EUROPEAN UNION'S TRADE-RELATED ENVIRONMENTAL MEASURES AND ITS NON-TARIFF BARRIER EFFECTS: IMPLICATIONS AND POLICY OPTIONS FOR INDIAN INDUSTRY

Dissertation submitted to Jawaharlal Nehru University
in partial fulfilment of the requirements
for the award of the Degree of

MASTER OF PHILOSOPHY

Submitted by

S. MAHESH

CENTRE OF AMERICAN & WEST EUROPEAN STUDIES
SCHOOL OF INTERNATIONAL STUDIES
JAWAHARLAL NEHRU UNIVERSITY
NEW DELHI - 110 067
INDIA

2000

CENTRE FOR AMERICAN & WEST EUROPEAN STUDIES
SCHOOL OF INTERNATIONAL STUDIES
JAWAHARLAL NEHRU UNIVERSITY
NEW DELHI-110067

21 July 2000

CERTIFICATE

This dissertation entitled *European Union's Trade-Related Environmental Measures and its Non-Tariff Barrier Effects: Implications and Policy Options for Indian Industry* submitted by *S. Mahesh* for the award of the Degree of *Master of Philosophy* is an original work and has not been previously submitted for any other Degree of any University before.

We recommend this dissertation to be placed before the examiners for evaluation.

PROF. B. VIVEKANANDAN
Supervisor

PROF. B. VIVEKANANDAN
Chairperson

GRAM : JAYENU. Tel. : 6107676, 6167557- Extn. 2334. TELEX : 031-73167 JNU IN FAX : 091-11-6198234

Dedicated to my Parents and the Lord Almighty

CONTENTS

PREFACE

The conflict between trade liberalization and environmental protection is a contemporary phenomenon that is bound to grow in importance with the opening up of world trade under the auspices of the World Trade Organization (WTO).

Environmental protection has emerged as a major concern in the industrialized world, particularly in Europe. Unfortunately this has been reflected in the increasing resort to trade restrictions by the European Union (EU) on the ground of environmental protection. The European Union is one of India's largest trading partners and its trade-related environmental measures are bound to have an adverse impact on the market access of Indian products in the European Union. Therefore, it becomes necessary to study the political-economy of environmental standard-setting in the EU, the type of environmental measures that would have an adverse trade impact on Indian industry, their legal compatibility with WTO rules, as well as the potential problems and policy options that the Indian industry would need to consider when facing up to these new non-tariff barriers.

The objectives of this study as outlined in its four chapters are:

1. To discuss some of the issues and complexities involved in the trade-environment interface from an economic and legal perspective.

2. To trace the evolution of environmentalism in Europe and study the process of environmental policy making in the European Union.

3. To find out the nature and motives of interest groups behind trade-related environmental measures initiated within the European Union and to reveal protectionist intentions, if any.

4. To study the characteristics of trade-related environmental measures with respect to trade within and outside the European Union and to ascertain its legal bases.

5. To study the non-tariff barrier effect of the European Union's trade-related environmental measures on Indian industry and exports and suggest suitable policy responses in the domestic and international arena.

6. To suggest a suitable proposal for reconciling process and production methods (PPMs) with environmental protection and their integration into international trade rules.

With these objectives in mind, I have undertaken this study on the challenging frontier of the trade-environment linkage. The emphasis of my study is on one key aspect of this linkage, namely the way in which measures for environmental protection can act explicitly or implicitly as a non-tariff barrier for exports, particularly from the developing countries. This aspect is examined in its political, economic and legal dimensions. The study is descriptive and factual in many respects, yet given the nature and significance of the topic, there is a considerable analytical component. Both primary and secondary source material have been relied upon along with the Internet. Interviews with two renowned experts in their field have also contributed valuable to this work. I am sure this study will shed some light on one of the greatest challenges facing the developing world as we enter a new millennium.

During the course my research for this dissertation I have received help and guidance from a number of individuals and institutions. First and foremost, I wish to thank Professor B. Vivekanandan, my Supervisor and Chairperson of the Centre for American and West European Studies, Jawaharlal Nehru University, for the inspiration he gave me to undertake this study and the patience and meticulousness with which he has corrected my work.

I have relied upon a number of libraries for the collection of primary and secondary data required for this study. They include the British Council Library, New

Delhi, the American Centre Library, New Delhi, the European Delegation Library, New Delhi, the Library of the Indian Society of International Law, New Delhi, the United Nations Information Centre, New Delhi, the Library of the Confederation of Indian Industry, New Delhi, the Library of Jawaharlal Nehru University, New Delhi, the Library of the Tata Energy Research Institute, New Delhi, and the Library of the Centre for Development Studies at Thiruvananthapuram. I am deeply indebted to these Libraries and their Librarians and staff for their help in securing the data I needed to proceed with this work.

I am deeply indebted to Professor B.S. Chimni of the Centre for Studies in Diplomacy, International Law and Economics, Jawaharlal Nehru University for the valuable information and guidance he gave me. I am also grateful to Dr. Veena Jha, the UNCTAD Project Coordinator at the United Nations Office, New Delhi, and Professor John Kurien, Associate Fellow at the Centre for Development Studies, Thiruvananthapuram, for granting me the opportunity to interview them.

I am grateful to all my friends, Simi, Gopakumar, Shiju, Brijesh, Rajesh, Thejas, Meena, Nirbhay, Rajdeep, Koshy, Pramod, Madhavan for the help and support they rendered at various stages of this work from the collection of study material to proof reading.

Finally I am thankful to my parents and grandmother for their encouragement and emotional support that will always be with me.

Jawaharlal Nehru University
18 July 2000

S. MAHESH

LIST OF TABLES AND FIGURES

List of Tables and Figures in Chapters

List of Tables and Figures in Appendix

Page

Poverty and environmental stress are closely related....The necessary conditions to reducing poverty-based environmental damage is to achieve more -- not less-rapid and, at the same time, sustainable growth.

- Brundtland Commission Report, 1987

Chapter 1

INTRODUCTION: THE TRADE-ENVIRONMENT DEBATE

The connection between environmental protection and international trade has been recognized during the last three decades. It is only in recent years, however, that the rise of "environmentalism" within many countries has led to focussed attention on the potential conflict between the values and goals underlying trade and environmental rules. The evolution of trade and environmental law(s), without each taking into account its systemic relationship with the other, has given rise to a seemingly contradictory set of objectives of both. This has spurred conflict between the proponents of greater trade liberalization and those of environmental protection.

The principal global trade regime since the Second World War has been the General Agreement on Tariffs and Trade (GATT). It has evolved through practice and through the eight formal agreements, reached in eight negotiating rounds, culminating in 1994 in the Uruguay Round. This transformed GATT into the newly established World Trade Organization (WTO), including a dispute settlement mechanism. International trade law is now seemingly well-adjudicated and effectively enforced through the principle of '*cross-retaliation*', which, however, is more effective against weaker trading nations than stronger ones. At the same time, environmental law is neither as coherent nor as effectively enforceable as international trade law. It remains scattered in a series of multilateral treaties and declarations such as the Convention on International Trade in Endangered Species (CITES) (1973), the Montreal Protocol (1987), the Rio de Janeiro United Nations Conference on the Environment and

Development (UNCED) (1992), and in a patchwork of organizations such as the United Nations Environment Programme (UNEP) and the UN Commission on Sustainable Development (CSD), an inter-governmental institution created by the UNCED. These institutions have played an important role in the evolution of environmental law and policy and in heightening awareness of environmental issues. But in institutional homogeneity, scope, consistency, extent and participation in negotiations and policy making and in the enforceability of the rules thus made, they are not comparable to the WTO. A debate has thus arisen on the desirability and benefits of a liberalized trade policy, the objective of the WTO regime *vis-à-vis* those of environmental protection, and the viability of reconciling the two. This debate encompasses a wide range of complex issues.

Framing the Issues

The trade-environment debate revolves around the framing of a series of broad policy questions that lie at the core of the debate. They include:

1. Should a state be permitted to impose unilateral trade restrictions to promote that state's environmental objectives in:

   (a) the state's own territory or environment;

   (b) In foreign states; (or)

   (c) In areas beyond the national jurisdiction.

2. Should trade sanctions be used to further the objectives of multilateral environmental agreements?

3. Is differing willingness to suffer environmental degradation simply another aspect of comparative advantage, and if it is not, is it susceptible to regulation in terms of: (a) final products; and/or (b) production processes?

4. Ought states be able to establish domestic environmental standards going beyond the internationally agreed standards?

5. Can conflicts between trade and environment objectives be addressed adequately within trade oriented bodies such as the WTO or are new or reformed forums needed?

6. Is environment a discrete area in which special rules ought to apply, or will any environmental exceptions to free trade rules be a pretext... for protectionism?[1]

Answers to many of these questions are still elusive. It would, however, be worthwhile to throw further light on these issues by discussing the current political, economic and legal framework as well as the thought and practice governing the trade-environment area.

The Economic Efficiency Argument and the GATT Approach

The rationale for international trade stems from distinctive national endowments that lead to differences in comparative advantage. In fact, the principle of gains arising from comparative advantage is at the heart of classical trade theory. Theoretically, countries sell goods whose production costs are lower in their country than in other and purchase goods, they cannot produce as efficiently as others do. However, the significance that different countries attach to environmental costs in the production process varies greatly. Often this significance is also linked to the level of their income. Generally, higher the level of income, greater is the concern for the environment.

Broadly, two views exist on the impact of trade on the environment. The first view regards increased trade, as a result of multilateral trade liberalization to be harmful to the environment by increasing the level of pollution, consumption and

---

1 Benedict Kingsbury, "Environment and Trade: The GATT/WTO Regime in the International Legal System", in A. Boyle (ed.), *Environmental Regulations and Economic Growth* (Oxford, Clarendon Press, 1994), p.192.

transportation of production factors and goods, thereby creating pollution and depleting the Earth's resources. The second view is that free trade has a favourable impact on the environment by allowing efficient utilization of same resources and by increasing standards of living, thereby creating a positive preference for a cleaner environment.[2]

The first view is the one that is advocated by the environmentalists worldwide as well as environmental Non-Governmental Organizations (NGOs) based chiefly in the developed world. The second one has the support of most economists who favour a liberal trade policy.

In a market economy, the price system is an instrument through which information on changes in raw material supplies can be spread throughout the economy. The price of any given commodity depends not only on consumer preferences, but also on the relative scarcity of the raw material used in producing it. In a market economy, every firm chooses the production mix that yields the maximum profit. Similarly, it is assumed that consumers will choose the best available combination of goods, given their income and current prices. If the supply of a certain raw-material decreases, its price will increase and its use will decrease, both in direct consumption and in the productive process. A new equilibrium price that corresponds to the new demand and supply conditions will be established.[3]

---

2 Steve Charmowitz, "Free Trade, Fair Trade, Green Trade: Defogging the Debate", *Cornell International Law Journal* (Ithaca, N.Y.), vol.27, 1994, pp.462-65.

3 Kister Hjalte, Karl Lidgren, and Ingemar Stahl, *Environmental Policy and Welfare Economics* (Cambridge, Cambridge University Press, 1977), pp.4-5.

The reason why the price system in a market economy functions less than perfectly with respect to environmental issues is that it covers only a limited number of natural resources. For example, cars that emit lead compounds in their exhaust can cause an increase in the lead content of crops growing near the road and indirectly lead to the accumulation of lead in animal and human bodies. But the farmer cannot bill passing motorists for using the road and thereby affecting his crops. The cost of pollution is the damage to the crops and increased medical bills of treating consequent ill-health of consumers. Thus, if the price system is to function effectively, it must encompass all of the factors of production and products of a given production process, including the free- environmental factor that is used. Many, if not all, environmental problems are due to a breakdown in the price system. It fails to convey a message about the relative scarcity of environmental resources to the users of these resources.[4]

There are several theoretical approaches to the issues outlined above. The classic approach follows that of the English economist Pigou's work during the 1920s. It involves a discussion of externalities. In an economic context, an externality is said to exist, when one firm's production (or an individual's consumption) affects the production process (or standard of living) of another firm (or individual) in the absence of market transactions between them. The factory emitting smoke in the atmosphere or sewage into a river is an example of a negative externality.[5] The theory of externalities can also be expressed in terms of private costs, i.e., costs

---

4 Ibid., p.7.

5 Ibid.

incurred by a certain production process that are internal to a firm, and external costs (social costs) that are borne by society as a whole.

The condition for a smoothly functioning price system is to establish some kind of ownership or control over the environmental resources, but this is very difficult to implement. Easier, second-best alternatives include:

(a) Imposing taxes or subsidies on wastes, or on activities at an early stage in the production process. For e.g., in imposing a tax on smoke emissions, based on the value of expected damage or on the actual products like phosphates, sulphur or lead additives.

(b) A second alternative is direct regulation - i.e., limiting the total amount of emissions. Such directives that forbid certain processes and establish mandatory processing of waste are measures that affect earlier phases of the production chain. Some regulations on the other hand, limit the amount of certain substances in the final product.

In many instances, the administrative and policing costs of the taxation system are lower than those connected with regulation. It shifts the costs of protection from the consumer of the environment to the producers and consumers of products that destroy the environment.[6]

The relationship between international trade and environmental pollution usually centres on two groups of problems connected with the pollution produced by certain production and consumption activities:

Group One: Pollution is a local or national problem, but the goods produced by polluting activities are traded on international markets and can be produced in any number of different countries. The location and scale of production in any country depends, among other things, on that country's environmental policy.

---

6 Ibid., p.10.

Group Two: Pollution is not only a national but an international problem as the pollutants are transported by air or water to other countries. There are varying degrees of pollution, ranging from one country's polluting of a body of water that is bordered by a few other countries to the pollution of the global commons like oceans and atmosphere.[7]

Group one problems have their greatest impact on trade and, perhaps, lead to a harmonization of different countries' environmental policies. Hence the focus, as of now, will be mainly on the first kind of problem. The difficulty in assigning property rights over environmental resources have led governments to look at options like imposing pollution taxes to induce producers to bear costs of pollution. The problem with this solution of internalizing external costs lies in accurately measuring the costs as well as the possibility that the administrative costs of imposing these measures, such as the pollution taxes, may exceed the revenue raised.[8] Hence, the current practice, as in the European Community, favours the imposition of common environmental standards. Methods which employ economic incentives and the market mechanisms such as carbon taxes are gaining in popularity, in case where the costs of administration are lower than the revenue expected to be raised.

A simple model involving two countries A and B and one commodity Q will demonstrate the problems of different environmental standards in different countries as well as the implications of a common standard on international trade.

---

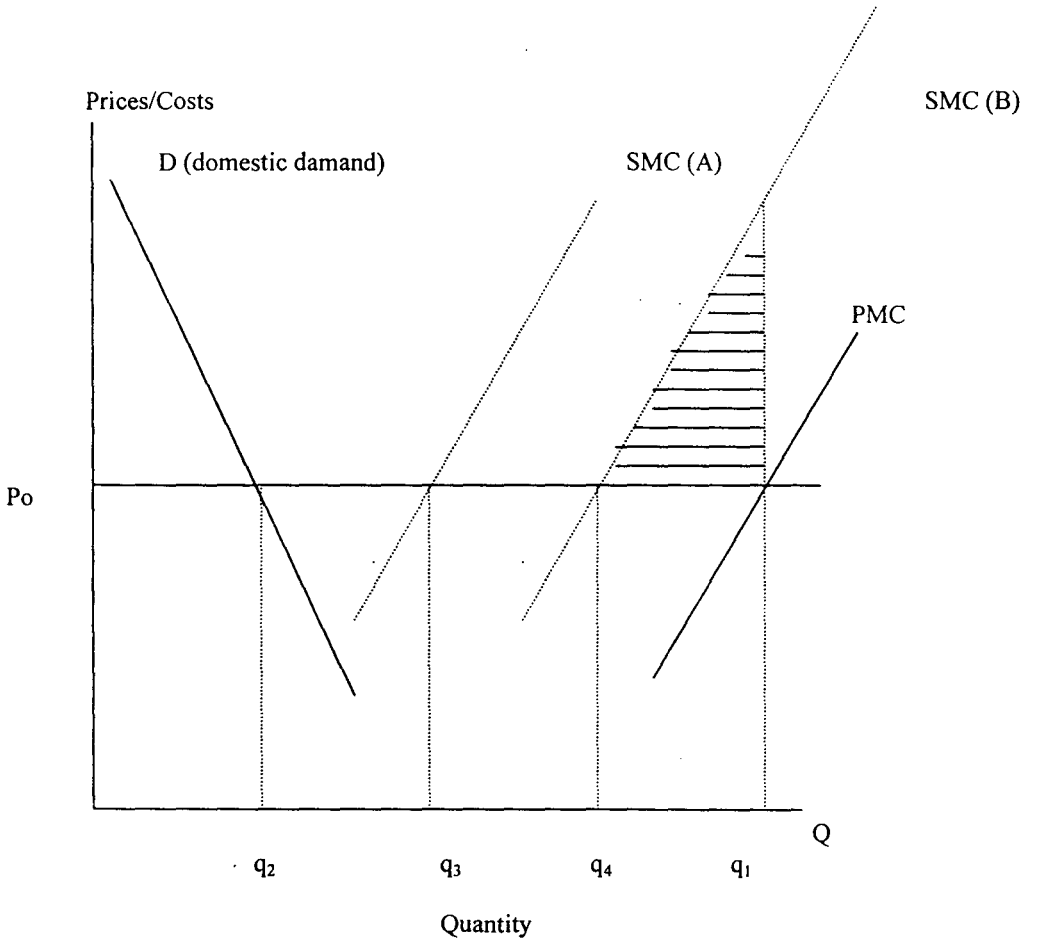
7 Ibid., pp.91-92.

8 John Hassan, "Environment Policy", in Frank McDonald and Stephen Dearden (eds.), *European Economic Integration* (London, Longman, 1992), p.120.

Let us assume that country A is developed and has higher environmental standards than country B which is still developing. This imposes higher costs on firms in country A, such as in restricting polluting emissions. They, however, can be protected from overseas competition through tariffs or other non-tariff barriers. With free trade being initiated, let us assume that common environmental standards are adopted. Then the question arises as to what level they ought to be set. This is because the social marginal costs (SMC) in A and B, namely SMC (A) and SMC (B), may be different. The social marginal costs are defined as Private Marginal Cost (PMC) plus external marginal costs (it being assumed that they include only environmental costs) in countries B and A. Let D be the domestic demand in country B.

Figure 1

ENVIRONMENTAL STANDARDS AND INTERNATIONAL TRADE: A TWO-COUNTRY ONE-COMMODITY MODEL



Assuming that country B does not have any set environmental standards at all, then at the world market price Po, it produces product Q at output level q_1 where its PMC=world market price. The quantity demanded for domestic consumption is q_2, where the Demand curve D intersects the price line. The balance $q_1 - q_2$ shows the quantity exported to country A. Social costs of production in country B due to pollution is represented by SMC (B) and is clearly higher than PMC but much lower than the social costs of similar pollution in country A, given similar Private Marginal Costs of Production in both the countries. Country B thus acquires a competitive advantage by ignoring the marginal environmental costs represented by the shaded triangle, selling Q at less than its 'true' cost of production.[9] This can be defined as a type of social or, to be more precise, environmental dumping. If country B had taken into account the true environmental costs of production, it would have produced at q_4. Thus, it could lead to restriction of production in country A in favour of cheaper imports from country B thereby worsening country A's balance of trade position, perhaps forcing country A to shift resources to the exporting of other commodities in which it has a greater comparative advantage. But the loss to country B in such cases may be the higher social costs of pollution in spite of better market access and terms of trade.

Supposing country B were to set its environmental standards identical to, and reflected by, the social costs prevailing in country A, namely SMC (A), then country B experiences losses and is forced to produce at a non-optimal point q_3 with exports reduced to q_3-q_1.[10] As it is very difficult to estimate true environmental costs, it

---

9 Ibid., p.121.

10 Ibid.

would be almost impossible to adopt an optimal solution where each country produces, where its SMC = P.[11] There is thus the danger that it would encourage the setting of either too high or too low emission standards.

The gap between PMC and SMC is crucial in this regard. It has been pointed out by Frank McDonald that countries with lower environmental standards may also be those with lower productivities and this, therefore, entails higher PMCs than countries A, thereby limiting the scope for penetrating A's markets. But this argument can be countered by pointing out that developing countries generally enjoy a lower labour cost advantage in many export sectors such as textiles and leather. When added to the lower SMCs of environmental pollution in these countries due to natural reasons or different political, social and cultural setup, the products thus produced may enjoy a formidable advantage in price terms over their developed country counterparts. Hence it is no wonder that non-tariff barriers based on environmental product or process standards have been sought to be imposed by developed countries. The need felt is especially great, given the fact that conventional tariff and non-tariff barriers like quantitative restrictions are being steadily dismantled by the WTO.

Thus, given the absence of transnational pollution standard, a global optimum obtains with free trade if each country pursues that environmental policy which is optimal for it. Tariffs and import restrictions directed against countries with lower environmental standards will lead to a distortion in the optimal division of labour and a welfare loss for all. However, if the country A pursues an optimal policy, and others do not, then is A justified in imposing tariffs on imports from non-optimizing countries? While the net result may well be an increase in total social welfare costs,

---

11 Ibid.

tariffs would represent a coercive measure and would be difficult to justify. How is one country to determine, if another is following an optimal environmental policy? It is, after all, only the home country, that can efficiently estimate its own environmental costs, as environmental resources are public goals. For one country to question another implies that the country whose policy is questioned is unable to manage its own affairs.[12] It is such a point of view that makes international negotiations difficult.

The GATT Approach on the Economic Perspective

GATT makes a distinction between consumption and production externalities, although both might generate welfare losses in the importing country. In economic terms, there is no difference between the nature of the externality. Hence,

> ...the differentiation between consumption and production externality arises from some notion of national 'sovereignty' i.e., no importing nation has the right to interfere with the production technology of another country.[13]

In its 1992 Report, the GATT Secretariat argued that sustainable development is not intrinsically linked to international trade and that trade is simply a magnifier enabling countries with adequate sustainable development policies to pursue these better. GATT favoured adoption of an appropriate overall domestic environmental policy rather than focussing attention on problems that are allegedly trade related.

---

12 Hjalte, Lidgren, and Stahl, n.3, p.95.

13 David, Pearce, "The Greening of GATT: Some Economic Considerations", in James Cameron, and Damien Geradin (eds.), *Trade and the Environment: The Search for Balance*, vol.1 (London, Cameron May 1997), p.32.

Dealing with the problem at source or through market mechanisms like taxes was preferable to unilateral trade restrictions.

Thus, classical economic theory based on efficient utilization of resources is at the heart of the GATT/WTO approach. Trade-economists like Subramanian hold that the only kind of trade restrictions that are justifiable are multilateral measures aimed at enforcing compliance with international agreements addressing trans-border environmental issues such CITES. Even so, these may be inefficient instruments to correct the underlying market failure. Jagdish Bhagawati, while preferring direct taxes on producers as opposed to trade restrictions on efficiency grounds, is ready to accept restrictions as a second best alternative, provided they are: (a) Scientifically supportable, (b) Imposed for legitimate environmental reasons, and (c) the least damaging to trade of the available options.[14] Bhagawati and T.N. Srinivasan have dismantled a number of conventional views in favour of environmental harmonization. They have argued that welfare losses would result if harmonization is forced on less developed countries.[15]

LEGAL ASPECTS OF THE TRADE-ENVIRONMENT DEBATE IN THE CONTEXT OF GATT/WTO

From the perspective of international law, a central issue with regard to the trade-environment debate is the limits placed on state action to use the instrument of

---

14 Benedict, Kingsbury, n.1, p.198.

15 For details see Jagdish Bhagawati and T.N. Srinivasan, "Trade and the Environment: Does Environmental Diversity Detract from the Case for Free Trade?", in Jagdish Bhagawati and Robert E. Nudec (eds.), *Fair Trade and Harmonization. Prerequisites for Free Trade?*, vol.1, *Economic Analysis*, Cambridge, Mass. MIT Press, 1997), pp.159-99.

international trade to meet environmental concerns. These are embodied in the GATT which seeks to lay down the fundamental principles governing international trade. The basic policy of GATT is to minimize governmental actions which inhibit or limit the importation of products. This is done with treaty obligations to limit tariffs (*Article I*), to avoid discrimination between domestically produced goods and those imported (*Article III*) and to avoid the use of quantitative and other non-tariff restrictions on imports (*Article IX*).[16]

The original GATT document (GATT-1947) was never seriously concerned with the interface between trade and the environment. Article XX however, contains provisions which allow states to depart from their GATT obligations to serve legitimate policy objectives which include measures necessary to protect human, animal and plant life or health and the conservation of exhaustible natural resources.[17]

---

16 *General Agreements on Tariffs & Trade*: *Basic Instruments and Selected Documents*, vol.IV, Geneva, March 1969, pp.1-15.

17 The relevant portions of Article XX read:

> Subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail or a disguised restriction on international trade, nothing in this Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures:
>
> ...
>
> (b) necessary to protect human, animal or plant life or health;
>
> ...
>
> (g) relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption.
>
> ...

Provisions in Article XX have been the subject of several disputes between the contracting parties. Indeed, since 1980, the GATT Dispute Settlement procedures have been used more frequently for the settlement of international environmental disputes than the dispute settlement procedures of any other worldwide organization.[18]

To find out the extent of limits placed on state action to use trade instruments to achieve environmental goals, it is pertinent to examine the findings of the two GATT Panels in the Tuna Dolphin cases that ignited the debate in the 1990s on the trade-environment linkage and led to the issue assuming the importance that it does now.

The First Tuna Dolphin Case

The Panel was established in March 1991 and submitted its findings in August 1991. One of the key questions that the panel had to decide in the Tuna case was whether the action of the United States in prohibiting imports of certain yellow fin tuna products from Mexico under its Marine Mammal Protection Act of 1972 (MMPA) was consistent with GATT obligations. The stated goal of the Marine Mammals Protection Act is that the incidental kill or serious injury of marine mammals in the course of commercial fishing be reduced to insignificant levels approaching zero. In this instance, what was sought to be prevented was the incidental

---

18 Ernst-Ulrich Petersmann, "International Trade and International Environmental Law: Prevention and Settlement of International Disputes in GATT", *Journal of World Trade* (Geneva), vol.27, February 1993, p.43.

killing of dolphins because of the deployment of the "purse-seine"[19] net to fish tuna.

The legal problem involves two closely related trade and environment *issues*. The first issue concerned "*like products*" i.e., whether legal treatment can differ for otherwise like products based upon how the product was produced. The *second issue* concerned "extra-jurisdictionality" i.e., whether a GATT member country may unilaterally regulate activities that take place outside its own borders.[20]

The principal findings of the panel clarified the approach of GATT on both these issues. The Panel found that:

i) GATT provisions imposed few constraints on a contracting party's implementation of domestic environmental policies.

ii) Contracting parties could freely tax and regulate imported products like domestic products and also freely tax or regulate domestic production for environmental purposes.

---

19 The "purse-seine" method has been described thus: A fishing boat using this technique locates a school of fish and sends out a motorboat (a seine skiff) to hold one end of the purse-seine net. The vessel motors around the perimeter of the school of fish unfurling the net and encircling the fish, and the seine skiff then attaches its end of the net to the fishing vessel. The fishing vessel then purses the net by winching in a cable at the bottom edge of the net, and draws in the top cables of the net to gather its entire contents.

20 Henry L. Thaggert, "A closer look at the Tuna-Dolphin Case: 'Like Products' and 'Extra Jurisdictionality in the Trade Environment Context", in James Cameron, Paul Demaret, and Damien Geradin (eds.), *Trade and Environment: The Search for Balance*, vol.1 (London, Cameron May, 1994), p.69.

iii) Contracting parties might not restrict imports merely because it originated in a country with environmental policies different from its own.

In other words, the Panel refused to introduce the concept of *extraterritoriality* into GATT. As under Article III(2) or of the National Treatment Clause, an importing country could not tax a produce prior to its arrival at the border. Similarly under Article III(4) "regulations could not apply to aspects of a product's production prior to its arrival at the border".[21] The Panel noted the danger of a wide variety of policy differences apart from environment being made the criteria for import restrictions. There then arose, the necessity of imposing limits on the range of such policy differences in such cases as well as develop criteria to prevent abuse.

iv) Considering *Article XX(B)*, the U.S. had not met the criteria of 'necessity' set out in the provision i.e., it had not demonstrated that it had exhausted, other less trade restricting options available to it such as negotiating international cooperative arrangements.

v) Fifthly, if Contracting Parties were to permit trade measures of this type, then amending, supplementing or waiving the obligations under GATT provisions would be preferable to interpreting Article XX.

The Panel thus clearly endorsed the understanding that GATT rules (in this case interpreting Article III) covers only those measures that are applied to the

---

21 Ibid., p.75.

'product as such' and not to the production process. Regulations, like taxes, under Article III should therefore only reach the product as such and not processes.[22]

The GATT Panel Report has been criticized by environmentalists and others.[23] Although the Polluter Pays Principle is not part of GATT law, it is contended that,

> Until GATT adopts the Principle as part of its international trade policy, its claim that "trade liberalization will improve environmental quality", will fail... liberalized trade will only result in sustainable development, ensuring increased economic growth without environmental degradation, if GATT adopts the Polluter Pays Principle.[24]

But critics tended to ignore the positive dimensions of the Panel Report which were:

i. That the GATT Dispute Settlement Proceedings offered an effective means at low transaction cost for defending weaker countries against unilateral power politics and for clarifying and adjudicating market access rights under GATT law.[25]

ii. As a GATT study on the subject of trade and environment has noted, "interference with trade is seldom, if ever, the first best way of achieving a particular domestic environmental objective".[26] GATT Disputes have shown that tax discrimination and discriminatory import and export restrictions are not efficient environmental policy instruments and have been used as protectionist devices.[27]

---

22 Ibid., p.73.

23 For opposing views, see Thaggert, n.20, pp.69-88.

24 Ursula Kettlewell, "GATT: Will Liberalized Trade Aid Global Environmental Protection", *Denver Journal of International Law* (Denver), vol.21, 1992, pp.72 & 74.

25 Petersmann, n.18, p.79.

26 Kettlewell, n.24, p.71.

27 Petersmann, n.18, p.71.

iii. The Polluter Pays Principle as defined by the OECD provided only a limited indication of applicable environmental standards which must take into account factors such as differences in the pollution assimilative capacity, degree of industrialization, population densities and social objectives and priorities attached to the environment.[28]

Thus firms in Less Developed Countries (LDCs) may have little incentive, capital or technology to go in for environmentally friendly products or processes as the marginal returns may be much less than the marginal cost incurred. At the same time an exporter may be penalized by higher costs of compliance with regulations abroad. At the same time if domestic standards are raised also quickly it may favour imports over domestic products. Governments in LDCs may not have adequate funds to spare from competing uses to subsidize firms to help them comply with higher standards abroad.

In this context it is worth noting the contents of Principle 12 of the Rio Declaration,

> Trade policy measures for environmental purposes should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade. Unilateral measures to deal with environmental challenges outside the jurisdiction of the importing country should be avoided. Environmental measures addressing trans-boundary or global environmental problems should, as far as possible, be based on international consensus.

> *Finally*, it may be emphasized that the Tuna Panel Report took a balanced view of the interaction between the concepts of sovereignty, free trade and environmental protection. Each needs to be given an interpretation which does not disregard the necessity and legitimacy of the others.[29]

---

28 UNCTAD, *The Outcome of the Uruguay Round: An Initial Assessment* (New York, 1994), p.232.

29 B.S. Chimni, "Greening the GATT or Green Protection: Certain Legal Issues", Seminar Paper presented at 26th Annual Conference of Indian Society of International Law, New Delhi, 14-15 February 1997, p.10.

Philip Sands has criticized the Panel reasoning as representing a heroic, but misguided attempt to keep in place the hermetic seal around the GATT legal order in the face of fundamental changes taking place in the international legal order.[30] This flaw was however sought to be addressed by the GATT Panel in the *Second Tuna-Dolphin Case*.

The Second Tulna Dolphin Case

The facts in the second Tuna-Dolphin case were the same with the difference that it concerned intermediary nations. The provision concerned was an amendment to an earlier provision in the US Marine Mammals Protection Act and was effective as of 26 October 1992. It required proof be made that each country identified as an intermediary nation had itself prohibited importation of any tuna that was barred from direct importation into the United States from countries under a primary embargo by the United States.[31] According to one analyst, "while the GATT panel reached the same decision in this case, the difference in its reasoning is worth noting".[32]

The difference is mainly with regard to the *concept of extra-territoriality*. Unlike the Panel in Tuna Dolphin I, the Panel in this case stated that the General Agreement did not proscribe in an absolute manner, "measures that relate to things

---

30 Ibid., pp.10-11.

31 Steve Charnowitz, "Environmentalism confronts GATT rules: Recent developments and new opportunities", *Journal of World Trade*, vol.27(2) (April 1993), p.38.

32 B.S. Chimni, n.29, p.11.

or actions outside the territorial jurisdiction of the party taking the measure".[33] At the same time the Panel upheld the verdict of Tuna-Dolphin-I in its understanding of *Article XX(g)* whereby unilateral trade measures so as to force other contracting parties to change their policies within their jurisdiction, would impair the balance of rights and obligations among contracting parties, particularly market-access rights. Under such an interpretation, the General Agreement could no longer serve as a multilateral framework for trade among contracting parties.

In this context it must be noted that the US law was a domestically written standard. If the definition of dolphin safe tuna had been taken from an international authority, there would be less room to allege that the US standard was written to "afford protection to domestic production" in violation of the GATT Article III(1) rule.[34]

In the context of references being made to *environmental and trade treaties other than GATT*, the Panel noted that it was necessary to determine the extent to which these treaties were relevant to the interpretation of the text of the General Agreement. In this case, the Panel, after considering Article 31 and 32 of the Vienna Convention on the Law of Treaties, concluded that the cited agreements by the Parties were bilateral or plurilateral and were not concluded among the Contracting Parties to the General Agreement and that they did not apply to the interpretation and application of the General Agreement and its provisions.

---

33 International Legal Materials, vol.XXXIII, no.4 (July, 1994), para 5.16.

34 Charnowitz, n.31, p.46.

Scope of Application of Article XX (b)

The Panel noted that the text of Article XX(b) suggested a 3-step analysis:

i. It had to be determined whether these policies had been actually invoked to protect human, animal or plant life and health.

ii. Whether the measure invoked was "necessary" to protect human, animal, plant life and health (i.e., no alternative existed).

iii. Whether the measure was applied in a manner consistent with the requirement set out in the Preamble to Article XX.

The Tuna-Dolphin II case ruling, like Tuna-Dolphin-I was never adopted. The *significance of the Panel decision* in the Second Tuna-Dolphin case, according to Philip Sands, is that, "It reflects a recognition that the GATT Legal Order is part of a broader international legal order and subject to the international rule of law".[35] "*Secondly*, it leaves open the possibility that extra-territorial applications of trade-related environmental measures (TREMS) will be consistent with GATT".[36]

The Tuna-Dolphin cases were not the only cases concerning trade and environment to be brought before the GATT. Previously in the *Herring & Salmon Case (1988)* the Panel ruled that trade measures restricting imports had to be made in conjunction with domestic production restrictions. Also in the *Thai Cigarettes Case (1990)* the Panel ruled against the Thai ban on import of cigarettes on health grounds

---

35 Philip Sands, "GATT 1994 and Sustainable Development: Lessons from the International Legal Order", in GATT Doc.7E 009, 28 July 1994, papers presented at the GATT Symposium on Trade, Environment and Sustainable Development, p.28, cited in B.S. Chimni, "WTO Dispute Settlement System and Sustainable Development", Discussion Paper prepared for World-Wide Fund for Nature, India (New Delhi, WWF, May 1999), p.48.

36 Ibid.

citing that Thailand had not taken recourse to less trade restricting measures according to the interpretation of the word "necessary" in Article XX(b).

The Tuna Dolphin (I & II) Panel Reports although they were never adopted is nonetheless of great significance . The verdict highlights the dynamism and change to which formulation, interpretation and application of international law, including GATT law, is subject to and how the importance of environmental considerations may leave open the possibility of future change and modification in GATT regulations, with serious implications for developing country interests.

The Trade-Environment Interface in the Final Act of the Uruguay Round

The Preamble to the WTO Agreement calls on WTO members to conduct their trade and economic relations with a view to

> ...allowing for the optimal use of the world's resources in accordance with the objectives of sustainable development, seeking both to protect and preserve the environment and enhance the means for doing so in a manner consistent with their respective needs and concerns at different levels of development...[37]

Till the conclusion of the Uruguay Round, there was only one agreement that dealt with product standards: the 1979 Agreement on *Technical Barriers to Trade* (TBT). But the Final Act contains two separate agreements:

1. ***The TBT Agreement***: which has been modified (from the 1974 one) to define "technical regulation" as a "document which lays down product characteristics or their related process and production methods".[38] Thus *production methods that* are

---

37 WTO, Secretariat, *Guide to the Uruguay Round Agreement* (Geneva, Kluver Law International, 1999), p.258.

38 B.S. Chimni, n.29, p.17.

related, i.e., those which have an effect on the product characteristics, such as its quality of performance, are now covered by the Agreement. This is in contrast to the 1979 Agreement that explicitly left out Processes and Production Methods (PPMs) from its scope. The new Agreement rules out import restrictions based on divergent environment standards. But interpretative difficulties and difficulties in distinguishing between "related processes and production methods" and PPMs *per se*, may lead to environmental trade restrictions based on PPMs being imposed in a veiled manner.

The Sanitary and Phytosanitary Agreement (SPS)

Under the SPS Agreement, imports can be restricted on the basis of process and production methods only if they are considered necessary for the protection of animal and plant life or human health. Thus PPMs without such an impact cannot be prescribed. But here too *interpretative difficulties* may arise. In addition, three important differences between the TBT and SPM agreements may be noted:[39]

i. The SPM Agreement allows discriminatory measures as long as they are not arbitrary or unjustifiable between countries where identical or similar conditions prevail.

ii. Under Article 5, Members can introduce or maintain SPMs which result in a higher level of protection than would be achieved based on relevant international standards.

iii. The Agreement on SPM introduces the *Precautionary Principle* in Article 5, para 7 and permits members in cases where relevant evidence is insufficient, to adopt provisional SPMs on the basis of available pertinent information.

According to Principle 15 of the Rio Declaration, the 'Precautionary Principle' should be adopted only when the non-adoption of the measure, because of the lack

---

39 Ibid., p.18.

of full scientific certainty, could lead to "threat of serious and irreversible damage". Such risks do exist in the instance of cases covered by the SPS Agreement. On the other hand, according to Rege,

> ...the possibility of imports of industrial products exposing the importing country to such risk of irreversible damage would, however, be very remote.[40]

This is an effective answer to many environmentalists who have demanded the inclusion of the 'precautionary principle' in the TBT Agreement also.

Both the agreements also require that the TBT or SPM measures will not be prepared, adopted or applied with a view to, or with the effect of, creating unnecessary obstacles to international trade. Furthermore, both agreements contain a special and differential clause. For eg., Article 10 of the agreement on SPM states:

1. In the preparation and application of sanitary and phytosanitary measures, members shall take account of the special needs of developing country members, and, in particular, of the least-developed country members.

2. Where the appropriate level of sanitary or phytosanitary protection allows scope for the phased introduction of new sanitary and phytosanitary measures, longer time frames for compliance should be accorded on products of interest to developing country members so as to maintain opportunities for their exports.

3. With a view to ensuring that developing country members are able to comply with the provisions of this Agreement, the Committee is enabled to grant to such countries, upon request, specified, time-limited exceptions in whole or in part from obligations under this Agreement, taking into account their financial, trade and development needs.[41]

---

40 Vinod Rege, "GATT Law of Environment Related Issues Affecting the Trade of Developing Countries", *Journal of World Trade*, vol.28 (1994), p.109.

41 B.S. Chimni, n.29, p.19.

Despite this, the danger of unilateral imposition of PPM measures on SPM grounds, or likelihood of the developed countries seeking to amending the GATT text to allow for the use of PPMs, is always a possibility. The alternative proposal of *compensation* to LDCs in *lieu* of trade gains lost by them is also problematic, as it is no substitute for long term economic development or employment growth through trade. Moreover, economically stronger nations would always be able to 'buy' their values to which they attach importance by paying compensation, unlike LDCs which cannot afford to do so.

The '*Like Product*' problem is another avenue for protectionism on environmental grounds. The phrase '*like product*' has not been *defined* either in GATT (1947) or GATT (1994). Moreover in the GATT Panel Report on the *United States Taxes on Automobiles* submitted on 11 October 1994, the Panel tried to define this term on the basis of the purpose of Article III. Its observations made it clear that the term '*like product*' can be interpreted to distinguish between products, otherwise similar, in order to meet policy goals (including environmental ones) as long as the concerned measure does not afford protection to domestic production. This represents a departure from the reasoning of the GATT Panel in the Tuna-Dolphin (I) Case which ruled out extra-territorial application of domestic environmental laws.

Charlie Arden Clarke in his paper "Green Protectionism" has called for GATT dispute panels to distinguish between trade policies taken for genuine environmental protection purposes from those taken to afford protection for domestic industry. He has argued that "existing GATT safeguards ensure that it is not easy to construct undetectable green protectionist measures...[and that GATT dispute panels usually have] no difficulty in detecting...cases of green protectionism, even though the

institution has limited environmental competence".[42] However, he recognizes that difficult questions will arise when both the goals are being pursued simultaneously. The GATT Panel may have to assess whether the balance of the policy objective leans more towards environmental protection or "green protectionism", in many disputes.

The other provisions in the *Final Act* that deal with 'environmental protection are:

> The *Agreement on Subsidies and Countervailing Duties* provides that assistance of up to twenty per cent of the cost of adapting existing facilities to new environmental laws and requirements is to be regarded as a non-actionable subsidy (i.e., not subject to countervailing duties).[43]

Here too the greater economic clout of industrially advanced countries or regions, such as the EU, may help their firms in upgrading themselves to higher national, regional or international environmental standards *vis-à-vis* their counterparts or competitors in less developed countries.

Better protection of interests of less developed countries is *Article 27* of the Agreement on *Trade Related Intellectual Property Rights* (TRIPs) which in general requires that all inventions be patentable, but provides for exclusion from patentability of inventions, if preventing their commercial exploitation is considered necessary to avoid serious prejudice to the environment. The same article allows governments to *exclude from patentability* plants and animals, while microorganisms and non-biological and microbiological processes may be patented.[44]

---

42 Ibid., p.24.

43 Guide to the Uruguay Round Agreements, n.37, p.258.

44 Ibid., p.258.

A brief analysis of WTO-cases

The setting up of the WTO in 1995 meant the emergence of a full-fledged institutional mechanism to regulate trade. The Dispute Settlement Body came into being to settle disputes between member countries in a time-bound framework. It derived its strength from being ultimately based on the principle of 'cross retaliation', whereby a member country not implementing the award of the Panel could be punished by the complainant imposing trade restrictions in sectors of interest to it which might be totally unrelated to the dispute. Thus, a country like India if it lost a case against the United States in respect of automobile imports could face restriction on its textile exports by the US if it failed to implement the Panel Award.

The major cases - post-1995 involving a *trade-environment conflict* are as follows:

(1) ***The Imported Gasoline Case (1996)***: In which the Environmental Protection Agency (EPA) of the US promulgated regulations regarding composition and the emissions effects of gasoline in order to improve air quality in the U.S. The reformulated gasoline was required to be 15 per cent cleaner by 1995 than gasoline which was sold in 1990.[45] The US refiners were allowed to establish industrial baseline for 1990 using actual data on fuel composition or several alternative methodologies for reconstructing their fuel composition. On the other hand importers were required to satisfy a statutory baseline which was calculated by taking the average level of contaminants in the US Refining industry in 1990. Venezuela and

---

45 Chimni, n.35, p.50.

Brazil contended that the Gasoline Rule inter alia offended Article III(1) and III(4) of GATT.

The WTO Panel Report ruled that the baseline establishment rules were inconsistent with Article III(4) of GATT. The Appellate Body also supported this decision and found that the baseline establishment rules although within the terms of Article XX(g) was a foreseen discrimination and was not entitled to the justifying protection by Article XX as a whole. The Appellate Body (AB) differed with the Panel Report in that it found a 'measure' as such was not unjustifiable for protecting the environment but the manner in which the measure was sought to be applied was. The AB had emphasized a case to case determination of the balance to be struck between affirmative commitments in GATT and the exceptions contained in Article XX(b) and (g).[46]

2. ***The Shrimp-Turtle Case (1998)***: The U.S. Court of International Trade (CIT) in its decision in the Earth Island Institute Vs. Christopher ordered a ban on shrimp imported from all countries which had not adopted adequate policies to protect sea-turtles. It based its ruling on an interpretation of Section 609 of Public Law 101-162 which required ...the prohibition of the importation of shrimp products from countries that "have failed to mandate shrimp fishing practices which provide sea-turtle protection comparable to that provided by U.S. Law".[47] Initially limited to the Caribbean/Western Atlantic area and later extended worldwide, the ban was challenged by India, Pakistan, Thailand and Malaysia. The Panel concluded that the

---

46 Chimni, n.35, pp.50-59.

47 Ibid., p.59.

import ban on shrimp and shrimp products was not consistent with Article XI(1) of GATT, 1994 and not justifiable under Article XX of GATT. It based its conclusions on:

i. The need to safeguard the security and predictability of the multilateral trading system.

ii. Need to prevent exceptions in Article XX from defeating the general purpose and objects of the WTO Agreement that might impair market access and the existence of a non-discriminatory multilateral framework.

iii. The need for international cooperation and avoiding unilateral measures.[48]

The Appellate Body upheld the Panel decision but on the ground that the U.S. had resorted to economic embargo to achieve a certain policy goal without taking into consideration different conditions which may occur in the territories of other member countries, as well as on the ground that the US had failed to engage the appellees in negotiations. The US action amounted to "arbitrary discrimination".[49]

But what is significant about the Panel Rulings in both these cases is that the WTO did not appear to obstruct the goal of environmental protection *per se*. In the Shrimp Turtle case, the Appellate Body suggested that it was not the extra-territorial application of its environmental standards that violated GATT rules but the arbitrary way in which the law was applied. Further the Appellate Body advocated the necessity of findings a balance between the right of a member to invoke an exception under Article XX and duty of that member to respect the treaty rights of other members. Moreover the WTO Panels and the Appellate Body have not ruled out

---

48 Ibid., p.59-64.

49 Ibid., p.70.

unilateral measures especially if serious negotiation attempts had failed. All this seems to ensure that in future, trade objectives will not always trump environmental protection goals.[50]

With regard to *Sanitary and Phytosanitary Measures*, the most significant case was the *EC-Hormones Case (1998)* whereby two WTO Panels dealt with separate complaints by the USA and Canada against the European Communities (EC) concerning the prohibition of imports of meat and meat products derived from cattle which have been administered certain natural and synthetic hormones for growth purposes. Both the panels and later the Appellate Body held that the EU Measure at issue were inconsistent with Article 5.1 of the SPS Agreement., While the Panels and the AB ruled that the *precautionary principle* could not override the explicit provisions of the SPS Agreement, the AB significantly ruled that the right of a member to establish its level of sanitary protection was an autonomous right. Moreover the AB considered 'risk' to include not only scientifically ascertainable risks but also the 'potential' for such risk on human health in the real world.[51] Risk assessment could be from multifarious sources and not necessarily embody the view of the scientific Community. These could include consumer groups. Hence in future situations, especially where there is a risk to human health that are irreversible, countries may have sufficient flexibility to impose SPMs. This could happen even when only a tenuous relationship between an SPM measure and risk

---

50 Ibid., pp.64-70.

51 For detailed history of the EC-Hormones case see H. Hammonds, "A US Perspective on the EEC Hormone Directive", *Michigan Journal of International Law*, vol.11 (1990), pp.840-844 and W.P. Meng, "The Hormone Conflict between the EC and the United States in the Context of GATT", *Michigan Journal of International Law* (Ann Arbor), vol.11, 1990, pp.819-39.

assessment exists, which may not even be supported by scientific evidence. This does not bode well for developing countries.

CONCLUSION

The trade-environment debate involves complex issues and an overview of its economic and legal aspects has been given in this chapter. Several measures have been proposed as a compromise between environmental and economic interests. It will be beyond the scope of this dissertation to explore all these alternatives fully. However, the emerging trends will clearly be taken note of and be discussed in greater detail in the following chapters in the context of the European Union's environmental trade regulations. The job of the Committee on Trade and Environment set up by the WTO to study the relationship between trade and environmental measures has been made more complicated by the rapid evolution of Environmental Trade Measures (ETMs).

The *first generation ETMs* were simple prohibitions or product standards (e.g., no hazardous waste imports). The *second generation* ETMs are complex prohibitions or standards that require a judgement about foreign practices (e.g., sustainability) or policies. (e.g. Ratification of the Basel Convention). The *third generation* ETMs are likely to be market based incentives rather than *direct regulations*.[52] A good example of such measures will be eco-labelling, that will enjoy the support of consumers and presumably producers in the developed world. Being voluntary in nature, it may not be an explicit non-tariff barrier but by the preconditions required

52 Charnowitz, n.31, p.49.

for acquiring a label, it may be implicitly so. Any WTO discipline on these Trade Related Environmental Measures will have to take into account their rapidly changing nature. The truth is that developing countries, with an inadequate technical and intellectual infrastructure, may not be able to discern to what extent these new measures may constitute a non-tariff barrier. Only if they do so will they be able to subsequently challenge its legality at a dispute settlement forum.

This dissertation will attempt to show that these newer forms of trade regulations that may not be explicitly trade restricting may, in fact, prove to be the greatest obstacle to market access for developing countries, especially in a scenario where the priority attached to the environment among Western, notably European Union, consumers and governments is rapidly increasing. This sentiment may be suitably exploited for protectionist purposes by European domestic industry and it will be vital to realize where the thin dividing line separating these concerns begin and end. Only then will trade liberalization pursued under the WTO agreements and in future negotiations, hold any significance to developing countries, in terms of economic growth and betterment of standard of living.

Chapter 2

ENVIRONMENTAL POLICY MAKING IN THE EUROPEAN UNION

The European Community (EC) is one region where there has been an attempt to reconcile the seemingly contradictory objectives of free trade and environmental protection. While most of these attempts relate to movement of goods within the European Union (EU), their study is useful in trying to analyze the impact of EU environmental standards on developing countries such as India. There are a number of reasons for this:

Firstly, environmental policies and standards differ even among the various countries of the European Union. How the "lesser-developed" EU countries, especially in Southern Europe have formulated their strategy, in response to higher environmental standards set by the more advanced countries, may hold out important lessons for developing countries. Conversely, they also serve to highlight the important differences in politico-economic challenges faced by lower standard countries within the EU and developing countries in the Third World.

Secondly, the study of environmental policy-making within Europe helps reveal the actors, interests and motives behind environmental legislation within the EU. This may help bring out the subtle ways in which protectionist tendencies operate in the guise of environmental protection.

Thirdly, it helps to understand the legal bases of EU legislation that may affect trade.

And *finally*, it provides a tool to gauge the importance attached to environmental protection among the European public, an important factor that Indian Industry would have to consider in the formulation of marketing strategies for Indian exports.

History of Environmentalism within the EU

The word 'environment' is absent in the 1957 Treaty of Rome which established the European Community. However, even in the absence of explicit powers, the Community did develop an environmental policy, albeit only during the 1970s. The conception of the EU's environmental policy is generally accepted as occurring at the Paris Summit of October, 1972 where member states formally acknowledged the need for a Community-wide policy framework in the field of environment.[1] Between the early-1970s and mid-1980s, the EU issued more than one hundred environmental regulations and directives covering a wide range of areas like air, water and noise pollution, waste-disposal, accident prevention, chemical safety, environmental impact and wildlife protection. By the mid-1980s virtually all aspects of environmental policy had been addressed in one form or another at the Community level.

The significant growth of EU environmental regulation during the 1970s was due to several factors:

---

1 Christopher M. Dent, *The European Economy: The Global Context* (Cornwall, Routledge Publishers, 1997), p.395.

(i). *Increase in public concern about environmental issues that swept the industrialized world in the late 1960s and early 1970s and the political activism of various environmental organizations* made the issue politically salient. National governments expanded and strengthened their regulatory controls over industry. EU institutions saw environmental policy making as a means of preserving their political legitimacy and addressing the 'democratic deficit' i.e., the gap between the Community's power over and accountability to the electorate of its member states. The momentum of European integration could be enhanced in a vital and visible policy area, while it stagnated in other areas in the 1970s.[2]

(ii) *The EC's Commitment to the Common Market* meant that national environmental regulation and its expansion was seen as hindering harmonization necessary for the free flow of goods within the EC. Moreover, such national standards could be used to protect domestic producers. Conversely, succumbing to lower environmental standards, in order to maintain competitiveness, meant that a country's regulatory policies were held hostage to that of the least strict state. Thus, some degree of uniformity in environmental standards was deemed to be essential and for this Community wide legislation was necessary.[3]

(iii) *Geographical factors* too have necessitated the expansion of EU environmental policy. A number of member states in Europe are physically close to one another. The quality of their physical environment as well as the health of their population is

---

2 Giandomenico Majone, "Cross-National Sources of Regulatory Policy Making in Europe and the United States", *Journal of Public Policy* (Cambridge), vol.11, 1991, p.95.

3 David Vogel, *Trading Up: Consumer and Environmental Regulation in a Global Economy* (London, Harvard University Press, 1995), p.58.

significantly affected by the environmental policies of their neighbours. The Rhine river, *for example,* flows west through Germany, France and the Netherlands; accordingly, the quality of Dutch water is influenced by German and French pollution controls. Wind direction in Europe is usually from West to East, which means that Britain's loosely regulated power-plant fumes, and the acid rains they cause, affect Germany and the Netherlands despite strict domestic regulations.[4]

(iv) *Multilateral Environmental Agreements*: The trans-boundary or global characteristics of environmental problems have necessitated international cooperative efforts to try and overcome them. These have normally centred on Multilateral Environmental Agreements (MEAs) such as the Vienna Convention (1985) and the Montreal Protocol (1987) to address the ozone layer problem, the Basel Convention on Transboundary Movements of Hazardous Wastes (1989), and the Rio-de-Janeiro UN Conference on the Environment and Development (1992). The EU has played an important role in establishing MEAs and has been a contracting party to all the major agreements that have emerged since the 1950s. The Rio Declaration, has, through its underlying principles provided the orientation for the EU's 5th Environmental Action Programme. The main protagonist role of the EU in Multilateral Environmental Agreements has usually been prompted by 'front-runner' advantages for European businesses to compete in future world markets through technology transfers and structural adjustments made with respect to sustainable development principles.[5] This is in spite of possible loss of competitiveness in the short run,

---

4 Vogel, n.3, p.61.

5 Dent, n.1, p.394.

especially if the main rivals are non-participants to the Multilateral Environmental Agreements.

(v) Last, but not the least, a series of different events have been important in catalyzing EU's environmental policy. Some key events are set forth: (a) Firstly, *the 1973-74 Oil Crisis* that shocked Europe out of complacency and greatly raised awareness about the need for conserving natural resources; (b) Secondly, Environmental tragedies such as the *Increasing levels of pollution* in major European rivers, like the Rhine, as well as the effect of air pollution on large tracts of the Black Forest in Germany; (c) The Ekofisk oil-field blowout in Norway and, the Amoco Cadiz wreck and oil spill off the coast of France in March 1978;[6] (d) The Sandoz Warehouse Fire in Basel in 1987, which led to the leak of tons of highly toxic chemicals into the upper reaches of the Rhine river;[7] (e) Toxic levels from factories such as Seveso (Italy) in July 1976, Flixborough (UK) in 1974 and Beek (Netherlands) in 1975. All these events led to growing public outcry against environmental degradation and prompted the Community to introduce suitable legislations.

The Chernobyl nuclear accident (1986) had an important impact on policy making in the EU and in the Member States. Indirectly, it influenced Europeans at the grassroots level, providing an impetus and an electoral base for green parties both in national parliaments and in the European parliament. It pointed out the lack of facilities for monitoring and gathering data on the environment, since there were no

---

6 Annica Kronsell, *Greening the EU* (Bromley: Chartwell Bratt, 1997), p.107.

7 Directive 88/610 as cited in Annica Kronsell, ibid., p.108.

provisions to collect and monitor such data within European institutions.[8] The problem in connection with the Chernobyl accident was thus perceived in DG XI (the Directorate in charge of environment) as having to do with the lack of monitoring capacity and did not lead to a direct questioning of the use of nuclear energy in Europe.[9]

There were similar events notably the increasing acid rain incidence in Sweden and northern Europe, which led to the European Commission's efforts to regulate the emission from industrial plants and to propose air-quality standards for nitrous oxide (N_2O). Although the above factors led to EU action in the environmental field it was based on urgency and need and there was no definite or coherent approach or agenda. It was clear that some environmental objectives and principles on which action would be based was needed. An outline of the causes of the rise of environmentalism within the EU is important as it provides an insight into the reasons why the EU, the national governments, European business and consumers, behave the way they do with regard to environmental protection. It also provides a background for specifically studying the possible impact of EU environmental legislation on trade.

The Evolution of EU Environmental Policy and the Impact of the Single European Act (1987).

After the Paris Summit of October 1972 European Ministers responsible for environmental issues met at a conference in Bonn later that month. Here, the framework and strategies proposed at the UN Conference on the Human

---

8 Kronsell, n.6, p.108.

9 Ibid.

Environment, in 1972 at Stockholm, were embodied in the first of many Environmental Action Programmes (EAPs) that have provided the main thrust of EU Environmental Policy.[10] The Action Programmes are strategic documents with general guidelines that propose a set of long term solutions, and, hence a direction to the Community's environmental policy making. They were recommendations and not binding documents and several times, legislation has been passed as and when the need arose. These legislations do not find mention in the EAPs, as future crises could not be foreseen. As of now, five EAPs have been drafted. A brief outline of the first 4 EAPs are given below:

THE FIRST EAP (1973-77) concentrated mainly on remedial actions addressing both cumulative and immediate problems facing the Community. It led to directives on the regulation and elimination of toxic waste discharges. Water pollution control measures were given particular priority, and the polluter pays principle was established underlying all measures. According to this principle it is the polluter who is responsible and should pay for any damages to the natural environment, thereby internalizing environmental damage costs.

THE SECOND EAP (1977-82) laid greater emphasis on preventive action which gave a new orientation to policy but in substance most measures accompanying this EAP were essentially revisions of those in the first EAP. Many of the early policy directives in the first 2 EAPs contained socio-economic derogations that effectively placed their environmental objectives into a subordinate position. *For e.g.*, the French and the Italian tourist industries were allowed to adopt lower compliance

---

10 Dent, n.1, p.395.

levels on beach pollution regulations in order to avoid redundancies in that sector.[11]

THE THIRD EAP (1982-87) was characterized by a higher profile and priority due to the ascendancy of environmental issues on the political agenda. It had a broader framework compared to previous EAPs and included new areas such as stimulating the development of 'greener' industries, eco-technologies, and efforts to promote the recycling, re-use and recovery of environmental resources. The 1985 Directive on Environmental Impact Assessments (EIAs) were introduced, whereby permission for large industrial or infrastructural projects to proceed were made conditional to a prior study of their environmental side effects.[12]

(iv) *The Single European Act and the Fourth EAP (1987-92).*

On 1 July 1987, the Treaty of Rome was amended by the Single European Act (SEA). It facilitated the creation of a Single European Market, and also introduced a number of important changes in Community environmental policy and policy making.

> The two developments were related: in exchange for reducing their controls over access to their domestic markets, the EC's greener member states were assured that protective regulations would either be maintained or strengthened.[13]

The major legal and institutional changes proposed were:

---

11 Ibid.

12 Ibid.

13 Vogel, n.3, p.60.

Firstly, *Article 100a* of the SEA explicitly recognized the improvement of environmental quality as a legitimate Community objective in its own right. More importantly, the SEA stated that in harmonizing national regulations, "the Commission...will take as a base a high level of [environmental] protection". This statement meant that an improvement of environmental quality was the objective of harmonization rather than simply the removal of trade barriers, as under the Treaty of Rome.[14]

Secondly, *Article 130r* further required that "environmental protection requirements shall be a component of the Community's other policies".[15] "This provision accorded environmental protection an unusual priority, since no other EU goal was granted a commensurate provision".[16]

Thirdly, *the SEA in practice* strengthened the hands of the Commission's Environmental Directorate (DG XI) in its conflicts with those directorates whose focus was essentially economic. "To reassure member states which feared erosion of their strict standards, they were granted the right to maintain or introduce national environmental standards stricter than those approved by Brussels, provided they did not constitute a form of "hidden protectionism" and were otherwise compatible with the Treaty of Rome.[17]

---

14 Ibid.

15 Stanley P. Johnson and Guy Corcellex, *The Environmental Policy of the European Communities* (London, Kluwer Law International, 1995), p.491.

16 Vogel, n.3, p.60.

17 Ludwig Kramer, "The Single European Act and Environmental Protection: Reflections on Several New Provisions in Community Law", *Common Market Law Review* (The Hague), No.24, 1987, p.651.

Fourthly, the SEA also facilitated the adoption of environmental regulations by the Council of Ministers. Although legislation approved under Article 130 (the SEA's environmental article) still required *unanimity*, the SEA permitted environmental directives approved under Article 100a, which provides for the approximation of laws concerned with the functioning of the Common Market, to be approved by a *qualified majority*. This made it easier for the Council of Ministers to reach agreement on the terms of environmental legislation.[18]

(5) Fifthly, *the SEA also expanded the role of the European Parliament* which has generally been more supportive of stricter environmental standards than the Council, in shaping Community legislation. For 10 Articles of the EC Treaty, the SEA established a "cooperation procedure" under which the Parliament has the right to propose amendments to legislation approved by the Council of Ministers. If the Commission chooses to retain these amendments, then the Council must either reject them unanimously or adopt them by a qualified majority.[19]

Finally, the SEA led to growing awareness of the impact of the single market on environmental pollution through a dramatic increase in the transportation, and, thereby, of increase in sulphur dioxide and nitrous oxide emissions. Expansion of intra-Community trade also threatened to increase the exposure of member states to toxic and hazardous waste imports. Thus, the Community's renewed commitment to

---

18 Vogel, n.3, p.61.

19 Ibid.

economic integration made the strengthening of environmental standards even more urgent.[20]

The Fourth EAP (1987-92) stated that environmental protection was an essential element of all economic and social policies, thus extending the integrational imperatives set within the SEA.[21]

Following the passage of the SEA, the momentum for Community environmental regulation accelerated significantly. Between 1989 and 1991, the EU enacted more environmental legislation than it had in the previous twenty years. By 1992, it had issued over 450 regulations and is adding new ones at the rate of 100 a year. By the early 1990s, the EU had succeeded in harmonizing standards for virtually every important aspect of environmental policy, including air and water quality, noise pollution and wild life and conservation. While EU standards that do not directly affect traded products have been uneven, on balance, the EU has greatly contributed to strengthening environmental standards throughout the EU.[22] For those member states with relatively weak domestic environmental movements, the EU has been the single most important factor in improving their environmental quality.[23]

---

20 Ibid., pp.61-62.

21 Dent, n.1, p.395.

22 Vogel, n.3, p.62.

23 Haigh, "EEC Environmental Policy and Britain", 2nd edition (Harlow, Essex: Longman, 1989), as cited in Vogel, n.3, p.62.

The year 1987 was declared by the Council as the European Year of the Environment. It was also the year in which the report of the World Commission on Environment and Development (Brundtland Commission) was published setting the stage for the United Nations Conference on Environment and Development held in June, 1992.[24]

The Masstricht Treaty and the Fifth Environmental Action Programme

The Single European Act speeded up voting procedures and clearly defined the Community's environmental competence. At the same time, some provisions required a subsidiarity principle potential cost-analysis prior to Community action i.e., the justification for action at the Community level rather than at state or local level. These provisions held the potential for being used to retard Environmental policy.[25]

The Maastricht Treaty establishing the Single European Market was signed by all the member States on 7 February 1992 and entered into force on 31 October, 1993. It reflected the Brundtland Commission's emphasis on sustainable development. Article 2 of the EEC Treaty was amended to commit the EU to "achieve a sustainable and non-inflationary growth respecting the environment". Article 3 confirmed the need for a policy in the sphere of the environment. *Article 130r(2)* required the integration of environmental policies into other fields. The same paragraph also explicitly mentions the precautionary principle, whereby action could be taken to

---

24 Johnson and Corcellex, n.15, p.492.

25 Ibid., pp.492-93.

eliminate possible dangers to the environment even before a clear causal link was established by scientific evidence.[26] This has important ramifications for trade as shown by the EU embargo on hormone treated American beef. "Article 130 u(1) requires Community policy to foster "the sustainable economic and social development of the developing countries".[27]

The power of member states to adopt more stringent environmental measures that at the Community level was already recognized through Article 130(T) in the Single Act.[28]

The Treaty increased the power of the European Parliament through an extension of qualified majority voting and introduction of Article 189(b) of the *co-decision procedure*. This gave the Parliament an equal say to that of the Council with conciliation procedures to resolve differences between the two institutions. Thus, Parliament could veto a proposed legislation. The Treaty also had a declaration providing for transposing Community directives into national laws by an amendment to Article 171.[29]

---

26 Margaret Brusaco Mackenzie, "European Community Law and the Environment", in Alan Boyle, ed., *Environmental Regulation and Economic Growth* (Oxford, Clarendon Press, 1994), pp.78-79.

27 Johnson and Corcellex, n.15, p.493.

28 Ibid., p.489.

29 Thus, if the Commission believes that a member state had not complied with a judgement of the Court, it may refer the case back to the Court recommending that the member state pay a fine or "penalty payment". The Court has the final decision. Failure to pay the fine, could, in theory result in the freezing of payments from structural funds and other sources. See, Johnson and Corcellex, n.15, p.494.

The European Union's Fifth Environmental Action Programme (1992-2000) is more comprehensive in scale and ambitious in its objectives than any of its predecessors. Its distinguishing features are:

Firstly, the Centrality of the "sustainable development" theme was the most important feature of the 5th EAP.[30]

Secondly, *A sectoral approach*, with a special focus on industry, energy, transport, agriculture and tourism, entailing an examination of their resource implications, environmental impacts and the potential outcomes of actions taken in response to them.[31] "The numerous environmental issues identified as requiring particular attention were climate change, acidification and air quality, protection of nature and bio-diversity, management of water resources, the urban environment, coastal zones and waste management".[32]

Thirdly, the EAP saw the *Introduction of broader policy instruments*, other than legislative action alone, to pursue and attain the desired environmental goals. These included new initiatives such as: (a) the Environmental Management and Audit Scheme aimed at encouraging firms to aspire to a particular level of environmental management standards; (b) the Eco-labelling scheme that attempts to promote the production and consumption of environmentally friendly products through awarding products that meet the scheme's criteria for eligibility; and (c) a further impetus

---

30 Dent, n.1, p.397.

31 Susan Baker, Maria Kousis, Dick Richardson and Stephen Young, "The Theory and Practice of Sustainable development in EU perspective" in Susan Baker, Maria Kousis, Dick Richardson and Stephen Young (eds.), *Politics of Sustainable Development* (London, Routledge, 1997), p.33.

32 Dent, n.1, p.397.

towards the establishment of a European Environmental Agency, to provide the Community and member states with objective, reliable and comparable information at the European level.[33]

The 5th EAP also saw more extensive use of economic instruments such as eco-taxes, refund schemes as well as subsidies and support programmes to encourage industries to switch to environmentally friendly methods through financial assistance and transfers of technology.[34]

Last but not the least, the Treaty enshrined the principles of 'shared' responsibility involving participation of individuals, government and private enterprise at all levels to achieve long term sustainability and subsidiarity (by which the Community would take action only if the objectives could not be better achieved by member-states or local and regional authorities).[35]

While the Maastricht Treaty and the 5th EAP have signalled a quantum jump in the quest for a more coherent EU Environmental Policy, only time will tell how successful the proposed measures will be in reconciling economic growth with environmental protection. Decision making involves a series of factors and institutions and it would be worthwhile to take a brief look at the decision-making process of the actors and interests involved.

---

33 Mackenzie, n.26, p.88; and Dent, n.1, p.397.

34 Kronsell, n.6, pp.144-45.

35 Mackenzie, n.26, pp.86-87.

THE INSTITUTIONS AND ACTORS

The European Community has a set of institutions that play important and distinct roles in the policy process:

(i) *The European Commission*, which represents the 'European interest', has the sole power to initiate proposals. It also has general administrative functions and is responsible for overseeing implementation of policies. It has a number of Directorate Generals which are hierarchically structured. DG XI is the directorate that deals with environment issues.[36]

(ii) *The European Parliament* is an institution that is directly elected by the citizens of the Community Member states, through adult suffrage. The European Parliament consists of 518 members. The number of members per country is weighed by population. Its earlier function was as an advisory and supervisory body. With different Treaty changes its legislative powers have increased. The European Council however continues to make the key decisions. The Parliament is divided into various Committees that closely correspond to the different Directorate Generals. Committee XI deals with environmental issues and consumer protection.[37]

(iii) *The Council* is composed of ministerial level representatives from the national governments of the member states. It is the principal decision making body and decides on the legislative proposals originating from the Commission. The member states are represented in the Council and in its working groups such as COREPER.

---

36 Kronsell, n.6, p.151.

37 Ibid., p.152.

Initially the Council was a classic intergovernmental institution, where each member state was represented as a sovereign-decision making body, relying on consensus. This has increasingly shifted to qualified majority voting on a large number of issues. Hence it has become increasingly important to negotiate with other member states in order to build coalitions for majorities. The Council Presidency rotating between the member states at six monthly intervals, provides the direction and momentum of EU activities. Germany and Denmark have been seen to be the forerunners in environmental policy, while Greece is one of the 'laggards' or latecomers.[38]

(iv) *Finally the Eurogroups* are important actors in the policy process and their role is mainly advisory. Different types of Eurogroups are involved, when it comes to proposals for environmental regulation. The Environmental Non-Governmental Organizations (ENGOs) at the European level cooperate with DGXI and the Parliament and try also to monitor policies coming from other DGs. Eurogroups are increasingly getting involved in environmental legislation owing to the growing importance of the strategies of integration and shared responsibility. *For example*, the industrial lobby is active when legislation relates to the standardization of products or the regulation of industrial processes or activities.[39]

---

38 Ibid. Also see, Centre for Promotion of Imports from Developing Countries, *European Regulations Manual* (Netherlands, Centre for Promotion of Imports from Developing Countries, 1997), p.12.

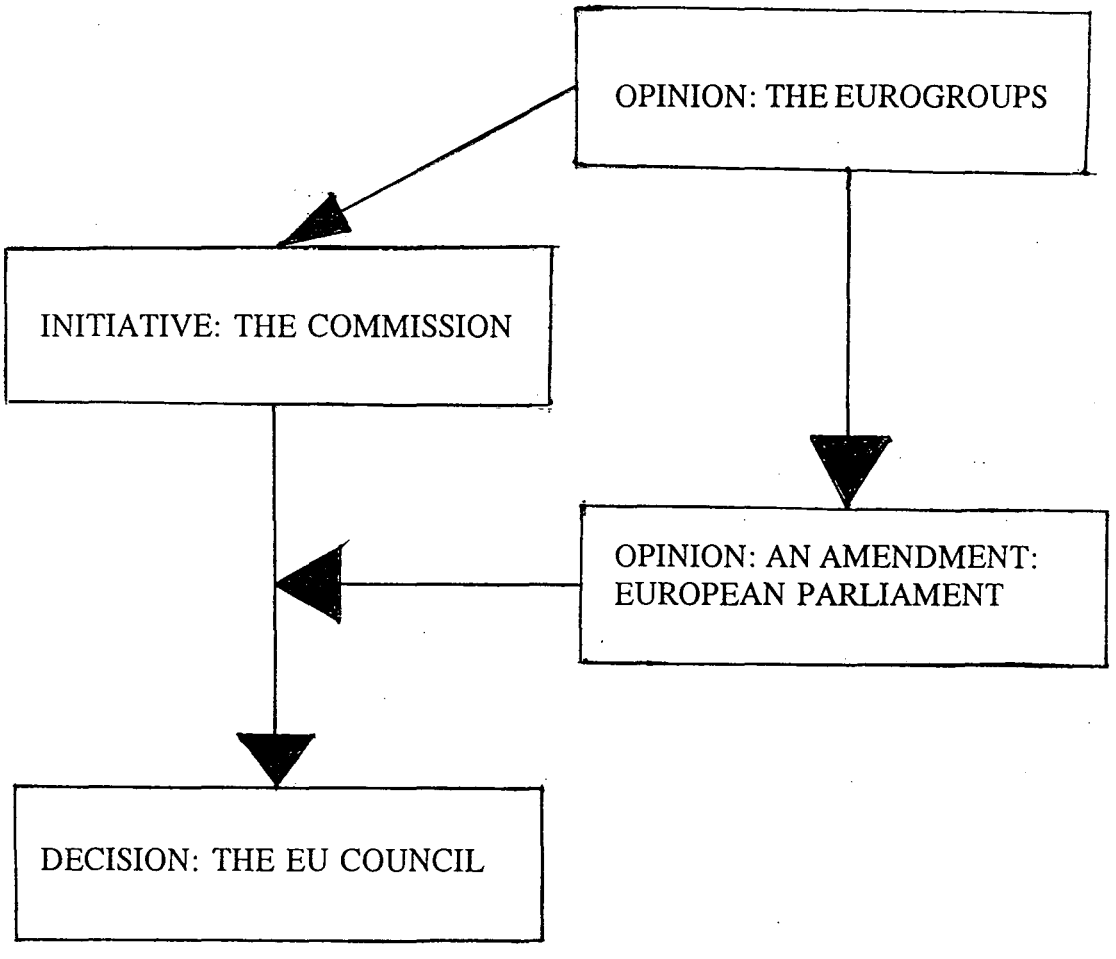
39 Ibid., pp.152-53.

A simple diagram of the *formal Community policy process is given below*

(v) *The European Court of Justice* has both a judicial and an enforcement role, deciding on the interpretation of laws, ensuring that they are implemented by national courts and overseeing the implementation process.[40]

(vi) *The Court of Auditors* is an internal working institution which controls the finances of other EU institutions.[41]

Figure 2: The Formal Community Process



Source: Annica Kronsell, *Greening the EU* (Bromley: Chartwell Bratt, 1997), p.153.

---

40 *European Regulations Manual*, n.38, p.12.

41 Ibid.

The legislative output takes five forms:

(a) *Regulations* that are binding in its entirety and directly applicable on all states and parties, in all its details. A regulation automatically becomes part of national law without any implementation legislation; (b) *Directives* are bindings that may be addressed to specific states which may choose the form of compliance. Directives require implementation at the national level; (c) *Decisions* are more specific acts, often administrative in nature, binding in their entirety, but only on those parties, including states, to which they are addressed; (d) *Recommendations* are non-binding and cannot have a direct effect, but express detailed EU preferences; (e) *Opinions* that are non-binding and cannot have a direct effect.[42]

More than 20 years after its birth, European Community Environmental Policy, despite its weakness, has been an undeniable success. The European Commission's dynamism, the ever-growing public interest, reflected in some member states by the growing presence of 'Green' parties as well as increase in the number of green parliamentarians in the European Parliament are all strong indications of this. Together with the introduction of Qualified Majority Voting, they have given the needed impetus for environmental legislation. Qualified Majority Voting has helped in harmonizing environmental directives, especially directives that affect economic and industrial decisions, with a bearing on the single market. However, the co-decision procedure, with up to 11 separate stages, could end up slowing the decision-making process. This leads us to the crucial question of how the EU, in the post-

---

42 Centre for Promotion of Imports from Developing Countries, *Eco Trade Manual: Environmental Challenges for exporting to the European Union* (Netherlands, Centre for Promotion of Imports from Developing Countries, 1998), pp.20-21.

Maastricht era, will attempt to harmonize the seemingly divergent claims of economic integration and environmental protection. It would be worthwhile to study the methods adopted in a pre-Maastricht era regulatory effort in the field of automobile emissions in order to understand the divergent interests at work, including seemingly protectionist motives, behind environmental legislation in Brussels. It is interesting to study how the Community has tried to maintain a balance between free trade and competing national interests, and the goals of environmental protection. This has important ramifications in future trade-environment negotiations by helping to isolate the variables that enable a successful compromise to be reached and in trying to apply these variables in the more challenging international context.

The Dynamics of Environmental Regulation Within the European Union: A Case Study of Automobile Emissions

The setting of automobile emission standards has been one of the most important and contentious areas of EU environmental policy. Automobile emissions are a major source of air pollution and their regulation has been an important component of the environmental policies of all industrialized nations. European countries like Italy, Germany and France are home to major automobile manufacturing firms -- both domestic and foreign. It was therefore evident that emissions regulation would affect production costs and conditions of competition within Europe. Unlike the US the European states did not have uniform standards. The EU opted for "optional harmonization" during the early 1970s, by setting maximum ceiling requirements for emissions but allowing individual states to impose

laxer requirements.[43] At the same time it prohibited member states from imposing stricter standards on imports than those specified in the directives. However, since much of European car production is exported to other member states, auto producers had a strong incentive to comply with emission standards. As these became progressively stricter, nations seeking to place stronger controls on vehicular emissions were gradually permitted to do so. Moreover, much of the initiative in pushing through the standards lay with the UN Economic Commission for Europe and not the EC.

The EC's effort at internal regulation ran into difficulties. In the case of lead content in gasoline, states like Germany had adopted a maximum level of 0.4 grams per litre in 1972, to be reduced to 0.15 grams per litre in 1976, while Britain had adopted a level of 0.84 grams in 1972.[44] The disparity in national regulations threatened to hinder intra-EU trade not only in gasoline but even in motor vehicles as different car engines were designed to run on fuels containing varying amounts of lead.[45] Eventually the EC, after prolonged negotiations, approved a directive establishing both minimum and maximum standards of 0.40 grams and 0.15 grams. The upper limit was to accommodate a decision the Germans had already made.[46] The inclusion of a lower limit mainly in response to pressure from the British government that wanted to avoid barriers to trade in motor vehicles, that could

---

43 Vogel, n.3, pp.63-64.

44 Ibid., p.64.

45 Johnson and Corellex, as cited in David Vogel, n.3, p.65.

46 Turner T. Smith and Pascale Kromarek, *Understanding US and European Environmental Law: A Practitioner's Guide* (London, Graham & Trotman, 1989), p.71.

be created by any one member-state insisting on lead-free petrol.[47] The directive while trying to prevent trade-barriers also contributed to EU wide emissions reduction.[48]

The first half of the 1980s found the Community under growing pressure to enact new restrictions on automobile emissions. In 1984, the Commission presented to the Council, two new related directives on automobile emissions: *one*, proposed the total elimination of lead from gasoline, while the *second* required a further 70% reduction in carbon monoxide, hydrocarbons and nitrogen oxide in automobile emissions. The two were linked, since the Community's proposed emission standards required all new cars to be equipped with catalytic convertors, which meant they could use only unleaded petrol. The significant departure in EU environmental policy that it entailed was because the EU attempted to formulate its own regulations, rather than, as in the past, adopt European wide standards. The new standards were as strict as those in the US. Approval by the Council followed in 6 months and the 1985 Directive maintained the maximum and minimum standards attained earlier. However, it contained two additional provisions:

Firstly, it urged each member state to achieve the 0.15 level as soon as possible.

Secondly, the directive required that all member states offer at least some unleaded gasoline for sale beginning October 1989. The delay was intended to give

---

47 Nigel Haigh, *EEC Environmental Policy and Britain* (Harlow, Essex, Longman, 1989), p.204.

48 Vogel, n.3, p.65.

the petroleum and automobile industries sufficient time to make the necessary design changes.[49]

> The EC's endorsement of the goal of unleaded gasoline reflected both the increasing influence of European environmental organizations as well as a shift in producer preferences. European Environmentalists had become increasingly critical of the EC's prohibition of national legislation requiring lead content below 0.15 grams/litre. On June 1983, the European Parliament approved a resolution urging that the restriction be ended.[50]

In addition the pressure exerted by the British government following recommendations of the Royal Commission on Environmental Pollution, led the Commission to review its stand. The coincidence of the British position with that of Germany's, although remarkable, was for different reasons. German automobile manufacturers were already fixing their automobiles with catalytic convertors which required that the petrol used be unleaded. Otherwise, the cars would not be profitably exported outside Europe. In sum, the significant strengthening of European environmental standards reflected a convergence of interests between European environmentalists and German car producers.[51]

The Luxembourg Compromise

Reaching an agreement on new automobile emission standards proved much more difficult than in the case of lead free gasoline. The Council's proposed guidelines were designed to have the same effect on the environment as the strict US

---

49 Ibid., p.66.

50 Ibid.

51 Ibid., pp.66-67.

standards.[52] But this entailed installation of 3-way catalysts and electronic fuel injection control systems on all vehicles. It was a good example of the painstaking process of collective government and clashing national interests.[53] Underlying and, for the most part, reinforcing the different strengths of environmentalism within Europe were the conflicting interests of European automobile producers. The dispute over emission standards pitted countries with large car manufacturers, such as Germany, home of Mercedez Benz, BMW and Audi, against states such as France and Italy, home of Fiat, Peugeot and Renault, all small-car manufacturers. Only one-third of German car production comprised of small cars as compared to three-quarters of Italian production. Britain, although without important domestic manufacturers was home to a number of foreign medium size car producers whose interests coincided with that of small car manufacturers. The dispute essentially centered on whether emission standards should be mandatory for all small and medium new vehicles as well, in addition tc large vehicles for which there was unanimity. The debate over this issue reveals the critical role of regulatory standards in affecting the terms of international competition in the following ways:

Firstly, *Installation of technologies such as fuel-injection systems* entailed greater costs for small automobile manufacturers than larger ones. Since small-car purchasers were more price-sensitive, mandatory installation of converters and injection systems, threatened to depress sales of smaller cars.

---

52 "Agreement on New Auto Emission Standards starting in 1988 called Major Breakthrough", *International Environmental Reporter* (Washington, D.C.), 13 November 1985, p.368.

53 Hilary F. French, "The EC: Environmental Proving Ground", *World Watch* (Washington, D.C.), vol.4, no.6, November-December 1991, p.27.

Secondly, *The nature of markets* targeted by German automakers were primarily the United States and Japan, as compared to French and Italian producers whose production was primarily for the domestic market. The US and Japanese markets already had catalytic convertors as the norm. For the large German manufacturers, adoption of US regulations by the European Community would actually reduce production costs as there would be no need for separate production lines for European and export markets. Moreover, Germany gave tax incentives to consumers to buy "green" cars which was absent in France, Britain and Italy.

Thirdly, availability of unleaded petrol also varied between European countries, which made it more difficult for the owners of vehicles equipped with convertors to purchase gasoline in Britain, France, Italy and Spain.[54]

The British were opposed to the idea of fitting catalytic convertors which, they said, was "outdated" and wanted technologies like "lean-burn engines" designed to decrease engine pollutants, to be adopted. Underlying this position was the substantial investment that Ford UK had made in 'lean-burn technology' and its inexperience in convertor production and design. The French and Italians also opposed the German initiative on convertors, with Germany threatening to unilaterally impose its own emission standards and make catalytic convertors mandatory on all cars sold in Germany. This pleased Germany's green constituencies, impatient at the slow pace of the EC's environmental policy. But the possibility of an intra EU trade war made Germany's export oriented car manufacturers to persuade Bonn to backtrack. Thus, although Germany did enact legislation to make convertors compulsory on all cars

---

54 Vogel, n.3, pp.68-69.

sold within Germany, it agreed to delay the law's implementation from 1986 to 1988 for cars above 2 litres and to 1989 for all other cars in order to give the Community more time to act. To accommodate the interests of France, Britain and Italy, the Community altered its guidelines on pollutants allowing for the use of 'lean-burn' engines for medium-sized cars and still looser standards were set for smaller cars. In effect, the German government traded off lower standards for vehicles produced outside Germany for the ability to impose stricter standards on its domestic manufacturers.[55]

In July 1985, the nine members of the Council reached the *Luxembourg Compromise*. The result of this compromise was as follows:

Firstly, *Different emission limits* along with different deadlines for meeting them were established for cars in each category. Stricter deadlines were set for new models than for new vehicles, the design specifications of a model in production being more difficult to change.

Secondly, *The 1987 legislation* still set a ceiling rather than a floor. Members were still allowed to set lower emission levels, but could not exclude any cars that complied with its emission standards.[56]

Thirdly, with regard to tax incentives offered for purchase of clean cars within Germany, foreign automobile firms regarded it as a 'free-trade distortionist' measure. But some Commission officials considered them compatible with Community

---

55 Ibid., pp.70-71.

56 Ibid., p.71.

regulations as they provided for tax derogations to final consumers on a non-discriminatory.[57] The Luxembourg Compromise restricted the terms under which they were allowed to do so.

The Luxembourg Agreement represented a disappointment to European environmentalists. The EU appeared to have sacrificed stricter pollution requirements in order to prevent the emergence of new non-tariff barriers. Although standards were heightened, in the final analysis, interests of small car manufacturers had carried greater weight than those of environmentalists. However, the latter secured the concession of a provision to the Luxembourg Agreement requiring the EU to adopt new stricter emission requirements for small and medium sized vehicles in 1987, which would be effective from 1992 and 1993. Since unanimity was required for adopting the Agreement, a veto by Denmark ensured that it had to wait until the passage of the Single European Act (SEA) where the Qualified Majority Voting (QMV) was introduced. It was the first directive to be adopted under the QMV system.[58]

The directive had to pass another hurdle, namely, that of the European parliament which, under the SEA, had the right to review Council Directives. The political strength of environmentalists within the Parliament ensured that the debate was heated.[59] At the end of the debate, the EC's environment Commissioner

---

57 "Commission to Consider Legal Proceedings on West German Incentives for Cleaner Cars", *International Environmental Reporter*, 13 November 1985, p.39.

58 Vogel, n.8, p.72.

59 Ibid.

Clinton Davis pleaded with the Parliament not to undermine a fragile, hard-fought compromise. He warned that the Commission would reject any amendment approved by the Parliament and argued that "some progress is better than none at all".[60] On 18 November 1987, with many MEPs abstaining, an amendment to heighten the proposed emission standards was defeated and the following month, the Luxembourg Compromise became law.[61]

The Small Car Directive

Events however moved rapidly towards the establishment by the Commission for stricter emission standards for smaller vehicles. There were many changes in the political and economic context which led to easier acceptance of stricter environmental standards. These were:

Firstly, *The European environment movement* had gained considerable strength in a number of European countries including Britain. Its influence in the European Parliament had also grown, putting pressure on the Council and the Commission to enact stricter standards than they otherwise might have.

Secondly, *there was growing pressure to harmonize environmental regulation* within Europe, as the date for the single Market drew nearer, especially those that

---

60 See Jonathan Story and Ethan Schwartz "Auto Emissions and the European Parliament: A Rest of the Single European Act", INSEAD-CEDEP, 1990, pp.23-24, as cited in Vogel, n.3, p.73.

61 Ibid.

directly affected free trade. The device of optimal harmonization was no longer viable.[62]

Increasing acceptance of catalytic converters among small car manufacturers in Britain, France and Italy, as a result of growing experience with the technology and spread of environmental concern among consumers in these countries, reflected in their demand for 'cleaner cars'. This reduced much of the opposition to stricter emission norms.[63]

The focus of the debate now switched to the European Parliament. The European Environmental Bureau, a lobbying group representing 100 European environmental organizations, criticized the Council's position and demanded emission standards as strict as that of the U.S. beginning in January 1993. Realizing that the Parliament faced with upcoming European elections was likely to insist on standards which might prevent the enactment of any directive at all, the Commission and the Council were forced to compromise.[64] They were also spurred by the Dutch move to require catalytic convertors on all cars sold within the country. While the EU would have challenged the Dutch requirement in the European Court, the move would have been politically unpopular and would have undermined the Commission's green credentials.[65] The Commission, accordingly on 5th April, one week before the

---

62 Ibid., p.75.

63 "European Community Environment Ministers Agree on New Emission Levels for Small Cars", *International Environmental Reporter*, June 1989, p.283.

64 Vogel, n.3, pp.74-75.

65 "Green, Greener, Greenest?", *Economist* (London), 6 May 1989, p.67.

European Parliament's vote, announced a proposal for stricter emission standards for small cars.[66]

Two issues that remained were:

(a) *Timing of the enforcement of standards*: The Dutch, Danes and Germans pressed for faster implementation of the new standards while the British, French and Italians wanted more time for their domestic manufacturers to adjust. The Council compromised by setting a deadline of 1 July 1992 for all new models and six months later for vehicles then in production.[67]

(b) *The issue of fiscal incentives by the government given to 'clean' vehicle buyers* which had the potential of distorting competition. The issue had been addressed by the EU earlier. The Dutch, Germans and Danes had introduced them. The Council compromised by again, permitting member states to offer fiscal incentives to new car purchasers until July 1992, provided it did not exceed 85 per cent of the cost of the catalytic convertor.[68]

In *July 1989 a second version of the Small Car Directive* was approved by the Council by a qualified majority, opposed only by Denmark and Greece. It was a significant step towards both tightening and harmonization of pollution control standards within the Community. Strict new limits on emissions were established for

---

66 Vogel, n.3, p.75.

67 Ibid.

68 "European Community Environment Ministers Agree on New Emission levels for Small Cars", n.63, p.283. Also see, Vogel, n.3, p.75.

all small cars within the EC. All cars would be required to fit catalytic convertors and thus run on unleaded gasoline. The new limits proposed to cut existing emission levels by 73%. Thus, although disagreements among member states continued, the EU had finally managed to harmonize emission standards for the majority of vehicles sold in Europe and that too at a relatively high level.[69] Member states, through their individual actions made the EU move towards stricter standards in order to assure the viability of the single market. "A 1993 directive required new cars to reduce carbon-di-oxide emissions by an additional 30 per cent, hydrocarbons by 55 per cent, and nitrogen oxides by 38 per cent. Stricter emission standards were also established for diesel engines".[70]

The Significance of the EU Regulatory Process on Automobile Emissions

Environmental policy making in the EU have revealed differences in individual member states' preferences for environmental regulation. The disputes have also revealed the distinctive ways in which these policies affect producers within the EU as well as the relative strength of the environmentalists *vis-à-vis* industrial groups in the different member states. A *number of important factors come to light in the analysis of this process*:

(i) *International orientation* of the producers have had a significant impact on the attitudes of states. The fact that German automakers had to export half of its cars to

---

69 Vogel, n.3, p.76.

70 David Gardner, "EU to Recycle the Issue at Fresh Talks on Waste", *Financial Times* (London), 2 December 1993, p.2.

California, which had the world's strictest environmental laws, significantly influenced Germany's decision to press for tighter emission norms in the EC.

(ii) *The role played by EU institutions* has been important in speeding up environmental regulation. Harmonization of regulation was enhanced, for example, by the introduction of Qualified Majority Voting in the EU Institutions.

(iii) *The adoption of higher standards* clearly affected a particular section of manufacturers who lobbied through their governments against the adoption of higher standards as it affected their cost structure. Manufacturers of larger cars in the environmentally strict 'Green' countries such as Germany clearly supported higher standards, as it not only increased their sales within Europe but also helped them in export markets abroad. The case study clearly shows how environmental concerns could actively help business interests of manufacturing groups in competing for markets both in the EU and abroad.

(iv) *The economic clout of 'greener' states* like Germany also contributed to the strengthening of EU standards. The green preferences of a large consumer segment within Germany and other countries could not be ignored by Italian and French producers. Even within Germany, producers had moved towards 'greener' standards in response to US standards and market preferences. It also meant that producers in 'greener' states had a competitive edge *vis-à-vis* their competitors in 'greener' export markets.

(v) *The EU has generally tried* to fashion a compromise between the standards of the greener states and less green ones in order to preserve the single market and at the same time protect the environment in a more enhanced manner.

Consequently for the majority of EU member states and its citizens, the increasingly important role of the EU in making environmental policies has driven national regulation of the 'average' EU state upward. The engines, of course have been the economic clout of the 'greener' states. The Single European Act by strengthening the European Parliament with green political constituencies, has increased the ability of European environmentalists to shape EU policies. It has weakened the ability of green movements such as those within Germany and Denmark to influence environmental standards within their own nations while increasing their ability to influence policies, through the EU, in countries where environmentally oriented movements were weak. With the addition of members like Austria, Sweden, and Finland with strong environmental groups and tighter regulations. EU regulations will only be more enhanced in the future.

CONCLUSION

Of all regional integration arrangements, the European Union has witnessed the most rapid evolution of a coherent and well-developed environmental policy. The most important determinant of the political economy of trade and environment within the EU has been and will continue to be the differences between the European Commission and the national governments.[71] The nature of the European industry and its markets as well as how far it uses the environment as a 'resource' i.e., its pollution and resource depletion impact, will determine the extent to which the

---

71 Gernot Klepper, "The Political Economy of Trade and the Environment in Western Europe", in Patrick B. Low, ed., *International Trade and the Environment, World Bank Discussion Papers No.159* (Washington, The World Bank, 1992), p.247.

conditions of its competition will be affected by EU legislation. Competitiveness can also depend on whether the legislation seeks to introduce process standards or product standards. Regulations concerning process standards may reduce the competitiveness of domestic industry while product standards may induce a potential for market segmentation and improve the competitive position of domestic firms *vis-à-vis* their foreign competitors.[72]

Klepper argues that of the principal interest groups within the EU industry associations and labour unions do not have a coherent and well-defined stand with regard to environmental regulation. Industries in environmentally stringent EU states like Germany generally push for EU harmonization to reduce competitive disadvantages caused by the creation of a single market where normal barriers to trade like tariffs and border controls have been dismantled. Even within countries with more lenient polices, attitudes may vary. An expanding firm acquiring new capital stock has greater incentives to go in for more environmental friendly production methods and may therefore support harmonization rather than established firms with substantial old capital stock whose profitability may be reduced by new regulations. Countries where umbrella associations of industry are strong such as the BDI (Federal Association of German industry) may tend to focus on long run interests of the whole industry and hence oppose environmental regulation less, than countries where sectoral groups predominate and where divergence of views may emerge. Labour Unions are similarly divided though organizations like the DGB in Germany tend to support effective environmental legislation, as the long run costs of implementation are higher for 'late-comers'. At the same time strongly export

---

72 Ibid., p.251.

oriented industries like the chemical industry in Germany may oppose higher standards to the extent it affects competitive exports outside the EU. The *case of agriculture* is different as it is a highly protected sector and influential politically and also has put pressure on the environment due to the high level of subsidies received through the Common Agricultural Policy.[73] This sector may be affected by agricultural liberalization under future WTO rounds of negotiations, which may lead to a fall in ecologically unsustainable subsidies. Protectionist pressures could surface in the form of sanitary and phytosanitary and such other measures, in agricultural trade.

Green groups and political parties have come to stay as an impatient and integral feature of European politics although their relative strength varies between member states. Ecological issues have become important in elections although with the exception of climate change most are intra EU issues.

It is important to note that foreign trade in manufacturing is dominated by intra-EU trade. This, according to Klepper, is responsible for concentrations of public statements and policy issues on intra-EU issues. However, this could easily change in the future as developing countries threaten to capture market shares within the EU due to low labour costs, in sectors like textiles. Labour costs will be significant due to a substantial reduction of tariff and conventional non-tariff barriers such as questions achieved under the WTO regime. The prevailing balance of trade may also

---

73 Ibid., p.255.

affect general protectionist sentiment with greater leanings towards disguised environmental protectionism in times of falling exports and rising imports.[74]

Finally the implications of the eastward expansion of the EU has yet to be analysed in detail. Industries competing with LDC exports in areas like textiles in these countries may also resort to environmental protectionism once they are compelled to adhere to higher EU standards. All this makes it imperative to study the nature and legal bases of the TREMs that can be imposed by the EU.

---

74 Ibid., p.257.

Chapter 3

TRADE RELATED ENVIRONMENTAL MEASURES IN INTRA AND EXTRA-EU TRADE

By the term 'Trade-Related Environmental Measures, we mean those measures whose primary justification is the protection of the environment but which take the form of trade instruments such as standards, taxes, trade restrictions, subsidies and conditionality. Trade-Related Environmental Measures (TREMs) may be taken multilaterally or unilaterally. Multilateral TREMs include measures that are taken in accordance with Multilateral Environmental Agreements (MEAs) and pursuant to MEAs.[1] Multilateral Environmental Agreements are usually based on consultations among a number of states and are generally non-discriminatory. These such as the CITES or the Montreal Protocol, may contain specific measures that regulate free trade and such restrictions are recognized by the GATT. Nonetheless, problems may arise if the MEAs call for TREMs in relation to non-parties when both the parties and non-parties to an MEA are WTO members. Yet multilateral TREMs based on MEAs are preferable to unilateral TREMs that are considered increasingly protectionist, often discriminatory and violative of the sovereign right of a state to determine its domestic environmental policy. "These are essentially power based rather than rule based".[2]

---

1 Kenneth P. Ewing, and Richard G. Tarasofsky, "The *Trade and Environment Agenda: Survey of Major Issues and Proposals -- From Marrakesh to Singapore* (Gland, International Union for Conservation of Nature and Natural Resources, Switzerland, 1997), p.5.

2 Ibid., p.12.

Hence, it is important to study the nature and legal bases of the TREMs of the European Community and their compatibility with WTO rules. The implications of TREMs has been different for EU member states and third countries due to the different political, economic, legal and institutional frameworks in the context of which these TREMs have been applied. The attempted reconciliation of free trade and environmental protection within the EU may hold out significant lessons for doing the same in a global context, but yet may not be workable as a global model. This chapter shall address the above issues and examine the facts and problems.

TREMs and the Internal Market

A major objective of the establishment of the European Community was to enable the free movement of goods among its member states.[3] The EC Treaty contains a variety of provisions that seek to prohibit impediments to intra-community trade. The central provision with regard to import restrictions is *Article 30* which prohibits all measures having an equivalent effect to quantitative restrictions on imports. This encompasses all trading rules enacted by member states which are capable of hindering, actually or potentially, directly or indirectly, intra-Community trade.[4] At the same time Article 36 permits member states to restrict or even ban imports, exports or goods in transit if such restrictions are necessary for the reasons

---

3 David Vogel, *Trading up: Consumer and Environmental Regulation in Global Economy* (London, Harvard University Press, 1995), p.25.

4 Damien Geradin, "Balancing Free Trade and Environmental Protection: The Interplay between the European Court of Justice and the Community Legislator", in James Cameron, Paul Demaret, and Damien Geradin (eds.), *Trade and the Environment* (London, Cameron 1997), p.206.

of public morality, policy or security or for the protection of life or health of humans, plants or animals.

Subsequently, in the *Proceureur de la Republique*, 1985, the ECJ held that the protection of the environment was one of the Community's essential objectives which might justify certain trade restrictions.[5] In the Cassis de Dijon case, the European Court of Justice gave a landmark judgement, namely, that in the absence of common rules, member states could regulate matters relating to production and marketing within their own territories but could not regulate product and production standards in another state. This laid the basis for the concept of *mutual recognition* in the EU.[6] It formed the basis of the rule that if a product is accepted in one member state then it must be sold freely in another state.[7] National restrictions could then be imposed only if it satisfied the test of *proportionality* i.e., whether the measure was: (a) actually necessary in the public interest; (b) whether the measure was least trade restrictive. Moreover, it had to fulfil the test of *non-discrimination* i.e., applying equally to domestic and imported products.[8] Otherwise, the principle of mutual recognition of standards would prevail. The test of proportionality was closely examined in the *Danish Bottles Case*. In this case, the Commission challenged a Danish law of 2 July 1981 whereby all manufacturers had to market beer and soft

---

5 Martin Coleman, "Environmental Barriers to Trade and European Community Law", in A. Boyle (ed.), *Environmental Regulation and Economic Growth* (Oxford, Clarendon Press, 1994), p.134.

6 Vogel, n.3, p.31.

7 Thomas Anderson, Carl Folke and Stefan Nystrom, *Trading with the Environment* (London, Earthscan Publications, 1995), p.100.

8 Coleman, n.5, p.135.

drinks in reusable bottles. The decision was made in the context of a well-functioning recycling system for glass bottles that was threatened by increased sales of non-returnable beer and other bottles. The Commission considered the law to add greater costs to the suppliers of imported goods rather than Danish goods creating a trade-barrier to free movement of goods. The Danish law conflicted with the basic regulation that goods accepted in one member state must be accepted in all member states. While foreign bottles were not directly prohibited,. foreign suppliers had greater difficulty in creating a system to handle reusable bottles.[9] The containers also had to be approved by National Agency for Protection of the Environment. Following the Commission's intervention in 1984, the Danish government amended the 1981 law to allow the use of non-approved containers apart from metal containers, provided a deposit and return system was established. Even this was for test periods only and in limited quantities. The Commission was not satisfied and brought proceedings in 1980 to have the deposited return system and the approval system declared incompatible with Article 36 of the Treaty.[10] The European Court of Justice found the deposit and return system to be *proportional* to the goal of environmental protection which was a consideration within the EU and was thus compatible with Article 30. On the other hand, the Danish requirement of marketing beverages in approved containers only imposed undue restrictions on imports of beverages and the environmental gain was not in proportion to the substantial

---

9 Anderson, Folke, and Nystrom, n.7, p.101.

10 Geradin, n.4, pp.208-09.

drawbacks for foreign suppliers. Hence the measure was deemed incompatible with *Article 30.*[11]

In the Walloon Waste Case, however the ECJ considered the issue of non-discrimination and not proportionality. In 1985, the Belgian Walloon region introduced regulations prohibiting the storage and deposition of waste from other countries and other regions of Belgium. The European Commission contended that the regulations were discriminatory and could not be justified under Article 36. It added that Belgium had violated Article 30 in addition to other directives such as 84/361 which already provided for detailed, uniform systems for the supervision and control of transfrontier shipment of dangerous waste.[12] On 9 July 1992, the ECJ, which handled the dispute ruled out general import prohibitions in hazardous waste due to prior existence of a harmonization legislation. The Court regarded the Walloon situation as exceptional, and highlighted the need to take into account the particular nature of wastes. While waste could be treated as a commodity, the Walloon situation required a derogation from Article 30 due to the overwhelming need for environmental protection. The Court cited Article 130r(2) of the Treaty of Rome which stated that environmental damage as a priority had to be rectified at source. It also cited the principles of "self-sufficiency" and "proximity" expressed in the Basel Convention of 22 March 1989, whereby wastes had to be handled by the local entity or region where it was generated, as far as possible, and dealt with, as close as possible to its place of origin so that the need for transportation is limited. Therefore, according to the Court, this, and the special nature of waste that was outside the

---

11 Anderson, Folke and Nystrom, n.7, pp.101-02.

12 Geradin, n.4, p.211.

region, made the Walloon regulation non-discriminatory.[13] The Court however failed to apply the test of proportionality in this case as it had done in the Danish bottles case. Regarding the Waste issue the ECJ ruling states that "subsidiarity and self-supporting principles have greater validity than the interests of free trade".[14]

Legal Basis of Intra-EU TREMS and their Significance

The choice of legal basis of Environmental Measures is a contentious question within the Community. Following the amendment of the Treaty by the Single European Act, environmental legislation may be based on either *Article 100a* or *Article 130s*. "Article 100a provides for approximation of provisions laid down by law, regulation or administrative action in the member states, which have as their object the establishment and functioning of the internal market".[15] Thus, any environmental measure that impinges on the free movement of goods and affects the creation of the single market can be taken only under Article 100a. Paragraph 3 of Article 100a provides that proposals under Article 100a concerning environmental protection will take as the base a high level of protection".[16] These measures were to be taken by qualified majority decision of the Council and also entailed a cooperation procedure, assigning a more active role to the Parliament. Legislation

---

13 Coleman, n.5, pp.137-38.

14 Anderson, Folke and Nystrom, n.7, p.103.

15 Coleman, n.5, p.141.

16 John Usher, "Protection of the Environment through Trade Restrictions and the Community's External Relations: The Respective Competence of the Community and of the Member States", in Cameron, Demaret and Geradin (eds.), n.4, p.271.

based on Article 130s is concerned solely with environmental protection. Prior to the Maastricht treaty Article 130s measures required unanimity and only a consultation with Parliament. The Maastricht treaty has necessitated qualified majority even in case of decisions taken under Article 130s except in certain areas where unanimous decisions are required. While adopting decisions based on qualified majority under Article 130s, a lengthy consultation procedure has been laid down (similar to that applicable for 100a measures) involving 2 separate readings by Parliament.[17]

Extent of Derogation under Article 100a and Article 130s

While derogations to introduce more stringent measures are permitted under both Article 100a and Article 130s, the conditions are more stringent in the case of Article 100a. Paragraph 4 of Article 100a, states that measures taken under Article 100(a)(4) for protection of the environment must be notified to the Commission. Further the measures must be non-discriminatory and must not constitute a disguised restriction on trade. In such cases the *proportionality* test would be applied. The list of grounds under Article 100a(4) are exhaustive. But derogations are not permitted if harmonization measures are adopted *unanimously*. In the case of *Article 130s* too, derogations which are provided for under *Article 130t* has to be non-discriminatory and proportionate. Article 130t, however, allows for both Community and national measures to co-exist and national measures to be more stringent than Community ones as long as they are along the lines of Community legislation on the subject. Article 130(t) and Article 100a(4), both deal with areas where Community legislation already exists, thus picking up where Article 36 and the Cassis de Dijon mandatory

17 Coleman, n.5, p.142.

requirements leave off. But, an important difference is that derogations are allowed by Article 130t even to EU legislation *unanimously* adopted unlike Article 100a(4).[18]

The existence of these 2 bases is certainly significant. The conditions under which states may derogate under Article 100a(4) are limited. The Community's aim thus has been to ensure the least hindrance to the free movement of goods as possible, albeit taking into account a high base level of environmental protection. At the same time the democratic role of the European Parliament has certainly been increased in legislation based on both Article 100a and Article 130s. The doing away with unanimity in measures to be taken for environmental protection under Article 130s and the rise of green parties in the European Parliament will certainly strengthen the hands of environmentalists. Environmentalists look to the democratic decision-making process within the European Parliament as the best way to safeguard their interests. In the 1989 elections for example, "the Green Party captured 30 seats out of 569, pushing it into fifth place among the political groups. A sizeable block of Social Democrats and Greens, committed to strong environmental legislation, makes the Parliament the most progressive branch of the EC, more pro-environment, in fact, than many members' national parliaments."[19]

The importance and need for selecting the correct legal basis for a particular environmental regulation still remains problematic. In the Titanium Dioxide, the Commission supported by the Parliament sought an annulment of a Council regulation

---

18 Ibid., pp.142-43.

19 Hilary F. French, "The EC: Environmental Proving Ground", *World Watch* (Washington, D.C.), vol.4, no.6 (November-December 1991), p.28.

based on Article 130s concerning procedures for harmonizing programmes for reduction and elimination of pollution caused by waste in the titanium dioxide industry. The difficulty of delimitation between Article 130s and Article 100a has especially risen with regard to "harmonization regimes of different national regulations of industrial processes as opposed to products".[20] The Commission argued that the measure impacted on the conditions of competition within member states, by imposing variable costs of pollution control, on different states. The ECJ found an incompatibility between the procedures adopted under Articles 100a and 130s and while the directive was concerned with both environmental protection and conditions of competition, the court opted for Article 100a. Later in the Waste Directive Case, the ECJ was again asked by the Commission to annul a Council Directive regarding waste disposal which was based on Article 130s. As the directive had as its object both the completion and the functioning of the internal market as well as environmental protection, the Commission argued that following the Titanium Dioxide decision, the measure had to be based on Article 100a. The Court, however, found that the mere fact that establishment and functioning of the internal market was insufficient to make Article 100a operative. This was because harmonization of market conditions was only an incidental effect of the measure.[21] The main aim and content of the measure, i.e., the *centre of gravity*, related to environmental protection and hence the use of Article 130s was justified.[22]

---

20 Geradin, n.4, p.216.

21 Ibid., p.217.

22 Coleman, n.5, p.144-45.

The debate over the choice of legal bases has implications for the trade-environment debate as the choice offers scope for giving precedence for environmental protection over free trade within the EU and with the rest of the world. Naturally environmentalists would prefer the use of Article 130s as list of conditions for derogation is not exhaustive and more stringent measures at the national level are possible. In future disputes, the "main aim and content" of a directive as decided by the ECJ will decide whether a measure is a TREM or not with regard to Intra EU trade.

TREMs in the External Trade of the European Community

Measures primarily restricting the Community's external trade, for the purpose of protecting the environment, concern trade in wildlife, waste and dangerous substances and products, the use of which may damage the Earth's atmosphere. Since most of these are based on International Environmental Agreements, the likelihood of their incompatibility with WTO rules is minimal. These agreements explicitly provide for trade restrictions as a means of enforcing the agreement or of achieving its environmental objectives. "In these instances trade measures taken against signatories of the international agreement pose no real legal issue for the GATT as long as the environmental agreement has entered into force subsequent to the relevant GATT provisions. This is due to the public international law principle, that in the event of a conflict, the provisions of a later treaty take precedence over those of an earlier one".[23] However, if trade measures are taken with respect to non-

23 Michael J. Trebilcock and Robert Howse, *The Regulation of International Trade* (London, Routledge, 1995), p.360.

signatories, then a legal problem would arise. Many international environmental agreements such as CITES (Convention on International Trade in Endangered Species) explicitly authorize parties to adopt stricter measures and ban imports from and exports to non-parties. The absence of a conflict in many cases stress from the fact that most countries are already party to an international convention as in the case of the Montreal Protocol but partly it is also due to a genuine desire to avoid unnecessary conflicts. This does not rule out the possibility of future conflicts over Multilateral Environmental Agreements.[24]

TREMS with respect to extra EU-trade include:

(a) ***Trade in Wildlife*** which is covered by CITES also known as the Washington Convention. The goal of CITES is to promote international cooperation so as to protect wild flora and fauna against over exploitation through international trade. It prohibits trade in species and derived products threatened with extinction as listed out in Appendix I of CITES and strictly regulates trade in species which though not endangered might be threatened with extinction if trade were not to be controlled. (As listed in Appendix II). Thirdly, it also regulates trade in those species, not included in Appendix I or II but are identified by a party as being protected in its territory (listed in Appendix III). Parties to CITES can take stricter measures such as a complete ban on trade or to restrict trade in species not covered by CITES. Trade with non-parties are also subject to the same restrictions as trade with parties. The EU has introduced a separate regulations to implement CITES within EU as CITES itself provides that its scope does not extend to members of a customs union. At the

---

24 Duncan Brack, *International Trade and the Montreal Protocol* (London: Earthscan publications, 1996), p.72.

same time, it is the member states and not the EU that are recognized as parties to CITES.[25] In addition to measures under CITES, the Community introduced other measures such as import license requirements for whales and other cetacean products, a ban on the import of ivory from African elephants, limited bans on the import of seal-pup skins and certain types of pelts.[26]

(b) *Substances that deplete the Ozone Layer*

In 1987, the Montreal Protocol on the Substances that Deplete the Ozone Layer was adopted, which provided for measures including trade measures with the aim of reducing global emissions of chloroflurocarbons and related substances commonly known as CFCs. Both the Community and member states are parties to the Montreal Protocol and to the 1990 London amendment which require additional and stricter measures to be taken to protect the Ozone layer. The Community has thereby introduced regulations prescribing the phasing out of the production and consumption of CFCs within shorter timespans. Community legislation authorises import of CFCs from parties within certain quantitative limits which are scheduled to decrease in parallel with a decrease in production of CFCs within the Community. Exports and Imports of CFCs with regard to non-parties was already prohibited or has been banned as of 1 January 1993. The Community measures dealing with CFCs are based

---

25 Paul Demaret, "Trade-Related Environmental Measures in the External Relations of the European Community", in Cameron, Demaret and Geradin (eds.), n.4, pp.278-79.

26 Coleman, n.5, p.148.

on Article 130s of the EC Treaty. Member states are in turn entitled to maintain or introduce more secure measures by invoking Article 130t.[27]

(c) *Trade in Waste and Dangerous Substances*

As seen earlier, waste, includes materials for both disposal or recovery as seen by the ECJ and were treated as goods.

EU regulations and directives have been in accordance with the 1989 Basel Convention on transboundary movements of hazardous wastes and their disposal by which each party has the right to prohibit the import of hazardous wastes. Export is permitted only when the importing country's government has given permission in writing. If there was reason to believe that the waste would not be disposed of in an 'environmentally sound manner', then it should not be exported. The Basel Convention prohibited trade with non-signatory parties.[28] Within the European Community, Directive 84/631, as amended by Directive 86/279, deals with the shipment of hazardous waste to and from the Community. It does not prohibit trans-frontier shipments of hazardous wastes but provides for a *Prior Informed Consent System* (PIC) by which any shipment of hazardous waste, including from a third state destined to a member state, must first be notified to a competent authority of that state. Article 39(1) of the Lome IV Convention prohibits all direct or indirect *export* of such waste to the ACP states. The ACP states in turn have agreed to ban the direct or indirect import of hazardous or radioactive waste in their territory from the Community or from any other country. Article 39(1) however allows a member state

---

27 Demaret, n.25, pp.293-94.

28 Andersson, Folke and Nystrom, n.7, p.119.

to which an ACP country has exported waste for processing to return the processed waste to the ACP state of origin. Directive 84/631 has since been replaced by a new regulation that covers movements of all type of waste and not just hazardous wastes. Exports of waste for disposal are prohibited except those intended for European Free Trade Area (EFTA) countries which are parties to the Basel Convention. Exports of waste intended for *recovery* is also prohibited except those to OECD countries, parties to the Basel Convention, and non-OECD countries, parties to the Basel Convention, and which would have concluded a bilateral agreement with the Community. Exports and imports of waste which are not prohibited are submitted to the prior informed consent system. The regulation is based on Article 130s by the Council rather than Article 100(a) or Article 113 (dealing with Common Commercial Policy) of the European Community.[29]

The Community has also introduced legislation controlling the import and export of certain dangerous chemicals into and from the Community.

(d) *Trade in Tropical Timber*

The significance of the earth's forests has increasingly been recognized over the last two decades as repositories of bio-diversity, as sinks for atmospheric carbon and as a source of new medicinal and useful chemicals. At the same time, the demand for forest wood has been rising due to its use as a raw material for construction and industrial processes as well as for forest land and fuel to accommodate rising

---

29 Demaret, n.25, pp.291-92.

populations.[30] Controlling commercial logging which at least partly accounts for the destruction of tropical forests and controlling trade in tropical timber seems necessary, as logging is mainly carried out with a view to export either whole logs or processed hard wood.[31] There is no international legal instrument as yet that prescribes controls on trade in tropical timber. The European Community is party to the Tropical Timber Agreement (ITTA) signed in Geneva in 1983 under the auspices of the UNCTAD. It does not regulate trade but provides a framework, the International Tropical Timber Organization (ITTO) allowing producers and consumers of tropical timber to meet, consult and cooperate with regard to all relevant aspects of the tropical timber economy, including sustainable utilization and conservation, bearing in mind the sovereignty of producing members over their natural resources. The Community has refrained from taking any unilateral trade measures.[32]

In 1992, Austria passed a law providing for both mandatory and voluntary labelling of tropical timber. The mandatory labelling would indicate that the product was "tropical timber" while the voluntary label would indicate that the timber originated from sustainably-managed forests. The law was challenged by the ASEAN countries on the grounds that it discriminated against tropical timber and that the definition of sustainable forestry was not based on international norms and consultations.[33] Malaysia and Indonesia threatened to take counter measures and

---

30 Ewing and Richard Tarasofsky, n.1, p.70.

31 Demaret, n.25, p.283.

32 Ibid.

33 Anil Agarwal, Sunita Narain and Anju Sharma (eds.), *Green Politics: Global Environmental Negotiations* (New Delhi, Centre for Science & Environment, 1999), p.283.

Austria withdrew its mandatory labelling requirement and extended its voluntary programme to timber from all types of forest.[34] Overall, the European Commission seems to believe that only comprehensive measures agreed upon by both producing and consuming countries are capable of protecting tropical forests in the long run.

(e) *Genetically Modified Organisms*

The issue of genetically modified organisms has in recent times become the basis for trade disputes between the EU and the US. The EU, passed labelling laws under its Novel Food Regulation in 1998 which requires that any food produced from soya or maize which contains residues of engineered DNA or protein must be recorded as GMO food. The law has not evoked protests from EU farmers who have little vested interest in Genetically Modified (GM) crops due to heavy subsidies on agriculture and the fact that GM technologies have been applied to maize, soya and cotton of which the EU is not a big producer. The US claims that the EU labelling laws are a technical barriers to trade while the EU justifies it under the SPS agreement of the WTO. In July 1999, the EU published "a revised directive, listed Deliberate Release of Genetically Modified Organisms, which calls for a 10 year licensing period for each GMO seed authorization and requires labelling of products containing GMOs above a certain threshold".[35] The objective, in accordance with the precautionary principle, was to protect human health and the environment, but its

---

34 Ewing and Tarasofsky, n.1, p.71.

35 Aggarwal, Narain and Sharma (eds.), n.33, p.281.

misuse for protectionist purposes, especially in the face of future agricultural trade liberalization, cannot be ruled out.

Legal basis of TREMS in Extra-EU Trade

A survey of the TREMs adopted by the Community indicates that these measures were based on Article 235 of the EC Treaty before the Single European Act and on Article 130s thereafter. In fact different bases have been used for the same kind of measures. For e.g., the export and import of dangerous chemicals was covered under Article 130s in 1989 and the export of equally dangerous chemicals under Article 113 in 1988. According to Paul Demaret, the explanation may lie in the changing composition of the Council.[36]

Article 113 deals with the Community's powers in the external field and is the basis of the Common Commercial Policy. Under Article 113 the Community is competent with respect to trade matters. Decisions under Article 113 are generally taken by the Council on the basis of a qualified majority. In the Chernobyl judgement (Greece Vs. Council) Greece challenged a Council regulation based on Article 113 prescribing minimum acceptable levels of radioactive contamination for agricultural products from third countries, following the Chernobyl nuclear accident. Greece contended that the regulation was essentially concerned with the protection of public health and should hence be based on Article 130s. The Court struck down the argument saying that the regulation dealt with uniform import rules and intended to regulate trade between the Community and non-member countries. The Court

---

36 Paul Demaret, n.25, p.298.

supported the interpretation by reference to article 130r(2) which states that environmental protection shall be a part of the Community's other policies. Paul Demaret considers Article 113 the correct basis for TREMS as it lends coherence to Community policies *vis-à-vis* third countries. TREMs adopted on the basis of Article 130s would leave member states free to adopt stricter policies or to adopt TREMs in the absence of specific Community legislation. If such national measures are challenged by third countries, parties to the GATT, only the member states would be qualified under Community law to intervene in the dispute settlement proceedings. This would contrast with the usual practice of Community participating in disputes even when national trade measures are involved[37] TREMs fall within the scope of Article 113. In such a case, Regulation 288/82 empowers member states to adopt or maintain TREMs as long as the Community does not act, provided they are notified to the Commission. EU TREMs on the most part reflect compromises between member states who have not been on restricting trade with third countries to the same extent. Paul Demaret also argues that since environmental concerns are not the same, member states should be given similar rights as in Article 100a(4) to derogate from Article 113 requirements albeit under very strict conditions in spite of the existence of Community harmonizing measures.[38]

The danger of TREMs being based on Article 130s or Article 100a(4) type derogations is that environmental concerns could be manipulated by individual member states to serve protectionist concerns. It will be even more important for the

---

37 Ibid., pp.295-301.

38 Ibid., pp.303-06.

WTO to apply the criteria of proportionality in such cases. Moreover third countries will face a multiplicity of TREMs rather than a single European level one.

Third Generation TREMs and their Impact: A Case Study of Eco-Labelling

Third generation TREMs are those that are essentially market based rather than based on legislations or the legislation may intend to harness market based forces to ensure the viability and success of these measures. The measures that may have an impact on third country producers and industries include the CO_2/energy tax proposal intended to stabilize CO_2 emissions at 1990 levels by 2000.[39] Half of the tax would be based on the volume of CO_2 emissions and half on energy content of the power being employed. The tax proposal has been criticized by countries such as Saudi Arabia that look upon it as a means of restricting oil imports from the Middle East while subsidizing coal in the EU that was worse for the environment.[40] The *EU Packaging Directive* was adopted in December 1999 with the aim of harmonizing European packaging standards, and thus reduce harmful impact of wastes while avoiding internal market distortions. The already existing German Packaging Ordinance which implemented the DSD and Green Dot schemes highlight the non-tariff barrier effect of such legislation. The German Ordinance fully implemented by 1993 require producers and retailers to take back packaging waste for recovery and disposal. While exporters could join organizations willing to recycle their waste without having to take it home, developing country exporters have faced difficulties

---

39 Centre for Promotion of Imports from Developing Countries, *Eco Trade Manual: Environmental Challenges for Exporting to the European Union* (Netherlands, 1998), p.24.

40 Coleman, n.5, pp.154-55.

in obtaining information of the new requirements. Moreover recycling plants in Germany and Europe are not equipped to take into account materials used in developing countries and the failure to confirm to recycling norms has impacted negatively on the export competitiveness of many developing countries.[41] The Packaging Directive is however a mandatory and not a voluntary measure.

Ecolabelling as an NTB

Amongst all these measures, the one whose success in protecting the environment depends most on the consumer is the *eco-labelling* scheme.

> The practise of supplying information on the environmental characteristics of a commodity to the general public may be called *eco-labelling*.[42]

The information is generally conveyed through means of a label affixed onto the product.

Eco-labelling may be of three types:

Type I labels which are established by third parties such as governmental organizations or private non-commercial entities that award labels to products and manufacturing processes. These labels are awarded on the basis of multiple criteria

---

41 Christine Wyatt, "Environmental Policy Making, Eco-labelling and Eco-Packaging in Germany and its Impact on Developing Countries", in Veena Jha, Grant Hewison and Maree Underhill (eds.), *Trade, Environment and Sustainable Development: A South Asian Perspective* (London, McMillan Press, 1997), pp.59-62.

42 Anil Markandaya, "Eco-Labelling: An Introduction and Review", in Simonetta Zarrilli, Veena Jha and Rene Vossenar (eds.), *Eco-Labelling and International Trade* (London, Macmillan Press Ltd., 1997), p.1.

including environmental effects of the manufacture, transportation and disposal of a product. This criteria is termed *'Life-Cycle Analysis'* as it analyses the environmental effect of the entire life cycle of a product from raw-material harnessing to final disposal. Examples of this type include the Blue Angel Scheme in Germany and White Swan in Norway.

Type II labels examines a single attribute of a product such as energy efficiency, or use of sustainably harvested materials in the manufacture of a product. These are awarded by a company or an industry association or consumer group.

Type III labels provide quantified information using an agreed set of indices, giving selected data about the environmental impact of a product. This is a rare kind of label as compared to the other two types.[43]

Eco-labelling essentially has three main objectives: (a) To give more information to the consumer about the environmental effects of the product being consumed; (b) a desire to raise environmental standards in the production of a commodity; (c) a desire to give producers in the country where the label is issued a competitive advantage over other producers. This objective is however not always admitted.[44] A study on the impact of eco-labelling schemes in the EU on Brazilian exports has revealed a number of difficulties being faced by Brazilian exporters in the areas of textiles, pulp and paper and footwear. These are similar to the principal export sectors here in India that will be affected by the EU Eco-labelling schemes. The difficulties include:

---

43 Markandaya, n.42, pp.2-3.

44 Ibid., p.4.

(a) Lack of investment capacity by smaller firms to carry out necessary changes in the production process confirming to the eco-label criteria.

(b) Difficulty in meeting eco-label criteria when the inputs themselves were imported as in the raw cotton and leather imported into Brazil;

(c) Pollutants required to be controlled for eco-label issue have little relevance for Brazil.

(d) Criteria that clearly favour developed countries such as use of recycled material where collection and recycling is subsidized.[45]

These difficulties may be further compounded by the importing country excluding competing foreign products from consideration for an eco-label while domestic substitutes are included.[46] Moreover foreign producers are not usually represented on panels that set the criteria.[47]

The term eco-label is given to the EU's environmental label, the flower. All other national or manufacturers labels are called environmental labels. But the term 'eco-label' is popularly used for all such labels.[48] The growth in national, voluntary and private eco-labels has been rapid within the EU and the EU eco-label attempts to check the resultant confusion about validity and recognition by establishing a single EU wide label. The scheme is based on Council Regulation (EEC) no.880/92 of 23 March 1992. Except for food, drinks and pharmaceuticals,

---

45 Pedro da Motta Veiga, Mario C. de Carvalho Jr., Maria Lucia Vilmar and Heraldiva Facanha, "Eco-labelling schemes in the European Union and their Impact on Brazilian Exports" in Simonetta Zarilli, Veena Jha and Rene Vossenaar (eds.), n.42, pp.54-79.

46 Ewing and Tarasofsky, n.1, p.29.

47 Harmen Verbruggen, Saskia Jongma and Frans van der Woerd, "Eco-Labelling and the Developing Countries: The Dutch Horticultural Sector", in Simonetta Zarrilli, Veena Jha and Rene Vossenaar (eds.), n.42, p.156.

48 Eco Trade Manual, n.39, p.76.

no category is excluded, and criteria is set for each product group.[49] (*For a list of eco-labels within Europe, See Table 1 in Appendix).*

The power of the eco-label is supposedly to shift production to environmentally sound production practices. But as some analysts have opined, this would in turn depend on the effect of economic behaviour on market prices.[50] Various eco-labelling schemes have been introduced in the EU, some specifically on products of interest to developing countries such as textiles. This aspect will be further examined in the next chapter. It is clear that eco-labelling in order to avoid being a non-tariff barrier requires transparency of standard setting and involvement of producers, consumers, importers and exporters, and standards should be set keeping in mind the very different conditions that prevail in developing countries. International organizations such as the ISO (International Standards Organization) are the right fora in deciding on mutual recognition or harmonization of standards. Eco-labels are voluntary and hence are not illegal under WTO. Yet they may serve as a disguised non-tariff barrier through negative advertising within the EU of un-eco-labelled products, difficulty in meeting the criteria of award, lack of information and participation with regard to standard setting and most importantly lack of finance and technology to meet these standards. Other trade related environmental measures such as the green GSP seek to encourage positive environmental practices by developing country producers by granting extra-tariff reductions to such commodities produced

---

49 Ibid., p.76.

50 For details, see Aditya Mattoo and Harsha V. Singh, "Eco-Labelling, the Environment and International Trade", in Zarrilli, Veena Jha and Rene Vossenaar, n.42, pp.38-40.

by cleaner production techniques. But even this may not be of substantial benefit to LDCs as will be explained along with the other issues, in the next chapter.

CONCLUSION

As the WTO puts pressure on developed countries to dismantle explicit non-tariff barriers like quotas and progressively reduce tariffs, protectionism may hide behind environmental standards. The impact of environmental legislation on conditions of competition has been recognized and has been sought to be harmonized by the European Community within its frontiers, through broad based policy integration and enforcement through supranational institutions. This is however quite different from pursuing harmonization among nations not forming part of an economically or politically integrated group.[51] WTO does not enjoy supranational powers in adopting positive harmonization measures and allows member states to set the highest possible environmental standards provided they do not restrict trade. Trade-environment reconciliation has been easier within the EU as environmental standards of even the worst performing member states are raised upwards through positive harmonization and mutual recognition has been employed where uniform harmonization is not possible. Distorting effects to free trade are smoothened out by active legislation in the environmental field under Article 100(a). The GATT does not enjoy such a competency. The concept of proportionality is also not enshrined in the GATT. The sheer divergence of standards among GATT member countries and

---

51 David W. Leebron, "Lying down with Procrustes: An Analysis of Harmonization claims", in Jagdish Bhagwati, Robert E. Hudec (eds.), *Fair Trade and Harmonization: Pre-requisites for Free Trade?*, vol.1, *Economic Analysis* (Cambridge, Mass., The MIT Press, 1997), p.49.

different national laws, institutions and priorities make agreement very difficult. At the same time the concepts of mutual recognition of standards and proportionality can be borrowed from the EU and enshrined as part of the GATT principles. A major difference in environmental standard harmonization attempted within the EU and that on a global scale is the differences in access to capital, technology and official funding. Poorer countries or regions within the EU and potential new entrants from Eastern Europe, especially their small and medium enterprises, enjoy an access to EU sponsored subsidy schemes, and technology transfer on a scale not available to developing countries. This is because internal market interests and issues of future integration of east-European states into the Community is involved. Hence, extra-EU TREMs in the long run may affect trade of the developing countries with a potentially much bigger market that includes the East European states as well.

The nature of TREMs that affect trade is itself undergoing a change. The trend especially within the EU is towards market-based measures such as eco-labelling that do not act as explicit non-tariff barriers but implicit ones. What is clear is that the importance of environmental protection within Europe will rise, as is clearly shown by ECJ judgements. TREMs based on Article 130(s) will be more disruptive as member states may be allowed to set more stringent standards. It is clear that these measures will be the agenda for future world trade talks. It is imperative that developing countries be prepared in all possible ways so that environmental protection within Europe and its interface with global trade is converted into an opportunity for all rather than a threat to some.

Chapter 4

IMPLICATIONS AND POLICY OPTIONS FOR INDIAN INDUSTRY

The European Union is at present India's second largest trading partner after the United States, accounting for almost 30% of India's exports. But India accounts for just 1.3% of the EU's external trade. The importance of the EU as a major market for Indian exports will increase in the future with the addition of new states in Eastern Europe. With the dismantling of traditional non-tariff barrier and progressive lowering of tariff rates by the WTO, the role of environmental standards as a new non-tariff barriers assumes great significance. The fact that the EU is one of the most environmentally conscious markets in the world and a 'laboratory' for the testing and evolution of TREMs makes it imperative to study their impact on Indian industry and exports and suggest suitable policies to tackle this challenge. At the same time, it has to be borne in mind that any economic development generated through trade in the Third World will have to be sustainable in the long run if it has to be viable. The levels of environmental protection must be a dynamic and not a static concept, and must continually evolve upwards, as a country develops. Only then can international trade and the resultant increase in economic activity help rather than harm the environment. This implies that in the long run a global, non-protectionist framework will have to be in place that integrates environmental protection into all aspects of economic activity including process and production methods, taking into account the needs and interests of developing countries.

India's exports to the EU: A product-wise Survey

After the disintegration of the USSR, India's export market has turned increasingly to the OECD countries. In 1993, for instance this market accounted for 57% of India's exports. The main products exported to OECD markets are leather, textiles, and food and agricultural products (See table below).

Table 1: Indian Exports by Commodity Groups and Markets, 1993 (Millions of US dollars)

Commodity groups	World	Total	OECD countries			Developing countries
			US & Canada	EU	Japan	
Total	22,206.5	12,389.5	4,215.3	5,797.4	1,740.2	8,018.6
Food and Agricultural products	4,167.2	1,871.7	465.9	867.3	494.7	1,878.6
Leather	540.8	416.7	53.2	334.1	7.5	93.5
Textiles	5,893.5	4,297.6	1,362.7	2,404.7	208.3	1,251.7
Manufactured goods	16,377.4	9,776.4	3,604.5	4,665.3	941.7	5,654.0
Metals	821.9	448.7	15.9	127.9	294.0	349.2
Chemicals	1,632.8	710.8	201.8	412.9	39.1	705.6

Source: COMTRADE, UNCTAD as cited in Jha, Markandaya and Vossenaar, n.1, p.187.

Of these, textiles have the highest export value to this market representing 73 per cent of total textile exports in 1993. Another product of significance in this context was leather, where 85% of exports went to the developed countries. Marine products exports to the OECD is also important accounting for 83% of India's total exports of these products.[1]

---

1 Veena Jha, Anil Markandaya and Rene Vossenaar (eds.), *Reconciling Trade and the Environment: Lessons from Case Studies in Developing Countries* (Cheltenham, Edward Elgar Publishing, 1999), pp.186-87.

India's major exports to the EU can be broadly divided into 6 different product categories in descending order of importance:

i. *Manufactures* -- accounting for about 51.37% of India's total exports to the EU.

ii. *Agricultural products* -- accounting for about 30.68%

iii. *Pearls and jewellery* -- accounting for 9.93%

iv. *Mineral products* -- accounting for about 5.65%

v. *Miscellaneous products* -- accounting for 2.17%

vi. *Other products* -- accounting for 2.17%

Within these *categories*, the product *groups* in order of importance according to their share in the total exports are:

(a) *Clothing (20.77%)* comprising readymade garments, knitted and crocheted garments, carpets and floor coverings made of handwoven textiles and other made ups.

(b) *Raw material* (19.25%) comprising of hides, skins and furskins, raw crude rubber, cork and wood, pulp and waste paper, textile fibres and their wastes and crude animal and vegetable material.

(c) *Food* (11.43%) comprising food and live animals, beverages and tobacco, animal and vegetable oils etc.

(d) *Pearls and Jewellery* (9.93%) and

(e) Other *Semi-manufactures* (8.27%) comprising leather, leather manufactures, dressed furskins, rubber manufactures, cork and wood manufactures (excluding furniture), paper, paperboard and articles of paper pulp, non-metallic mineral manufactures and manufactures of metals.[2]

From the table below, it is clear that food and other semi-manufactures have a higher share percentage in the total import basket of the EU. These two sectors are

---

2 Paramita Dasgupta, "Enhancing exports to the EU: A Product-based approach", in *Foreign Trade Review* (New Delhi), vol.22, no.4, January-March 1998, pp.44-45.

also the ones showing high growth rates among all the import categories, although raw-materials imports show the highest growth rates. For clothing, however, both market share (3.73%) and rate of growth of imports (8.42%) between 1991 and 1995 is also low, although this is one of the categories in which Indian export growth rates to the EU have been high. Hence if India is to increase its exports into the EU substantially it must focus on the fast growing categories of food and other semi-manufactures where India's market share in the EU is still low.

Table 2: India's major exports to the EU, 1991-1995

India's major exports	EU's import composition	Growth rate of EU's imports 1991-95	Growth rate of India's Exports 1991-95	Share of India's exports in EU's imports
Raw materials	1.57	29.21	45.64	7.32
Clothing	3.73	8.92	81.71	3.34
Food	11.21	16.05	37.83	0.61
Pearls etc.	1.65	24.13	34.36	3.61
Other semi-manufactures	6.09	25.01	86.55	0.81

Source: Computed from *Eurostat 1996 and International Trade Statistics, 1995*, vol.II, in Paramita Dasgupta, n.2, p.43.

With regard to specific product groups the table below shows that the three most rapidly growing EU imports are office machinery and telecommunications equipment, chemicals and auto products. In all these product categories, India has negligible shares in EU imports. Hence to increase its market share in these categories, there is a need to develop high quality products to capture the market.

This entails a study of the non-tariff barriers prevailing in these sectors including environmental product standards.[3]

Table 3: Share in EU Imports (Intra-EU & Non-OPEC Developing countries 1990-1994: Commodity-wise percentage)

	1990	1991	1992	1993	1994
Raw materials					
Non-OPEC developing	18.35	18.89	18.72	20.22	20.89
Intra-EEC	45.52	44.24	43.30	41.53	41.15
Clothing					
Non-OPEC developing	37.46	39.40	39.00	42.36	41.16
Intra-EEC	53.63	50.96	50.34	44.86	44.84
Food, beverages and tobacco					
Non-OPEC developing	15.37	15.69	14.51	15.56	17.44
Intra-EEC	70.44	71.05	72.10	70.38	68.27
Textiles					
Non-OPEC developing	15.81	15.68	15.96	17.59	19.04
Intra-EEC	64.37	65.51	64.98	62.99	61.16
Other Semi-Manufacturers					
Non-OPEC developing	5.47	5.90	5.77	7.03	7.13
Intra-EEC	73.88	73.65	73.88	69.57	68.91

Source: Computed from *International Trade Statistics Yearbook, 1995*, vol.II, as cited in Paramita Dasgupta, n.2, pp.38-39.

The EU has been imposing both high tariff and non-tariff barriers against commodities specifically exported by developing countries such as agricultural and food products, textiles and clothing, footwear and electronic equipment.[4]

In analysing the possible protectionist motives behind the imposition of environmental standards, it is important to study the intra and extra-EU share in total EU imports in the relevant commodity categories. The table below makes it clear that most imports in the commodity categories of raw materials, food beverages and

---

3 Ibid.

4 Ibid., p.36.

tobacco, textiles and semi-manufactures are still dominated by intra-EU imports. However in the case of clothing the margin between imports sourced from within the EU and those from non-OPEC developing countries is very small. This is one sector where the imposition of environmental standards may be fuelled by protectionist motives in order to reduce erosion in market share of domestic industry. However, more substantial proof will need further research into various other parameters like the share of the particular industry in a European country's GDP, level of employment intensity, wage and production costs *vis-à-vis* less developed countries, strength of trade unions, etc.

Table 4: EU's Major Imports, 1991-95

EU's Major Imports	EU's Import composition (%)	Growth rate of EU's imports	Growth rate of India's exports	Share of India's exports in EU's commodity mix
Food	11.21	16.05	37.83	0.61
Office machinery and telecommunication equipment	10.19	41.29	100.00	0.002
Auto products	9.46	26.13	239.31	0.12
Chemicals	9.26	38.26	133.90	0.43
Other non-electrical goods	6.26	5.06	231.60	0.02
Fuels	6.21	-14.07	-28.75	0.08

Source: Computed from *Eurostat 1996 and International Trade Statistics, 1995*, vol.II, in Paramita Dasguptga, n.2, p.45.

According to quantitative data on trade flows, obtained by the UNCTAD, approximately 15% of exports from the ESCAP (Economic and Social Commission for Asia and the Pacific) region to the OECD markets are environmentally sensitive. For South Asian countries, the share is 30%, which is the largest for the ESCAP region. This is significant and suggests that South Asian countries may require further assistance to comply with environmental measures due to limited experiences in

export marketing. Countries most vulnerable to environmental product measures were Bangladesh (48%), Pakistan (38%), Vietnam (34%) and India (25%).[5]

The analysis also shows that trade with the EU, particularly Germany, includes the greater proportion of exports subject to environmental measures, while trade with the United States of America includes the smallest proportion at approximately 6%. Therefore Asian countries exporting a disproportionate share to the EU are more likely to encounter environmental measures. The highest percentage refers to South Asian exports to the EU where 73% of exports are environmentally sensitive. (*See Figure 1 in Appendix*). Products vulnerable to eco-sensitivity are textiles, food products and other labour intensive manufactures. *See Figure 2 in Appendix.*[6]

Environmentally oriented product policies in the OECD countries may take the form of standards and regulations (E.g., Energy consumption levels for household appliances or pesticide residue limits in fruits and vegetables), economic instruments such as border taxes or labelling and information conditions.[7] With reference to the categories of environmental measures, standards and regulations and eco-labelling are consistently the most significant (See figures 3, 4, 5 and 6 in Appendix). For South Asia in particular (see figure 4 in Appendix) and China (see figure 6 in Appendix) eco-labelling surpasses standards and regulations in importance. In particular, it is the

---

5 United Nations, *ESCAP Studies in Trade and Investment (27): Trade Effects of Eco-labelling* Proceedings of a Seminar held in Bangkok. 17-18 February 1997 (New York), pp.17-18.

6 Ibid.

7 Veena Jha and Reni Vossenaar, "Environmentally Orientated Product Policies, Competitiveness and Market Access", in Veena Jha, Grant Hewison and Maree Underhill (eds.), *Trade, Environment and Sustainable Development: A South Asian Perspective* (London, McMillan Press, 1997), pp.41-43.

eco-labels of the EU which affect Asian exports. However, these results remain inconclusive as they do not measure the restrictiveness of the measures. Nevertheless, their consistent ranking at the top suggests that these two types of measures are potentially the most significant for Asian exporters.[8] In order to fully understand the implications of the EU's TREMs for Indian industry, the first step is to identify those sectors that are likely to be the most vulnerable to these measures. Subsequently, the nature and scope of these TREMs within each sector has to be analysed.

SECTORS OF INDIAN INDUSTRY SENSITIVE TO TREMs

The importance of the OECD to Indian exports has already been mentioned. This makes Indian exports vulnerable to environmental measures imposed in the OECD countries. The table below shows the products sensitive to the imposition of eco-standards as well as their regional market shares.

Table 5: Regional market shares in India's export of sensitive products, 1993 (in percentage terms)

Commodity groups	World	Total	OECD countries			Developing Countries
			United States & Canada	European Union	Japan	
Total	100.0	57.0	18.0	26.1	7.8	36.1
Marine Products	100.0	82.9	12.4	24.8	45.2	16.9
Fruits	100.0	65.5	27.9	26.8	5.1	31.9
Vegetables	100.0	75.7	21.4	32.9	3.3	20.6
Leather and Leather products	100.0	84.8	17.1	58.9	1.5	11.7
Footwear	100.0	79.6	29.0	45.5	0.8	8.2
Textiles	100.0	73.3	20.5	39.6	3.6	22.8
Dyes & Pigments	100.0	60.1	21.2	32.4	1.6	39.3

Source: COMTRADE, UNCTAD as cited in Jha, Markandaya and Vossenaar, n.1, p.187.

8 United Nations, n.5, pp.17-18.

The extent of vulnerability of these products to eco-standards will be determined by the compliance costs involved and access to the technology required in the process.[9]

The TREMs that will be faced by Indian industry can be classified into Mandatory External Regulations and Voluntary Measures. Both these kinds of measures will be analysed under each sector.

Dyes

Regulations on dyestuffs affect both the leather and textile industry which have experienced cost increases as a result of trying to conform to eco-standards in this intermediate product. Use of dyes such as cobalt blue and sulphur black has been banned in external markets. While a viable substitute in the form of maize starch has been identified for the latter, the implications of the ban on Cobalt Blue has been costly. It has entailed a heavy investment of over US$13 million in order to effect changes in the manufacturing process and to upgrade technology, particularly the establishment of secondary treatment plants, to obtain the requisite quality and investment in automation control instruments. Such adjustments were found to be close to impossible for small-scale producers of dyes forming a significant portion of dyestuff suppliers and exporters. A switchover to non-benzidine dyes also implies higher costs. One study estimated that the cost of Direct Black 38 dye was about $3 per kg, whereas Direct Black 22 which is non-benzidine, was priced at $8 to $10 per kg. This will increase the cost of final output in case of textiles, as raw material costs

---

9 Jha, Markandaya, and Vossenaar (eds.), n.1, pp.187-88.

account for 60% of the cost of production and cost of dyes account for a significant portion of it. To the extent that small-scale units contribute significantly to exports, they will be particularly affected by eco-regulations due to higher unit compliance costs than largescale enterprises.[10]

Textiles and Clothing

As already noted, textiles are an important, if not the most important, category of export commodities to be affected by environmental measures. India has a massive textile base with around 27 million yarn lengths, over 180,000 lakh looms and about 1100 spinning and composite mills.[11] About 40% of Indian textile exports go the EU and compliance costs with EU regulations regarding dyes and chemicals will be steep especially considering that 63% of the total exports from this sector are from small and medium enterprises. Consequently competitiveness based on low prices can be eroded in a price sensitive sector. Moreover the gains made by India from textile negotiations at Marrakesh and the resultant dismantling of the multi-fibre agreement quota system could also be undermined.[12]

The maximum environmental damage is caused during cotton growing and textile finishing due to use of fertilizers, and pesticides and chemicals during growing and intensive use of water during finishing. Around 100 litres of water are used in

---

10 Ibid., pp.188-89.

11 Vasantha Bharucha, "The Impact of Environmental Standards and Regulations set in Foreign Markets on Indian Exports" in Jha, Hewison and Underhill (eds.), n.7, p.137.

12 Jha, Markandaya and Vossenaar (eds.), n.1, p.190.

the production of just 1 kg of textiles. Chemical contamination of textiles also poses a health risk for workers and consumers.[13]

A number of regulatory measures apart from those pertaining to dyes, exist in the OECD countries. They include compulsory labelling requirements concerning formaldehyde to protect consumers as well as a ban on certain carcinogenic and allergenic substances.[14]

In a law made effective since 1 July 1995, Germany has prohibited the importation of textiles using dyes that contain carcinogenic components or ingredients. The law prohibits the importation of any product printed or dyed with azodyes and dyes that contain or release trace quantities of nitro-benzene. Producers, suppliers and traders will have to provide a declaration that these chemicals are not present in their merchandise. The declaration will be binding and allow German importers to reject goods that yield traces of the banned chemicals without any legal recourse for the exporter.[15]

Apart from these mandatory regulations, several voluntary measures in the form of eco-labelling schemes have been introduced in Germany and the EU. These apply to the final output as well as process and production method criteria. In Germany the MST (*Marke Schadstoffgeprufter Textilien*) has been introduced as a product label for textiles reaching the final consumer. The MUT (*Marke Umweltschonender Textilien*) product label is meant for intermediate textile products

---

13 Bharucha, n.11, p.137.

14 Jha, Markandaya and Vossenaar (eds.), n.1, p.189.

15 Bharucha, n.11, pp.137-38.

manufactured in an environmentally benign way and do not enter the textile market. These eco-labels were proposed by the *Association for the promotion of textiles friendly to the consumers and the environment* that was founded by the Association of Textile Producers (Gesamttextil.e.v.) in Germany. The 'eco-friendly' association has restricted its membership to textile producers within the EU and EFTA (European Free Trade Association) countries. While producers outside the EU could apply for an MST label as long as their products confirmed to the laid down criteria, the MUT label is to be reserved exclusively for producers in EU & EFTA countries as only in these countries can the Association be assured of the quality of the production process.[16]

The major objection to these labels lies in their violating Article IX of the WTO as the awarding criteria constitutes a discrimination against manufacturers and exporters in third countries. As non-tariff barriers they are inconsistent with Article XI of the WTO and Article 30 of the EEC Treaty. Their taking PPMs into account is also violative of international trade rules. The Association's contention is that these labels constitute private rather than government measures and they cannot be considered trade barriers under WTO rules. But this argument can be challenged on the grounds that it was the Federal Environmental Agency in Germany that invited the industry to initiate the eco-labelling programme. By excluding non-EU and EFTA countries, the MUT could violate anti-trust laws even though it might not violate WTO rules. The MST admits non-European producers but its non-tariff barrier effect lies in its difficult and costly norms (compliance is undertaken by the textile institutes

---

16 Christine Wyatt, "Environmental Policy Making, Eco-Labelling and Eco-Packaging in Germany and its Impact on Developing Countries", in Jha, Hewison and Underhill (eds.), n.7, p.57.

at a cost of DM2000 or $1200 that has to be covered by the producer) for developing country exporters to comply with. The industry is forthright in justifying these measures as a means of offsetting the low-wage advantage enjoyed by developing country producers by positive advertising for German and European textiles through these labels as an environmentally friendly product.[17]

The EU eco-labelling scheme introduced in 1992 has at present considered only two items in the textiles and clothing category, namely T-shirts and bed-linen made of cotton or polyester blends.[18] The criteria for the label covers all stages of the production process from the amount of pesticides and chemicals used during cotton growing to the chemical residues in the final products.

Compliance with mandatory standards pertaining to chemicals were estimated to increase fixed costs by 10 per cent and variable costs by 15 per cent for Indian industry due to the requirement of importing chemicals and knowhow. Compliance with eco-labelling schemes by Indian industry would also entail disproportionate costs especially for small and medium enterprises. Even among large exporters, it was felt that market fetching price premiums is only 25% of the total European market and hence would not suffice to cover the incremental cost of adherence to the eco-criteria. Moreover in a sector that relies greatly on price competitiveness, adjustment in production lines and the consequent price hike of the final product in the rest of the

---

17 Ibid., pp.58-59.

18 Pedro da Motta Veiga, Mario C. de Carvalho Jr, Maria Lucia Vilmar and Heraldiva Facanha, "Eco-labelling schemes in the European Union and their impact on Brazilian exports", in Simonetta Zarrilli, Veena Jha and Rene Vossenaar (eds.), *Eco-labelling and International Trade* (London, McMillan Press Ltd., 1997), p.63.

international market would severely affect demand. Thus problems of compliance with eco-labels in the textile sector is very serious and unlikely to be forthcoming in a situation where marginal costs are greater than the marginal returns.[19] Thus expansion of organic cotton growing, and eco-friendly textiles in a big way would significantly depend on the expected price-premiums and profit and the growth of a distinct eco-friendly consumer segment in Europe and elsewhere beyond its present limited extent.

The alternative till then is to promote certain Indian textiles, such as handlooms and textiles, using natural dyes as eco-friendly in the European market and obtain a *de-jure* recognition through an eco-label.[20]

Leather

One of the oldest and fastest growing industries in India, the leather industry, contributes significantly to her exports. The comparative advantage of the Indian leather industry lies in her large raw material base and the competitive wages of her labour force. The bulk of the leather industry comprises of small scale tanneries located throughout the country.[21]

In December 1989, the German government decided to ban the use of the toxic fungicide, pentachlorophenol (PCP) which was extensively used for tanning by

---

19 Jha, Markanday, and Vossenaar (eds.), n.1, p.194.

20 Bharucha, n.11, p.138.

21 Ashok Jha, "Protection of the Environment, Trade and India's Leather Exports" in Jha, Hewison and Underhill (eds.), n.7, p.120.

the Indian leather industry. This was followed by restrictions in Denmark, Sweden and the United States. The ban exposed three main problems: *firstly*, a lack of information about restrictions in other countries, *secondly*, a lack of chemical testing facilities in India, and *thirdly*, a lack of substitutes.[22] As a result of the ban, Indian industry was forced to adopt to the new standards, and suffered a great loss as goods already produced with a higher PCP content could not be sold to European countries.[23] Presently most tanneries use an imported substitute BUSAN 30, whose price is ten times higher than the price of PCP. According to one study conducted, exporters stated that the cost of replacing all chemicals with eco-friendly ones increased total costs by 10 to 15 per cent. It was felt that testing costs alone could increase the price of shoes by $3-$4 per pair. Concern was also expressed regarding the inability in knowing the exact composition even among imported dyes. Thus incurring extra costs might not guarantee entry into the more regulated OECD markets.[24]

A New European Commission guideline on the leather products is under preparation and is likely to be adopted by the end of 2000. It is expected to come into effect by July 2002. According to the guideline, Tributylin, a toxic chemical used as an anti-bacterial agent, and certain other hazardous materials like amino-anisidine and 2-methoxyanyline are being added to the list of banned substances. Similarly the use of azo-dyes, chromium, formaldehyde and pentachlorophenol in the manufacture of

---

22 Ibid., pp.120-21.

23 V.R. Sharma, "Environmental Regulatory Measures and their Economic Impact on the Indian Leather Industry", in National Resources Forum (New York), vol.19, no.2, May 1995, p.159.

24 Jha, Markandaya and Vossenaar, n.1, p.189.

carpets would be banned ultimately according to Dr. Dietrich Kebschull, director of the Indo-German Export Promotion Project.[25]

With regard to eco-labelling, many leather exporters regarded it as a non-tariff barrier due to the subscription costs involved and costs of complying with the strict criteria in addition to verification costs. For example, in the case of footwear, a rough estimate of incremental costs of adjustment indicate that the costs of compliance with eco-labelling would be about 33 per cent of the current export price affecting India's price competitiveness directly.[26]

Pollution and effluent discharge, contamination of surface and ground water, threat to workers' health from chemical substances are environmental hazards that are widely recognized. But small and medium enterprises comprise the bulk of leather tanneries and exporters and this makes it difficult for them to obtain technical and financial support necessary for complying with eco-standards or eco-labelling criteria. Lack of awareness, especially among small-scale tanneries, regarding eco-regulations is another problem. The government has had to intervene in persuading them to adopt cost effective common effluent treatment.[27]

---

25 G. Ganapathy Subramanian, "Rough weather for leather again", *The Economic Times* (New Delhi), 10 July 2000, p.3.

26 Jha, Markandaya, and Vossenaar, n.1, p.194.

27 Ibid., pp.185-95.

Packaging

Packaging regulations like dye regulations have an impact across sectors as all exports involve packaging. The most comprehensive legislation existing today within the European Union is the German Packaging Ordinance which holds manufacturers and distributors responsible for taking back used packaging. Many German consumers are not familiar with jute packaging and disposal problem has led many exporters to switch to plastics.[28] The acceptability of jute is, however, growing and several companies in Germany and in other countries offer recycling services for used jute packaging.[29] Recently, Germany did not accept bulk drugs because plastic containers were made of non-recyclable materials. In the textile sector cardboard is replacing polyvinylchloride (PVC) and high density polyethylene as packaging materials. Stiffness in yarn bundles and garments are also being replaced by cardboard. The incremental costs of a switchover in packaging was stated by exporters as being two percent to three percent of packaging costs. For leather products, some exporters commented that the cost of packaging to stringent markets such as Germany was twice the usual packing cost to tanners.[30]

AGRO PRODUCTS

Food safety is a major concern in the European Union. Growing consumer consciousness about food and its qualities has encouraged organic farming and the

---

28 Christine Wyatt, n.16, p.62.

29 Jha, Markandaya, and Vossenaar, n.1, p.41.

30 Ibid., p.193.

market for organic produce is expanding rapidly. It has also forced regulators to strengthen standards for pesticide residues, food additives and preservatives. Chemical pesticides have been important in increasing agricultural productivity, both in plant protection and post-harvest processing and storage. But pesticide use has affected the health of farmers and labourers and left behind residues in food, soil, rivers and groundwater resources.[31]

The Uruguay Round Agreement on Agriculture is expected to increase the market access for Indian agricultural products. Hence it is important for Indian agriculture to switchover to eco-friendly techniques to fully exploit the potential for increased agro exports to the EU and other markets. The chief obstacle is the high costs that a switchover to eco-friendly techniques and safer pesticides entail. For example an attempt to substitute DDT with an eco-friendly pesticide, malathion resulted in a four-fold increase in costs. Similarly a compromise in productivity and enhanced prices will have to be borne if organic farming techniques are pursued. At present all imported food products into the EU are liable for inspection at the first point of entry for compliance with food laws pertaining to the country of entry.[32] Price-sensitivity and the extent of price competition will have to be taken into account before organic farming for export can be undertaken in as bigway.

---

31 Bharucha, n.11, pp.134-35.

32 Jha, Markandaya, and Vossenaar, n.1, p.191.

Tea

India is responsible for nearly one-third of the global tea-production and the OECD countries account for 40 per cent of the global imports.[33] Indian teas have been affected by complaints in Germany regarding pesticide residues of Ethion, Tetradifon and Heptachlor. The Assam Terai and Boora teas have also been affected by complaints from other OECD importers regarding Bicofol. The government has banned 12 hazardous pesticides including DDT and has restricted the use of a less hazardous but still harmful pesticides and taken up steps to promote organic farming. The lack of testing facilities however remains a major barrier to attaining eco-friendly production of tea. While figures on incremental costs are not available, exporters state that costs of compliance would affect their world market. This will be especially true in CTC and orthodox tea where India's main competitors China and Sri Lanka have reportedly been unaffected by the eco-standards and also where the ability to sell at low prices is important. Compliance may be more rewarding for high value teas like Darjeeling where a cost increase can be safely met with a price-rise.[34]

Marine Products

Marine products are considered an environmentally-sensitive product group. Sanitary and phytosanitary requirements have affected market access for sea-food exports in the past. For e.g., marine products shipments to Europe were detained on

---

33 Bharucha, n.11, p.130.

34 Jha, Markandaya and Vossenaar, n.1, pp.190-91.

the grounds of salmonella contamination in the 1980s.[35] The fishing industry in India has generally relied on small craft and hence do not generally threaten marine species like turtles, dolphins or whales. However, waste and effluent discharge from the industrial, agricultural and the domestic sector pose a serious threat to the life and health of various marine species.[36] Introduction of new fishing techniques such as puise-seine more suited to the ample fish reserves in temperate waters may also be ecologically hazardous to fish species in tropical seas.[37]

The main concern for Indian exporters in the sea food industry generally stem from the sanitary and phytosanitary measures imposed in OECD countries. The EU issued the Seafood Directive (91/493/EEC) in July 1991 to harmonize the seafood safety standards among its member countries. A key part of the Directive was its application to fishery products being imported into the EU which dictates that standards and procedures applicable to fish products imported into the EU shall be at least equivalent to those governing domestic EU products. The Directive requires that sea-food processors carry out their "own-checks" to assure sea food safety. This is based on the concept of Hazard Analysis Critical Control Programme at which potential hazards to hygiene and safety are identified at every stage of processing and packaging and eliminated. The Directive provides for competent EU authorities to carry out monitoring checks to ensure compliance with the specifications. "The EU

---

35 Bharucha, n.11, p.136.

36 V.K. Gopalan, "The Fishery resources of Kerala and their exploitation", keynote paper in *Seminar on Fisheries Crisis and Policy approach in Kerala* (Trivandrum, Fisheries Research Cell, 1987), p.57.

37 Interview with Dr. John Kurien, Associate Fellow at the Centre for Development Studies, Thiruvananthapuram, India, at Thiruvananthapuram on 14 June 2000.

is moving to a situation where it will accept seafood products only from countries which have been approved as having an equivalence of standards, monitoring, enforcement and inspection". Further, only export processors approved by the exporting government and accepted by the EU Commission may engage in export trade as is already the case in meat products.[38]

Following a ban in early 1997 by the EU on Indian shrimp products, the commerce ministry has laid down stringent qualifications for firms to be eligible to export to the EU. To be certified by the Export Inspection Council , the final authority for deciding the eligibility, domestic firms have to subject themselves to an inspection by an Inter-departmental panel comprising one representative each from an Export Inspection Agency, the Marine Products Export Development Authority (MPEDA) and the Central Institute of Fisheries Technology (CIFT). It is the Ministry of Commerce which finally forwards the list of firms eligible for export to the EU with an assurance about the hygienic conditions of products exported.[39]

The Seafood Exporters Association of India (SEAI) claims to have spent more than Rs.100 crores (US$25 million) on upgrading their facilities to conform to HACCP regulations. Exporters have apprehended the possibility of another ban due to lack of government initiative and investment to improve infrastructural facilities like fish-landing ports and water supply. Cumbersome export-import policies have apparently hampered the import of raw materials for processing and re-export and led

---

38 *ICSF Postings No.4* (Chennai, International Collective in Support of Fishworks, 4 May 1999), pp.7-8.

39 Ibid., p.11.

to low capacity utilization of merely 15 per cent.[40] The long waiting time for testing and certification could also compromise the freshness of these perishable products.[41]

Implications of Multilateral Environmental Agreements (MEAs)

While trade effects of MEAs are not EU-specific, they are discussed here as they would affect Indian industry's trade with the European Union as well. The two MEAs of relevance to Indian industry are the Basel Convention on Transboundary movement of hazardous wastes and the Montreal Protocol.

Being a signatory to the *Basel Convention*, India opposes the ban on importation of scrap, as use of recycled scrap proves to be more eco-friendly and cost effective than production of virgin metal. According to the Indian Non-Ferrous Metals Manufacturers Association, 45 per cent of India's metallurgical industry is based on recycling of scrap in about 5000 plants employing nearly half a million people. Hence a ban on scrap imports will significantly harm the metallurgical industry.[42]

Under the *Montreal Protocol*, India has agreed to phase out the production and use of chloroflurocarbons (CFCs) by the year 2006. Being a small consumer of CFCs it has received a grace period of 10 years. As per the London Amendment, India is also obliged to ban exports of controlled substances to countries not party to the

---

40 Ibid.

41 Jha, Markandaya and Vossenaar, n.1, p.193.

42 Ibid., pp.196-97.

Montreal Protocol. It has also ratified the gradual phase out of carbon-tetrachloride and other fully halogenated CFCs, methyl chloroform and HCFCs over time.[43]

India is a producer of most of the Ozone Depleting Substances (ODS) it consumes and this self-sufficiency has acted as a bulwark against trade measures. Only two sectors were linked significantly to trade: the CFC producers who targeted three-quarters of their products at the international market and the users of halon 1301 who relied entirely on imports. The emerging refrigeration and airconditioning industry was also growing at the rate of 15 per cent when India signed the protocol, and increasingly targeted export markets as domestic demand was not perceived sufficient.[44] The desire to retain these markets, fear of drying up of imports of halon 1301 and the positive incentives like financial assistance and technology transfer on fair and favourable terms induced India to sign the Protocol.[45]

The adjustment costs have been calculated in terms of costs incurred by CFC producers, industries which used CFCs as an input, and consumers of final products. A study by an Indian government appointed task force has estimated incremental costs for early and late phase out scenarios. Besides this two other studies by the World Bank and the Ministry of Environment and Forests have estimated early and late phase out costs for the three categories mentioned above.

---

43 Ibid., p.197.

44 Shipra Das, "India: Effects of Trade Measures and Positive Measures in the Montreal Protocol on Selected Indian Industries" in Veena Jha, and Ulrich Hoffman (eds.), Achieving Objectives of Multilateral Environmental Agreements: A package of trade measures and positive measures (Geneva, UNCTAD 2000), p.53.

45 Ibid., pp.61-62.

Table 6: Adjustment costs for India in implementing the Montreal Protocol (in Million US$ net present value)

Source	Early phase out				Late phase out			
	P	U	C	T	P	U	C	T
World Bank	192	68	60	320	82	50	350	482
Ministry of Environment and Forests	120	40	147	307	43	37	62	703
Task Force	--	--	--	1400	--	--	--	2450

Note: P represents producers; U - users; C - Consumers; T - Total
Source: Veena Jha, Anil Markandaya and Rene Vossenaar, n.1, p.198.

The table clearly shows that an early phase out is more expensive for producers as they will not be able to recover their investment outlays in CFC technologies. Inability to export to Article 5.1 (Montreal Protocol) countries and insufficient domestic demand will lead to excess capacity. In view of the capacity available for exports, it might be necessary to bring out early adjustments and identify indigenous substitutes. Hence research and development costs will also increase. A late phase out will prove more costly for consumers as producers may write off their investment but consumers will be unable to recharge their CFC-using refrigerators and other products after 2010. Overall costs are greater for a late phase out option as the number of consumers of CFCs outweigh the number of its producers.[46]

Besides these costs, industry is facing difficulty in obtaining suitable technology essential for using new substitutes. Tie-ups with foreign companies had to be resorted to and in many cases foreign companies were unwilling to share technology. Unsuitability of CFC-free technology for Indian climatic conditions may

46 Ibid.

prove another problem. According to one study developing indigenous technology is the most cost effective option for India in the long run.[47] Because of the importance of refrigeration in a tropical country like India, especially in horticulture, aquaculture, floriculture and food processing, adjustments will have to be made as soon, and as effectively, as possible.

POLICY OPTIONS

The implications of TREMs clearly reveal the need for suitable strategies both at the national as well as the international level to obviate or reduce their adverse effects or even to turn them to positive effect.

Options at the National level include the following measures:

(a) ***Bridging the information gap***: In order to effectively deal with the challenge of the EU's TREMs, the Indian industry and exporters need to know sometimes well in advance, of current regulations and likely developments in EU trade policy. Lack of knowledge and awareness has been especially true in the case of small and medium enterprises, especially in the leather and dye industry. Creating awareness about regulations would require active government intervention. However, export councils, industry associations and voluntary associations, are also playing an active role. The use of information technology can be crucial in bridging the information gap. The use of the internet can enable any small enterprise to be well aware of the latest or forthcoming regulations or labelling schemes that might affect it. The environmental management centre at Mumbai for instance provides consultancy services to Indian

47 Ibid., pp.198-99.

industry and has up-to-date information on EU and other eco-labels at its website - *www.emcentre.com*. It also enables industry to evaluate themselves on their level of compliance with national and international environmental regulations.

(b) ***Infrastructure development*** in the environmental sector can greatly reduce compliance costs. The government has set up a number of common effluent treatment (CET) plants sometimes in joint collaboration with United Nations Industrial Development Organization (UNIDO) in the leather industry.[48] In the dye industry, small and medium enterprises have asked for government assistance in setting up Common Effluent Treatment Plants. Similarly it should set up adequate infrastructure such as port landing facilities and water supply to enable seafood exporters to comply with SPS measures.

(c) ***Ensuring testing facilities and providing guidelines***: Testing for compliance with eco-regulations is another area requiring government intervention. The tea-industry suffers from a lack of testing facilities and there is a need for more facilities. The Indian Institute of Packaging provides testing facilities for meeting packaging requirements.[49] Testing and certification in the marine products sector need to be speeded up in order to avoid perishability and loss of freshness. Adequate testing facilities can greatly reduce the higher costs of testing abroad. Institutions and associations like the Indian Tea Research Association, Central Pollution Control Board, Central Leather Research Institute, etc., also lays down guidelines that has to

---

48 Jha, Markandaya and Voseenaar, n.1, p.185.

49 Ibid., p.192.

be followed by the Indian industry. This can prevent serious losses in the future due to sudden disruption of exports and the higher costs of compliance at short notice.

(d) ***Proactive environmental measures***: These would include setting of domestic environmental standards and pollution norms as is being already done. The government has also intervened in the case of benzidine dyes and in the setting up of CET plants. The introduction of the Ecomark, a domestic eco-label is a proactive step that will increase consumer and producer awareness of and consciousness regarding ecolabels and eco-friendly methods of production. Proactive steps also include efforts to aggressively promote eco-friendly substances and techniques already used in India. "The Agricultural and Processed Food Products Export Development Authority (APEDA) has applied to the European Union for India to be registered as a source of organic produce".[50] Similarly jute packaging, handloom textiles and natural dyestuffs have to be actively promoted in the EU states as being environmentally friendly products.

(e) ***Role of the corporate sector and NGOs***: The corporate sector can also play a pioneering role in both dissemination of information, absorption of technology as well as promotion of eco-friendly techniques and products. This is especially true with regard to large enterprises. Many firms had already started the process of phasing out of ODS even before the government evolved a strategy for compliance with the Montreal Protocol. The Tata Electrical and Locomotive Co. (TELCO) has successfully upgraded its technology in order to comply with EU emission and noise norms and thus export its automobiles to the EU. Gokak mills in Karnataka has applied for oko-tex certification. It has obtained German knowhow for dyeing cotton

---

50 Bharucha, n.11, p.135.

yarn in an eco-friendly manner and also grows organic cotton. All these firms are pioneers in their own way and may set the trend for other enterprises to follow given adequate financial and technical support. Non-governmental organizations (NGOs) can also play a crucial role in disseminating awareness about multilateral trade and environmental agreements and mobilizing public opinion. NGOs such as Consumer Unity and Trust Society (CUTS), Jaipur, and the Centre for Science and Environment (CSE), New Delhi, are already doing this. Tata Energy Research Institute has also contributed in capacity building initiatives in India.

Options at the international level include:

(a) *Transparency and democratization in standard setting and reform of WTO dispute redressal mechanism*: Developed countries when framing environmental policies that affect trade should take into account the concerns of developing countries and consult them before taking such measures. This will ensure that such measures are avoided if necessary or are taken with minimum impact on developing countries. Prior consultation, giving due notice to developing countries, and involving them in setting of standards such as eco-labelling will add to transparency and democracy in decision making and will lessen or remove the protectionist intent or impact of these measures.

The present WTO dispute settlement mechanism, while being time bound and effective, does not address many concerns of developing countries. It provides for corrective action by an erring country only after the approval of a Panel Report by the Dispute Settlement Body. There is no prospect of retrospective relief from the time an incorrect TREM has been applied, even though the exports of a developing

country is adversely hit. A provision must be included to effectively compensate developing countries for the loss suffered as well as a mechanism for joint retaliation by a number of developing countries which may be the only effective retaliation possible.[51] Developing countries should also strengthen their legal infrastructure on a country or regional basis so that they can initiate dispute settlement procedures without having to rely on developed country legal assistance that may be costlier.

(b) *Corporate assistance* in the form of technical and financial assistance to developing country small and medium enterprises directly or through joint ventures or even the subsidiaries of transnational companies may help in dissemination of timely information, technology and capital crucial for compliance with eco-regulations. Cooperation between developed country importers and developing country suppliers is also essential in the timely spread of information and other forms of assistance. Governments and aid agencies can provide a conducive environment for facilitating such cooperation.[52]

(c) ***Bilateral cooperation***: Developed country governments are increasingly assisting their major developing country trading partners in adapting to environmental regulations and standards through consultations, organization of workshops and technical cooperation. The Centre for Promotion of Imports from Developing Countries (CBI) Netherlands Bureau, regularly assists developing countries through information dissemination, and organizing workshops such as those on azo-

---

51 B.L. Das, "WTO's defective dispute settlement process", *The Hindu* (New Delhi), 6 July 2000.

52 Jha, Markandaya and Vossnaar, n.1, pp.53-54.

dyes.[53] The Indo-German Export Promotion Project has assisted in setting up testing facilities for PCP and has disseminated information on PCP regulations. An Indo-Dutch collaboration is underway in Kanpur for the setting up of treatment plants for tanneries.[54] Such examples can be a model for similar initiatives in the future.

(d) ***Role of Multilateral aid and development agencies***: Multilateral aid and development agencies can assist developing countries in disseminating information, providing financial and technical assistance, especially to small and medium enterprises, and helping enterprises in India take advantage of potential 'green' markets in the EU and other OECD countries.[55] The UNDP funded National Leather Programme has sought to address environmental issues in eastern India, for example by promoting an integrated leather complex to enable shifting of smaller tanneries to one location in Calcutta.[56] The UNEP has launched the clean textiles initiative to promote cleaner production methods in the textile industry.[57] UNCTAD has carried out valuable policy analysis and studies in India on trade and environment linkages and transfer of technology. The German agency for development cooperation (GTZ) has also provided valuable technical and other assistance to environmental capacity building projects in India.

---

53 Ibid., p.54.

54 Jha, n.21, p.122.

55 Ebba Dohlman, "Traded, Environment and Development Cooperation" in Jha, Hewison, and Underhill (eds.), n.7, pp.207-08.

56 Jha, n.21, p.122.

57 Website www.emcentre.com

(e) *Transfer of technology* is crucial for ensuring Indian industries' compliance with eco-standards in the EU and also for generally upgrading to cleaner production techniques. In certain cases, such as developing substitutes for ozone depleting substance, indigenous technology may be a better option due to its suitability to Indian conditions. The main barrier to technology transfer are constraints on financial resources and investment capability by Indian firms.[58] These could be alleviated through soft-financing options with help from international organizations. Other constraints include, unsuitability of technology to local conditions, lack of managerial and technical expertise as well as reluctance of foreign firms to part with technology especially those covered by Intellectual Property Rights. Even in joint ventures foreign firms tend to supply only 'current technology rather than next generation technology that is too costly, and that too on terms that suit their own interests.[59] The Indian government has taken initiatives to reduce regulation and licensing control on foreign trade to facilitate foreign investment and transfer of technology. It has also drafted a technology policy aiming, in part, to encourage the use of environmentally sound technology. At the same time it needs to guide, stimulate and reward industry to achieve desired environmental goals through regulation and incentives. Indigenous research and development and innovation within Indian industry to develop new environmental technologies or improve upon them will be the best option for the country in the long run.[60]

---

58 Amrita N. Achanta, Pradeep Dadhich, Prodipto Ghosh and Ligia Noronha, "The transfer of Environmentally Sound Technology with Special Reference to India", in Jha, Hewison and Underhill (eds.), n.7, p.195.

59 Ibid., p.197.

60 Ibid., pp.196-98.

RECONCILING TRADE AND THE ENVIRONMENT IN PROCESS AND PRODUCTION METHODS: THE MDE (MINIMUM, DIFFERENTIAL AND EVOLVING) SECTORAL STANDARDS PROPOSAL

It has been widely recognized that more than the characteristics of the product *per se*, it is process and production methods (PPMs) that do the greatest harm to the environment, local or global. Current WTO rules do not permit trade restrictions or sanctions that are based on the lower PPM standards of a member country. However, a reconciliation between trade liberalization and environmental protection will have to address the issue of PPMs. A number of proposals have been put forward to integrate concerns about PPMs into the international trading system. They range from mutual recognition and acceptance of equivalence in the case of eco-label criteria, as suggested by Veena Jha[61] and others, to amendment of Article XX provisions in WTO. Daniel C. Esty favours the creation of Global Environmental Organization that would coordinate global environmental policies and make nations advance environmental cost internalization.[62] Yet, he recognizes the difficulties of creating such an organization in the short run and argues for the integration of environmental principles, including PPMs, into WTO rules.[63]

However, the reality is that a single environmental standard in PPMs is impractical at present due to diversity among nations with regard to level of economic

---

61 Rene Vossenar, and Veena Jha, "Environmentally based Process and Production Method Standards: Some Implications for developing countries", in Jha, Hewison and Underhill (eds.), n.7, pp.33-36.

62 Daniel C. Esty, "Greening the GATT: Trade, Environment and the Future" (Washington, D.C., Institute for International Economics, 1994), p.5.

63 For further details, see ibid., pp.231-37.

development, access to technology and capital. There are also differences in the nature and type of environmental problems and assimilative capacities. Thus differential PPM standards are the norm rather than the exception. However, the fact that many PPMs do harm the environment cannot be disputed. Consequently, any trade liberalization that leads to an expansion of these particular type of PPMs in a sector, say textiles, will definitely magnify the environmental harm caused by that sector. At least in the short run, trade expansion may not lead to rise in PPM standards especially if the firms involved are small and medium-sized enterprises, as is the case with the leather and textile industry in India, whose profits depend on low prices for final products. They may simply not be able to afford the costly technology needed to upgrade their production process towards higher standards.

In this Section I shall seek to put forward a new proposal called the *Minimum, Differential and Evolving Sectoral Standards* concept that will try to reconcile the concerns of developing countries on economic development with sustainability in process and production methods. Owing to the impracticality of a global environmental organization in the short run, this proposal rests on the decentralization and integration of environmental principles based on the specific sectors of production linked with global trade. Non-trade-related environmental concerns too will have to be addressed, but they will not be the focus of this proposal. The *MDE sectoral standards concept shall involve the following step by step approach*:

1. The first step will be to identify those production sectors involved in global trade that contribute to environmental damage such as steel, textiles, leather, fishing, etc.

2. Under the auspices of an international body, such as the UN Industrial Development Organization, the UN Environment Programme or the International Organization for Standardization, countries involved in the production of these items can be categorized into

various zones on the basis of the type of environmental problems and impact caused. The zonal classification will be done for each sector. Thus in a single sector, *say textiles*, India and Bangladesh may fall into one zone and Germany and Austria into another, based on the nature of environmental impact and their geographical pollution assimilative capacities.

3. In each sector, countries falling in a particular zone may be awarded grade points based on criteria such as per capita income, level of technology and access to capital, size of the firm, etc. The *grade points* will indicate the *capability* of that country to upgrade its firms to a higher PPM standard with its own resources.

4. After this exercise, two levels of 'floor' and 'ceiling' *standards* in each *sector* may be arrived at through multilateral negotiations, such as the one followed for the Montreal Protocol. The negotiations would involve the main countries involved in the production, consumers, exporters and importers of that commodity. Thus one multilateral environmental agreement would be signed for textiles by textile producing nations, another for leather by leather producing countries, etc. Prior models in the form of the International Tropical Timber Agreement and the Forest Stewardship Council already exist.

5. The standards arrived at would be *differential* with regard to zone. These will take into account the type of environmental impact caused. Standards for uniform global environmental impacts would be the same, as in the Montreal Protocol. These PPM standards can be formally recognized and set by the International Standardisation Organization (ISO), or integrated into the ISO 14000 series of environmental standards.

6. A single eco-label award based on the life-cycle analysis can be awarded to a firm if it conforms its PPMs to the ceiling standard set for the zone to which it belongs. This will avoid the multiplicity of domestic labels and resultant confusion while respecting the differences between 'environmentally-friendly' life-cycle criteria between countries. The label can be awarded by the ISO and will be recognized by a consumer anywhere in the world. Monitoring and verification procedures can be suitably worked out.

7. If a country fails to adhere to even the 'floor' or 'minimum' standards set for the zone then all countries, party to the multilateral environmental agreement for a particular sector, say leather, can impose trade sanctions on it (with provision under WTO rules). This will ensure effective retaliation against developed countries also. If a country adheres to the ceiling standards, the major importing countries have to provide it positive trade preferences and greater market access through lowering of quotas and tariffs.

8. Financing of a country's efforts to higher PPM standards can be based on a mix of options such as 'greater market access to exports, debt-redemption, a multilateral fund created for that sector, and multilateral and bilateral assistance. Technology transfer agreements can also be worked out. A country with a lower-grade point award like Bangladesh may need greater multilateral assistance than Turkey with a higher grade point award.

9. A graduation principle can be built in whereby as a country's percapita income and level of technology rises, the baseline or floor standards can be raised. Ceiling or 'maximum' standards, to qualify for eco-label or greater market access will also rise. A rise in PPM standards and trade liberalization will follow each other in a virtuous circle. *Thus PPM standards in all zones will continually evolve upwards as a country develops* until a stage comes when they will be automatically harmonized.

CONCLUSION

TREMs of the EU are beginning to affect Indian exports. The EU's importance as a destination for Indian exports will magnify the impact of its environmental regulations. The sectors most significantly affected include textiles, leather, dyes and food products. The worst affected will be small and medium enterprises as they contribute significantly to exports and lack access to finance and technology. Lack of information about eco-standards, lack of testing and certification facilities and difficulty in obtaining requisite technology are the other problems. A major disincentive is the lack of a market for 'eco-friendly' goods substantial enough to cover the costs of changeover to a more-environmentally friendly production process. The nature of price sensitivity of the market and prices of competitors are important in this regard. The market share of the EU in a particular commodity and the share which can be diverted to other less stringent markets will also determine the compliance of Indian industry to TREMs. Various policy options for dealing with the impact of TREMs exist at the domestic and international level. These include bridging

the information gap, building suitable infrastructure, provision of technical and financial assistance, evolving suitable marketing techniques and investment in research and development, invention and innovation suited to Indian conditions. The government, corporate and research institutions, NGOs, foreign governments and multilateral organizations all have a role to play in the implementation of these policy options. Finally, the question of reconciling process and production methods with environmental protection, is a crucial, if not the most important aspect of reconciling trade and environment. Nations will have to cooperate, and find a way to resolve this issue without substantially overhauling the present WTO rules. The Minimum Differential Evolving Sectoral Standards proposal may offer a suitable framework under which this reconciliation can be pursued, without serious damage to either trade or the environment.

CONCLUSION

Trade restrictions and sanctions, whether explicit or implicit are perhaps the most potent non-military weapon existing in the world today. This is particularly true if they are used by a developed country against a developing one. This is because the pattern of trade between these two are usually asymmetrical. For example any trade restriction or sanction imposed by the EU on India will have a great impact in terms of export disruptions, job losses, fall in foreign exchange reserves and on the balance of payments position. On the contrary, a similar restriction or sanction imposed by India on the EU will have little or no consequence on the EU. Current international trade rules under the WTO are clearly codified and coherent and more importantly, they are enforceable through the principle of cross-retaliation; if legitimized by a verdict of the dispute settlement panel. All these make trade-policy an effective instrument to enforce non-trade values such as environmental protection or labour standards. Environmental costs represent a social cost or externality that is not internalized equally throughout the world. In many developing countries, the actual market price of a commodity does not reflect the social marginal cost of environmental degradation that may accompany a production process. Developed nations may sometimes use explicit trade restrictions on imports from developing countries due to concerns about environmental degradation or resource depletion as was seen in the Tuna-Dolphin cases brought before the GATT. Many times, however, these concerns may actually be veiled attempts at protectionism, as shown in the "Imported-Gasoline case" and the 'Thai-cigarettes' case. Many developing countries already have a comparative advantage in products such as textiles and leather owing

to a large resource base and low wages of labour. When the environmental costs of producing them are also not reflected in the market price, their products may enjoy a formidable advantage in price terms to displace products of domestic industry in developed countries. Hence many sections within the developed world have clamoured for imposing tariffs or restrictions against imports from developing countries. The current practice according to WTO rules is that while the environmental or health impact of a final product may be the basis for a restriction on trade, no restriction can be placed if the environmental damage is caused by the process and production method and is purely localized within the exporting nation. But interpretation of WTO provisions may be subject to change. The WTO is trying to accommodate environmental concerns and its verdict in the "Tuna-Dolphin-2" case and panel report on the "United States Taxes on Automobiles" reveal that the GATT (now WTO) has been trying to find ways to legitimize trade restrictions on genuine environmental protection grounds if other options fail. Moreover, the agreement on technical barriers to trade and the agreement on sanitary and phytosanitary measures negotiated in the Uruguay Round leave open the scope for protectionist interpretation.

The rise of environmentalism and the importance attached to environmental protection in Europe is clearly ascribable to a number of factors, such as localized environmental disasters, geographical proximity of its member states and consequent trans-border pollution, and the 1973 oil crisis which revealed the dependence of the EU on secure fossil fuel resources and the need for resource conservation. All these factors have led to the emergence of a number of green parties and other environmental groups in the various EU member states. They have been instrumental in the framing of various environmental laws and policy statements embedded in the various

environmental action programmes. The Single European Act (1987) and the Maastricht Treaty (1992) were guided by the demands of approximating diverse environmental standards that existed within the EU to prevent their disruptive effect on the free flow of goods consequent to the creation of a Single Market. Setting environmental standards within the EU has been a cumbersome process due to conflicting interests of various groups such as environmentalists and industry associations and uneven development among the member states. Sometimes the nature of market orientation and firm size has led manufacturers either to support or to oppose higher environmental standards. This is clearly revealed by a case study of standard setting in the automobile industry. The EU has generally tried a compromise between the higher environmental standards of the northern European states with lower ones in Spain, Portugal, Italy and Greece. However, the economic clout of the richer member states has ensured that EU standards have on the average moved upwards. Maintaining or enlarging market share in the EU and abroad have been an important factor in support of higher environmental standards by automobile manufacturers. Environmentalists within the EU have generally focussed on local issues except for the issue of climate change. Foreign trade of the EU in manufacturing is also dominated by intra-EU trade which has led to concentration of public statements and policy issues on intra-EU problems according to Klepper.[1] This could easily change once dismantling of conventional tariff and non-tariff barriers, such as the multi-fibre agreement, lead to a surge of low cost imports like textiles from developing countries. The eastward expansion of the European

---

1 Gernot Klepper, "The Political Economy of Trade and the Environment in Western Europe", in Patrick Low (ed.), *International Trade and the Environment*, World Bank Discussion papers No.159 (Washington D.C., The World Bank, 1992), p.247.

Union may lead to inclusion of countries such as Poland, Hungary and Turkey that produce commodities like textiles in competition with developing countries. When these countries too are forced to increase their environmental standards to the EU level, it may fuel protectionist sentiment against developing country imports.

Within the EU the European Commission has generally tried to ensure the smooth functioning of the single market and minimize distortions caused by environmental derogations within member states. Thus environmental measures taken within the EU can be based on Article 100(a) if it concerns the approximation of laws relating to the single market and thus by implication the free movement of goods. Other environmental measures are taken under Article 130s which give room scope for derogation by individual member states, who can set stricter standards than those required at the EU level. Hence any environmental protection measure taken on the basis of Article 130s will allow scope for greater derogation and will have a more trade-restricting effect on third countries if the measure necessitates a ban on commodities for health or other reasons. This is because third countries may have to face a multiplicity of TREMs instead of a single EU one. This may occur even if countries derogate under Article 100a(4) although the criteria for doing so is more restrictive. In such cases their legality under WTO rules will have to be analyzed. At present the chief TREMs affecting extra-EU trade are those based on multilateral environmental agreements such as the Basel Convention, the Montreal Protocol and Convention on Trade in endangered species etc., which are legal according to WTO rules. Newer forms of TREMs are those based on voluntary measures such as eco-labelling that are not violative of WTO rules. A number of eco-labels have emerged at the national level in Europe as well as a EU eco-label. The objective of an eco-

label is to provide information to the environmentally conscious consumer about the eco-friendliness of a product and thus induce him to buy the product, sometimes at a premium price over other similar products. This TREM seeks to capitalise on the inherent advantages enjoyed by the producer in developed countries with regard to access to capital and technology and thereby neutralize the advantages of unlabelled products from developing countries with lower labour costs. While theoretically producers in any country may apply for a label, their non-tariff barrier effect lies in the non-transparent setting of criteria which may be more suited to conditions within the EU and the high costs involved in application and monitoring costs for developing country producers.

The South Asian region is particularly dependent on the EU as a major export market and this increases its vulnerability to the TREMs of the EU. These measures may take the form of regulations, standards or voluntary measures. The greatest impact usually arises from regulations and standards, especially those relating to dyes, chemicals and pesticide content. The sectors most affected in India are those that are also the most important export oriented. These include textiles, leather, dyes (as an intermediate product), tea, other agricultural products, and marine products. The refrigeration and air conditioning industry has also been affected by India's adherence to the Montreal Protocol, primarily due to the difficulty in obtaining substitutes for chlorofluorocarbons (CFCs) and CFC-free technology. The non-tariff barrier effect with regard to regulations and standards primarily lies in the high costs required for compliance, costly technology and the need to import the required inputs. The non-tariff barrier effect is magnified when the study reveals that the majority of export oriented units are small and medium enterprises, which lack effective access to

capital, technology and sometimes even timely information regarding these regulations and standards. High costs of compliance have also deterred enterprises from applying for EU eco-labels in addition to unsuitable criteria set down for these labels. Most significantly, the market for eco-labelled commodities within the EU has not been perceived to be big enough to go in for the additional investment required. This is especially the case with regard to price-sensitive products like textiles and tea which depend on low prices to survive in the world market. While demand for eco-labelled products may expand within the EU as environmental consciousness grows, the market is still at a nascent stage.[2] Policy options to deal with the impact of the EU's TREMs may be taken both at the domestic as well as international level. Their primary components include providing access to capital and technology especially to small and medium enterprises, creation of adequate infrastructure such as testing facilities and common effluent plants, provision of timely information and guidelines about TREMs, and the transfer of technology or indigenous research and development in developing suitable environmental technologies. On a higher policy plane, India must prevent the hijacking of the WTO agenda by environmental groups in developed countries or non-governmental organizations in a way detrimental to developing country interests. It must also develop the required legal infrastructure necessary to fight future cases at the WTO Dispute Settlement Body, on behalf of the other developing countries, if necessary.

At the same time it has to be kept in mind that all countries whether developed or developing cannot shirk their responsibility towards the goals of environmental

---

2 Interview with Dr. Veena Jha, UNCTAD Project Coordinator at the United Nations, New Delhi on 5 July 2000.

protection and sustainable development. In particular the question of reconciling process and production methods with environmental protection will have to be solved as these have the greatest impact on our environment. :"The EU is a poor role model for the globalization of environmental social standards. It has greater cultural and economic homogeneity, far deeper and more powerful institutions and stronger links to local democracy than could possibly occur in a global body".[3] Yet even the EU has had to respect local preferences and allow for local environmental standards. The WTO does not enjoy a similar competence in environmental legislation. One prevailing view holds that environmentally cleaner production technology could be provided by developed countries at a low cost to developing countries.[4] The level of access to capital, technology and official funding in the EU is not the same as that on a global scale. Poorer regions and smaller enterprises within the EU have access to funds on a level far higher than those accruing to developing countries. Hence it is imperative that the evolution to higher environmental standards in developing countries is carried out in a gradual, smooth and non-disruptive manner aided by positive incentives rather than those based on disruptive trade restrictions or sanctions. As the Brandt Commission Report (1980) recommended, nations "should cooperate more urgently in the international management of the atmosphere and other global commons and in the prevention of irreversible ecological damage".[5] Similar

---

3 Jim Rollo and Alan Winters, "Subsidiarity and Governance: Challenges for the WTO: Environmental and Labour Standards", *The World Economy* (Boston), vol.23, no.4, April 2000, p.574.

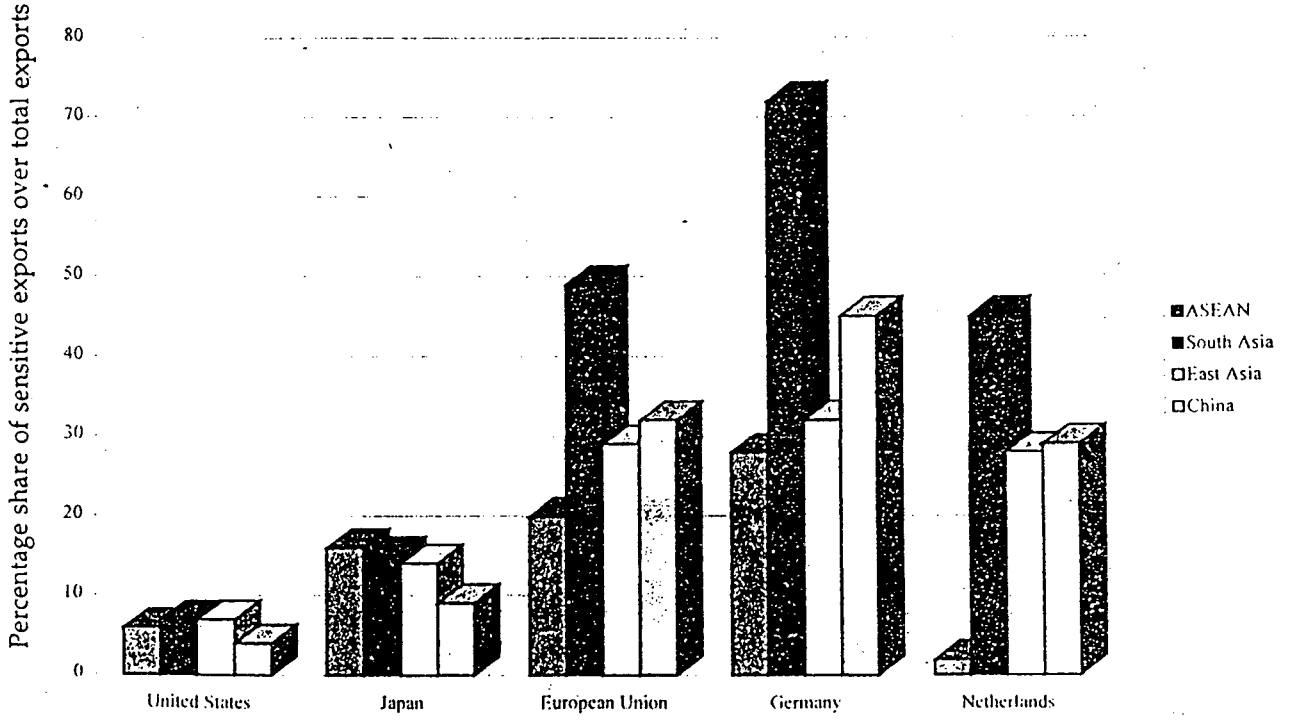
4 B. Vivekanandan, *International Concerns of European Social Democrats* (London, Macmillan Press, 1997), p.164.

5 See Report of the Brandt Commission, *North-South: A Programme for Survival* (Cambridge, Mass., 1980), pp.114-16 as cited in B. Vivekanandan, n.4, p.137.

cooperation is required for solving the environmental issues arising out of trade liberalization and production for export. The minimum differential evolving sectoral standards proposal outlined in the last chapter attempts to find a solution based on a positive, cooperative, result-oriented and multilaterally enforceable approach. If it succeeds, it will be a giant leap forward towards the resolution of the trade-environment debate.

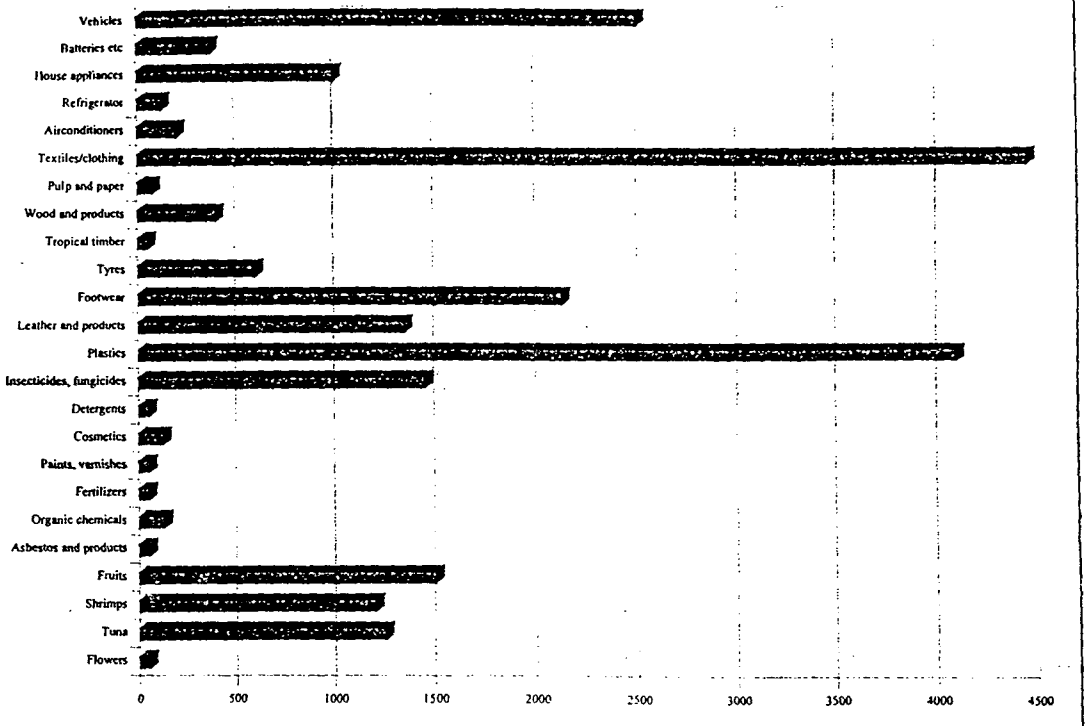
APPENDIX

Figure 1. Variations in sensitive exports of Asia to selected markets



Source: ESCAP studies in Trade and Investment (27): *Trade Effects of Eco-Labelling*, proceedings of a Seminar held in Bangkok, 17-18 February 1997 (New York: United Nations, 1997), p. 19.

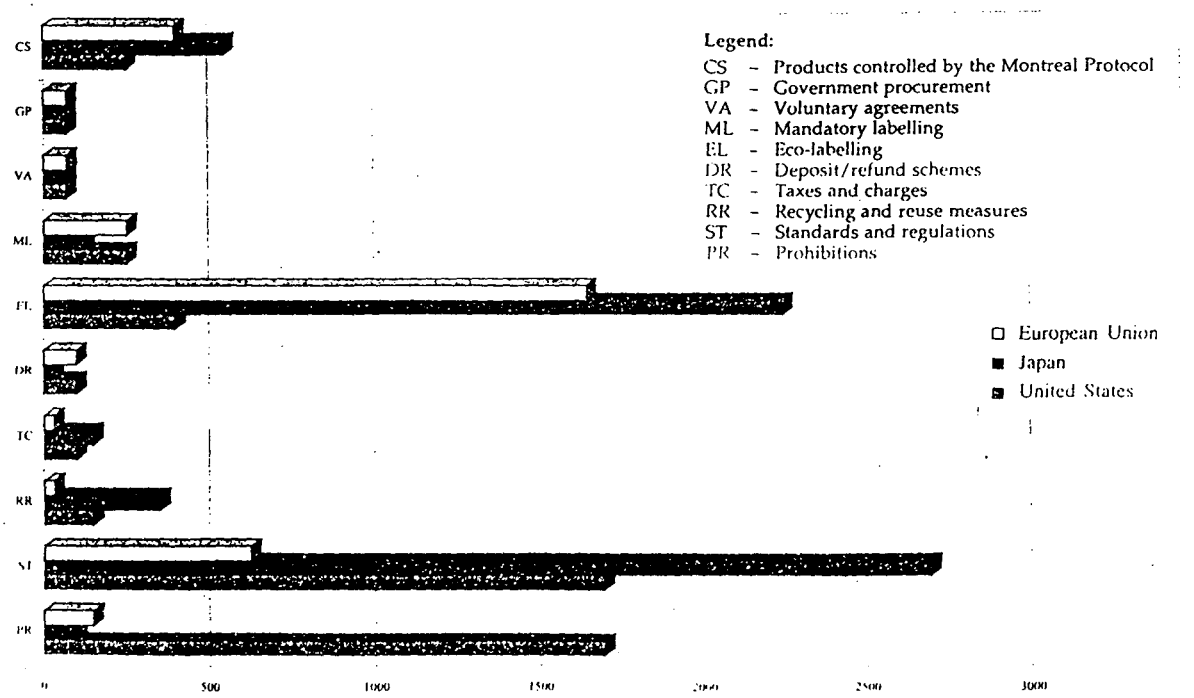
Figure 2. Sensitive exports of Asia to the United States of America, Japan and the European Union (1993 value in millions of US$)



Source: ESCAP studies in Trade and Investment (27): *Trade Effects of Eco-Labelling*, proceedings of a Seminar held in Bangkok, 17-18 February 1997 (New York: United Nations, 1997), p. 20.

Figure 3. Estimated exports from ASEAN economies of sensitive product measures in selected OECD markets

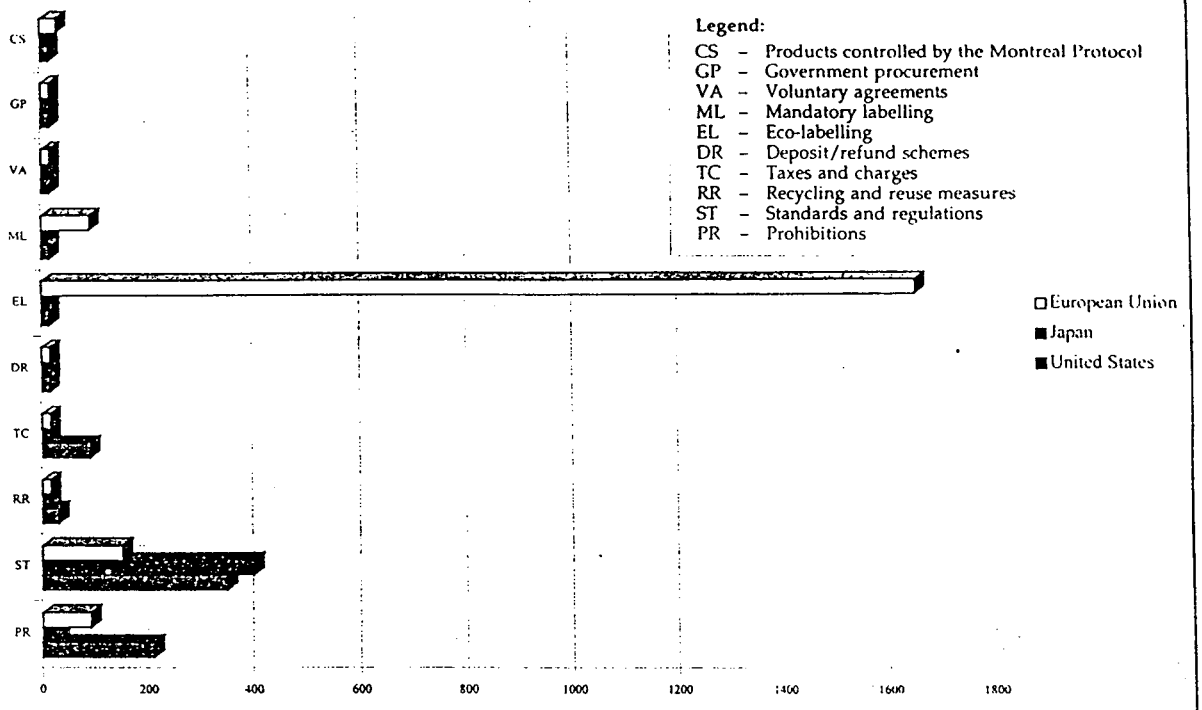
(1993 value in millions of US$)



Source: ESCAP studies in Trade and Investment (27): *Trade Effects of Eco-Labelling*, proceedings of a Seminar held in Bangkok, 17-18 February 1997 (New York: United Nations, 1997), p. 21.

Figure 4. Estimated exports from South Asian economies of sensitive products subject to environmental product measures in selected OECD markets

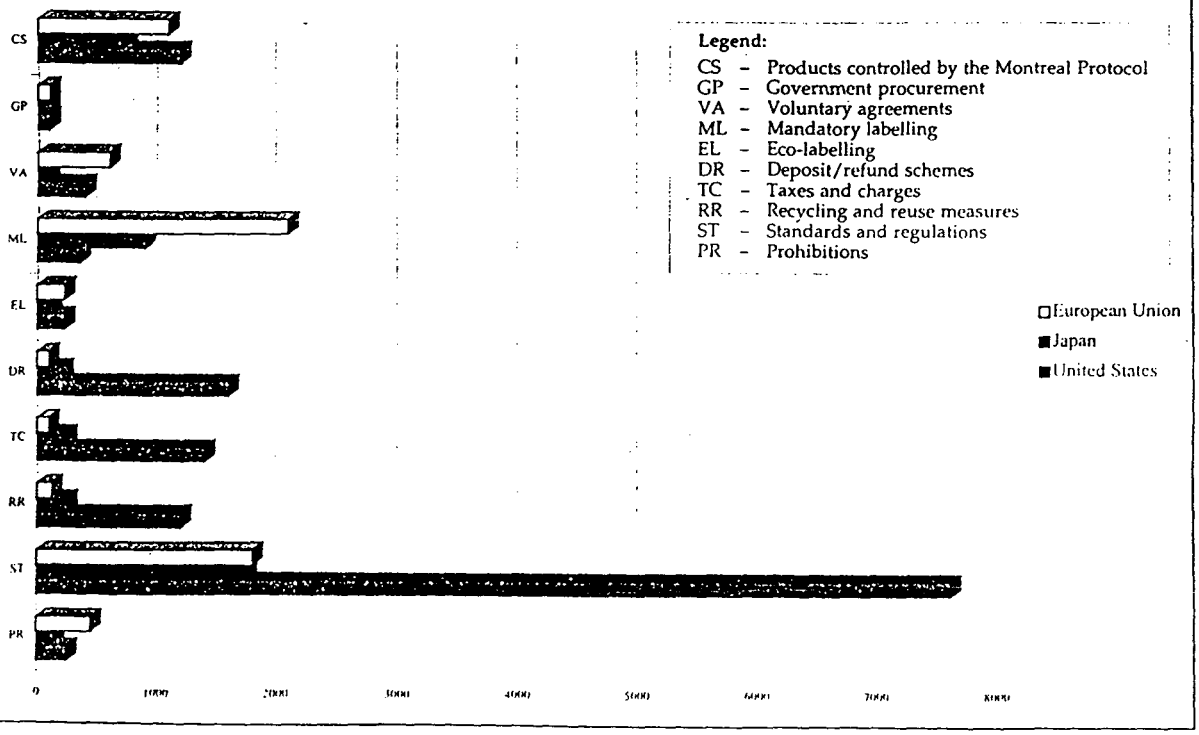
(1993 value in millions of US$)



Source: ESCAP studies in Trade and Investment (27): *Trade Effects of Eco-Labelling*, proceedings of a Seminar held in Bangkok, 17-18 February 1997 (New York: United Nations, 1997), p. 22.

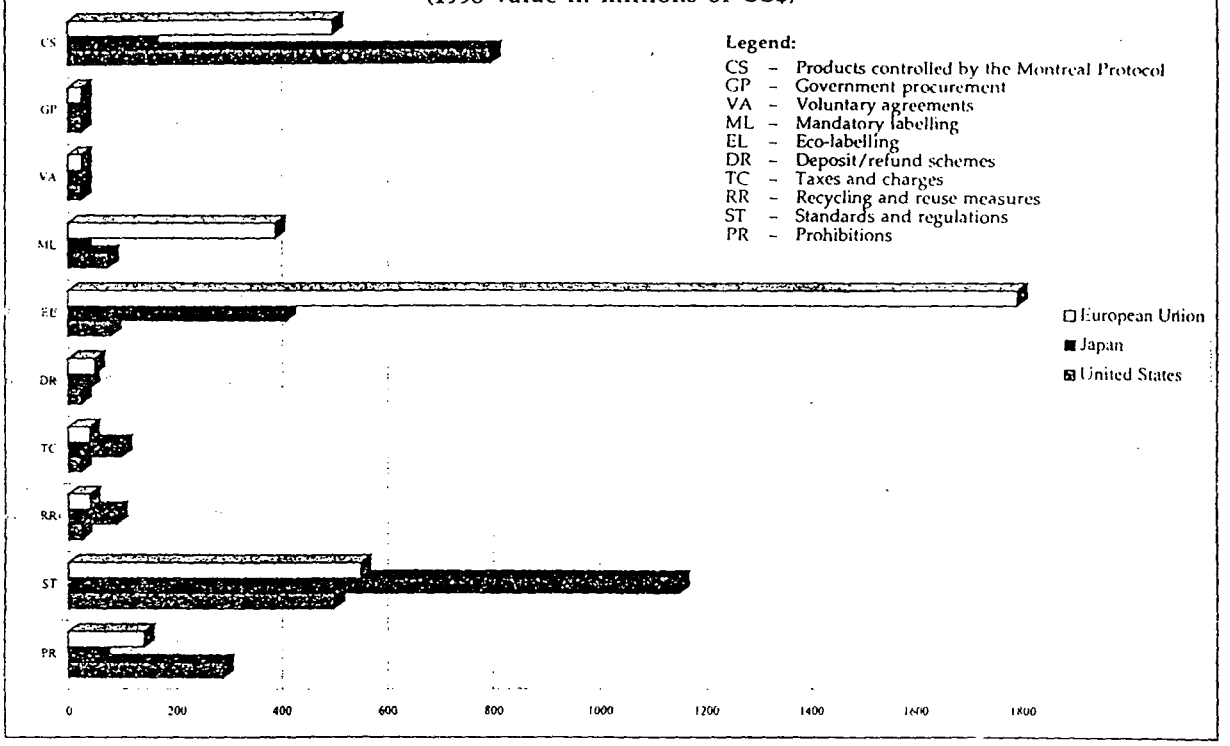
Figure 5. Estimated exports from East Asian economies of sensitive products subject to environmental product measures in selected OECD markets

(1993 value in millions of US$)



Source: ESCAP studies in Trade and Investment (27): *Trade Effects of Eco-Labelling*, proceedings of a Seminar held in Bangkok, 17-18 February 1997 (New York: United Nations, 1997), p. 23.

Figure 6. Estimated exports from China of sensitive products subject to environmental product measures in selected OECD markets (1993 value in millions of US$)



Source: ESCAP studies in Trade and Investment (27): *Trade Effects of Eco-Labelling*, proceedings of a Seminar held in Bangkok, 17-18 February 1997 (New York: United Nations, 1997), p. 26.

Table 1:

Ecolabels & Product Groups Covered By Each

Ecolabel	Products	Country
Ecolabel	T-shirts (cotton), bedlinen, bed sheets, pillow cases, valances, removable. Washable quilt or duvet covers. In future: Other cotton/polyester garments, clothes made of other fibres and eventually other textile products.	European Union
Oko-Tex		Germany
Product Class		
I	For babies and infants,	
II	With skin contact,	
III	Without skin contact	
IV	For furnishing material	
Toxproof		Germany
Toxproof with permanent skin contact	baby clothing, Shirts, blouses, sports clothing, underwear, stockings, nightwear, bed clothing, bedding, bathroom fabrics, blankets	
Toxproof baby Clothing	Clothing for babies upto 36 months of age	
Ecoproof	Certification of an ecological production method for textiles	Germany
Schadstoff geprufft	Leather or plastic materials in textiles	Germany
Oko-tex Standard 1000	Certification of eco-management within a given company	Germany
Eco-tex®	All textile products	Germany
AKN trademark and members	Clothing, bedding	Germany
Otto Versand	Clothing, home textiles	Germany
Brita Steilmann	Casual wear	Germany
Hess Natur	Underwear, outer wear, baby clothing, bed-linen	Germany
Nordic Environmental labelling (Milijomarkt)	The criteria apply to textiles made from cotton, sheep wool, flax, polyamide polyester, viscose, lyocell (tencel) or acetate	Sweden, Norway, Iceland,Finland
Swan A	Yarns; ply-yarns, loose stock, staple fibres,	
Swan B	Baby clothing	
Swan C	Clothing	
Swan D	Outerwear	
Swan E	Curtains	
Swan F	Furnishing textiles	
Swan G	Bed linen	
Swan H	Other kind of textiles	
Good environmental choice	All textile products containing at least 95% by weight of textile fibre	Sweden
KRAV	Textile from organic fibres	Sweden
EKO-Seal	Clothing, underwear, cloth diapers, towels and household textiles	The Netherlands
Stitching Milieukeur		The Netherlands
Milieukeur clothing/textile	Textile for use in clothing and clothes	
Milieukeur curtains and lace curtains	Lace curtains and textile for curtains	
Milieukeur bedlinen	In future	
EKO-Seal	Textile from organic fibres	The Netherlands
Environmental Choice	Organic cotton products	Canada
Eco Mark Japan	Cloth diapers, unbleached clothes, bed-linen, towels, cloth shopping bags, textiles made of waster fibres, clothing made of used PET	Japan
Green Mark Taiwan province	Reusable diapers, unbleached towels, cloth shopping bags	Taiwan
Eco- Mark republic of Korea	Reusable diapers, unbleached towels, cloth shopping bags	Korea
Eco-Mark India	textiles of cotton, wool, silk, man-made fibres, jute	India
China Environmental Labelling	Silk product	China
Good Environmental Choice	Clothes, home textiles	Sweden

Source: www.emcentre.com

Garments, Requirements for ecolabels at EU-level, in Germany, The Netherlands, and Sweden - "A"

Ecolabel	Certain azo-dyes	Formaldehyde	Pentachlorophenol	Pesticide	Other Compounds	Quality or process demands
Ecolabel adults (EU)	prohibited	75 ppm	prohibited	Prohib. (list of 25 subst)	prohib chlorogenic carriers	Yes
Ecolabel baby garments (EU)	prohibited	30 ppm	prohibited	Prohib. (list of 25 subst)	prohib chlorogenic carriers	Yes
Milieuker clothing	prohibited	75 mg/kg	Total EOX,50 mg/kg	Organic chlorine<1 mg/kg	isocyan<75mg/kg; prohib. PVC coating	Yes, restriction on colouring
EKO (NL)	For all categories: extensive positive list included in certification scheme; most of mentioned substances in figure are prohibited.					Yes, a.o. organic production
Toxproof - without skin contact		300 mg/L	0.5 mg/L	List with restrictions	glyoxal 300 mg/kg; chlorоorg carriers prohib	No
Toxproof- direct skin contact		75 mg/L	0.5 mg/L	List with restrictions	glyoxal 75 mg/kg; chlorоorg carriers prohib	flame retard. prohib., chlorоorg carriers
Toxproof baby clothing		20 mg/L	0.05 mg/L	List with restrictions	glyoxal 20 mg/kg; chlorоorg carriers prohib	flame retard. prohib., chlorоorg carriers
Ecoproof labels (G)	For all categories: see toxproof labels					Yes, see toxproof+no child labour+ envir.
Oko - Tex 103	prohibited	300 ppm	0.5 ppm	tot . 1ppm	prohib chlorogenic carriers	Yes
Oko - Tex 103	prohibited	75 ppm	0.05 ppm	tot . 1ppm	prohib chlorogenic carriers	Yes
Oko - Tex 106	prohibited	20 ppm	0.05 ppm	tot . 0.5ppm	prohib chlorogenic carriers	Yes
Swan A,B		30 ppm	Chlorophenol 20m g/kg	EOX,3ppm, list of compounds which may be used to certain limits		Yes
Swan B		100 ppm	Chlorophenol 20m g/kg	EOX,3ppm, list of compounds which may be used to certain limits		Yes
Good environmental choice	prohibited	According to Finnish standard				Yes
KRAV			prohibited			Yes, organic production

Garments, Requirements for ecolabels at EU-level, in Germany, The Netherlands, and Sweden - "B"

Ecolabel	Arsenicum	Antimony	Lead	Cadmium	Chromium	Mercury	Nickel	Copper	Cobalt	Zinc
Ecolabel adults (EU)	No use of metals in pesticides, dyes and pigments									
Ecolabel baby garments (EU)	No use of metals in pesticides, dyes and pigments									
Milieuker clothing	2mg/kg	2 mg/kg	2 mg/kg	2 mg/kg	2 mg/kg	2 mg/kg	2 mg/kg	2 mg/kg	2 mg/kg	10 mg/kg
EKO (NL)	for all categories: extensive positive list is included in certification scheme; most of the mentioned substances in this figure are prohibited									
Toxproof - without skin contact	0.2 mg/kg	0.2 mg/kg	0.8 mg/kg	0.1 mg/kg	total 1 mg/kg Cr nVI prohib	0.02 mg/kg	1 mg/kg	20 mg/kg	1 mg/kg	20 mg/kg
Toxproof- direct skin contact	0.2 mg/kg	0.2 mg/kg	0.8 mg/kg	0.1 mg/kg	total 1 mg/kg Cr VI prohib	0.02 mg/kg	1 mg/kg	20 mg/kg	1 mg/kg	20 mg/kg
Toxproof baby clothing	0.2 mg/kg	0.2 mg/kg	0.8 mg/kg	0.1 mg/kg	total 1 mg/kg Cr VI prohib	0.02 mg/kg	1 mg/kg	20 mg/kg	1 mg/kg	20 mg/kg
Ecoproof labels (G)	for all categories; see toxproof labels									
Oko - Tex 103	1.0 ppm	-	1.0 ppm	1.0 ppm	Cr VI prohib., Cr 2.0ppm	0.02 ppm	4 ppm	50 ppm	4 ppm	
Oko - Tex 103	1.0 ppm	-	1.0 ppm	1.0 ppm	Cr VI prohib., Cr 2.0ppm	0.02 ppm	4 ppm	50 ppm	4 ppm	
Oko - Tex 106	0.2 ppm	-	0.2 ppm	0.1 ppm	Cr VI prohib., Cr 1.0ppm	0.02 ppm	1 ppm	25 ppm	1 mg/kg	
Swan A,B			0.8 mg/kg	0.1 mg/kg	tot. 900 mg/kg, Cr VI 0.02 mg/kg	0.02 ppm	4 mg/kg	900 mg/kg	900 mg/kg	
Swan C			0.8 mg/kg	0.1 mg/kg	tot. 900 mg/kg, Cr VI 0.02 mg/kg		4 mg/kg	900 mg/kg	900 mg/kg	
Good Environmental Choice	Conc. metal complexes in added dyes<1g/kg				use forbidden			use forbidden		
KRAV										

Source: www.emcentre.com

Household and furnishing textiles : requirements for ecolabels at EU-level, in Germany, The Netherlands and Sweden - "A"

Ecolabel	Certain azo dyes	Formaldehyde	Pentachlorphenol	Pesticide	Other compounds	Quality or Process Demands
Ecolabel bedlinen	prohibited	75 ppm	prohibited	prohibited (list of 25 subst)	prohib chlorogenic carriers	Yes
Millieuker clothing	prohib (10 amines)	300 mg/kg	total EOX< 50 mg/kg	organic chlorine< 1 mg/kg. prohib PVC coating	isocyan<75 mg/kg: prohib PVC coating	Yes, restriction on colouring
EKO (NL)	all categories: extensive positive list included in certification scheme; most of the mentioned subst. in figure are prohibited					Yes, a.o. organic production
Toxproof - without skin contact	prohibited	300 mg/L	0.5 mg/L	list with restrictions	glyoxal 300mg/kg; chloorg carriers prohib	No
Toxproof- direct skin contact	prohibited	75 mg/L	0.5 mg/L	list with restrictions	glyoxal 300mg/kg; chloorg carriers prohib	flame retard prohib. chloorg carriers
Ecoproof labels (G)	for all categories: see toxproof labels					Yes, see toxproof+no child labour+envir
Oko - Tex 109, 110	prohibited	300 ppm	0.5 ppm	tot 1 ppm	prohibition chlorogenic carriers	Yes
Oko - Tex 111, 112	prohibited	75/120 ppm	0.5/ 0.05 ppm	tot 1.0/0.5 ppm	prohibition chlorogenic carriers	Yes
Oko - Tex 114	prohibited	300/75/20 ppm	0.5/0.05 ppm		prohibition chlorogenic carriers	Yes
Swan D,E, F		300 ppm	chlorophenol 20m g/kg	EOX< 3 ppm, list of compounds which may be used to certain limits		Yes
Swan G		100 ppm	chlorophenol 20m g/kg	EOX< 3 ppm, list of compounds which may be used to certain limits		Yes
Swan H		30 ppm	chlorophenol 20m g/kg	EOX< 3 ppm, list of compounds which may be used to certain limits		Yes
Good Environmental Choice	prohibited	according to Finnish standard				Yes
KRAV						Yes, organic production

Household and furnishing textiles: requirements for ecolabels at EU-level, in Germany, The Netherlands and Sweden - "B"

Ecolabel	Arsenicum	Antimony	Lead	Cadmium	Chromium	Mercury	Nickel	Copper	Cobalt	Zinc
Ecolabel bedlinen	no use of metals in pesticides, dyes and pigments									
Millieuker clothing	50 mg kg	50 mg/kg	5000 mg/kg	50 mg/kg	Cr VI. 50mg/kg. Cr III 5g/kg	50 mg/kg	5000 mg/kg	5000 mg/kg	5000 mg/kg	20000mg/kg
EKO (NL)	for all categories, extensive positive list is included in certification scheme; most of the mentioned substances in this figure are prohibited									
Toxproof - without skin contact	0.2 mg kg	0.2 mg/kg	0.8 mg/kg	0.1 mg/kg	total 1 mg/kg. Cr VI prohib	0.02 mg/kg	1 mg/kg	20 mg/kg	1 mg/kg	20 mg/kg
Toxproof- direct skin contact	0.2 mg/kg	0.2 mg/kg	0.8 mg/kg	0.1 mg/kg	total 1 mg/kg. Cr VI prohib	0.02 mg/kg	1 mg/kg	20 mg/kg	1 mg/kg	20 mg/kg
Ecoproof labels (G)	see toxproof									
Oko - Tex 109, 110	1.0 ppm		1.0 ppm	0.1 ppm	Cr VI prohib; Cr 2.0 ppm	0.02 ppm	4 ppm	50 ppm	4 ppm	-
Oko - Tex 111, 112	1.0/ 0.2 ppm		1.0/0.2 ppm	0.1 ppm	Cr VI prohib: Cr 2.0/1.0 ppm	0.02 ppm	4/1	50/25 ppm	4/1	-
Oko - Tex 114	1.0/ 0.2 ppm		1.0/0.2 ppm	0.1 ppm	Cr VI prohib: Cr 2.0/1.0 ppm	0.02 ppm	4/1	50/25 ppm	4/1	-
Swan D,E, F	0.2 mg/kg		0.8 ppm	0.1 mg/ kg	900 mg/kg; Cr VI 0.02 mg/kg	0.02 mg/kg	4 mg/kg	900 mg/kg	900 mg/kg	
Swan G	0.2 mg/kg		0.8 ppm	0.1 mg/ kg	900 mg/kg; Cr VI 0.02 mg/kg	0.02 mg/kg	4 mg/kg	900 mg/kg	900 mg/kg	
Swan H	0.2 mg/kg		0.8 ppm	0.1 mg/ kg	900 mg/kg; Cr VI 0.02 mg/kg	0.02 mg/kg	4 mg/kg	900 mg/kg	900 mg/kg	
Good Environmental Choice	conc. metal complexes in added dyes<1 g/kg				use forbidden			use forbidden		
KRAV										

Source: www. emcentre.com

SELECT BIBLIOGRAPHY

SELECT BIBLIOGRAPHY

PRIMARY SOURCES

Eco-Trade Manual: Environmental Challenges for Exporting to the European Union (Netherlands: Centre for Promotion of Imports from Developing Countries, 1998).

European Regulations Manual (Netherlands: Centre for Promotion of Imports from Developing Countries, 1997).

General Agreements on Tariffs and Trade: Basic Instruments and Selected Documents, vol.IV, Geneva, March 1969.

Government of India, Ministry of Finance, *Economic Survey*, 1999-2000.

ICSF Postings, no.4 (Chennai: International Collective in Support of Fishworkers, 4 May 1999).

International Legal Materials, vol.XXXIII, no.4, July 1994.

UN, ESCAP Studies in Trade and Investment (27): *Trade Effects of Eco-labelling*. Proceedings of a Seminar held in Bangkok. 17-18 February (New Delhi, 1997).

UNCTAD, *The Outcome of the Uruguay Rounds: An Initial Assessment* (New York, 1994).

WTO Secretariat, *Guide to the Uruguay Round Agreements* (Geneva, Kluver Law International, 1999).

SECONDARY SOURCES

Books

Agarwal, A., Sunitha, N., and Anju S. (eds.), *Green Politics: Global Environmental Negotiations* (New Delhi: Centre for Science and Environment, 1999).

Agarwal, A.N., *Indian Economy: Problems of Development and Planning*, 22nd Edition (New Delhi: Vishwa Prakashan, 1996).

Anderson, T., Carl, F., and Stefan, N., *Trading with the Environment* (London: Earthscan Publications, 1995).

Baker, S., Kousis, M., Richardson, D., and Young, S. (eds.), *Political of Sustainable Development* (London: Routledge, 1997).

Bhagawati, Jagadish and Hudec, R.E. (eds.), *Fair Trade and Harmonization: Pre-Requisites for Free Trade*, vol.1, *Economic Analysis* (Cambridge, Mass., MIT Press, 1997).

Boyle, Alan (eds.), *Environmental Regulation and Economic Growth* (Oxford: Clarendon Press, 1994).

Brack, Duncan, *International Trade and the Montreal Protocol* (London: Earthscan Publications, 1996).

Cameron, J., Demaret, P., and Geradin, D. (eds.), *Trade and the Environment: The Search for Balance*, vol.1 (London: Cameron May, 1997).

Dent, Christopher, M., *The European Economy: The Global Context* (Cornwall: Routledge Publishers, 1997).

Esty, Daniel, C., *Greening the GATT: Trade, Environment and the Future* (Washington, D.C., Institute for International Economics, 1994).

Ewing, K.P., and Tarasofsky, R.G., *The Trade and Environment Agenda: Survey of Major Issues and Proposals -- From Marrakesh to Singapore* (Gland, Switzerland, International Union for Conservation of Nature and Natural Resources, 1997).

Haigh, Nigel, *EEC Environmental Policy and Britain* (Harlow, Essex: Longman, 1989).

Hans, J., Opschoor, B., Button, K., and Nijkamp, P. (eds.), *Environmental Economics and Development* (Cheltenham: Edward Elgar Publishing, 1999).

Hjalte, Lidgren and Stahl, Ingemar, *Environmental Policy and Welfare Economics* (Cambridge: Cambridge University Press, 1997).

Jha, V., Markandaya, A., and Vossenaar, R. (eds.), *Reconciling Trade and the Environment: Lessons from Case Studies in Developing Countries* (Cheltenham: Edward Edgar Publishing, 1999).

Jha, V., Hewison, G., and Underhill, M. (eds.), *Trade, Environment and Sustainable Development: A South Asian Perspective* (London: McMillan Press, 1997).

Johnson, Stanley, P., and Corcellex, Guy, *The Environmental Policy of the European Communities* (London: Kluwer Law International, 1995).

Kronsell, Annica, *Greening the EU* (Bromley: Chartwell Bratt, 1997).

Low, Patrick, ed., *International Trade and the Environment*, World Bank Discussion Papers No.159 (Washington: The World Bank, 1992).

McDonald, Frank and Dearden, Stephen (eds.), *European Economic Integration* (London: Longman, 1992).

Smith, Turner T., and Kromarek, Pascale, *Understanding US and European Environmental Law: A Practitioner's Guide* (London: Graham and Trotman, 1989).

Trebilcock, J., Michael and Robert, Howse, *The Regulation of International Trade* (London: Routledge, 1995).

Vivekanandan, B., *International Concerns of European Social Democrats* (London: McMillan Press, 1997).

Vogel, David, *Trading up: Consumer and Environmental Regulation in a Global Economy* (London: Harvard University Press, 1995).

Zarrilli, S., Jha, V., and Vossenaar, R. (eds.), *Eco-Labelling and International Trade* (London, McMillan Press, 1997).

Articles

Achanta, A.N., Dadhich, P., Ghosh, P., and Noronha, L., "The Transfer of Environmentally Sound Technology with Special Reference to India", in Jha, V., Hewison, G., and Underhill, M. (eds.), *Trade, Environment and Sustainable Development: A South Asian Perspective* (London: McMillan Press, 1997).

Agreement on New Auto Emission Standards Starting in 1998 called Major Breakthrough", *International Environmental Reporter* (Washington, D.C.), 13 November 1985.

Baker, S., Kousis, M., Richardson, D., and Young, S., "The Theory and Practice of Sustainable Development in EU Perspective", in Baker, S., Kousis, M., Richardson, D., and Young, S. (eds.), *Politics of Sustainable Development* (London: Routledge, 1997).

Bhagawati, Jagadish and Srinivasan, T.N., "Trade and the Environment: Does Environmental Diversity Detract from the Case for Free Trade?", in Bhagawati, Jagdish and Hudec, R.E. (eds.), *Fair Trade and Harmonization: Prerequisites for Free Trade, vol.1, Economic Analysis* (Cambridge, Mass: MIT Press, 1997).

Bharucha, Vasantha, "The Impact of Environmental Standards and Regulations Set in Foreign Markets on Indian Exports", in Jha, V., Hewison, G., and Underhill, M. (eds.), *Trade, Environment and Sustainable Development: A South Asian Perspective* (London: McMillan Press, 1997).

Charnowitz, Steve, "Environmentalism Confronts GATT Rules: Recent Developments and New Opportunities",*Journal of World Trade* (Geneva), vol.27(2), April 1993.

Charnowitz, Steve, "Free Trade, Fair Trade, Green Trade: Defogging the Debate", *Cornell International Law Journal* (Ithaca, N.Y), vol.27, no.3, Symposium 1994, pp.462-65.

Chimni, B.S., "Greeting the GATT or Green Protection: Certain Legal Issues", Seminar paper presented at 26th Annual Conference of Indian Society of International Law, New Delhi, 14-15 February 1997.

Chimni, B.S., "WTO Dispute Settlement System and Sustainable Development", Discussion Paper prepared for World Wide Fund for Nature, India (New Delhi, WWF, May 1999).

Coleman, Martin, "Environmental Barriers to Trade and European Community Law", in Boyle, A. (eds.), *Environmental Regulation and Economic Growth* (Oxford: Clarendon Press, 1994).

Commission to Consider Legal Proceedings on West German Incentives for Cleaner Cars", *International Environmental Reporter*, 13 November 1985.

Das, Shipra, "India: Effects of Trade Measures and Positive Measures in the Montreal Protocol on Selected Indian Industries" in Jha, V., and Hoffman, Ulrich (eds.), *Achieving objectives of Multilateral Environmental Agreements: A Package of trade measures and positive measures* (Geneva, UNCTAD, 2000).

Dasgupta, Paramita, "Enhancing Exports to the EU: A Product based approach", in *Foreign Trade Review* (New Delhi), vol.22, no.4, January-March 1998.

Demaret, Paul., "Trade-Related Environmental Measures in the External Relations of the European Community", in Cameron, J., Demaret, P., and Geradin, D. (eds.), *Trade and the Environment: The Search for Balance*, vol.1 (London: Cameron May, 1997).

Dohlman, Ebba, "Trade, Environment and Development Cooperation", in Jha, V., Hewison, G., and Underhill, M. (eds.), *Trade, Environment and Sustainable Development: A South Asian Perspective* (London: McMillan Press, 1997).

European Community Environment Ministers Agree on New Emission Levels for Small Cars", *International Environmental Reporter*, June 1989.

French, Hillary, F., "The EC: Environmental Proving Ground", *World Watch* (Washington, D.C.), vol.4, no.6, November-December 1991.

Geradin, D., "Balancing Free Trade and Environmental Protection -- The Interplay between the European Court of Justice and the Community Legislator" in Cameron, J., Demaret, P., and Geradin, D. (eds.), *Trade and the Environment: The Search for Balance*, vol.1 (London: Cameron May, 1997).

Gopalan, V.K., "The Fishery Resources of Kerala and their Exploitation", keynote paper in *Seminar on Fisheries Crisis and Policy approach in Kerala* (Trivandrum, Fisheries Research Cell, 1987).

Green, Greener, Greenest?", *Economist* (London), 6 May 1989.

Hammonds, H., "A US Perspective on the EEC Hormone Directive", *Michigan Journal of International Law* (Ann Arbor, Michigan), vol.11, 1990.

Hassan, John, "Environmental Policy", in McDonald, Frank and Dearden, Stephen (eds.), *European Economic Integration* (London: Longman, 1992).

Helm, Carsten, "A Policy for Trade and the Environment in a Global Economy", in *Economics* (Tubingen), vol.55/56, 1997

Jha, Veena and Vossenaar, Rene, "Environmentally Oriented Product Policies, Competitiveness and Market Access", in Jha, V., Hewison, G., and Underhill, M. (eds.), *Trade, Environment and Sustainable Development: A South Asian Perspective* (London: McMillan Press, 1997).

Jha, Ashok, "Protection of the Environment, Trade and India's Leather Exports", in Jha, V., Hewison, G., and Underhill, M. (eds.), *Trade, Environment and Sustainable Development: A South Asian Perspective* (London: McMillan Press, 1997).

Kettlewell, Ursula, "GATT: Will Liberalized Trade Aid Global Environmental Protection", *Denver Journal of International Law* (Denver), vol.22, 1992.

Kingsbury, Bendict, "Environment and Trade: The GATT/WTO Regime in the International Legal System", in Boyle A. (ed.), *Environmental Regulation and Economic Growth* (Oxford: Clarendon, 1994).

Klepper, Gernot, "The Political Economy of Trade and the Environment in Western Europe", in Low Patrick (ed.), *International Trade and the Environment, World Bank Discussion Papers No.159* (Washington: The World Bank, 1992).

Kramer, Ludwig, "The Single European Act and Environmental Protection: Reflections on Several New Provisions in Community Law", *Common Market Law Review* (The Hague), no.24, 1987.

Leebron, W. David., "Lying down with Procrustes: An Analysis of Harmonization Claims", in Bhagawati, J., and Hudec, R.C. (eds.), *Fair Trade and Harmonization: Pre-requisites for Free Trade?", vol.1, Economic Analysis* (Cambridge: Massachusetts, The MIT Press, 1997).

Mackenzie, M.B., "European Community Law and the Environment", in Boyle, Alan (eds.), *Environmental Regulation and Economic Growth* (Oxford: Clarendon Press, 1994).

Majone, Giandomenico, "Cross-national sources of Regulatory Policy Making in Europe and the United States", *Journal of Public Policy* (Cambridge), vol.11, 1991.

Markandaya, A., "Eco-labelling: An Introduction and Review" in Simonetta, Zarrilli S., Jha, V., and Vossenaar, R. (eds.), *Eco-labelling and International Trade* (London: McMillan Press Ltd., 1997).

Mattoo, Aditya and Singh, H.V., "Eco-Labelling, the Environment and International Trade" in Zarrilli, S., Jha, V., and Vosenaar, R. (eds.), *Eco-labelling and International Trade* (London: McMillan Press Ltd., 1997).

Meng, W.P., "The Hormone Conflict between the EC and the United States in the Context of GATT", *Michigan Journal of International Law*, vol.11, 1990.

Pearce, David, "The Greeting of GATT: Some Economic Considerations" in Cameron, James and Geradin, Damien (eds.), *Trade and the Environment: The Search for Balance*, vol.1 (London: Cameron May, 1997).

Petersmann, Ernst-Ulrich, "International Trade and International Environmental Law: Prevention and Settlement of International Disputes in GATT", *Journal of World Trade*, vol.27, February 1993.

Rege, Vinod, "GATT Law of Environment Related Issues Affecting the Trade of Developing Countries", *Journal of World Trade*, vol.28, 1994.

Rollo, Jim and Winters, Alan, "Subsidiarity and Governance: Challenges for the WTO: Environmental and Labour Standards", in *The World Economy* (Oxford), vol.23, no.4, April 2000.

Sharma, V.R., "Environmental regulatory measures and their economic impact on the Indian leather industry", in *Natural Resources Forum* (New York), vol.19, no.2, May 1995.

Siebert, Horst, "Trade Policy and Environmental Protection", in *World Economy* (Oxford) 1996.

Usher, John., "Protection of the Environment through Trade Restrictions and the Community's External Relations: The Respective Competence of the Community and of the Member States", in Cameron, J., Demaret, P., Geradin, D. (eds.)., *Trade and the Environment: The Search for Balance, vol.1* (London: Cameron May, 1997).

Vaughan, Scott, "Trade and Environment: Some North-South Considerations", in *Cornell International Law Journal*, vol.27, no.3, 1994.

Veiga, P.D.M., Carvalho, M.C.D., Vilmar, M.L., and Facanha, H., "Eco-labelling Schemes in the European Union and their impact on Brazilian Exports", in Zarrilli, S., Jha, V., and Vossenaar, R. (eds.), *Eco-Labelling and International Trade* (London: McMillan Press, 1997).

Verbruggen, Harmen., Jongma, S., and Van der Woerd, F., "Eco-labelling the Developing Countries: The Dutch Horticultural Sector", in Zarrilli, S., Jha, V., and Vosenaar R. (eds.), *Eco-labelling and International Trade* (London: McMillan Press Ltd., 1997).

Vossenaar, Rene, and Jha, V., "Environmentally based Process and Production Method Standards: Some Implications for Developing Countries" in Jha, V., Hewison, G., and Underhill, M. (eds.), *Trade, Environment and Sustainable Development: A South Asian Perspective* (London: McMillan Press, 1997).

Wyatt, Christine, "Environmental Policy-Making, Eco-labelling and Eco-packaging in Germany and its Impact on Developing Countries", in Jha, V., Hewison, G., and Underhill, M. (eds.), *Trade, Environment and Sustainable Development: A South Asian Perspective* (London: McMillan Press, 1997).

Newspapers

Financial Times (London)
Economic Times (New Delhi)
The Hindu (New Delhi)

Websites

www.emcentre.com
www.europa.eu.int
www.wto.org
www.oecd.org
www.un.org

Interviews

Interview with Dr. John Kurien, Associate Fellow at the Centre for Development Studies, Thiruvananthapuram on 14 June 2000.

Interview with Dr. Veena Jha, UNCTAD Project Coordinator at the United Nations Office, New Delhi, on 5 July 2000.