155.

Nevertheless, economists alone cannot be blamed for controversy over intergenerational resource distribution. Norgaard rightly asserts that:

In practice, furthermore, politicians have instructed agencies to make decisions with equity implications on economic grounds. And economists have accepted the distributive tasks which politicians have dodged.¹¹

More to the point, Wolf points out that the democratic political process itself is often to blame for the high discount rate due to the short electoral time frame in which politicians plan and operate. "Hence, future costs and future benefits tend to be heavily discounted or ignored, while current or near-term benefits and costs are magnified."¹² An inherent ethical discount rate is implicit in all decisions we currently make with regard to issues such as resource consumption (forests, oil, iron ore et cetera); quality of the air and water; the state of the ozone layer; on employing nuclear energy.

As will be demonstrated the present generation has, misguidedly and unwittingly perhaps, chosen to discount the future at a high rate. Consistent with realist thought, this high discount rate guides our collective consciousness and manifests itself in encouraging states to seek after their own

¹¹. Richard B. Norgaard and Richard B. Howarth, "Sustainability and Discounting the Future", Ecological Economics, ed. Robert Costanza et al., New York: Columbia University Press, 1991, p.99.

¹². Charles Wolf, Jr., Markets or Government: Choosing between Imperfect Alternatives, Cambridge, Massachusetts: The MIT Press, 1988, pp. 40-41.

immediate self-interest with little regard for future generations.

It would be elucidating to be mindful of intergenerational equity as an examination of these obstacles which inhibit the implementation of effective environmental policies proceed. The shortsightedness exhibited by most states is an overriding factor in our economic and political institutions' inability to make appropriate long-term plans for the utilization and preservation of the earth's natural resources.

(ii). Transboundary Issues and the Nation-State: Environmental free-ridership.

International environmental agreements are often frustrated by the number of "free-riders" who benefit from other states' efforts:

Countries are more likely to succumb to the temptation to hitch a free ride the more the costs of belonging to an international agreement diverge from the benefits it brings; or the longer the gap between the pain and the gain.¹³

Free-riders may justify their behaviour because of an infrastructural inability to change, free-ride for immediate economic gain or free-ride on a matter of principle. Thus, for example, the United Kingdom, France (to a large extent) and in particular Greece, Portugal, Belgium and Eire free-ride on the more stringent environmental policies of Germany, the

¹³. "The Environment - Whose World Is It, Anyway?" The Economist, Vol. 323, No. 7761, May 30 1992, p.6.

Netherlands, Sweden and Denmark "...all of which are leaders in the initiation of environmental regulations."¹⁴ For primarily economic reasons the United States exhibited free-rider tendencies when it delayed taking action on acid rain¹⁵. Canada instituted the Acid Rain Control Program in 1985 whereby the seven most easterly Provinces agreed to reduce sulphur dioxide (SO²) emissions by approximately 50% of 1980 levels -which provided the base case levels- no later than 1994. Canada's success in attaining this goal is largely determined by American action on acid rain because about half of sulphate deposits in Eastern Canada come from sources of SO² in the United States. However, not until 1990 did the United States Congress finally amend the U.S. Clean Air Act which is expected to reduce transboundary flow of acid rain into Eastern Canada by more than 50% by the year 2000.¹⁶ From the perspective of theories of international relations, it can be argued that free riders epitomize the tenets of an

¹⁴. Morten Andersson, et al. "Environmental Problems in Western Europe, 1980-1989", Environmental Management, Vol 16, No.2, March/April 1992, p.193.

¹⁵. "Acid rain is caused in Canada principally by emissions of sulphur dioxide (SO²), although nitrogen oxide (NO_x) emissions are also precursor pollutants. Once released into the atmosphere, the emissions are carried long distances by prevailing winds and return to earth as acid rain, snow, fog or dust. When the environment cannot neutralize the acid being deposited, damage occurs to forests, lakes and fish populations." Canada's Green Plan, "Economic Instruments for Environmental Protection" Ministry of Supply and Services Canada, 1992, p.27.

¹⁶. Ibid. p.28.

introverted and shortsighted realist approach (though realism cannot always be equated with myopia), as immediate self-interest is the basis for inaction by free riders.

Adding to the difficulty of allocating responsibility, environmental free-riders avoid their international environmental obligations by letting other states shoulder abatement costs. Thus free-ridership can be construed as either a nonmarket or a market failure. The economic benefits from free-riding derive from not having to pay abatement costs which would increase the cost of exports to recover the additional expense, therefore goods are more competitive internationally. The absence of an international body to coerce states into shouldering their environmental responsibility is a nonmarket failure which is partially explained by the realist's belief in the omnipotence of state sovereignty.

(iii). Transboundary Issues and the Market: International Externalities and Social Costs.

As pollutants respect no political borders, the concept of international externalities is significant because it provides the impetus for many environmental agreements between states. Simply stated;

...environmental pollution economics is nothing more than a classical externality problem. Emissions to the air or discharges to rivers, lakes, and seas mean an economy to the polluter and a diseconomy to its victims. The former easily disposes of a useless waste product, and saves on

abatement costs. The latter suffers from the pollution and/or is forced to bear defensive outlays.¹⁷

The undesirable by-products the production process creates pollute the air, rivers, lakes, seas and cause atmospheric deterioration. Those which can have regional or global environmental impacts are called "international externalities". As market failures go, international externalities are particularly complex because allocating responsibility poses so much uncertainty. The political and economic systems have still not come to grips with this concept, consequently the social cost of pollution has not been internalised in the pricing of goods.

International environmental externalities are the result of a market failure caused by a negative externality or an undesirable consequence of an economic activity. Examples of such negative international environmental externalities may include the overfishing by Spanish and Portuguese trawlers close to or within Canada's 200 mile off-shore territory. By contributing to the depletion of the cod stock the Spanish and

¹⁷. Tomas Zylica, "The Role for Economic Incentives in International Allocation of Abatement Effort," in Ecological Economics: The Science and Management of Sustainability, ed. Robert Costanza (New York, 1991), pp.384-385. In economics 'externalities' are a broader concept than this definition implies. For instance, Stewart and Ghani discuss pecuniary and real externalities. "Real (or technological) externalities affect a firm's production function (or a consumer's utility function) while pecuniary externalities affect the price vector." Frances Stewart and Ejaz Ghani, "How Significant are Externalities for Development?", World Development, 1991, Vol. 19, No. 6, pp.569-594.

Portuguese caused a negative externality upon Newfoundland's fisheries. The Canadian Federal Government was forced to announce the moratorium on cod fishing in 1992 due to dangerously low stocks. Other negative environmental externalities may be caused by sulphur dioxide emissions from metal smelters and coal-or oil-fired power plants creating an acid rain problem; radiation effects of nuclear power stations (Chernobyl) and, chemical dumping into inland water bodies shared with other countries. Externalities on the international level encounter many difficulties of assessing responsibility and measurement.

National accounting systems for instance, do not incorporate international or domestic externalities in their national accounts. In the case of the latter when a tree is felled and sold, the loss of that tree is not subtracted from the national accounts because the value of a standing tree is not known and therefore is not recorded on the gross national product¹⁸ (GNP) ledger. Given this prevailing national accounting system:

A country could exhaust its mineral resources, cut down its forests, erode its soils, pollute its aquifers, and

¹⁸. Herman Daly and John Cobb Jr. concern themselves with asking "... whether growth in the economy as measured by GNP actually contributes to the total well-being of people." [p.63] They conclude; "To use it as if it were a significant indicator of economic well-being--much worse of well-being in general--is an egregious instance of the fallacy of misplaced concreteness." Herman E. Daly, and John B. Cobb Jr., p.84.

hunt its wildlife and fisheries to extinction without affecting its measured national income.¹⁹

This approach is clearly wrong and dangerous. However, rectifying the deficiencies of calculating national accounts has proven to be a difficult undertaking for most countries.²⁰ Attempts at revising the national accounting system are being undertaken. The Organization for Economic Co-operation and Development (OECD) for instance, has reportedly devised an

¹⁹. "Earth in the Balance Sheet: Incorporating Natural Resources in National Income Accounts", Environment, Vol. 34, No. 7, September 1992. p.14.

²⁰. The United Nations devised System of National Accounts (SNA), which is accepted internationally as the standard for national accounts, has perpetuated many of the erroneous notions on which countries determine their GNP. For instance, the SNA violates a basic accounting rule in not calculating the depreciation* of natural assets such as forests and mineral resources. Furthermore, the SNA assumes that natural resources are ubiquitous and abundant; natural resources are a free gift of nature and; that the economic value of these resources is not readily established. Recognizing the shortcomings of the SNA, France and more particularly Norway have employed a system of national accounts which incorporates resources-accounting to supplement their national income accounts. These countries, among others, have to some extent internalized environmental externalities thereby providing a more reliable tabulation of their national natural resources.

*Salah El Serafy contends that "...depreciation is not applicable in the case of nonrenewable resources such as fossil fuels that cannot be recycled or reused once they have been combusted." Salah El Serafy, "The Environment as Capital", Ecological Economics: The Science and Management of Sustainability, (ed.) Costanza, Robert. New York: Columbia University Press, 1991. p. 173.

~"Earth in the Balance Sheet: Incorporating Natural Resources in National Income Accounts", loc. cit. pp.13-15.

H.M. Peskin, "Alternative Environmental and Resource Accounting Approaches", Ecological Economics: The Science and Management of Sustainability (ed.) Robert Costanza, New York: Columbia University Press, 1991. p.179.

accounting system which internalizes many externalities and has been adopted by some-primarily Western-countries.²¹

Calculating international externalities is difficult for several reasons. These include disparate capabilities to collect data from country to country (technological and financial disparities); differing priorities between countries; mistrust and antagonism between North and South and; disputes over environmental standards. Combined, these obstacles make calculating--much less dealing with-- environmental externalities a formidable task.

(iv). Legal Issues in International Law: Policing the Global Commons.

The existence of a global commons is a nonmarket obstacle because world governments have achieved very little progress (particularly in redressing international environmental problems through multilateral agreements) beyond the confines of the nation-state. Some advances have been made in recognizing the open seas as the 'common heritage of mankind' as well as the Antarctic, certain celestial bodies and the air we breathe. However, states have been reluctant to engage in meaningful and substantive co-operation on many other significant areas (deforestation, desertification, CO,

²¹. Richard C. Rockwell, and Richard H. Moss, "The View From 1996: A Future History of Research in the Human Dimensions of Global Environmental Change", Environment, Vol. 34, No. 1, January/February 1992, p.33.

emissions, loss of biodiversity) which more directly impinge on their state sovereignty.

The global commons has proven itself to be a perplexing concept for the world community. Elinor Ostrom reminds us that this perplexity is not new.²² Aristotle, Hobbes and others addressed the "commons" problem which Hardin later made famous in the "Tragedy of the Commons"²³. Indeed, economists' assumptions about human nature as being driven by greed and envy are exemplified by Hardin's renowned medieval common grazing lands metaphor. Furthermore, one could include Grotius, the father of international law. In Mare liberum (1609) Grotius contended, as Edward McWhinney observed, "...that the high seas, outside the narrow national three-mile territorial sea, were incapable of appropriation and belonged to everyone."²⁴ In the 1950s Malta's United Nations Ambassador Pardo introduced the phrase "the common heritage of mankind". This concept has since been espoused in the Antarctic Treaty, 1 December 1959, the Outer Space Treaty, 27 January 1967 and more recently in the final United Nations' Convention on the Law of the Sea signed 10 December, 1982.

²². Elinor Ostrom, Governing the Commons, Cambridge: Cambridge University Press, 1990, p.1.

²³. Garret Hardin, "The Tragedy of the Commons", Science, Vol. 162, No. 3859, 13 December, 1968.

²⁴. Edward McWhinney, United Nations Law Making, (New York: Holmes & Meier Publishers), 1984, p.234.

Recognizing that the "commons" includes more than just the land and sea, but the air and atmosphere also, numerous international agreements have been instigated to try to address these matters. Principle 21 of the 1972 United Nations Conference on the Human Environment holds states generally responsible for not polluting their neighbours. The world's first air pollution control agreement was the Economic Commission for Europe's Convention on Long Range Transboundary Air Pollution adopted in 1979.²⁵ However, Marc Levy reports that, "[f]ew states have adjusted their national policies to respond to the protocols, and there is both nonparticipation and noncompliance on the part of some large polluters."²⁶

The economic and geopolitical divisions which characterize humanity's world create a false sense of isolation and immunity from the activities of others. As Gro Harlem Brundtland put it: "...the Earth's atmosphere is a closed system; we are not getting rid of our emissions. In fact, it is like a car that pours out its gases into the driver's compartment."²⁷ Even so, the global commons is still widely abused both at the individual level and more specifically for our purposes, at the state level.

²⁵. Serge April, "The Development of International Environmental Law," in From Coexistence to Cooperation, ed. Edward McWhinney et al., (Dordrecht, 1991), p.122.

²⁶. Marc Levy, 'Acid Rain In Europe', Environment, Vol.34, No.4, May 1992, p. 16.

²⁷. Gro Harlem Brundtland, "Global Change and Our Common Future", Environment, Vol.31, No.5, June 1989. pp. 40-41.

(v). Implementation Issues: State Sovereignty.

State sovereignty constitutes a considerable obstacle in the implementation and especially the enforcement of international environmental agreements. States will only act if they can recognize that it is in their national self-interest to do so. This prerogative derives from, or is an intrinsic aspect of state sovereignty. This nonmarket obstacle prevents international agreements from becoming binding on states because no self-respecting state would cede its power to a world authority. The realist and mercantilist theories are predicated upon this most basic of all state rights.

In order for a treaty to become "international law", each signatory to the treaty must have it ratified by its government and consequently made law in its domestic jurisdiction. Only when a treaty is entrenched into the domestic legal system does it become law and enforceable through the states' appointed means of legal administration. International treaties are therefore voluntary with no legal compulsion to join and, like any domestic law, can be changed independent of other states. UNEP reports that prior to 1972 less than 60 environmental treaties were signed. Between 1972 and 1992, 150 multilateral environmental treaties were instigated;

...yet the efficiency and effectiveness of these legal instruments leave much to be desired, mainly because of the limitations inherent in the traditional negotiating process, limited compliance with existing legislation, ineffective procedures for the enforcement and verification of implementation, and the lack of mandatory

jurisdiction in legal instruments for settling disputes.²⁸

A Harvard University study revealed four types of responses governments adopt to international agreements:

Some countries simply avoid international obligations by failing to sign treaty commitments. Others accept commitments but fail to live up to them. A third group accepts commitments and achieves compliance. Finally, a fourth group surpasses the explicitly required obligations.²⁹

The study does not specify which response is the most prevalent in the international community, but does cite state sovereignty as an obstacle to solving global environmental problems.³⁰

The notions of political and economic sovereignty as principles in international law, "developed separately and independently of the United Nations Charter and of United Nations' practices generally."³¹ As new states attained political sovereignty they also assumed the power to control their national resources.³² With the more recent demise of colonialism, the social, economic and political diversity of new states has made international agreements particularly

²⁸. Tolba, et al. p.818.

²⁹. Marc A. Levy, et al. "Institutions For The Earth: Promoting International Environmental Protection", Environment, Vol.34, No.4, May 1992. p.14.

³⁰. Ibid. p.13.

³¹. McWhinney, p.178.

³². Kenneth W. Piddington, "Sovereignty and the Environment", Environment, Vol.31, No.7, September 1989, p.20.

difficult to implement. Within the OECD alone there are many disparate views on the importance of environmental issues and how they should be tackled. When taking into consideration North-South relations and the difficulties of even defining environmental problems, let alone agreeing on solutions, the future outlook for international environmental co-operation looks bleak.

The importance of state sovereignty was amply demonstrated at the United Nations Conference on Environment and Development (UNCED or the "Earth Summit") in June 1992, where rhetoric was abundant and substance scarce. Prominent among those seeking to enforce their own national agenda was the U.S. Criticised on many grounds, foremost among these was President Bush's threat to boycott the Earth Summit if limits to lower emissions of carbon dioxide in 2000 to 1990 levels were not relaxed, insisting that otherwise such a move would threaten American jobs and the U.S. economy. President Bush unabashedly stated he would only return to the Earth Summit if it was "productive" for him to do so, which according to the chief of domestic policy at the White House, Clayton Yeutter, meant "the definition of a productive meeting is whether it's in the best interest of the United States".³³ Malaysia also

³³. "Bush threatens boycott of Earth Summit in Brazil", The Globe and Mail, March 30, 1992. No.44,404 p.A8. The Congressional Quarterly reports that the Clinton Administration "...will sign the international biodiversity treaty aimed at protecting rare and endangered species." Congressional Quarterly, April 24, 1993. Vol. 51, No. 17. p.1019.

defended its national self-interest when it blocked all compromises on a draft statement of principle for the conservation and management of the world's forests.³⁴ A common lamentation throughout The World Environment 1972-1992 is typified by these words; "Agreements have been entered into freely, but the will to enforce them has often been lacking...the pace of government action has faltered."³⁵

Analogous to the conventional environmental concerns such as ozone depletion, deforestation and greenhouse effect, but one which is not immediately associated with these concerns, is the strategically important field of nuclear weaponry as it pertains to environmental protection and national sovereignty. The Preamble to the 1963 Nuclear/Moscow Test-Ban Treaty (MTBT) for instance, espouses the lofty objective of putting "...an end to the contamination of man's environment by radioactive substances".³⁶ The MTBT of course did not ban underground testing nor did France and the People's Republic of China--by

³⁴. "Earth talk sputter - Issue of cleanup derails UN talks". The Globe and Mail, April 4 1992, No. 44,409. p.A1.

Prior to the Earth Summit, Malaysia was a signatory to the "Beijing Declaration on Environment, Development" in which deforestation was noted as a "more serious and widespread environmental problem", among others. Declarations such as these are largely rhetorical and reap insignificant benefit to environmental rejuvenation.

"Beijing Declaration on Environment, Development", Beijing Review, Vol. 34, No. 27, July 8-14, 1991, p.10.

³⁵. Tolba, et al. p.vii.

³⁶. Nuclear Test-Ban Treaty, "Preamble". Moscow, August 5, 1963.

exercising their sovereign right of national self-determination--sign the treaty.³⁷

As a consequence of the MTBT, the 1968 Non-Proliferation Treaty (NPT), was to introduce further restrictions on the spread of nuclear technology. Signatories to the NPT commit to limitations on the spread of nuclear weapons technology as specified by the Treaty (Arts. 1 & 2). Non-signatories to the NPT are not bound by its provisions though many of them have reached individual safeguard agreements with the International Atomic Energy Agency (IAEA). Furthermore, Art. 10 (1) recognizes a state's right to exercise "...its national sovereignty...to withdraw from the treaty."³⁸ Therefore, regardless of safeguards states jealously guard their sovereignty over nuclear power decision-making and the state ultimately decides how it is going to apply nuclear safeguards even though NPT membership encourages them to accept IAEA standards.³⁹

In a case in the early 1970s, consistent with the newly discovered interests in ecology and human lifestyles⁴⁰, France

³⁷. France and China are observing the MTBT in practice, and are currently (in principle) ready to accept membership in the MTBT.

³⁸. N.J. Rengger, (ed.) "Nuclear Non-Proliferation Treaty", Treaties and Alliances of the World, London: Longman Current Affairs, 1990, p.285.

³⁹. N. Singh and E. McWhinney, Nuclear Weapons and Contemporary International Law, Martinus Nijhoff Publisher: Dordrecht, 1987, p.295.

⁴⁰. Ibid.

was brought before the International Court of Justice by Australia and New Zealand for conducting high-altitude nuclear test explosions in the South Pacific.⁴¹ The French⁴² consistently asserted their sovereignty in matters regarding their national security and not until May 1992 did France agree to sign the NPT.

The issue of sovereignty and trade illustrates the cognitive as well as the physical obstacles confronting the initiation of policies to improve the environment. A recent report by the General Agreement on Tariffs and Trade (GATT) on trade and the environment illustrates some of these difficulties. This GATT report on free-trade (published February 12th as its contribution to the "Earth Summit" in Brazil of June, 1992) argues that protectionism hurts environmental causes. GATT's argument is that trade creates prosperity which results in lower levels of pollution as richer countries pollute less due to the benefits of technological advances. Trade also facilitates the dispersion

⁴¹. "... the final judgement in 1974, was that the issue had become moot with the unilateral declarations of the intention by the French president and by French ministers, indicating the termination of any further above-the-ground nuclear tests by France in the South Pacific." Edward McWhinney, United Nations Law Making, New York: Holmes & Meier Publishers, 1984. p.118.

⁴². France is not alone in this respect, other nuclear powers such as the Peoples' Republic of China (signed NPT November 1991), Brazil, Argentina, Israel, South Korea, India, Pakistan, Iraq and others, have likewise been reluctant to relinquish their sovereign right over their national nuclear programmes.

of clean technology. Consequently, trade sanctions would disrupt this process and further undermine poor countries.⁴³ The report maintains that "[a] country with a stagnant economy...will be under greater pressure to stint on improving the environment..."⁴⁴ Not surprisingly, the report fails to ask if the earth's resources and environment can realistically sustain a continued 'high standard of living'. Developed countries containing only 25% of the world's population in turn produce 80% of CO₂ emissions. This may already exceed the earth's natural recuperative ability, adding more pollution would only compound the problem. The effects of further increases in humanity's standard of living therefore, will likely accelerate the rate of environmental degradation.⁴⁵

(vi). The Montreal Protocol: A Case Study

States all too often and too willingly compromise a treaty for some immediate gain. An examination of one of the most successful of international environmental agreements, the 1987 Montreal Protocol, will help present a more balanced perspective of the condition of international agreements aimed at regulating the commons.

⁴³. "Environmental Imperialism", The Economist, Vol.322, No.7746, February 15, 1992, p.78.

⁴⁴. Madelaine Drohan, "GATT Defends Green Policy", The Globe and Mail, No.44,364. February 12, 1992, p.B1.

⁴⁵. Hardin, p.1243.

The Montreal Protocol has been hailed as a guide for future treaty negotiations and the commencement of a new era in "global diplomacy"⁴⁶. However, when considered in the context of the circumstances in which it evolved, questions arise as to the validity of these optimistic declarations. An examination of these circumstances reveals that the success of the Montreal Protocol would be difficult to emulate in future international environmental agreements given the extraordinary convergence of factors which made the Protocol possible. Initiated by the United Nations Environmental Program (UNEP), the Montreal Protocol will likely be an exception rather than the rule in international relations.

The most salient attribute in the preliminary discussions leading up to the Montreal Protocol--and notably conspicuous by their absence--was the limited participation by developing countries. In his account of international efforts to protect the ozone layer beginning with the Vienna Conference, Richard Benedick (Chief U.S. negotiator) makes reference to the limited participation of the developing countries but explicitly avoids acknowledging that this was a contributing factor in the success of the ozone agreement. On one occasion during negotiations in Geneva in April 1987, Benedick recounts that:

The absence of any developing nations symbolized the South's lack of interest in details of the control

⁴⁶. Richard E. Benedick, Ozone Diplomacy, Cambridge: Harvard University Press, 1991, p.210.

measures; Tolba⁴⁷ himself served, in effect, as representative of the developing world.⁴⁸

Furthermore, Benedick relates India's indifference to the Montreal Protocol, "...whose officials in private conversation had characterized the issue as a 'rich man's problem--rich man's solution.'"⁴⁹ This apparent apathy among developing countries originates from their belief that ozone depletion is indeed a problem of the industrialized countries' making. Having reaped no economic gains from the use of CFCs and not being the primary consumers and producers of ozone depleting substances, many developing countries felt indifferent towards the problem, whose solution was primarily out of their hands in any event.

Benedick notes that industrialized nations account for less than 25% of the world's population and yet consume an estimated 88% of CFCs, forty times the CFC per capita consumption in China.⁵⁰ Unlike the greenhouse effect, deforestation, over-population or desertification however, ozone depletion poses an immediate threat to earth's ability to sustain life and is a rare phenomenon in that action by a few major developed countries could help alleviate the problem. Arduous negotiations between two Western factions

⁴⁷. Mostafa Tolba, an Egyptian scientist and head of the United Nations Environment Programme.

⁴⁸. Benedick, p.72.

⁴⁹. Ibid. pp.100-101

⁵⁰. Ibid. pp. 148-149.

were encountered, namely the U.S., Canada, West Germany, New Zealand and Finland who supported the rapid phaseout of ozone depleting substances while Great Britain, France and Italy were opposed because they were concerned about protecting domestic manufacturers.

Nevertheless, the most difficult negotiations, recalls Benedick, revolved around the issues of subsidies and technology transfer from developed to developing countries. Given the profound enmity between developed and developing countries, had the latter a substantial stake in the manufacturing and export of CFCs, then negotiating the Montreal Protocol would no doubt have been considerably more difficult.

Another significant factor which made the Montreal Protocol possible concerned the relatively small number of private sector companies which manufactured ozone depleting substances. Prominent in the private sector was U.S.-based Du Pont who accounted for a quarter of the world's production of CFCs. Though initially against the phaseout of CFCs claiming insufficient scientific evidence linking chlorine to ozone depletion, by 1978 Du Pont had already found substitutes for CFC in aerosol which proved to be more economical.⁵¹ In March of 1988, "...[b]efore either the European Community or the U.S. government, Du Pont proposed an international phaseout of

⁵¹. Ibid. p.31.

the chemicals"⁵² (CFCs and halons). Clearly, Du Pont has led the world chemical industry in finding substitutes for CFCs.⁵³

Since the mid-1980s Du Pont has supported the phaseout of CFCs and proclaims it publicly. "It [Du Pont] helped to form the Montreal Protocol, the joint initiative of governments, industry, scientists and environmental groups..." (italics added).⁵⁴ Du Pont's position in promoting the phaseout of ozone depleting substances is also significant in light of the fact that of the estimated \$200 billion⁵⁵ worth of industrial

⁵². Ibid. p.112.

⁵³. Du Pont is hailing hydrochloroflourocarbons (HCFCs) as the most viable substitute for CFCs. HCFCs still contain "small but measurable amounts of chlorine" and therefore do not achieve the tacit objective of entirely eliminating ozone depleting chemicals. The use of HCFCs is deemed necessary to phaseout CFCs as soon as possible. The scientific community supports Du Pont's use of HCFCs as transition compounds because they have significantly reduced ozone depleting potential, total global warming impact, and atmospheric lifetimes, compared to the CFCs. In certain applications where zero-ozone-depleting alternatives are not yet commercially available, Du Pont believes that the use of HCFCs, particularly the shorter-lived compounds, will affect a more rapid transition away from CFCs.

"Responsible Environmental Leadership. Du Pont Accelerates CFC phaseout to 1995", The Du Pont Canada Recharger, Spring/Summer 1992, No. 8. p.1.

Environment Canada meanwhile has designated HCFCs and other substances to be "...human-made, stable chemicals containing chlorine" therefore, "...they are still considered ozone-depleting substances." Environment Canada, Canada's Ozone Layer Protection Program - A summary report, Catalogue No.:EN40-442/1992 p.3 & p.8.

⁵⁴. Ron Zelonka, General Manager Flouorochemicals. Du Pont Canada, Newsletter, May, 1992, p.1.

⁵⁵. "Du Pont Commits to 1995 CFC Phaseout", News From Du Pont, Mississauga, Ontario. February 12, 1992. p.2.

equipment world wide, "[a]ll told, the value of U.S. equipment that is currently dependent on CFCs totals \$135 billion."⁵⁶ The U.S. has considerable economic and political self-interest in phasing out CFCs.

Though another milestone, the Helsinki negotiations also encountered difficulty because the United States opposed \$200 million in aid funds going to developing countries to find alternatives to CFCs.⁵⁷ Jonathan Harris believes that:

The effective operation of this pact is still in doubt, with continuing divisions between industrialized and developing nations. Nor is there a clear enforcement procedure. This record is not conducive to optimism in assessing our capacity to respond to the continued CFC threat, let alone the multifaceted environmental threats of the coming decades.⁵⁸

The convergence of political and market-driven objectives made the phaseout of CFCs possible and not a new cooperative phase in international diplomacy. States cooperated or opposed industry because it was in their national interest to do so, and not entirely out of benevolence toward the environment. Furthermore, the importance of immense public pressure bearing down on many Western governments because of the dire predictions of crop failure and increased incidence of skin

⁵⁶. "CFC Phaseout requires orderly Transition", Du Pont: Background, External Affairs/Wilmington, Delaware. June, 1990, p.2.

⁵⁷. Jonathan Harris, "Global Institutions and Ecological Crisis", World Development, Vol. 19, No. 1, 1991, pp.112-113.

⁵⁸. Ibid. p.113.

cancer provided crucial impetus.⁵⁹ These scenarios prompted Western governments in particular to take action to restore the ozone was a significant factor in the success of the Montreal Protocol. Additionally, this highlights the fact that states and the governments that administer them are motivated by political and economic self-interest consistent with realist and mercantilist prescriptions for states' behaviour.

A report for the OECD points out that an international treaty on global warming would be considerably harder to achieve. The report further cites the absence of cheap abatement technology, an immediate and high damage risk, and the extensive number of countries involved as being significant factors against the creation of a Global Warming Protocol.⁶⁰

The real barometer for the success of the Montreal Protocol will be how successfully developing countries adhere to their CFC phaseout schedule. Article 5 (iv, vi & vii) of the Montreal Protocol contains special provisions for developing countries which provide for less stringent phaseout

⁵⁹. Barry R.J. Jones, "Perspectives on International Political Economy", Perspectives on Political Economy, ed. B.R.J. Jones, New York: St. Martin's Press, 1983, p.174. According to Barry Jones this public pressure is an attribute of modern neo-mercantilism. (See Chapter I, p.12 n.21).

⁶⁰. Organisation for Economic Co-operation and Development, OECD Environmental Data Compendium, Paris: M. le Chef du Services des Publications, OECD, 1991, p.39.

conditions given special circumstances.⁶¹ The exuberance over having successfully reduced CFC use by over 20% (far ahead of the control schedule),⁶² needs to be balanced against where this reduction has come from; primarily developed countries and in particular the U.S.. This accomplishment required relatively modest international co-operation when the leading producers and consumers of CFCs were the biggest advocates for its phaseout.

61. Ozone Secretariat, Handbook for the Montreal Protocol On Substances That Deplete The Ozone Layer, Second Edition, October 1991, pp. 13-14.

62. Edward A. Parson, "Stratospheric Ozone and CFCs", Environment, Vol.34, No.4, May 1992, p.15.

CHAPTER III: CRITIQUE OF CURRENT AND PROPOSED SOLUTIONS TO ENVIRONMENTAL DEGRADATION.

(i). General Overview.

It is the contention of this thesis that environmental concerns may be better approached from the state level rather than the international level. As has been explained ecological free-riders, international externalities, misunderstanding of the global commons, and the persistence of state sovereignty are types of market and non-market failures which encumber the creation and enforcement of international environmental agreements. Until such time as a world body is endowed with coercive powers to equitably compel states to abide by the terms of a treaty to which they are signatories, state governments must be given incentives to improve and protect the physical environment by appealing to their national self-interest. For, at present:

Not one single state would carry out (nor does it) a decision by the United Nations or an international organization if it considered it to be contradictory to its interests.¹

Looking beyond immediate trade matters, effective environmental concerns are too important to be left to the 'invisible hand' of the free market alone to resolve. Although

¹. A. Bovin, "World Community and World Government", in Rourke, J.T. (ed.) Taking Sides, Connecticut: The Dushkin Publishing Group, Inc. 1991, p.295.

the market system has been, and continues to be (at least in the short-term) the most efficient means yet devised of allocating resources, this system has exhibited some serious flaws in light of relatively new knowledge that many world resources are indeed finite. The UNEP (1992) report on the environment explains:

While market prices represented by productive use value can be an important indicator of value, the market price is not always an accurate representation of the true economic value of the resource, and does not deal effectively with questions of distribution and equity.²

The same report, nevertheless, recognizes the importance of working within market economies as a means of improving and maintaining the quality of the environment.³

Many environmental policy recommendations do not generally consider utilizing the attributes of the existing market system and, in particular those of the world trading system. Often policy suggestions revolve around establishing more international institutions or reinforcing existing ones, or warn that national governments must cooperate to avoid calamity. Such recommendations overlook the opportunity of getting the political-economic forces of the market system working for the environment. Acknowledging his opposition to unilateralism, Lester Thurow has inadvertently provided

². Mostafa K. Tolba, (ed.) et al. The World Environment 1972 - 1992, London: Chapman & Hall, 1992, p.200.

³. Ibid. p.711.

further justification for the unilateral imposition of environmental tariffs in relating the predicament of international trade. He states:

The rules that govern international trade are being unilaterally broken for two reasons. The world has outgrown the existing rules, and the flexible exchange rates that were supposed to guarantee a rough balance in trading accounts have failed to work...[C]ountries feel that they must respond with actions limiting their imports in defiance of the rules of international trade...⁴

In practice, the employment of a unilateral means of international environmental protection may not be as foreign a notion as it may first appear. Unilateral action in international trade is already an option which many states are currently exercising.

An irreconcilable dichotomy prevails in the thinking of many environmental policy proponents which constitutes a serious obstacle in recommending effective policies. On the one hand international co-operation to combat environmental problems is certainly the most desirable path. However, the persistence of wealth disparities between the North and South, military conflicts, or protectionism, for example, renders sincere international environmental co-operation difficult. Norman Myres exemplifies the first position with his observation that;

...it is not always sufficient for a nation to seek to safeguard its own environmental endowment through its national policies...Rather, the entire community of

⁴. Lester C. Thurow, Head to Head, New York: William Morrow and Company, Inc., 1992, p.237.

nations, reflecting a sort of emergent global constituency, needs to consider its joint needs as an indivisible objective of collective global well-being.⁵

Myres reflects on the reality of the second position when he states that;

...there has been next to no attempt on the part of governments and international agencies, let alone business enterprises and other parties involved, to adapt their policy strategies accordingly.⁶

Myres goes on to argue that reform of national political systems is necessary to facilitate the implementation of effective environmental policies, but contents himself with acknowledging the complex nature of the reforms and pursues it no further.⁷ Ignoring the power of national politics is simply not an option to achieving environmental initiatives yet policy advocates continue to side-step this political reality.

Henk Kox for example, proposes measures to integrate "...environmental externalities into an international price system by a type of international agreement..."⁸ His proposal however, would encounter some difficulty in the implementation stage. For Kox the languid international commodity agreements (ICAs) should be revived as the New International Commodity Agreements (NICAs), but his proposal is based on many "ifs".

⁵. Norman Myres, "The Question of Linkages in Environment and Development", Bioscience, Vol. 43, No. 5, May 1993, p.304.

⁶. Ibid. p. 307.

⁷. Ibid. p.308.

⁸. Henk L.M. Kox, "Integration of Environmental Externalities and International Commodity Agreements", World Development, Vol.19, No.8, 1991, p.934.

Essentially, ICAs are made between producer and consumer countries in an attempt to secure price stability for primary commodities.⁹ What distinguishes NICAs from ICAs is that the former will include "environmental protection elements" where the price of a commodity would provide for the development of new technology or environmental restoration costs in producing countries.¹⁰ Therefore, NICAs are an attempt to stem the environmentally destructive propensity of many debt-ridden developing nations who compete with each other for a bigger share of export markets.

Kox recommends three phases "if" governments agree to accept his NICAs proposal. Phase one would be a detailed technical and economic study of each separate commodity. The second phase involves political negotiation among interested groups as to what will be the acceptable level of ecological damage and a compromise on the price mark-up on each commodity required to repair the damage and improve production methods. Finally, agreement has to be reached on how the price mark-up will be implemented, whether as an import surcharge, export tax or other means. Consensus on monitoring, government representation and sanctions must also be reached at this stage. Kox rightly rules out the export tax scheme as it could only work "if" OECD countries accept "...most of the financial

⁹. David W. Pearce, The Macmillan Dictionary of Modern Economics, London: 1981, p.216.

¹⁰. Kox, p.937.

burden of the environmental reconstruction and conservation."¹¹ Furthermore, in order to prevent "free-riders", producing countries would have to endure auditing procedures that would intrude upon or limit their national sovereignty.¹² The import levy is considered the more viable option.

However, the implementation of this import levy is somewhat cumbersome and would certainly encounter opposition. The levy would be "commodity specific" requiring each commodity to have undergone a technical and economic assessment study to determine the appropriate rate. Kox's attention is drawn to Edward B. Barbier's study of world trade in raw ivory to illustrate the complexity and time required for such studies to formulate effective policies.¹³ Moreover, the importers in "commodity importing developed countries" (OECD) are responsible for paying the import levy to their national government who would in turn periodically transfer this sum to a specific board within NICA. As with the export levy this proposal also falters on several counts. It would

¹¹. Ibid. p.939.

¹². Ibid.

¹³. Barbier's article tries to determine the most economically viable and practical way to stem the 'illegal harvesting' of elephants which has contributed to their rapid decline in recent years. He ponders several options including import tax and regulation though concludes that further study into the matter is necessary, which would require taking into consideration of demand for unworked ivory in other countries such as the USA, the EEC, Taiwan and China notwithstanding Japan and Hong Kong. Edward B. Barbier, "Managing Trade and Environment: The Demand for Raw Ivory in Japan and Hong Kong" The World Economy, Vol.14 No.4 December 1991, pp. 407-430.

also only work if OECD countries would agree "...that most of the financial burden of the environmental reconstruction and conservation will have to be borne by [them]..."¹⁴

In addition, if the OECD countries are suspected of free-riding by not paying the import levies, would they also be subject to internal audits which intrude on their national sovereignty? Kox acknowledges that the biggest "if" to his proposal is "[w]hether the 'environmentalization' of ICAs will be successful depends primarily on the political will of the participating producer and consumer nations."¹⁵ Under Kox's scheme much of the financial burden to assist developing countries is placed on the OECD countries which is understandable but impractical under the current economic circumstances.

Other advocates for instituting international environmental systems to stem the tide of pollution have put forth the 'polluter pays principle' (PPP). The OECD countries adopted this principle in the early 1970s whereby public authorities would decide if a polluter should pay for the cost of reducing pollution. Environmental targets, particularly for air and water pollution as well as other externalities, would require OECD countries to levy taxes or other charges on polluters. These charges will ultimately be passed to the

¹⁴. Kox, p.940.

¹⁵. Ibid. p.941.

consumer through price increases, which will affect consumer consumption patterns to the benefit of the environment.¹⁶

Robertson reviews the proposals to utilize PPP¹⁷ on a global scale but holds it will encounter some difficulties. In trying to curb CO₂ emissions and thereby slow the greenhouse effect, "...taxes on consumption or production of fossil fuels...and replanting and forest management have been suggested as conditions for logging licences."¹⁸ Both Robertson and Zylicz identify other problems with applying the PPP internationally. For Zylicz, the main "...obstacle is the lack of an appropriate supranational authority to levy Pigouvian taxes (or initially allocate permits)."¹⁹ Despite the failings

¹⁶. David Robertson, "The Global Environment: Are International Treaties a Distraction?" The World Economy, Volume 13, Number 1, March 1990, p.118.

¹⁷. J. Owen Saunders offers this explanation of PPP. "With respect to international trade, the principle suggests that goods entering the international marketplace should carry with them the full costs of production, including their environmental costs." See J. Owen Saunders, "Trade and environment: the fine line between environmental protection and environmental protectionism", International Journal, XLVII, Autumn 1992, p. 727.

¹⁸. Robertson, p.119.

¹⁹. A Pigouvian tax is a corrective tax to deal with environmental externalities which calls for the imposition of a per unit tax on a product that serves as a proxy for the external cost not considered in by the market. Tomas Zylicz, "The Role for Economic Incentives in International Allocation of Abatement Effort", Ecological Economics: the science and management of sustainability, ed. R. Costanza et al. New York: Columbia University Press, 1991, p.397.

of the PPP, UNEP²⁰ still recommends the application of such a tax as a means of internalizing the "...full cost of environmental damage arising from pollution - or, more appropriately, of the costs of preventing such damage."²¹

Moreover, according to Zylicz, calculating the Pigouvian tax is extremely difficult because of the complexity of determining how much pollution a polluter is responsible for.²² This critique is further supported by the United State's experience. What if "...the dumper is bankrupt? Taken over? One of many? Unknown? What if the way the waste was disposed of was perfectly legal at the time?"²³ Robertson questions national governments' commitment who "...alone have the legislative powers to tax and to subsidise."²⁴ Other problems arise with 'free-riders' who do not adopt the PPP thereby gaining an unfair competitive advantage over those who do. Combined with the lack of administrative infrastructure in many Third World countries to implement the PPP, all render the PPP inappropriate on the international level. Saunders

²⁰. In an effort to combat the greenhouse effect, UNEP recommends the "[W]idespread and firm application of the 'Polluter Pays Principle...' as a high priority. Tolba, et al. pp. 79-80.

²¹. Ibid. p. 706.

²². Zylicz, p.386.

²³. "Cleaning up old pollution", The Economist. Vol. 322, No. 7748, February 29, 1992, p.18.

²⁴. Robertson, p.120.

agrees that today's environmental concerns are too complex to be satisfactorily dealt with by the imposition of the PPP, which was originally designed to include domestic externalities. Instead he advocates "...a massive and globally orientated exercise in co-operation."²⁵

Consistent with Saunders' reasoning, Biagio Bossone also advocates employing a "multilateral environmental agency" which in conjunction with governments would manage, administer and plan the use of strategic ecological resources.²⁶ As with other proposals for international co-operation, however, this one is fraught with the difficulty of getting states to place the global interest above their own national self-interest. Unfortunately, because of this Bossone's proposal faces inordinate difficulties.

Chief economist to the World Bank Lawrence Summers recently offered his own "innovative" solution to the developed countries' pollution problem. He made three main points:

First, the cost of pollution depends on earnings foregone through death or injury; these costs are lowest in the poorest countries. Second, costs rise disproportionately as pollution increases; so shifting pollution from dirty to clean ones reduces costs. Third, people value a clean environment more as their incomes rise; if other things

²⁵. Saunders, p.729.

²⁶. Biagio Bossone, "Environmental Protection: How Should We Pay For It? International Journal of Social Economics, Vol. 17, No. 1, 1990, p.8.

are equal, costs fall if pollution moves from rich places to poor ones.²⁷

On the surface Summers' proposals are economically sound for the developed countries to pursue. However, Summers' cynical and blatant disregard for human life as well as his short-term and deficient understanding of the dynamics of pollutants renders his suggestions impractical on humane, political and scientific grounds.

This proposal poignantly illustrates a deeper problem which compounds the difficulty of improving the world environment. Summers' solution to the pollution problem in spirit contravenes other international agreements such as The Basel Convention, adopted by 116 countries and the European Community in March 1989. This Convention attempts to provide guidance for "...the environmentally-sound management of the transboundary movement of hazardous waste."²⁸ Summers' economically expedient recommendations undermine other more serious and holistic attempts to deal with the world's environmental problems.²⁹

²⁷. Pollution and the Poor", The Economist, Vol. 322, No. 7746, February 15, 1992, p.18.

²⁸. Tolba, et al. p.272.

²⁹. In a response to The Economist's article, Summers defends the value of the opportunity cost test and of cost-benefit analysis as efficient and effective means of allocating resources and protecting the environment. His myopic commentary however, lacks a full appreciation of the impact such clinical economic decisions have in areas outside the discipline of economics. L. H. Summers, "Summers on sustainable growth", The Economist, Vol. 323, No. 7761, May 30, 1992, p.65.

Many observers like Christopher Patten contend that truly effective environmental programmes need to be international or even global in character. Patten submits three elementary reasons for his deduction:

First, no country taking unilateral action could make a sufficient impact on the problem to come near solving it. Second, most countries must be worried by the possibility that they may place themselves at competitive disadvantage by taking action in isolation from their trading partners. Third, less developed countries need the help and encouragement of the developed world if they are to stay on the path of economic growth while avoiding the mistakes that we have made.³⁰

These "reasons" have some redeeming qualities and will be addressed in the subsequent pages, though they only reflect one person's perception of how the world should work.

Setting aside the administrative logistics of achieving international co-operation to facilitate the implementation of effective environmental policies, Akihiro Amano postulates on the effects of a universal carbon tax. According to Amano:

If carbon taxes were levied in an internationally uniform fashion, then the resulting problems are, if any, of short-term adjustment character. The optimal international division of labour would not be seriously disturbed by the carbon tax. Rather, it will make price structures reflecting true social costs more adequately, leading to a more efficient resource allocation.³¹

An adverse effect would be achieved if a carbon tax was levied against a "subset" of countries or if a varying tax rate was

³⁰. Charles Jenkins and Branko Zlataric, "The environmental battle: can agriculture and forestry help?", The World Today, Vol. 47, No. 4. April 1991, p.68.

³¹. Akihiro Amano, "Global Warming and Economic Policy", The Economic Studies Quarterly, Vol.44 No.1, March 1993, p.10.

instituted because "...the supply sources of carbon-intensive products may shift from more efficient countries to less efficient countries."³² Furthermore, if only a group of countries introduces a carbon tax, this, according to Amano, will result in a reduction in international energy prices which in turn encourage increased consumption among non-participating countries, thereby creating "carbon-leakage".³³ These scenarios demonstrate, at least from one economist's assessment, that unless there is unprecedented world co-operation on the matter of carbon tax, widespread economic disequilibrium may result. Given the anarchical nature of the international community, however, universal co-operation on the matter of carbon pollution would be extremely difficult to attain, yet inaction on a whole series of environmental fronts poses greater uncertainties. The notion of "sustainable development" implies a broader approach is necessary to deal with environmental issues, though in practical terms sustainable development also falls short on substance.

(ii). Sustainable Development: A Critique.

No other environmental concept is as fashionable, all-encompassing and surrounded by rhetoric as sustainable

³². Ibid.

³³. Amano describes the "carbon-leakage" as, "...the percentage by which the effects of a unilateral cut are offset by increased emissions in other regions". Ibid. p. 10.

development.³⁴ The value of sustainable development lies not in the specific policies which it supports, but rather in having brought attention to the earth's finite resources and humanity's need to reevaluate social, political and economic priorities in recognition of this fact. As a policy instrument, however, sustainable development is deficient in its conceptual underpinning as well as in implementation.

In conceptual ecological terms, sustainable development has questionable practical foundation. Specifically of concern is a recommendation in "Our Common Future" the report by the World Commission on Environment and Development (WCED), otherwise known as The Brundtland Report, that environmental degradation can be alleviated by "reviving growth";

...development that is sustainable has to address the problem of the large number of people who live in absolute poverty...A necessary but not a sufficient condition for the elimination of absolute poverty is a relatively rapid rise in per capita incomes in the Third

³⁴. The most widely adopted definition of sustainable development is found in Our Common Future (WCED 1987): "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs." World Commission on Environment and Development (WCED), Our Common Future, Oxford: Oxford University Press, 1987, p. 43. This thesis will not initiate a thorough examination into analytically defining "sustainable development". It is widely acknowledged that sustainable development is not easily defined nor is there any single way of achieving it. Sharachchandra M. Lélé undertakes to analyze sustainable development in "Sustainable Development: A Critical Review" World Development. Vol 19, No. 6, June 1991. See also Michael A. Toman, "The Difficulty in Defining Sustainable Development", Global Development and the Environment: Perspectives on Sustainability, Washington D.C.: Resource for the Future, Darmstader, J (ed.), 1992, pp. 15-23.

World. It is therefore essential that the stagnant or declining growth trends of this decade be reversed.³⁵

Although William Rees believes that an ecologically grounded version of sustainable development has great merit, he disagrees with founding sustainable development on the notion of reviving economic growth:

Our mechanical perception of the biosphere is dangerously superficial and our continuing belief in the possibility of sustainable development based on the growth-oriented assumptions of neo-classical economics is illusory.³⁶

Antoinette Mannion would agree with Rees as she explores the biotechnological aspect of sustainable development, which she concedes is only a "small component" of the entire problem. To make sustainable development a reality explains Mannion "...there must be political and economic direction."³⁷

In terms of a global environmental policy instrument the implementation of sustainable development would likely achieve the same low level of success as other international agreements have realized. One of Rees' recommendations echoes the urgings of other policy advocates already cited, that is; "...the development of new forms of international co-operation and regulation to ensure acceptable standards for ecological

³⁵. WCED, pp. 50-51.

³⁶. William E. Rees, "The Ecology of Sustainable Development", The Ecologist, Vol. 20, No. 1, January/February 1990, p.18.

³⁷. Antoinette M. Mannion, "Sustainable Development and Biotechnology", Environmental Conservation, Vol. 19, No. 4, Winter 1992, p.304.

stability."³⁸ The Brundtland report also recognizes the important role of international politics as evident by the statement, "[t]hus in the final analysis, sustainable development must rest on political will."³⁹

As the success of sustainable development is inextricably linked to reviving economic growth, particularly in the developing countries, naturally, the Brundtland report advocates freer trade and opposes protectionism. It would be appropriate to briefly analyze WCED's position on sustainable development and trade against the realist/mercantilist assumptions of this thesis and how sustainable development holds-up against the obstacles cited in Chapter II as being impediments to the implementation of effective international environmental policies. The purpose of this exercise is not to discredit the viability of sustainable development, for the principles which sustainable development extols are, on the whole, admirable and desirable. However, the reality of international relations is that an unequivocal commitment for co-operation is extremely difficult to achieve.

Altruism best describes the trade policy prescription under sustainable development. Protectionism is rightly seen as being detrimental to sustainable development as this reduces the export diversification potential of many developing countries who are forced to rely on traditional

³⁸. Rees, p.22.

³⁹. WCED, p. 9.

export commodities.⁴⁰ The altruism in the Brundtland report is epitomized by its citing the "...success of some Far Eastern developing countries in increasing exports of labour-intensive manufactured goods..." as showing "...the development potential of trade."⁴¹ Presumably, these Far Eastern countries include South Korea, Taiwan, Hong Kong and Singapore, the "Four Tigers". These states achieved success not because they whole-heartedly accepted the tenets of liberal economics, but because they manipulated the market system for their national interest:

It is ironic that despite this international perception of the open economies of the Four Tigers, the U.S. government continues to pressure these countries to open their markets to U.S. products, admitting thereby that markets were not quite open after all.⁴²

The moral of this case is that states cannot achieve success unless national interest assumes top priority. Success, whether by an individual or a state, can only be achieved by placing one's interests ahead of others. This is otherwise called "competition" which is supposedly encouraged in a truly free market system.

In the case of the Four Tigers the state followed a highly interventionist policy which made rapid economic growth possible. Throughout the 1970s and 1980s the Four Tigers were

⁴⁰. Ibid. p.79.

⁴¹. Ibid.

⁴². Umesh C. Gulati, "The Foundations of Rapid Economic Growth: The Case of the Four Tigers", The American Journal of Economics and Sociology, Vol. 51, No. 2, April 1992, p. 168.

ruled by repressive dictatorships which made the achievement of great economic objectives possible. These states continue to pursue effective economic growth and implement export-maximizing policies,⁴³ (that is, mercantilist policies), though domestically and politically they are adopting democratic reforms. The Brundtland report would no doubt disapprove of such statecentric means by which to achieve economic growth, for the approach used by the Four Tigers does not constitute an environmentally responsible sustainable development policy.

The Brundtland report appeals to fairness and equity in trade:

If developing countries are to reconcile a need for rapid export growth with a need to conserve the resource base, it is imperative that they enjoy access to industrial country markets for non-traditional exports where they enjoy a comparative advantage.⁴⁴

In an idealistic world, this prescription would certainly solve many problems confronted by developing countries. However, in actual fact developed countries are fervently competing with one another and with developing countries in many political and economic fields.

In expounding the attainment of sustainable development through a freer market system, the Brundtland report does not exhibit a profound understanding of intergenerational equity. Neoclassical economists (the primary propagators of free market philosophy) have not fully accepted that the earth's

⁴³. Ibid. p. 161.

⁴⁴. Ibid. p. 83.

resources are finite. Therefore, resources are often utilized for immediate consumption reflecting the lack of foresight inherent in the present economic system. Consequently, the Brundtland report does not appear to appreciate the full consequences of market failures on the environment.

Although the side effects or externalities of the manufacturing process are briefly acknowledged, the full repercussions are likewise skirted over in an effort to substantiate economic growth as a solution to environmental degradation:

A mainspring of economic growth is new technology, and while this technology offers the potential for slowing the dangerously rapid consumption of finite resources, it also entails high risks, including new forms of pollution and the introduction to the planet of new variations of life forms that could change evolutionary pathways.⁴⁵

Encouraging developed countries to open their markets to the manufactured goods of developing countries surely diminishes the effects of externalities of the manufacturing process. The question needs to be asked: Will the promotion of manufacturing alleviate the environmental problems in developing countries which are currently caused by subsistence economies? Furthermore, there is no guarantee of the equitable

⁴⁵. Ibid. p. 5.

Sustainability through economic growth is still recommended in more recent reports on sustainable development. In "Caring for the Earth" (1991). Economic growth for developing countries through opening of national and international markets are still promulgated (p.23). IUCN/UNEP/WWF. Caring for the Earth. A Strategy for Sustainable Living, Gland, Switzerland: IUCN/UNEP/WWF, 1991, p.23.

distribution of any wealth (socially and environmentally) in developing countries that may accrue from manufacturing.

Asking developed countries to lower tariffs to allow developing countries to compete based on the principle of comparative advantage without a reciprocal lowering of the latter's tariffs fosters economic free-ridership. Additionally, given the ineffectiveness of treaties as instruments to compel states to adhere to international environmental quotas and regulations, environmental free-ridership would flourish as states bypass abatement costs. This accentuates the market and non-market failures of the sustainable development strategy.

On the whole sustainable development concentrates on non-market failure. "Growth in many developing countries is being stifled by depressed commodity prices, protectionism, intolerable debt burdens, and declining flows of development finance."⁴⁶ The mismanagement of the global commons and prevalence state sovereignty are non-market failures to which the Brundtland report only indirectly refers. The absence of a unified global environmental strategy (a conceptual vacuum sustainable development is supposed to fill) coupled with the implausible hope that states will strive together for the welfare of the planet and its inhabitants are formidable non-market failures obstructing the attainment of sustainable development.

⁴⁶. Ibid. p. 17.

This brief review of some of the existing proposals to restrain the current trend of environmental degradation has revealed a pronounced reliance on multilateralism. However, the absence of a supranational authority to enforce treaty obligations creates difficulties in pursuing a multilateral approach. Short of a supranational authority, international co-operation is frequently cited as a requisite for environmental amelioration. After decades of attempting the multilateral route the environment continues to deteriorate. An alternative solution is to provide states with the incentive to improve their own environmental condition through unilateral action. Chapter IV examines the possibility of pursuing a unilateral route utilizing environmental tariffs.

CHAPTER IV: THE FEASIBILITY OF ENVIRONMENTAL TARIFFS.

Environmental tariffs have significant advantages when economic ideology is not the overriding imperative in determining their usefulness. As instruments of public policy environmental tariffs can conform to the diversity of state national interests and yield to the notion that, to a state, international trade is more than the exchange of goods and services. Moreover, they can possibly ameliorate international environmental degradation. To their detractors environmental tariffs are criticised for promoting protectionism and possibly instigating chaos in the world trading system. These objections (and others) are not without some merit. However, the deterioration of our biosphere should be the overriding concern, particularly when both the international political and economic systems have, thus far, failed to accept or make serious plans to compensate for the degeneration of the environment.

This chapter will (i) demonstrate how environmental tariffs correspond to the theoretical criteria central to this thesis and confront the practical hindrances afflicting international environmental policies; (ii) offer an examination of the pros and cons of environmental tariffs; (iii) explain why the international liberal economic trading system provides the most effective means of initiating

environmental policies and; (iv) offer a rating system that states might use to base and justify environmental tariffs that they might impose against imports of environmental abusers.

(i). Theoretical and practical advantages of environmental tariffs.

Environmental tariffs allow states to retain control of their sovereignty and determine their own fate. States can also see a direct and immediate benefit to themselves through the implementation of environmental tariffs. Having established the inherently mercantilist nature of the market systems in Chapter I, this must be considered when formulating international environmental policies. States have always played an important role in the market system, and this will not change in the foreseeable future. Critics may oppose environmental tariffs because they reject the notion that governments can be legitimate and often necessary participants in the free market system. Successful environmental agreements cannot be so naive or misled by ideology.

As the voice for most domestic interests affecting a state, government is usually the spokesperson for those interests in the international arena; in this respect the state is a unitary actor. If a state decides to impose environmental tariffs, this decision would often be the outward manifestation of many endogenous interests having been

expressed to the government. Therefore, states are "constrained" rational actors because they must arrive at optimum policies given the varied interests they must hear and represent. Whether there are inefficient farmers in France or struggling car makers in the U.S., political pressure from these groups does influence the international trade policies of states. Environmental tariffs can provide states with meritorious justification for having to impose such tariffs upon another state by legitimately professing to be responding to the domestic political realities bearing down on any democratic government. Moreover, this environmental introspection may dispose states to begin revaluing their own national natural resources at a much higher rate to ensure the long-term survival of the state. Particularly, when states begin to assess resource availability in light of the depleting resources of other states, the adoption of environmental tariffs may help foster more long-term planning and improved accounting of natural resources and environmental assets.

For realists national security is the overriding imperative in international relations. Although this is conventionally applied to military security, new realities render economic and environmental security equally important. The survival of the state as a viable economic entity is a fundamental raison d'être of all modern politics. To this extent, states will utilize any means to retain or regain

their economic status. The mercantilist qualities of environmental tariffs constitute an effective mechanism to achieve this objective while simultaneously benefiting the environment. Additionally, the environmental integrity of a state is essential to its national security. Environmental tariffs take account of international externalities in the world trading system and penalize free-riders who, through their apathy, benefit from other states concerted efforts to improve the environment. The cumulative effect would cause a rise in concern for the global commons by encouraging states to initiate substantive policies and encouraging others to do likewise or become uncompetitive by their environmental inaction.

(ii). Pros and Cons of Environmental Tariffs.

The 1990s have been described as the "decisive decade" for the future of the world.¹ Should current pollution levels continue throughout this decade some scientists argue that the damage to the earth could be irreversible. The state of international anarchy provides an ineffective 'environment' for guileless co-operation. Furthermore, creating international organisations to enforce treaties encounters many difficulties--as previously demonstrated--including the ceding of national sovereignty and having to create a new

¹. Lester R. Brown, (ed.) et al. State of the World. New York: W.W. Norton & Company, 1992, p.3.

bureaucracy to administer the treaties; a process both time-consuming and cumbersome. In their discussion of public policy and the environment Miranda and Muzondo issue a twofold challenge to governments;

...to minimize the possible adverse effects of macroeconomic policies on the environment and to structure environmental policies so that they do not impact a country's macroeconomic performance.²

The implementation of environmental tariffs can meet these challenging requirements.

The anarchical nature of the international system means that international co-operation is unenforceable and elusive, though certainly not entirely unattainable. Holdgate estimates that there are more than 100 international conventions, agreements, and action plans that try to address world environmental issues. However the problem is;

...thunderstorms of rhetoric are followed by droughts of inaction. Words are cheap and action plans are easy to put on paper. Because such agreements create the cosy, inexpensive illusion of a problem solved, they are dangerous.³

Obviously, it would be extremely misleading to suggest that the imposition of environmental tariffs could be instituted without encountering some difficulties. Saunders raises some important questions about when a state acts

². Kenneth Miranda and Timothy Muzondo, "Environmental Policies: Public Policy and the Environment", Financial Development, Vol. 28, No. 2, June 1991, p.26.

³. Martin W. Holdgate, "The Environment of Tomorrow", Environment, Vol. 33, No. 6, July/August 1991, p.41.

unilaterally to imposes any kind of tariff or countervailing duty against another state citing domestic environmental imperatives as justification for its action. A synopsis of Saunders' concerns will be presented followed by a rebuttal to those concerns.

Enforcing any kind of environmental tariff may result in violations of treaty obligations under the GATT. According to Saunders American environmentalists in particular have argued that free trade invites goods from countries which have lower environmental standards, presumably therefore, lower production costs, amounting to an indirect subsidy for their products which results in lower prices to the consumer.⁴ Furthermore, the argument holds that the competitive unfairness suffered by the U.S. could turn public sentiment against domestic environmental standards which could be detrimental to the environment.⁵ These lines of reasoning constitute sufficient probable cause to justify the imposition of environmental tariffs despite the GATT.

The imposition of environmental tariffs requires a set of standards upon which to warrant the tariff, this according to Saunders will only make sense "...if one could agree on a common reference point for the 'correct' or the 'fair'

⁴. Owen J. Saunders, "Trade and the Environment: The Fine Line Between Environmental Protection and Environmental Protectionism", International Journal, XLVII, Autumn 1992, p.742.

⁵. Ibid.

environmental standards."⁶ Saunders quotes Housman and Zaelke who suggest that only a commonly agreed upon set of international environmental standards would be effective, particularly if the U.S. assumed the leadership role in setting world standards. Saunders questions the appropriateness of the U.S. dictating world environmental standards. Even if U.S. standards were superior to the rest of the world, this would nonetheless not be justification for unilateralism.

Finally, the most common concern about the imposition of environmental tariffs is the fear of retaliation and ultimately the provocation of a trade war. Saunders maintains that this is potentially the most harmful consequence of unilateralism to international economic relations. He envisages trade sanctions being implemented claiming environmental justification as an excuse for less lofty objectives. Furthermore, an exporting state will focus on the negative consequences to its economy rather than the environmental legitimacy of such an action.⁷

There is little doubt that international co-operation among states on a unprecedented level is the preferable means by which to curtail environmental degradation. Furthermore, it would be deceiving to proclaim environmental tariffs as the optimum mechanism to commence serious international

⁶. Ibid. p.743.

⁷. Ibid. pp. 745-746.

environmental initiatives. Nevertheless, the failure of international environmental agreements negates any serious hope for effective international co-operation in the foreseeable future. Morgenthau and Thompson convey these very sentiments:

The control of nuclear energy, the protection and restoration of the natural environment, the supply of food and raw materials are problems of this kind. They cannot be solved by an individual nation competing with other nations for national advantage. All nations, or a considerable number of them, have a common interest in the solution of these problems, which interest ought to be reflected in common policies transcending particular national interests. While some elites have become aware of this novel element in world politics and are trying to come intellectually to terms with it, the actual conduct of national foreign policies has hardly been affected by it. To the contrary, it testifies to the undiminished strength of nationalism...⁸

More specifically, Saunders' concerns can be addressed by drawing attention to GATT's difficulty with acknowledging and recommending the continuation of protectionist policies. A recent GATT report maintains that its existing rules recognise a government's competence (sovereignty) in setting high national environmental standards, but is concerned that such standards would be used for protectionist purposes. Simply said, GATT rules forbid "environmental imperialism" where one state imposes its environmental standards on others.⁹

⁸. Hans J. Morgenthau and Kenneth W. Thompson, Politics Among Nations, New York: Alfred. A. Knoff, 1985, p.122.

⁹. "Environmental Imperialism", The Economist, Vol. 322, No. 7746, February 15, 1992, p.78.

Notwithstanding this, some GATT advocates point to Article XX(b) (General Exceptions)¹⁰ as grounds for states to justify environmental protectionist policies; though the environment is not specifically mentioned in this Article. Piritta Sorsa notes that this Article has been invoked by the European Community to forbid the import of furs caught with leg-hold traps and the U.S. banned importing tuna from Mexico because the drift-nets used killed dolphins. Sorsa suggests that the GATT Standards Code (applies to signatories only, approximately forty) is theoretically wider in scope than Article XX. However, both these provisions were never originally set up as instruments for the environment, therefore, considerable uncertainty arises in applying them for environmental protection.¹¹ In principle however, GATT objects to the imposition of tariffs on environmental abusers, as "...environmental policies are a matter of preference"

¹⁰. Article XX(b) (General Exceptions).

"Subject to the requirement that such measures are not applied to the 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...necessary to protect human, animal or plant life or health." General Agreement on Tariffs and Trade (GATT). Article XX(B) (General Exceptions). October, 1947.

¹¹. Piritta Sorsa, "The General Agreement on Tariffs and Trade (GATT)" Trade Environment & Competitiveness, Kirton, J and Richardson, S (ed.), Ottawa: Sims Latham Group, 1992, pp. 190-196.

particularly where pollution effects are localised.¹² According to GATT such policies would create protectionist chaos in world trade.

Arthur Dunkel, GATT's former director general further warns: "We must watch that the question of the environment is not exploited by those who support commercial protectionism."¹³ In response a statement from Charles Keeling, a leading expert on CO₂ and global warming, admonishes that:

If you're going to be sceptical about climate change, you can stonewall for a heck of a long time before you have to be convinced...If there are economic reasons not to believe in solid evidence, you won't.¹⁴

Additionally, Arvind Subramanian poignantly observes:

It was also inevitable that the search for multilateral solutions in the environmental area would rely on the use of trade measures as an inducement mechanism, given the track record of their effectiveness in areas ranging from human rights, workers' rights and arms control to services, intellectual property and competition policy.¹⁵

Dunkel's economic imperatives are obscuring his attaining meaningful insight into the environmental dilemmas we currently face. However, new realities require a new approach. Steven Shrybman perceptively notes that:

¹². "Environmental Imperialism", The Economist, p.74.

¹³. Madelaine Drohan, "GATT Defends Green Policy", The Globe and Mail, February 12, 1992, p. B6.

¹⁴. Jonathan Weiner, The Next One Hundred Years, New York: Bantam Books, 1990, p.133. After finishing his Ph.D. in the mid-1950s in chemistry Charles Keeling led the then newly organized geochemistry program at Caltech where he began exploring the effects of carbon dioxide gas.

¹⁵. Arvind Subramanian, "Trade Measures For Environment", The World Economy, Vol. 15, No. 1, January 1992, p.136.

As long as the environment remains an externality that is ignored during the trade negotiation process, trade agreements will often institutionalize principles that are at odds with, and at times antithetical to, the objectives that are being pursued through international environmental agreements.¹⁶

Furthermore, Shrybman contends "...that environmental protection should not be left to a 40-year-old GATT provision that was never intended, nor used, for that purpose."¹⁷

GATT Articles provide for the various forms of protectionism to be introduced under other circumstances. For instance, Article XII authorises the imposition of import controls to relieve temporary balance-of-payments pressure. Article VI allows the use of restrictions against goods which are "dumped" on the domestic market. Most notable is Article XIX, which sanctions the use of import controls for the emergency protection of domestic industry.¹⁸ Condoning protectionism for environmental imperatives would therefore, not be a totally foreign notion under the GATT. The North American Free Trade Agreement (NAFTA) attempts to address the past discrepancies between multilateral trade agreements and environmental issues. Analysis of this endeavour will be the

¹⁶. Steven Shrybman, "International Trade and the Environment: An Environmental Assessment of the General Agreement on Tariffs and Trade", The Ecologist, Vol. 20, No. 1, January/February 1990, p.31.

¹⁷. Ibid. p.33.

¹⁸. David Greenaway, International Trade Policy. From Tariffs to the New Protectionism, London: The Macmillan Press, 1983, p.160.

focus of Chapter V as states attempt to come to terms with the inextricable link between trade and the environment.

Environmental tariffs are not intended to promote protectionism, but rather recognize where states' priorities lie and utilize this to the benefit of the environment. Such protectionism or mercantilism would only be employed if it furthered a state's national interest in general and not environmental objectives alone. Moreover, Mr. Dunkel's warnings of commercial protectionism reflect GATT's precarious future given the current impasse in the Uruguay round which "...has put at risk the very idea of a multilateral rule-based system of trade."¹⁹ Furthermore, despite these admonitions the U.S. is currently employing protectionist measures against Canada and eighteen other countries for allegedly dumping flat-rolled steel in the U.S. The antidumping tariffs range from 1.47 per cent to 109 per cent on a variety of steel products.²⁰

GATT's mandate is "...to raise standard of living, to ensure full employment, to develop resources, to expand production and exchange of goods, and to promote economic development."²¹ The president of the World Bank, Lewis Preston,

¹⁹. "After Uruguay", The Economist, Vol.322, No.7745, February 8, 1992, p.16.

²⁰. "U.S. hits Canadian steel", The Globe and Mail, Wednesday, June 23, 1993, p.A1.

²¹. "General Agreement on Tariffs and Trade", Treaties and Alliances of the World ed. by N.J. Renegger, London: 1990, p.72.

paid recognition to the importance of reconsidering our priorities:

The value of the environment has been underestimated for too long, resulting in damage to human health, reduced productivity and the undermining of future development prospects.²²

Fortunately, accepting the primacy of the environment over free market economics is no longer perceived as the domain of radical social outcasts; it is simply a recognition of the biophysical reality in which we live.

Saunders' concern about rating systems and standards will be addressed in section (iv). However, there are also several other concerns with environmental tariffs that should be addressed. One has to do with their effectiveness vis a vis states at various stages of development.

Developing countries are at a different stages of political and economic development than developed countries. Furthermore, the more pressing concern of simply surviving in many of these countries warrants some appreciation of the differing priorities developing countries have. Although pollution from motor vehicles, industry and agriculture have been significant concerns in developing countries, their major problems are population growth, mass poverty, deforestation and desertification which all severely and adversely effect the environment. These are symptoms of more fundamental social, economic and political dilemmas. Care needs to be

22. World Bank Report, May 18, 1992, in forward by Lewis Preston.

taken to encourage environmentally-sound policies and not punish responsible economic growth. Developed countries must acknowledge the "[e]vidence [which] shows that a rapidly degrading environment is making the poor even poorer."²³ Consequently, the poorer developing countries become, the greater the degradation of the earth's environment. The reality is that many (certainly not all) developing countries will continue to get poorer if an environmental tariff is levied on their export trade.

Prudence must be exercised to distinguish between the various countries that compose the "developing world". Brazil and Chad, South Korea and Ethiopia, Saudi Arabia and Papua New Guinea are all considered developing countries yet the differences between them are great. The social, political and economic circumstances of a country will determine whether environmental tariffs would be effective or even necessary.

For instance, the effectiveness of penalizing Ethiopia with environmental tariffs for the devastation caused by deforestation or desertification would be futile to the extreme. Not only would environmental tariffs have no impact on ameliorating the situation, they may obstruct political, economic and environmental progress. It is necessary to consider the intended purpose of imposing an environmental tariff, which is to influence a country to improve its

²³. Biagio Bossone, "Environmental Protection: Who Should We Pay For It?", International Journal of Social Economics, Vol. 17, No. 1, 1990, p.4.

environmental standing in relation to other countries by exerting external pressure on its exports through the imposition of environmental tariffs. The influence which can be exerted on Ethiopia to improve its environmental record through environmental tariffs would be negligible because its export market is so small. In this case market forces would negate the value of imposing environmental tariffs on many developing countries given their socially and environmentally impoverished condition. This does not eliminate the possibility that environmental tariffs would be imposed for strictly political purposes. Under this scenario the national interests of a state would necessitate a rational cost-benefit analysis of this action.

An important consideration for the state contemplating imposing an environmental tariff on a developing country is the importance of economics to the national interest of the state. Hence, the imposition of environmental tariffs would require a full appreciation of the political and economic benefits to be gained, which in the case of developing countries, would often be insignificant, therefore politically and economically unjustifiable.

(iii). Liberal Economic Trade System's Benefits For International Environmental Reform.

International trade has for decades become increasingly important to many countries. Italy for instance, earns 17.5% (1989) of its GNP from international trade and South Korea

29.6% (See Table 1). Considerable leverage can be exerted on states who exceed accepted levels of pollution or who contravene international agreements. In a self-help world each country will have to be its "brother's keeper", though the mechanics of reciprocity of the international trading system will ensure abusers of environmental tariffs are properly checked. In imposing environmental tariffs, the tariff assessor must be cognizant of the fact that trade works both ways.

The decision as to whether or not to impose an environmental tariff should be made by each state in response to flagrant environmental abuses by a state from whom it is importing products or commodities. Offending states would consequently realize that their domestic environmental abuses are affecting the competitiveness of their products or commodities in the international market. In order to be internationally competitive, it will be in the offending state's national interest to clean up its environmental record. Environmental tariffs would be most effective if a group of states imposed such a tariff on a state renowned for its environmental flagrancies. Preferably, duties collected from environmental tariffs can be used to improve the tariff's own environmental record, thereby becoming more competitive by preempting states from justifiably imposing of environmental tariffs. Consequently, investing in one's own

environment would create a trading advantage over states which do not.

The market mechanism will act as a check on countries who try to abuse environmental tariffs. As Table 1 illustrates in

TABLE 1. Exports as a Percentage of GNP of Selected Countries (1991: Billions US \$)²⁴

<u>State</u>	<u>GNP</u>	<u>Exports</u>	<u>Exports % of GNP</u>
ARGENTINA	91.2	10.0	11%
BRAZIL	447.3	31.3	7%
CANADA	568.7	142.1	25%
FRANCE	1,167.7	268.5	23%
HUNGARY	28.2	10.6	37%
INDONESIA	111.4	30.1	27%
ITALY	1,072.1	225.1	21%
JAPAN	3,337.1	367.1	11%
MALAYSIA	45.8	37.1	81%
MEXICO	252.4	35.3	14%
NETHERLANDS	278.8	158.9	57%
NIGERIA	34.0	12.9	38%
PAKISTAN	46.7	7.5	16%
POLAND	70.6	13.4	19%
SOUTH KOREA	274.5	79.6	29%
SAUDI ARABIA	105.1	48.3	46%
UNITED STATES	5,686.0	568.6	10%

Table 1 illustrates the importance of trade to the economies of a diverse group of countries and confirms the potential leverage which can be exerted against countries which are flagrant environmental abusers.

²⁴. The World Bank, The World Bank Atlas, Washington, D.C.: 1992, pp.18-19.

most cases trade makes up a considerable portion of a country's GNP. States who abuse environmental tariffs will suffer the retaliatory consequences of losing markets for their own exports. Environmental tariffs would therefore, function within the prevailing mercantilist trading system. A flagrant environmental abuser may incur an environmental tariff which could be imposed across-the-board on products they export to the state/s imposing the tariff. For simplicity, it may be more practical to impose a minimal environmental tariff on a state which is a small environmental offender in terms of the number of industries causing the pollution. Attempting to allocate the corresponding proportion of blame to specific industries could be futile and inefficient.²⁵ As an offending state made measurable efforts to improve its environmental record, this effort should be acknowledged by imposing a correspondingly lower environmental tariff rate. There will be, of course, no mechanism in place to prevent abuse other than the reciprocal workings of the market system.

In extolling the virtues of the market system, David Robertson reminds us that "[m]arket-based solutions are generally more effective than bans or prohibitions, because by altering prices they influence individual production and

²⁵. As Edward Barbier found in the world trade in raw ivory (see p.60 n.13).

consumption decisions."²⁶ Furthermore, market forces provide impetus for change and compel companies to become more internationally competitive than any other non-coercive force. Robertson goes on to explain that "...taxes and charges cannot be administered effectively through global agreements because they depend on the fiscal powers of the national governments".²⁷ The proposed environmental tariff system would be administered by national governments in recognition of the difficulty of enforcing international agreements.

An acceptable environmental rating system is important for countries using environmental tariffs in order to justify the imposition of a tariff on the imports of an offending country. Saunders' concern about the U.S. taking the leadership in unilaterally setting world environmental standards ignores the environmental policy initiatives taken by the Scandinavian countries, Germany, The Netherlands, Canada, New Zealand, Australia and many other countries. All these countries would have important input into the creation of environmental standards which the U.S. would doubtlessly seek out to add legitimacy to any standards it intends to apply internationally. Ideally, such standards would be arrived at through an internationally organized conference specifically dealing with the matter. However, countries who

²⁶. David Robertson, "The Global Environment: Are International Treaties a Distraction?" The World Economy, Vol 13, No. 1, March 1990, p,115.

²⁷. Ibid.

suspect that they will be the targets of these environmental tariffs (which may be a majority of countries) could certainly boycott such a conference; possibly rendering it ineffectual. Ultimately, some degree of unilateral action may have to be instigated by each environmentally concerned and responsible country, acting in its enlightened long-term national interest, to give momentum to the concept of environmental tariffs.

(iv). Rating System.

A universal, fair and acceptable rating system would be difficult to formulate and establish. The criteria for the rating system would be to contrive a method of rating countries in terms of how they rank as polluters comparable to other countries. Given that the international trading system already has a marked tendency to operate in a mercantilist manner, states could direct environmental tariffs at countries which rate high as polluters while simultaneously furthering their national self-interests. It should be emphasised once more that this does not constitute support for protectionism, but simply recognizes and utilizes existing trade practices to benefit the environment. Having said this, overtly fostering protectionism will encounter both favour and opposition.²⁸

²⁸. Herman E. Daly and John B. Cobb Jr., For the Common Good, Boston: Beacon Press. 1989, pp. 362-368. Daly and Cobb try to present the views of those in favour of free trade and those advocating protectionism. They go on to question the value of international trade in general, claiming it is, in

Miranda and Muzondo suggest that environmental taxes or pollution permits "...should be based strictly on what is needed to address the environmental concerns..."²⁹ This approach is also relevant for the imposition of environmental tariffs. It is conceivable that environmental tariff rates could range from as low as ¼% to as high as 10% of the value of the goods imported depending on the severity of the environmental infractions.³⁰ These rates would, by necessity, have to be relatively low if they are to be applied on all the exports of a given country. Environmental tariffs should not debilitate the targeted country, only provide an incentive to the infractor to improve its environmental record through domestic environmental policy initiatives.

Establishing an equitable system of rating countries is preferable to random unilateral measures because it would help instill consistency and prevent environmental tariff wars. The criteria used for rating countries should be based on accessible information to deter states from exaggerating their rating of another state in an attempt to justify imposing the highest environmental tariff or to retaliate for having been the target of environmental tariffs. The only verifiable means

effect, overrated.

²⁹. Miranda and Muzondo, p.27.

³⁰. On a trade-weighted basis Canada's average tariff is about 10%. Anthony Chapman, North American Free Trade Agreement: Rationale and Issues. Ottawa: Library of Parliament, Research Branch, January 1993, p.9.

of determining the validity of the environmental tariff imposed against another country is to refer to the information upon which the environmental tariff was originally based. This information should be widely available from domestic governments sources, thereby negating any claim by the target country that the information upon which the decision to impose an environmental tariff was based was incorrect. Verification is a difficult process under any circumstances. An objective method of rating countries is therefore needed. However, any rating system devised will be questionable due to the scepticism surrounding the collection of scientific data in particular.

Rating of states can be based on scientific data regarding the amount of CO₂, CFCs or other pollutants. However, there are some complications with this approach. Marina Alberti and Jonathan Parker aptly maintain that "[t]he intended purpose of measuring environmental changes is to inform policy making."³¹ However, the methods of measuring such change involve considerable controversy. The technology to obtain reliable scientific data is not yet available. Even if the technology existed, developing countries do not have the means, both financial and scientific, to collect such data. As UNEP (1992) has reported;

³¹. Marina Alberti and Jonathan D. Parker, "Indices of Environmental Quality: The Search for Credible Measures", Environmental Impact Assessment Review, Vol. 11, No.2, June 1991, p.99.

...in many countries, especially the developing world, the weakness is less in organizational structure, or even in consultative machinery, than in the resources available for the implementation of agreed policy or the enforcement of law... [E]nvironmental departments in many developing countries have tiny staffs and budgets in relation to the demand made on them.³²

Consequently, scientific data may only be used to rate developed countries such as those in the OECD. Concern arises in that scientific data for or from developing countries may not provide accurate assessments of their pollution ranking relative to (for example) OECD countries.

Other policy-orientated commentators like Gray and Rivkin however, recognize that "[a]bsolute scientific certainty is not a prerequisite for taking action."³³ They maintain that policies need to be implemented based on current research and the knowledge we have of environmental issues. Given this assertion, a significant degree of scientific or economic information made available by any country should be deemed legitimate and accurate considering our current knowledge. Furthermore, some scientists maintain that environmental indices are "...useful tools and some distortion is acceptable." Opponents warn that indices could mislead the user as the measures may not be totally accurate.³⁴

³². Mostafa K. Tolba, (ed.) et al. The World Environment 1972 - 1992, London: Chapman & Hall, 1992, p.730.

³³. C. Boyden Gray and David B. Rivkin, Jr., "A 'No Regrets' Environmental Policy", Foreign Policy, No. 83, Summer 1991, p.52.

³⁴. Ibid. p.98.

Another difficulty with scientific data collection concerns disagreement among experts about appropriate definitions. For example, an ecologist's definition of 'ecological integrity' differs from that of a chemist.³⁵ In comparing social indicators with environmental or scientific indicators Alberti and Parker concede that:

Economic statistics are well developed worldwide. While the development of economic indicators has been characterized by enormous controversies, several economic indices such as GNP and price indices are recognized worldwide as measures of economic wealth.³⁶

The important point they make regards the worldwide acceptance of "price indices".

A variation of the widely known and accepted Consumer Price Index (CPI) may provide a mechanism by which states could be rated. The CPI "...measures relative changes in the prices of a specified set of consumer goods which would be bought by the average household on a regular basis."³⁷ An "Environmental Pollution Index" could be devised to function on the same principle. The Environmental Pollution Index would measure relative change in the pollution producing indices commonly found in all developed states as a matter of determining their economic growth. Where accurate scientific data is not available a country's pollution rating can be

³⁵. Alberti and Parker, p.99.

³⁶. Ibid.

³⁷. David W. Pearce, The Macmillan Dictionary of Modern Economics, London, The Macmillan Press, 1981, p.376.

determined by measuring those economic and scientific proxy variables that create pollution. For example, per capita ratios of automobiles; refrigerators; oil refineries; nuclear energy; chemical plants; pesticide utilization and; forest harvesting or depletion, would make for effective proxy variables for rating states. Statistics for these variables are readily available as governments assess their own economic performance by their relative performance of these variables with other states.

Both the scientific and economic approaches for rating countries in terms of their relative polluting capacity have strengths and weaknesses. The Environmental Pollution Index should only contain data which is deemed to be accurate, whether it is based upon scientific or economic data. The Environmental Pollution Index for countries would contain a pool of twenty to fifty indices, out of which ten to twenty indices would be randomly chosen to evaluate the environmental rating of a particular state.³⁸ As an international public policy instrument, the Environmental Pollution Index may offer an objective and acceptable formula for determining degree of responsibility for environmental degradation. Though any state incurring an environmental tariff based on the Environmental Pollution Index would no doubt point out the flaws in the

³⁸. Determining the mean for each of the proxy variables requires some scientific or economic expertise in the various fields and is therefore beyond the scope of this thesis.

methodology from the data collection to the legitimacy for imposing a tariff.

An example of a possible Environmental Pollution Index can be drawn from the work of David Sarokin and Jay Schuklin who identify three key industries which inflict particularly heavy environmental devastation. The three are energy supply, agriculture and the automobile industry.³⁹ The Environmental Pollution Index indices should reflect these most prevalent source of global havoc. Consequently, an Environmental Pollution Index for developed countries would contain indices which are readily available and represent the major sources of pollution or the most hazardous forms of pollution. Table 2⁴⁰ contains examples of proxy variables which may be suitable indices to rate countries for their environmental standing relative to other countries with a similar economic background.

These indices would apply to some developing countries but by no means to all. Countries like Brazil, South Korea, Taiwan, Saudi Arabia certainly produce significant amounts of pollution from the primary sources mentioned, therefore, should be subject to environmental tariffs. Other less developed countries such as Sudan, Bangladesh, Mali,

³⁹. David Sorokin and Jay Schulkin, "Environmental Economics and Responsibility", Environmental Conservation, Vol. 19, No. 4, Winter 1992, p.328.

⁴⁰. Organisation For Economic Co-operation And Development. (OECD), "OECD Environmental Data Compendium 1991", Paris: M. le Chef du Service des Publications, OECD. 1991.

Afghanistan and so on, would not warrant a high environmental tariff due to the relatively low concentration of major pollution sources in those countries. If prudence is exercised, it may be advantageous for developing countries to impose environmental tariffs on more developed countries. Gunnar Eskeland and Emmanuel Jimenez argue that developing

Table 2. Selected Scientific and Economic Proxy Variables

- automobiles per capita
- refrigerators and air conditioners per capita
- tonnes of
 - pesticides
 - phosphates
 - chemical fertilizers, used per unit of agricultural production.
- coal consumption per capita
- nuclear waste per unit of GAP/per capita
- Hydrocarbons (HC) emissions
- Carbondioxide emissions (CO₂)
- Amounts of wastes generated. These sources could be obtained by examining;
 - municipal,
 - industrial,
 - agricultural,
 - sewerage
 - mining
 - chemical
 - oil
 - waste disposal into the sea per capita
 - paper waste

Source: OECD Environmental Data Compendium 1991.

countries can utilize export taxes and pollution taxes to their benefit as it would enable government to lower domestic

taxes.⁴¹ Eskeland and Jimenez cite a study by the OECD which;
...shows that environmental taxes have been a significant source of funding selected environmental expenditures in developing countries. The magnitude of the revenue potential of pollution-related taxes in developing countries still has to be seen in practice.⁴²

Perhaps environmental tariffs will prove to be more important instruments for developing countries than for the developed countries. Imposing a minimal environmental tariff of 1% or 2% on imports from developed countries is easily justified given the magnitude of the environmental problems they confront. Of course whether or not this is viable in reality can only be tested by actually implementing environmental tariffs.

As Saunders remarks, unilateral environmental action in the international arena encounters several complex and not easily resolved difficulties. However, an equally more important observation would be the failure of multilateral agreements to redress environmental degradation. A new and innovative approach is required to compensate for multilateralism's deficiencies. The combination of the Environmental Pollution Index, an equitable rating system and environmental tariffs allow a state the flexibility to pursue substantive environmental action either multilaterally or if necessary unilaterally. Most importantly, states can more easily justify implementing the type of policies environmental

⁴¹. Gunnar Eskeland and Emmanuel Jimenez, "Curbing Pollution in Developing Countries", Finance & Development, Vol. 28, No. 1, March 1991, p.16.

⁴². Ibid. p.18.

tariffs embody because national interest does not have to be subordinate to the environment, instead the two become mutually dependent.

The entire NAFTA process provides telling insight into the opposition and contention which will be encountered if environmental tariffs are to be imposed. Canada's fervent opposition⁴³ to the imposition of environmental trade sanctions against its exports may very well be a typical response in attempting to impose an environmental tariff. Mexico's concern of NAFTA intruding upon its sovereignty will certainly be raised if environmental tariffs were to be imposed on that country. However, where NAFTA is based on a trilateral agreement, environmental tariffs would be unilaterally imposed thereby instituting a new, though controversial, approach to penalizing environmental abusers which would require no prior treaty arrangement. Nevertheless, the process undertaken to achieve the final NAFTA document confronts many of the same obstacles other international agreements have encountered. An examination of NAFTA's likelihood for success will be conducted utilizing the analytical tools already used for examining the ineffectiveness of existing environmental agreements.

⁴³. Canada has attained a special exemption from having trade sanctions imposed against any goods it exports to either the United States or Mexico. Instead, if a trilateral NAFTA panel finds a persistent failure to enforce Canadian environmental or labour laws, then Ottawa could be fined up to \$20 million (U.S.). Fagan, Drew. "Canada wins special deal in NAFTA", The Globe and Mail. August 14, 1993, p. A1.

CHAPTER V: A PREEMPTIVE ANALYSIS OF THE ENVIRONMENTAL
PROVISIONS IN THE NORTH AMERICAN FREE TRADE
AGREEMENT.

(i). General Overview of the Environmental Provisions Under
NAFTA.

President George Bush and Mexican President Carlos Salinas de Gortari announced their intention to pursue a "Comprehensive Free Trade Agreement" on June 10, 1990. This agreement was to create a dynamic partnership in order to achieve sustained economic growth. The intention of the two Presidents was to facilitate the expansion of trade and investment by gradually removing trade barriers between the two North American nations over 15 years. Then Canadian Prime Minister Brian Mulroney indicated his desire to involve Canada in these negotiations culminating in the announcement of a North American Free Trade Agreement on February 5, 1991.

The legal text of NAFTA was formally signed by the states concerned on 17 December, 1992. The Parliament of Canada ratified the agreement in June 1993 (although not yet proclaimed) and side deals on labour and the environment were signed on September 14, 1993 by all the NAFTA parties. The U.S. and Mexico have yet to entrench the NAFTA into their body

of domestic law.¹ Although many of the provisions contained within the 22 chapters of the NAFTA could affect the environment, several key provisions address the trade/environment issue directly.

The Preamble to the NAFTA specifically identifies environmental protection and conservation as primary objectives, as well as the promotion of sustainable development and strengthening the development and enforcement of environmental laws and regulations.² However, these are philosophical principles espousing good intentions though their general and hortatory nature may preclude states from being bound by them under international law.³ The preamble's value as an international environmental instrument is therefore largely limited to pedagogy.

Article 104.1 of NAFTA sets out exceptions where treaty obligations to the Convention on International Trade in

¹. Subsequent to the completion of this thesis NAFTA was passed in the U.S. Congress on November 17th, 1993 by vote of 234-200 with a majority of the Aye votes coming from Republican Congressman. The following day the Mexican Congress also approved NAFTA. On November 20th, 1993 the U.S. Senate ratified NAFTA encountering only 16 Nay votes.

². North American Free Trade Agreement, Ottawa: Ministry of Supply and Services Canada, 1992, Preamble.

³. Edward McWhinney makes this agreement in relation to the Preamble in the United Nations Charter. Although the Preamble in U.N. Charter is considerably more poetic than the NAFTA Preamble, McWhinney explains the difficulty in applying general principles such as those expounded in the U.N. Charter to specific principles under international law. This argument may also be made about the NAFTA Preamble. Edward McWhinney, United Nations Law Making, New York: Holmes & Meier Publishers, 1984, pp.165-167.

Endangered Species (1979), Montreal Protocol (1987), and the Basel Convention (1989) prevail over the Agreement. However, the trade embargoes imposed under these three treaties apply only against non-signatories. As Christopher Rolfe has concluded, "[s]ince, Canada, the United States and Mexico are signatories to all three agreements the provisions of Article 104.1 are largely meaningless."⁴ The parties to NAFTA consequently retain their sovereignty over their domestic environmental laws, regulations and enforcement prerogatives.

Relevant articles in Chapter 7 of the NAFTA take care not to intrude on a country's sovereignty. Article 712 upholds each country's right to select its own appropriate level of protection of human, animal or plant life or health. The appropriate level of protection to be imposed is covered under Article 713 which encourages states to seek relevant international standards based on scientific principles and risk assessment as expounded under Article 715. Chris Rolfe asserts that work is needed to define "risk assessment". Furthermore, clarification of what constitutes "international standards" is required. Can a country adopt standards which are higher than the scientific evidence deems necessary? Finally, Rolfe maintains that as a precaution, provision for

⁴. Christopher J.B. Rolfe, Protecting the Environment in the Context of the North American Free Trade Agreement, Vancouver: West Coast Environmental Law Association, March 30, 1993, pp. 12-13.

higher standards should be allowed where scientific uncertainty exists.⁵

Within Chapter 9, Articles 904, 905, 906, and 914 deal specifically with environmental issues. Article 904 is analogous to Article 712 concerning each party's right to choose appropriate levels of protection and therefore encounters the same difficulty of requiring clarification on what "international standards" allow. Pursuant to Article 904, Article 905 carries over the idea expressed in Article 713. Each party shall use international standards as the basis for its own sanitary and phytosanitary and standard-related measures. Disagreement revolves around whether a party can adopt more stringent measures than scientific evidence warrants. Rolfe says a party cannot, because higher standards "...could be challenged on the basis that they are not justifiable under Article 905."⁶ Conversely, Chapman assumes that a party "...may adopt or maintain more stringent measures than those set internationally."⁷ Article 906 simply encourages NAFTA parties to "...work jointly to enhance the level of safety and of protection of human, animal and plant

⁵. Ibid. pp. 16-19.

⁶. Ibid. p.18.

⁷. Anthony Chapman, North American Free Trade Agreement: Rationale and Issues, Ottawa: Library of Parliament, Research Branch, January 1993, p.19.

life and health, the environment and consumers."⁸ Finally, Article 914 places the burden of proof that a NAFTA party's standards are inconsistent with NAFTA provisions upon the complainant party.

If NAFTA does not provide means to ensure that existing environmental laws are enforced, particularly in Mexico, then Article 1114 is of little value. Subsection 2 of Article 1114 states that parties to NAFTA should not lower their environmental standards to attract investment. It would be logical to assume that in order to lower standards they must be at a level from which they can be lowered. Though certainly applicable to Canada and the U.S., this Article is almost irrelevant in the case of Mexico.

Articles 2005 and 2015 deal with dispute settlement which is essential to any international agreement. Dispute settlements are largely corrective measures designed to resolve problems created because of ambiguity in the text or exploratory infractions (either intentional or incidental) which test the limits of the agreement. Therefore, dispute settlements inadvertently create international environmental public policies by settling disagreements and clarifying ambiguities which arise from those policies.

Nevertheless, Articles 2005 and 2015 are not the last word on dispute settlement mechanisms. Disagreement persisted

⁸. Article 906. North American Free Trade Agreement. 1992, p. 9-3.

between Canada and the U.S. on approaches to dispute settlement. Canada maintained that the U.S. approach was "too adversarial" and "too prosecutorial". Canada's chief negotiator John Weeks said: "Canada and Mexico have proposed that the three nations offer 'mutual reassurance' that environmental laws and standards will be adequately enforced."⁹

Although Canada has passed Bill C-115 (NAFTA legislation), this may be perceived as a negotiating ploy attempting to convince U.S. negotiators that the dispute settlement mechanism as outlined in Articles 2005 and 2015 are final. However, this is far from the truth. The U.S. is adamant that the parties must include some form of trade sanctions as a means of disciplining infractors. This will be part of the dispute settlement arsenal of measures to give the North American Commission on the Environment (NACE) "... a significant degree of credibility, a significant degree of power, and a significant degree of independence,"¹⁰ according to chief U.S. negotiator Rufus Yerxa. Therefore, it is quite probable that Articles 2005 and 2015 will be changed to reflect the U.S. Congress' insistence on including trade sanctions if NAFTA is to pass.

⁹. Peter Menyasz, "Use of trade sanctions to force compliance a problem", Environmental Policy & Law, Vol. 4, No. 3, June 1993, pp. front page & 214.

¹⁰. Ibid.

Though Canada is now exempt from being subject to trade sanctions, this is not a big concession by the U.S. The environmental condition of the U.S.-Canada border has not particularly been an issue in NAFTA trade negotiations. In fact, now that Canadian concerns over trade sanctions are placated, the U.S. can continue with one of its primary concerns which is to compel Mexico to drastically improve its environmental record, especially along the Maquiladoras.¹¹ Mexico's willingness to accept trade sanctions as part of the terms of the Agreement illustrates the importance that country places on completing the negotiations to ensure that freer trade with the U.S. is achieved. For Canada and the U.S. their national interests have greatly influenced the conditions of NAFTA with the attainment of free trade almost assuming secondary priority.

The environmental side agreement offers an opportunity to examine NAFTA countries' specific, though not exclusive, positions on the environment. These positions will reveal each country's attempt to protect or further their national interests. The link between the environment and other matters becomes evident in the side deal negotiations because

¹¹. The importance of Canada's participation in NAFTA is illustrated by President Clinton who, in his NAFTA promotional address, "...largely ignored Canada in his speech except to mix up his facts about Canada-U.S. trade..." John Saunders, "Clinton begins NAFTA push", The Globe and Mail, September 15, 1993, p.B1.

discussion on the environment cannot be separated from trade, labour, immigration and other political considerations.

(ii). Canada's position on the Environmental Side Line Agreement.

Like the largely ancillary role Canada played in the NAFTA negotiations, its role in the environmental side line negotiations also appear to be secondary to U.S. interests in improving environmental conditions along its border with Mexico. According to the "Canadian Environmental Review" made public in October 1992;

...it is unlikely the NAFTA will have a significant impact on the environment in Canada. The review also concluded there is likely to be minimal, or no, relocation of Canadian industry owing to projected differences in pollution abatement costs.¹²

Nevertheless, Canada does have recommendations to make on the side deal agreements which it will pursue to continue its participation in the negotiations. In a special report by Inside U.S. Trade on May 24, 1993, a copy of Canada's draft text¹³ on the environmental side line agreement was published which expounds Canada's position in detail. Michael Wilson's outline of Canada's four basic objectives in the environmental side line agreement may be a good starting point to provide a

¹². "Backgrounder. The North American Free Trade Agreement Implementation Act", News Release, Ottawa: Minister of Industry, Science and Technology and Minister for International Trade, No. 43, February 25, 1993, p.4.

¹³. Inside U.S. Trade, "Special Report", May 24, 1993, pp. S-1 - S-7.

narrower framework from which to begin to understand and analyze Canada's proposal:

1. Canada will support the creation of--and propose specific functions for--a North American Commission on the Environment (NACE).

2. Canada will seek to strengthen environmental co-operation among Canada, the U.S. and Mexico.

3. Canada will promote sustainable development based on mutually supporting environmental and economic policies and practices.

4. Canada will favour increased co-operation on the development and enforcement of environmental regulations.¹⁴

Each one of these recommendations will be examined with the aim of determining Canada's position on each point.

The first recommendation to support the creation of NACE exemplifies Canada's concern for its interests above the environment. Michael Wilson has proposed that the functions of NACE will;

...include harmonizing environmental standards at higher levels, developing limits for specific pollutants, promoting environmental science and technology, and increasing public awareness of environmental issues.¹⁵

In effect, Canada's proposal would bestow no tangible enforcement powers onto NACE. Instead, it will become another international organisation whose primary function would entail

¹⁴. Michael Wilson, "Wilson Outlines Canada's Objectives in talks with U.S. and Mexico on Environment, Labour", News Release, Ottawa: Minister of Industry, Science and Technology and Minister for International Trade, No. 66, March 1993, p.1.

¹⁵. Michael Wilson, "Notes for an address by the Honourable Michael Wilson, Minister of Industry, Science and Technology and Minister for International Trade, Second Reading Debate on Bill C-115 (The NAFTA Implementation Act), Statement. Ottawa: Ministry of Industry, Science and Technology and Minister for International Trade, 93/22, March 25, 1993, p. 9.

imposing on Mexico environmental standards already adopted as policy in Canada and the U.S. The draft text outlines the environment Commission's role as a consultative body capable of making recommendations to parties through the establishment of an "independent enquiry committee" (Article 19), though the text does not specify that a party would not be subject to sanctions if it does not comply with the Commission's recommendations. It is clear that the Canadian text attempts to retain a party's full autonomy in matters of resolving its environmental problems, emphasizing co-operation rather than coercion.

The second proposal is largely rhetorical. Creating NACE has the most potential for strengthening environmental co-operation in a substantive way, however, this opportunity is not being seized. Nevertheless, the Canadian government cites other agreements as proof of its effort. Among these, the Agreement on Environmental Co-operation with Mexico signed March 16, 1990; a \$1-million program to improve Mexico's environmental monitoring and enforcement practices announced in March 1992 and a Memorandum of Understanding on Environmental Education signed by the three NAFTA parties in September 1992.¹⁶ Though useful instruments, like all international treaties, they lack enforceability and consequently, often lack credibility.

¹⁶. News Release, No. 43, February 25, 1993, p.6.

As espoused earlier, sustainable development is a catch-phrase without real substance which governments flaunt to convey the impression that environmental concerns are being addressed. Article 1 of the draft text elaborates on how sustainable development is to be achieved through such abstract phraseology as "co-operation", "supporting environmental goals", "strengthening consultation" and "promoting transparency". Michael Wilson has briefly addressed sustainable development:

We are clear on this. The NAFTA is part of this Government's commitment to the quality of working life and to sustainable development. The NAFTA will contribute to economic growth in a way that takes into account the health and well-being of the population, and the protection and preservation of the environment on which we depend.¹⁷

Based on the earlier critique of sustainable development, it is clear that this statement makes for fashionable oratory, though it is inherently contradictory. Apart from not clearly establishing what he means by sustainable development, Wilson does not appreciate that sustainable development and the "protection and preservation of the environment" are not possible without the ability to reprove free riders and internalize externalities. Liberal economic philosophy has contributed considerably to creating the environmental problems we currently have, so it is incredulous to believe the continuation of this system will solve the problems it has created.

¹⁷. Statement, March 25, 1993, p.9.

Point four is a misleading statement on two counts. First, "increased co-operation" implies co-operation between the three NAFTA parties. Secondly, "the development and enforcement of environmental regulations" together suggests that increased co-operation between the three NAFTA parties is sought to institute means of enforcing agreed-upon environmental regulations. This, however, is not Canada's official policy.

Canada insists that the U.S. recommendation to impose trade sanctions for environmental violations is unacceptable.¹⁸ Being more specific, one senior Canadian official explained: "We're worried about arming the United States with any new capacity to take trade action against Canada."¹⁹ This statement is wrought out of Canadian experiences of being at the receiving end of U.S. countervailing duties on such items as steel, softwood lumber and livestock (see page 13, footnote 25). Wilson prefers public participation (Article 6 of the draft legal text) to compel governments to abide by environmental regulations: "Transparency and the heat of the public spotlight are powerful instruments in encouraging governments to respect their obligations, both to their own

¹⁸. Peter Morton, "Parliament puts Wilson on hot seat over NAFTA", Financial Post, May 27, 1993, p.5.

¹⁹. Drew Fagan, "Canada to fight NAFTA side deals", The Globe and Mail, May 19, 1993, p.B1.

citizens and to each other."²⁰ Contradicting himself, Wilson implicitly explains what his idea of "enforcement" is:

In my view, the protection of the Canadian environment should be the collective responsibility of Canadian governments, Canadian citizens, Canadian businesses and Canadian environmental organizations, not of U.S. or Mexican environmental and business organizations that could well have extraterritorial agendas.²¹

This sentiment highlights Canada's indifference to U.S. anxiety over Mexican environmental abuses in which the latter has demonstrated an inability to enforce existing regulations. Canada's desire to retain autonomy on the issue of environmental enforcement may not bide well with the U.S. Congress. Whether the U.S. is exempt from the Canadian prerogative to initiate trade sanction proceedings against U.S. for environmental infractions may become the source of possible objection in Congress.

(iii).The United State's Position on the Environmental Side Line Agreement.

The U.S. has specific reasons for insisting upon including an environmental side agreement. West and Senez submit that NAFTA is considered a strategic plan by the U.S. in response to the pollution problems along its border with Mexico. Therefore, according to West and Senez, NAFTA is to:

(i) stabilize the ecology, environmental protection of public health factors in the border area and, (ii)

²⁰. Michael Wilson, "Letter to Mr. Chris Rolfe of the West Coast Environmental Law Association." June 23, 1993, p.2.

²¹. Ibid. p.3.

relieve the demographic pressure of in-migration of foreign nationals into the American Southwest.²²

Weintraub and Gilbreath would add:

Thus, implicit within trade negotiations is a US demand that Mexico improve its infrastructure to facilitate increased levels of trade and that Mexico upgrade its environmental programs, ideally to US standards, to minimize the loss of transboundary resources and the health and safety impediments to the increased flow of agricultural and industrial commodities.²³

In simple terms, trade for the U.S. can be seen as the vehicle or the carrot for prompting Mexico to take responsibility for its deplorable environmental (and labour) record, particularly in the Maquiladoras which border the U.S. The controversy within Congress attests to this position as the agreed upon side deals on the environmental and labour issues still encounter considerable opposition. "U.S. President Bill Clinton has said that the parallel deals must be passed before he will present the NAFTA ratification bill to the U.S. Congress."²⁴

²². Paul West, and Paul Senez, Environmental Assessment of the North American Free Trade Agreement. The Mexican Environmental Regulation Position, Victoria, British Columbia: Ministry of Economic Development, Small Business and Trade, January 1992, p.68.

²³. Sydney Weintraub and Jan Gilbreath "The Social Side of Free Trade", Ties Beyond Trade. Labour and Environmental Issues under the NAFTA, Lemco, J and Robson, W.B.P (ed.). Toronto:Howarth and Smith, 1993, pp.53-54.

²⁴. John Davidson, "Mexico attacks side deals", The Globe and Mail, March 26, 1993, p.B4.

NAFTA has been approved by Congress (November 17th., 1993) and all three parties are certain to proceed with the proclamation of NAFTA on January 1st., 1994. Canada's new Liberal government had previously requested to re-open NAFTA for re-negotiation but "...settled instead for three pages of

The principal means advocated by the U.S. of compelling Mexico to enforce environmental laws thereby improving its environmental record is through the use of trade sanctions. The May 21, 1993 edition by Inside U.S. Trade disclosed a copy of the U.S. draft text of the side line agreements on the environment and labour. This text included several provisions promulgating the imposition of trade sanctions such as Articles 7(c), 16 (4) (e), (h) and (i)²⁵. Trade sanctions generally have been criticised for being "...heavy-handed and treads on each country's right to develop its own

side agreements -- a unilateral declaratrion on energy and joint statements along with the United States and Mexico on water exports, anti-dumping measures and subsidies." Barrie McKenna, "Liberals Concede NAFTA Fight", The Globe and Mail, December 3, 1993, pp.A1-A2.

²⁵. Inside U.S. Trade, "Special Report", May 21, 1993, pp. S-1 - S-19.

Article 7

(c) seeking sanctions, such as orders, compliance agreements, fines, penalties, injunctions, or imprisonment, in enforcement proceedings that are appropriate in light of the nature and gravity of the violation, any economic benefits derived from the alleged violation by the subject of the proceedings, and other relevant factors.

Article 16

(e) Article 2016(2)(b) shall read as follows: "its determination as to whether the Party has demonstrated a persistent and unjustifiable pattern of non-enforcement of its environment; a law, or any other determination requested in the terms of reference",

(h) if the Council is unable to resolve the matter within 30 days after it convenes, and provided that reasonable time has been available for the Party complained against to pursue enforcement action, a complaining Party may suspend an appropriate level of benefits under the NAFTA until such time as initiated; and

(i) in deciding what sanction is appropriate, the Party shall bear in mind that the purpose of any such suspension should be to encourage enforcement action rather than to create trade protection.

environmental laws."²⁶ More specifically, when comparing the relative size of the Canadian and Mexican economies to that of the U.S., it becomes evident that the former cannot compete with the latter in "tit-for-tat" trade battles given existing trading patterns.²⁷ (See figure 1). Fundamental to Canadian and Mexican opposition to the idea of sanctions has been their insistence that it would interfere with their national sovereignty.²⁸

In contrast to Canada, the U.S. has consistently demanded that NACE be an independent body "...with investigatory powers, and use trade sanctions as enforcement."²⁹ Chapter IV of the U.S. draft text follows this prescription as the composition and duties of the Council, the Secretariat and the Public Advisory Committee are detailed under the auspices of NACE. Most environmental groups across North America applaud granting NACE "...meaningful responsibilities and resources to fulfil its mandate,"³⁰ however, Canada and Mexico are concerned

²⁶. Peter Morton, "NAFTA negotiators seek side deals with sovereignty intact", The Financial Post, April 14, 1993, p.3.

²⁷. Fagan, (May 19, 1993) p.B2.

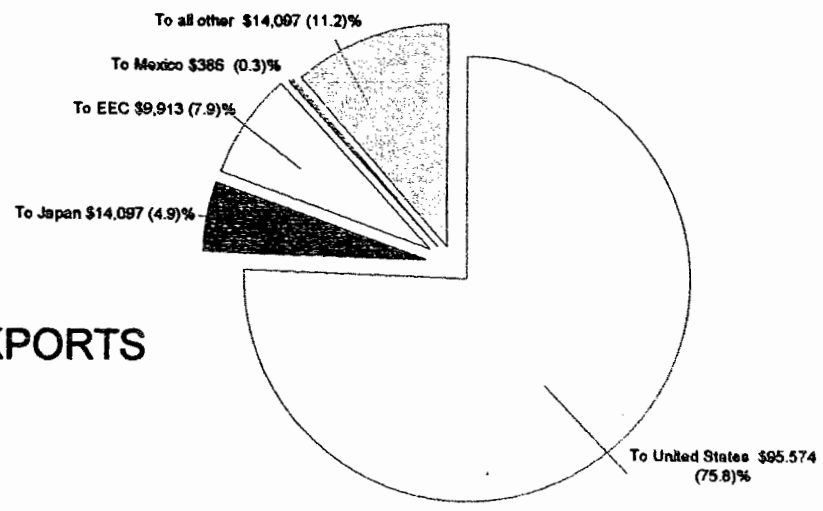
²⁸. Kelly McParland, "Key senator sees NAFTA success", The Financial Post, May 19, 1993 p.4.

²⁹. Senator Bachus. "North American Free-Trade Agreement", Congressional Record, Vol. 139, No. 64, May 10, 1993, p.S5737.

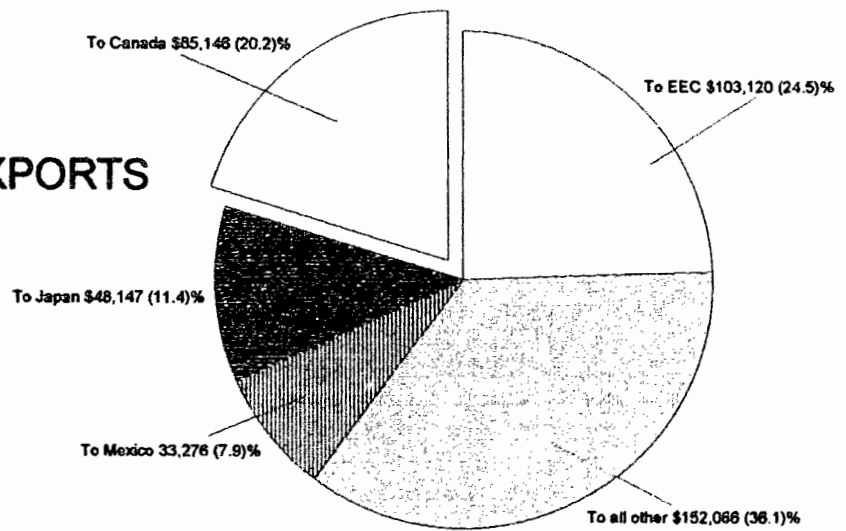
³⁰. "Environmental Organizations Outline Proposal for NAFTA Side Agreement", Defenders of Wildlife et al. Washington, May 4, 1993, p.1.

Figure 1
1991 Merchandise Exports
Millions of U.S. Dollars

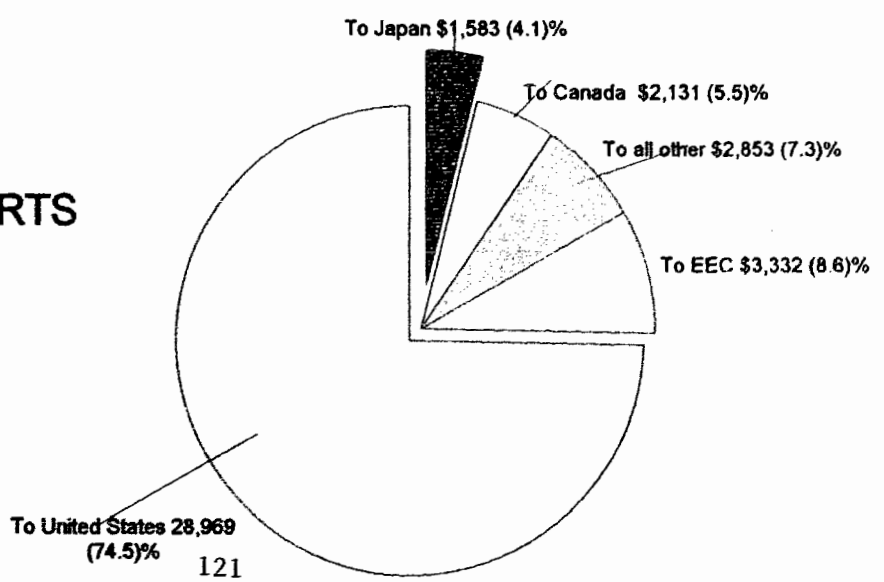
CANADIAN EXPORTS



UNITED STATES EXPORTS



MEXICAN EXPORTS



with not creating a supranational agency which would impinge on their sovereignty.

Like Canada, the U.S. injected a certain amount of rhetoric in its side line agreement proposal. The catch-phrases of sustainable development (Article 1 (b)) and co-operation (Article 1 (g) and Article 10 (2)) are requisitely touted. However, with reference to the latter, suspicion rather than co-operation may be the operative word for Canada and Mexico who perceive the U.S. as seeking to impose its environmental standards on them to justify its protectionist tendency under the rubric of "free trade".

(iv). Mexico's position on the Environmental Side Line Agreement.

Mexico has taken a similar position to Canada on the environmental side deal issue, however, Mexico has more at stake in the deal than Canada. Should the NAFTA fail, this would create a "nightmare scenario" for Mexico which entails "a delay or rejection of NAFTA, followed by a panic among investors and collapse of the Mexican peso."³¹ If a deal is successfully concluded: "Salinas will have little difficulty pushing his NAFTA legislation through Mexico's Congress, where his Institutional Revolutionary Party holds a majority."³²

³¹. Matt Moffett, "Nafta or Not, Salinas Pursues Free Market", The Wall Street Journal, June 15, 1993, p.A13.

³². Peter Morton and Rod McQueen, "Import surge safeguards Canada's main NAFTA worry", The Financial Post, January 2, 1993, p.5.

Opposition to the environmental side agreement does not come from the U.S. and Canada alone--Mexicans also have their concerns. The most notable of these is that Mexico will attract highly polluting industries from Canada and especially the U.S. because Mexican environmental standards are low and enforcement is weak. Therefore, concern for Mexico becoming a "dumping ground" for polluting companies is a real issue.³³ In response to this fear President Salinas has stated:

Mexico will not receive new, polluting industries that are not accepted in other countries. And, just as we do not want dirty or obsolete industries, we do not want to see our territory or our seas turned into garbage dumps, whether for ourselves or others.³⁴

Domestically, Mexico now requires that potentially contaminating industries which aspire to locate in that country or existing facilities with plans to expand must file an Environmental Impact Statement.³⁵ In 1988, the Mexican Congress passed "The General Law of Ecological Equilibrium and Environmental Protection", which constitutes the backbone of Mexico's environmental laws. This "General Law" is based, for the most part, on U.S. experience, and includes criminal

³³. International Wildlife, "A Conversation With Mexico's President", September/October 1992, p.51.

³⁴. Edward M. Ranger Jr., "Mexican Environmental Regulations. Their Influence on Foreign Investment", Business Mexico, Vol. 1, No. 2, 1992, p.20.

³⁵. Ibid.

penalties for non-compliance.³⁶ Though criticized for being a "paper tiger"³⁷, the General Law is being enforced more diligently since Mr. Santiago Onate Laborde became Attorney General for the Environment. National interest and state sovereignty continue to be obstacles which all NAFTA parties have been unable to lower for the sake of future generations. Under the Salinas administration the environment has been elevated to one of the highest priorities and consequently greater attempts are being made to more vigorously enforce Mexico's new and tougher environmental laws and regulations.³⁸

Mexico supports the creation of NACE which, according to their proposal, would also be divided into three bodies. The

³⁶. Andrew Lowry, "North American Free Trade Agreement and the Environment", Business America. The Magazine of International Trade, Vol. 113, No. 21, October 19, 1992, p.22.

³⁷. Drew Fagan, "A green focus for free trade", The Globe and Mail, March 17, 1993, p.B1.

³⁸. Embassy of Mexico (Ottawa). "Environmental Laws and Their Enforcement", Mexico and Free Trade: Fact Sheet, 1993. p.18.

Mexico's efforts to enforce environmental laws and regulations, include:

- * Fourfold increase in the number of environmental inspectors to more than 400.

- * Signing of agreements with 2,112 industries to install pollution control equipment.

- * Inspection of more than 7,668 industrial site for environmental compliance.

- * Suspension of operating licences and closure of 1,926 facilities for non-compliance with environmental regulations; reopening was permitted only after government approval of a full compliance program.

- * Permanent closure of more than 100 facilities, including the March 1991 closing of an oil refinery in Mexico City to curb pollution in the Valley of Mexico, at a cost of over US\$625 million in government revenues. Ibid. pp.18-19.

Mexicans, however, want the secretariat to be composed of nationals (Article 7) and funded separately by each party (7(1)(a)).³⁹ Article 7(2) explicitly subordinates the secretariat to members on the national Executive Committee (presumably environment ministers).⁴⁰ Clearly, the biggest obstacle obstructing consensus on the environmental side line agreement remains the issue of trade sanctions.

Article 9 of the draft legal text explains the type of action to be taken against a party which has exhibited an "...unjustifiable, persistent and systematic failure..." to uphold environmental standards. It strictly avoids any reference to trade sanctions. Upon receiving a complaint concerning ongoing violations, the Executive Committee (comprised of one national from each Party) which presides over the Commission, may issue recommendations and make them public unless the Parties agree to do otherwise (Article 9 (7)). This is the harshest disciplinary measure the Mexican's recommend. Even to incur this lenient penalty, Mexico advocates a more stringent criteria than the U.S. who propose tougher penalties given a less stringent burden of proof.⁴¹

³⁹. Inside U.S. Trade, May 21, 1993, p.S-15.

⁴⁰. Ibid. p.S-16.

⁴¹. Under the Mexican proposal "...unjustifiable, persistent and systematic failures..." (Article 9 (1)) need to be proven before recommendations and public attention may be brought to a violation. The U.S. proposal proposes that "...a persistent and unjustifiable pattern of non-enforcement..." be established before trade sanctions may be imposed (Article 16 (1)). Ibid, pp. S-16 and S-13. Article 19 (1) under the

Mexico's draft legal text limits the role of public involvement in the enforcement process. Only the advisory groups (Article 6), who may consist of experts from a variety of backgrounds, can initiate an inquiry. Whereas under Article 12(4)(c)(1) of the U.S. submission "...interested persons and non-governmental organizations" may initiate an inquiry. Moreover, according to analyst Scott Ottemen, the Mexican draft requires that the other two NAFTA governments are to come to the defence of a Party accused of having violated its obligations before action can proceed.⁴²

Invariably, sustainable development and the importance of co-operation also feature as important objectives in the Mexican draft. However, such rhetoric is trivial given the relatively lax penalties and limited public participation proposed in the Mexican submission. The U.S. Congress will not accept these terms unless greater assurance is provided that Mexico in particular will enforce its environmental laws and regulations.⁴³ With trade sanctions having been agreed to in

Canadian proposal calls for "...a consistent pattern of violations of the obligations under this Agreement by a Party" to warrant the penalty of public pressure being made to bear on an infracting Party. Inside U.S. Trade, May 24, 1993, p. S-6.

⁴². Inside U.S. Trade, May 21, 1993, pp. S-9 - S-10.

⁴³. U.S. environmental groups remain split on the effectiveness of the environmental side deal. The Sierra Club, Greenpeace and Friends of the Earth continue to oppose NAFTA. "They maintain that the environmental side agreement won't dissuade U.S. companies from going to Mexico to take advantage of its lax environmental enforcement, thus putting pressure on

the side deals the arguments against NAFTA in the U.S. have begun to focus on the prospect of job losses to Mexico.⁴⁴

(v). Plausible Extrapolations.

Discerning the success of NAFTA's environmental side agreement is somewhat premature considering that it has not been implemented and tried. Nevertheless, the information that is available is sufficient to extrapolate some plausible deductions as to the likely success of NAFTA based on the theoretical and analytical constructs already developed. The focus of these deductions are strictly based on the feasibility of trade sanctions as they relate to those states accused of environmental infractions.

Governments' prominent role in the NAFTA negotiations as well as in all trade, environmental, communications matters,

the U.S. to relax its own standards." Other environmental groups including the National Wildlife Federation and the World Wildlife Fund maintain that NACE "...will give the U.S. leverage it hasn't had before to encourage Mexico to clean up its environment." Asra Q. Nomani and Michael K. Frisby, "Clinton Opens Free-Trade Drive, But Side Accords Could Fall Short", The Wall Street Journal, September 15, 1993, p.A.18.

⁴⁴. The Wall Street Journal reported unions oppose NAFTA out of fear that U.S. Companies may relocate in Mexico due to lower wage rates consequently, they maintain that thousands of American jobs could be lost. Jackie Calmes and John Harwood, "As Congress Begins Hearings, Agreement Faces Uphill Climb". The Wall Street Journal, September 15, 1993. p.A18.

The New York Times reported that "...the question that has come to dominate the debate over NAFTA: its effect on American jobs." Gwen Ifill, "Clinton Call on 3 Presidents To Promote Free-Trade Pact", The New York Times, September 15, 1993, p.A12.

etcetera, is a very poignant assertion of the condition of international trade relations. The very fact that the governments of the U.S., Canada and Mexico must meet and, through a lengthy negotiation process, agree upon certain terms to attain "free trade"⁴⁴ is testimony that free trade is not a natural economic phenomenon; rather it must be created and sustained by governments. The pivotal role of the three governments supports the realist contention that states are the principal actors in international relations who seek to further their national interests knowing that no supranational authority exists to force them to comply with agreements if they do not unfold as planned. Furthermore, the jostling for economic advantage to ensure that another state does not attain a trade surplus or attract more corporations at another's expense is inherently a mercantilist trait. The negotiations on the environmental side deal epitomize the central role of the governments in trade negotiations as protectors of national interests with no party wishing to compromise its position in relation to the other participants. The bantering over trade sanctions provides a lucid example of a state's disposition to safeguard national interests.

Though often maligned, trade sanctions would, needless to say, redress some of the existing failures in the market

⁴⁴. In simple terms free trade can be defined as "Trade between nations when there are no barriers to the flow of goods and services between them". Robert P. Thomas, Economics: Principles & Applications, Chicago: The Dryden Press, 1990, glossary.

system and compel states to be more cognizant of their environmental laws and enforcement record. Governments may receive some impetus to enforce environmental laws and regulations (which are largely instituted to compensate for market failures) if they know that they may incur trade sanctions should they fail in their obligations. This may be considered an international public policy initiative, precluding states from treating domestic pollution-generating activities as no one else's concern and inclining them to think in terms of the global commons. Therefore, the spectre of trade sanctions may overcome some of the enforcement difficulties caused by the eminence of state sovereignty. Additionally, trade sanctions may be an effective means of discouraging or even penalizing international free-riders, so long as they have ratified the agreement and entrenched it in their domestic jurisdictions.

Having initially opposed any kind of intrusion upon their sovereignty Canada and Mexico have demonstrated opposed degrees of tolerance on this issue; reflecting their relative positions with the U.S. Although Canada and Mexico have stated that they recommend co-operation and public awareness as the desirable means of enforcing NAFTA, Mexico's economic imperatives have forced it to concede to U.S. demands that environmental abusers (mainly in Mexico) incur trade sanctions. This reflects Mexico's dire economic circumstances and desperation in seeing NAFTA come to fruition. For its

part, with the Free Trade Agreement (1988) in place, Canada believes that its economic relationship with the U.S. will be relatively secure, thereby fostering more confidence in opposing trade sanctions to preserve its sovereignty with less concern for negative economic repercussions for doing so. However, sovereignty will continue to be a contentious topic particularly if the U.S. commences trade sanction proceedings against Mexico. Accusations of the U.S. bullying its smaller and poorer neighbour can not be avoided particularly with Canada assuming a position largely indifferent to the environmental plight of the U.S.-Mexico border. Regardless of how much care was taken to ensure that the mechanism for instituting trade sanctions appears fair, criticism of the process will abound when sanctions are imposed.

Suggesting that international co-operation and public pressure alone should be the primary corrective mechanisms to ensure environmental compliance does very little in correcting the inherent deficiencies of the market system. The production process most often does not internalize negative environmental externalities in the pricing of a product, thereby the market system fails to reflect the true economic and ecological cost intrinsic in the production process. Some form of government intervention is therefore required to ensure that all the costs of production are included in the final price. Any proposal that does not promote the internalization of all the costs of production within the pricing mechanism, will not

begin to address the pollution problems created by the failures of the market system. Co-operation and public pressure are not enough--government intervention is necessary.

Nonmarket failures such as international borders and national interest are key obstacles which will hinder NAFTA's chances of success. In order for NAFTA to succeed in its environmental objectives, the global commons (in this case confined to the North American continent) must, for the most part, be perceived as having no national borders. In terms of policy implementation this will require ceding some degree of state sovereignty for the good of the commons. Mentally erasing the line which separates one state from another has been an extremely difficult cognitive exercise for the NAFTA negotiators and leaders. Until the shield of suspicion and self-interest can be forsaken, borderlines will continue to be a nonmarket failure which prevent the good of the global commons from taking priority over state interests. Intergenerational equity does not appear to be as pressing a concern as the game of "one-upmanship" in which states tend to be more embroiled. This game can be demonstrated by analyzing the rationale states used to enter in the NAFTA negotiations in the first place.

Canada had little choice in joining the negotiations because:

On the other hand, could Canada afford to stand aside while the U.S. negotiated a separate Agreement with Mexico that threatened to erode some of the gains that

this country had achieved in the earlier bilateral negotiations?⁴⁵

The protection of Canadian national interests was an important factor for the Mulroney government in deciding to join the US and Mexico in trilateral trade negotiations. Canada's economic gains from joining NAFTA would likely be modest, at least initially. "This suggests that Canada's rationale for entering the NAFTA negotiations was primarily defensive in nature."⁴⁶ More specifically, a trade agreement between the U.S. and Mexico would have proceeded whether Canada decided to join or not:

The incentive for Canada to ratify the NAFTA is not just to acquire the benefits from this agreement, but also to avoid the costs of being excluded. The status quo is not an option for Canada.⁴⁷

For Mexico, the incentive also focused on national interest, though in this case Salinas saw the NAFTA "...as Mexico's ticket to the First World."⁴⁸ Gustavo Vega-Cisneros asserts simply that the most important factor for Mexico entering the NAFTA was the continuation of a policy to open Mexico's economy:

For over 40 years, Mexico's development strategy had emphasized growth based on the internal market. However,

⁴⁵. Chapman, p.1.

⁴⁶. Ibid. p.2.

⁴⁷. Richard G. Lipsey, et al. "Inside or Outside the NAFTA? The Consequences of Canada's Choice", C.D. Howe Institute Commentary, No. 48, June 1993, p.8.

⁴⁸. Matt Moffett, "Nafta or Not, Salinas Pursues Free Market", The Wall Street Journal, June 15, 1993, p. A13.

the weakness of the world oil market, and the scarcity of external funds following Mexico's debt crisis, caused the Mexican government to break with tradition in its import substitution policies and seek more revenues through exports.⁴⁹

Chapman suggests several reasons for Mexico's enthusiasm towards NAFTA including expanding its export-led strategy to attain greater access to the U.S. market, "...which is unmatched by any other for size, openness and proximity."⁵⁰ The NAFTA can therefore be seen as a continuation of Mexican policy to promote the export of manufactured goods in an attempt "...to reduce its reliance on oil revenues, seeking to modernize industry, and furthering Mexico's integration with the world economy, particularly with the United States."⁵¹ Salinas also regards NAFTA as a catalyst for foreign direct investment which, combined with the return of flight capital (due to a strong economy because of NAFTA), would help finance its approximately US\$100 billion foreign debt.⁵²

Chapman assigns the U.S. political and economic motives for promoting NAFTA. It is in U.S. interest to have an

⁴⁹. Gustavo Vega-Cisneros, "Critical Issues in NAFTA: A Mexican Perspective", Trade Environment and Competitiveness, Ottawa: Sims Latham Group, Kirkton, J and Richardson, S. (ed.) 1992, p. 132.

⁵⁰. Chapman, p.9.

⁵¹. Edward J. McCaughan, "Mexico's Long Crisis. Towards New Regimes of Accumulation and Domination", Latin American Perspective, Vol. 20, No. 3, Issue 78, Summer 1993, p.19.

⁵². Ibid.

economically strong and politically stable southern neighbour which could potentially become a more significant trading partner to the U.S. and an important market for U.S. goods given Mexico's large population. Furthermore, free trade with Mexico fulfilled George Bush's vision of "Enterprise for the Americas" policy which would eventually attain free trade agreements with other Latin American countries.⁵³

This overview of the NAFTA parties' rationale has demonstrated that self-interest was the motivation and the objective; how then could the resulting agreement reflect anything less?

(vi). NAFTA's Relevance to Environmental Tariffs.

Should the U.S., Canada and Mexico ratify NAFTA this would not necessarily nullify the justification for environmental tariffs. The unilateral imposition of environmental tariffs circumvent many of the encumbrances involved in negotiating, ratifying and enforcing treaties. If NAFTA gets ratified by all parties then trade sanctions for environmental abuses may become a more acceptable means of punishing infractors. However, if NAFTA does not produce the level of prosperity anticipated by Mexico in particular, then any attempt by the U.S. to institute trade sanctions through the NAFTA framework will only foster contempt and a sense of

⁵³. Ibid. p. 10.

treachery. The inferior quality of many Mexican goods and the likelihood that Mexico will not attract American companies⁵⁴ and therefore, investments may produce a free trade agreement that works largely to the benefit of the U.S.

An examination of NAFTA highlights a number of issues which are pertinent to environmental tariffs. The trade sanctions provision under NAFTA is quite similar in principle to the manner in which environmental tariffs would operate, in that environmental abuse should be punished and can not be tolerated. However, environmental tariffs could be seen as a fairer instrument in some respects than the NAFTA proposal for warranting the imposition of trade sanctions. Whereas environmental tariffs would be imposed after a target country's environmental standing is compared relative to other countries (drawing from a reliable set of scientific and economic indices which would serve as environmental proxy variables), the NAFTA employs what may be seen as a less objective approach.

Articles 712 and 713 of NAFTA allow states to select their own appropriate environmental standards based upon relevant international standards and expounded upon under article 715. This genial approach could make for some

⁵⁴. Bob Davis found many instances in which U.S. companies found relocating their business to Mexico to be economically disadvantageous given the lax work ethic, inefficient national communications network and the extensive social benefits a company must, by Mexican law, provide its workers. Bob Davis, "Some U.S. Companies Find Mexican Workers Not So Cheap After All", The Wall Street Journal, September 15, 1993, p.A1.

controversial environmental standards being adopted particularly given the scientific uncertainty which beset environmental data. For instance, should the U.S. disagree with Mexican standards relating to SO₂ emissions then this could create a significant degree of contention if both parties disagree on the scientific data upon which the Mexican level was based. Environmental tariffs may be considered more efficient and fairer because they are a general assessment of a particular country's environmental standing, thereby avoiding the considerable complications and controversy created by appraising every type of pollutant and pollution source one at a time.

Although NAFTA is a trilateral treaty the environmental side deal is basically a unilateral agreement that will essentially work one way. Given the importance Mexico places on NAFTA as the "cornerstone for economic reforms"⁵⁵ and the immense economic disparities between Mexico and the U.S., a uneven trade relationship is being augmented. Some realists like David Baldwin and Kenneth Waltz would argue that Mexico's interdependence with the U.S. is asymmetrical, thereby placing Mexico in a more vulnerable position relative to the U.S. With the obvious the dependency Mexico has on the U.S., it is improbable that Mexico would initiate proceedings against the U.S. for environmental infractions. The proposed rating system

⁵⁵. Anita Snow, "Mexican markets cheer progress", The Globe and Mail, August 14, 1993, p.B3.

for environmental tariffs would at least have the advantage of appearing more objective because of the easily attainable proxy variables in the Environmental Pollution Index which could be subject to scrutiny for verification if necessary.

Perhaps the biggest difference between NAFTA and environmental tariffs is the fundamental premise upon which they are founded. NAFTA aims to redress environmental infractions through a complex system of commissions and panels intended to achieve fairness much like the manner in which law courts operate. This requires greater bureaucratization and government involvement than is necessary and hence, the usual inefficiencies. Conversely, environmental tariffs seek to operate within the prevailing world trade system, consequently utilizing the unique attribute of the free market to ensure fairness through the workings of trade reciprocity.

NAFTA is a groundbreaking treaty because it accepts trade sanctions as a legitimate instrument to remedy environmental abuses. However, these trade sanctions are primarily directed at one developing country (Mexico) which has little choice but to accept the conditions stipulated by its bigger trade partner (the U.S.). The NAFTA side deals are in many respects a bilateral agreements between the U.S. and Mexico with Canada having been extended the diplomatic courtesy of participating in the negotiations and appeased by being exempted from trade sanctions. The drawback with treaties is that after several years of negotiations and delays, the treaty must then be

ratified. After ratification the treaty must then be implemented and a verification mechanism devised, thereby creating more bureaucracy and the inevitable inefficiencies.

CHAPTER VI: CONCLUSION.

Many observers correctly point out that without concerted international co-operation the world environment will continue to deteriorate. This simple observation is a sound and logical assertion of the normative steps needed to alleviate environmental degradation. However, in support of the hypothesis of this thesis, the reality is that states compete with one another to further their national interest. This is particularly true in the realm of international treaties where the state is the principal actor.

Viotti and Kauppi's four primary assumptions about realism have been useful guidelines to analyze international relations as it applies to explaining the ineffectiveness of environmental agreements. Referring specifically to international environmental agreements, the state is undoubtedly the principal actor. The success of such agreements is dependent upon whether a state's national interests coincide with the provisions in a treaty.

States have repeatedly approached international environmental treaties with a double standard. For purposes of international prestige and co-operation, states often sign treaties carrying out their roles as the unitary voice of the country, but fail to adhere or enforce their treaty obligations if it has the potential of causing dissension domestically.

Having assessed states' roles in international trade relations and its pertinence to the environment, a brief comment on the usefulness of the realist assumptions would serve to focus in on how instructive this exercise has been. The realist notion that states are rational actors requires qualification. To the extent that states can only make decisions based upon the information at hand, this assumption is true. However, truly rational actors should have the ability to see beyond their immediate needs. A case in point involves the negative environmental externalities. Deforestation, for instance, may bear instantaneous profit, though in the long term this can render a state economically impotent because not enough forethought went into assessing its consequences even though the knowledge to make an intelligent long-term decision was available.

Another realist assumption which requires some qualification is equating national security with military power. The contemporary reality is that trade and environmental issues are probably as important as military security. Classical realists must begin to acknowledge that ecological security and trade are significant realities in contemporary international relations that can no longer be repressed at the level of low politics. If the environmental problems which plague the earth are not addressed immediately, states will begin to become increasingly defensive of their natural resources to the point where severe trade measures may

become an important instrument to attain power over competitors.

The mercantilist assumption that it is the government's responsibility to protect domestic economic and political groups through trade policies has long been a truth which states professing the virtues of the market system and free trade have often denied yet utilized themselves one time or another. As an actual policy paradigm, mercantilism has provided penetrating insights in exposing the true nature of the international trading system despite concerted attempts to ridicule its tenets and dismiss its relevance. The interconnectedness of politics and economics is highlighted by mercantilism, and perhaps this is the reason why liberal economists in particular have bypassed this theory in their attempt to make economics more "scientific". Mercantilism reveals an irrational aspect of the discipline which is virtually impossible to quantify. A more accurate term to describe the contemporary trading system is not "free trade" but "managed trade", for governments must become involved in the market system to overcome that system's deficiencies.

The concepts of nonmarket and market failures are valuable in establishing that in many respects government intervention in the market place to compensate for market failure is warranted. However, governments must be cognizant that they can also create nonmarket failures by their intervention. The primary reason for utilizing these concepts

was to establish that government involvement in the market place is often necessary and is not an intrusion into a sacred and perfect stateless system. More importantly, these concepts helped to provide an understanding of the interrelationship between the market system and government and assisted in refining environmental tariffs as an instrument required to initiate public policy for the betterment of the environment. However, in order to devise such an instrument, an understanding of some of the obstacles hindering the implementation of effective international environmental policies was necessary.

To this end the nature of the global commons and the persistence of state sovereignty were examined as nonmarket failures; and ecological free-ridership and international externalities were analyzed as market failures. By attempting to understand these principles and obstacles as they relate to international political and economic reality, it was possible to begin narrowing down the kinds of instruments which could best surmount the difficulties at hand.

Furthermore, by gaining an understanding of the recommendations other commentators thought would be appropriate to turn around the present trend of environmental degradation, it was possible to learn from their research and experiences. For example, Kox's conclusion that the answer ultimately lies with the political will to implement environmental policies is crucial affirmation that a

successful environmental policy must take into consideration measures that will motivate a state to employ an implementable and effective environmental policy.

The principal recommendation of this thesis is that the convergence of factors make environmental tariffs a feasible policy option to tackle the exponential rise of international biospheric decline. It would not be difficult to point out some of the shortcomings of environmental tariffs, indeed it is acknowledged that it is by no means a perfect solution and that international co-operation on a unprecedented level would certainly be a more desirable route. Nevertheless, the reality is that at the present time such co-operation is unattainable. Indeed, it may never be attainable unless states begin planning now for the inevitable pressure which will be placed on natural resource supplies. In the absence of any such planning, the market system offers the most viable means by which to encourage states to consider their environmental record.

Tariffs have long been a feature of the international trading system. Deliberate scaremongering on the part of "free trade" supporters that environmental tariffs would bring the trading system down is unsubstantiated. The biggest concern about environmental tariffs is that they may trigger chaos in the international trading system. However, chaos was not triggered by the European Community's Common Agricultural Policy, nor by Japan's protection of its semiconductor, auto

and rice producers. Protectionism is ubiquitous and all states utilize protectionist measures to achieve control over their economic affairs. If environmental tariffs instigate chaos at all, this may be a symptom or a manifestation of more deeply rooted accumulating weaknesses in the prevailing market system.

Other warnings that unitary action in the name of environmentalism would only serve to further divide the economic rift between the North and South may have some foundation. However, the wealth-poverty polarization is already occurring under the present market system. Developing countries must be given special consideration in the contexts of the environment and trade. It would serve no developed states' interest to penalise a developing country which is incapable of being influenced by environmental tariffs to improve its environmental condition. The proposed indices in the rating system would ensure that only the most polluting activities become the primary target of environmental tariffs. Interestingly enough, the Four Tigers have been hailed as exemplary models of successful developing countries, even though this venerated status was achieved by clever clandestine mercantilist policies. It appears, therefore, that a state may covertly employ protectionist measures to protect domestic interests and achieve growth, but may not overtly display such measures, particularly if they support such academic causes as environmental preservation.

Despite the many drawbacks one can contrive to try to demonstrate why environmental tariffs are not feasible, the one transcendent virtue environmental tariffs have over other policy proposals is that environmental tariffs operate within the prevailing parameters of international relations. To make environmental tariffs work it is not necessary to expect states to change what or who they are. States need not cede any of their national sovereignty, or place the interest of the global commons ahead of their national interests; states are not required to "cooperate" on a level never before attained and states are not expected to abide by the dictates of a supranational authority. Instead, all that states are required to do is to accept the fundamental nature of the international trading system and utilize the mechanisms which have long been a part of that system to make the enhancement of the national and international environment a primary focus of their trade agenda.

Once individual states begin caring for their own national environments over which they have stewardship, then perhaps we can begin addressing international environmental concerns more positively. With each state taking an introspective look at their environmental condition, the cumulative effect may be that the greater whole (global commons) will benefit from this introspection. This auspicious scenario is no more implausible than expecting states to comply with international environmental treaties when these

treaties offer no immediate tangible incentive for them to do so.

The NAFTA negotiations provide an opportunity to assess the state of international relations with a focus on trade and the environment. These negotiations provide a lucid example of how states are deceiving themselves in claiming to want free trade. It does not take years of negotiation with each party vying to protect its domestic interests in a document over 2,000 pages long to establish a free trade agreement. This is nothing short of managed trade. Free trade carried to its full extent is probably the most efficient means of solving a number of environmental problems. If all externalities were internalized into the pricing mechanism then the market system would indeed achieve a pricing equilibrium between the cost of goods and the full social, ecological and economic costs of providing that good. However, a pure free market system will never come into fruition because this would require trusting the workings of a clinical process which disregards national interest.

The theoretical and analytical constructs of realism, mercantilism, non-market and market failures established here, have proven to be useful tools to determine the probable success of NAFTA. Realism and mercantilism clarified the objectives of states as they relate to the international trading system. Nonmarket and market failures helped to

establish that governments do have a role to play although they too must recognize their limitations.

If NAFTA succeeds it is because it would have overcome many of the obstacles (free-riders, international externalities, view of the global commons and state sovereignty) which have prevented other international environmental agreements from being effective. Should NAFTA fail, it would be because it did not account for all or some of the obstacles cited. In the end NAFTA may become like most other environmental treaties where the agreement had been entered into though its provisions were not domestically enforced. In light of the U.S.'s economic and political dominance, the overriding obstacle NAFTA needs to surmount is to appear to be the trilateral treaty that it is intended to be and not a unilateral instrument which is what it will likely become.

The irony is that the very politicians who are espousing the virtues of free trade are the same group arguing about under what political conditions "free" trade will function. It is self-evident that no party truly wants free trade, what they want is a trade climate which would be more suitable to their individual political and economic agendas. In such a political climate, environmental concerns must compete for attention along with the deficit, balance of trade problems, recession, unemployment, inflation and a host of other critical issues.

Environmental tariffs could overcome many of the obstacles the NAFTA negotiations are facing. Like all treaties, the NAFTA must be enforced nationally to be effective. If trade sanctions become a part of the agreement, then it would certainly be unique and an interesting experiment in what may be a new phase in international treaty powers. Nevertheless, it can be argued that under close analysis environmental tariffs are a fairer mechanism because of the egalitarian nature of the Environmental Pollution Index for rating countries relative to their economic developmental stage. This Index is designed to achieve a fair and relatively verifiable means of rating countries based upon their own economic and scientific data. Any unilateral action to impose environmental tariffs can therefore be shown to be justifiable given the proxy variables employed. Furthermore, despite its shortcomings the free market system would assist in ensuring, through the reciprocal nature of trade, that a trade war does not ensue following the restrained imposition of environmental tariffs.

Unless some form of positive environmental action is taken soon the world's biosphere is bound to continue to deteriorate. This message has been echoed many times over by prominent people like Mostafa Tolba and Maurice Strong and yet our divisive political and economic institutions appear illequipped to confront the challenges of the present much less the future. These increasingly archaic institutions will

require extensive and profound re-evaluation if the continuing environmental degradation is to be ameliorated.

Although increased co-operation is hailed as one of the most important attributes the international community must foster to turn the tide of environmental degradation, our political and economic institutions revel on competition. How then are states expected to co-operate to compete? The two concepts are contradictory. This fundamental contradiction appears to have eluded world leaders who seem unable to resolve this dilemma. Until such time that co-operation can overtake competition as the prevailing global sentiment, decisive action needs to be taken to protect the global commons. In light of the failure of international agreements to preserve our biosphere, the implementation of environmental tariffs may be an idea whose time has come.

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