ASPECTS OF ENVIRONMENTAL NORMS UNDER THE WORLD TRADE ORGANIZATION

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By:

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DECLARATION A

"This dissertation is my original work and has not been presented for a degree or any other academic award in any university or institution of learning".

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"We confirm that the work reported in this dissertation was carried out by the candidate under our supervision".

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APPROVAL SHEET

This thesis entitled" *Aspects of Environmental Norms under the World Trade organization*" prepared and submitted by *Ador William Miabek* in partial fulfillment of the requirements for the degree of *Master of Laws in Public International Law* has been examined and approved by the panel on oral examination with a grade of PASSED.

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ABSTRACT

This study was to establish aspects of environmental norms under the world trade organization and to determine existing conflicts between trade rules with Multilateral Environmental Agreements (MEAs).

The study uses qualitative comparative case-study methodology to analyze ten environmental-based, GATT article XX exceptions cases. Each of these cases had been brought before the dispute resolution mechanisms of GATT and WTO respectively.

The study is driven by a desire to gain some insight into what happens when trade liberalization rules confront the interests of environmental norms and protection and also, examine existing relationship between trade and environment under the GATT and WTO. The restrictive measures or trade embargoes imposed on a trading partner or a member state in the name of environmental protection measures is offered under article XX(b) and (g) general exceptions of GATT which form the essence of each environmental dispute.

Based on the data analysis of ten environmental disputes brought the GATT and WTO dispute resolution mechanisms, it showed that there is existing conflicts between MEAs and multilateral trade rules such as principle of non-discrimination (GATT Article I and III), and general elimination of quantitative restrictions (GATT XI) respectively. It showed that GATT Article XX is narrowly defined to provide environmental protection under the WTO.

Recommendations could be to broaden the environmental exceptions under GATT Article XX amongst others.

CHAPTER ONE

THE PROBLEM AND ITS SCOPE

Background of the Study

Since the entry into force of the World Trade Organization (WTO)[1] Agreement in January 1995, international trade law has developed from a technical backwater of international law to one of its most vibrant fields and it may always happen that the rights and obligations of WTO Members under WTO Agreements are in conflict with their rights and obligations of other international agreements which form another branch of law under the international law. In the early 1990s, there were two significant events that affected the whole world dramatically. One was that the completion of the Uruguay Round of the General Agreement on Tariffs and Trade (GATT)[2] and the establishment of the World Trade Organization (WTO) in 1994. It is believed that trade liberalization is important to enhancing world economic welfare. The other was that the concept of sustainable development was arisen during the United Nations Conference on Environment and Development in June 1992 and the concept was stressed in the Rio Declaration and environmental protection has become an exceedingly important objective.[3]

As time going, people were more and more concerned with the environmental degradation and tried to find out the cause. Some believe that free trade leads to depletion of natural resources and pollution of environment. Some identify poverty as the primary cause of environment degradation and recognize the need for a new era of economic growth. Some countries use trade measures to protect environment, but are

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[1] Peter Van Den Bossche, *The Law and Policy of the World Trade Organization* (2nd edn Cambridge University Press 2008).

[2] Dukguen Ahn, *"Environmental Disputes in the GATT/WTO: Before and After the US-Shrimp Case,"* Michigan Journal of International Law (Summer 1999).

[3] *Environment and Trade: A Handbook*, The United Nations Environment Programme Division of Technology, Industry and Economics and Trade Unit and the International Institute for Sustainable Development, (2nd edn Canada, 2005).

opposed by some other countries. The linkage between trade and environment[4] becomes a major controversial topic in the areas of both international environment law and international trade law.

In recent years, the tensions between environment and trade policies have then significantly increased, fuelled by a host of trade disputes over issues as diverse as tuna, shrimps, automobiles, furs, or meat of cattle treated with certain growth hormones. In these and many other cases, some States wanted to ban the import on environmental grounds, while exporting States invoked their rights of non-discrimination in trade granted under the General Agreement on Tariffs and Trade (GATT) and other agreements under the World Trade Organization (WTO).[5] A central issue in this conflict is the legitimacy of unilateral action and national decision-making under WTO law, as opposed to multilateral decision-making. Then a second line of the conflict often indistinguishable from the first runs between the governments of the large developed markets in the North, with their strong environmentalist movements, and the smaller trading nations, in particular in the developing world. The efforts on the international level to strengthen the international trading regime often spill over into areas of international environmental concerns and vice versa. The norms and rules used to oversee international trade can affect the goals and norms associated with pursuing international environmental issues.[6] These trade and environmental links topic have gained increasing attention due to the continued diversification and integration of the global economy since the creation of the General Agreement on Tariffs and Trade (GATT) in 1947, and due to increasing awareness of environmental issues. The overall process of harmonizing trade rules with the environmental agenda has been described as the *"greening of world trade."*

The key issues that are arising from the nexus of international trade and environment include *trade and environmental rule synergy* which refers to the

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[4] WTO Appellate Body, "*United States - Import Prohibition of Certain Shrimp and Shrimp Products," (1998).*

[5] Steve Charnovitz, "*World Trade and the Environment: A Review of the New WTO Report," Georgetown* International Environmental Law Review (2000).

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

interaction between international trade regulation or liberalization and domestic environmental regulation; or vice versa. For example, if a law is passed in one country imposing strict environmental standards on the production of a certain good, these standards may unfairly discriminate against foreign producers which are against trading rules. *Harmonization;* this issue concerns whether trade agreements contribute to Harmonization of Environmental Standards, and whether harmonization positively or negatively affects the environmental impact of economic activity.[7] *Trade and the internalization of environmental costs;* these are environmental costs that can be shifted to other countries using trade measures. Conversely trade agreements can provide an effective forum for internalizing environmental costs not currently accounted for in production and processing of traded goods. Trade and Environment and UNCED Follow-Up Activities in UNCTAD, a report from the United Nations Conference on Trade and Development (1994), examines methods of internalizing environmental costs. *Transparency;* this notion is simply the publicizing of governmental laws and regulations, whether trade or environmental. Transparency has two general applications. The first application is in terms of the laws and regulations themselves through notification requirements and secondly, the question of transparency also arises in the area of dispute resolution mechanisms in multilateral trade agreements if applied to environmental matters, and vice versa.[8] *Intellectual Property;* the application of intellectual property rights and patent regimes, especially as related to biodiversity, can influence trade and environmental outcomes and surveys in this issue had been in Intellectual Property Rights for Biotechnology.[9] *The development;* Trade and environmental issues raise questions about potentially disparate effects on economic growth in industrialized countries and developing countries.

Many environmentalists, as well as some governments in industrialized countries, fear that the increasing discipline in trade policy brought about by the WTO will

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[7] Stephens c. *Harmonization, Trade and the Environment. International environmental affairs 5(1) 42-49,* (University press of New England, 1993).

[8] Von Moltke.K. *Dispute Resolution and Transparency. In the greening of world trade* (Washington D.C. government printing office, 1993)

[9] Groombridge, B. *Global Biodiversity: status of the Earth's living resources, World Conservation Monitoring Centre.* (New York, 1992)

undermine the effectiveness of environmental norms or multilateral environmental agreements (MEAs). These fears have so far remained debatable. A 1993 GATT study showed that 19 out of 140 multilateral environmental treaties had some relevance for the trading regime and none has as yet been challenged or affected by WTO law. The 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), for instance, bans trade in protected species with nonparties unless they comply with treaty provisions.[10] The 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (Basel Convention) bans the import or export of wastes from States that are not party to the treaty. Likewise, the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer (Montreal Protocol) restricts trade with non-parties, for example by requiring governments to ban the import of goods that have been produced by non-parties with ozone-depleting substances even if those goods no longer contain such substances.[11] Notably, trade in such goods amounted to 16 percent of world trade before the Protocol entered into force. The trend of establishing multilateral environmental rules with trade effects continues, as evidenced by the 1998 Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (Rotterdam Convention) and the 2000 Cartagena Protocol on Biosafety to the 1992 Convention on Biological Diversity (Biosafety Protocol), both of which are not yet in force.

These multilateral environmental agreements contradict at least some of the basic obligations under GATT, notably Articles I, III and XI. Nonetheless, parties to these agreements will generally be able to justify their action under Article XX of GATT, the general exception clause. This proviso permits WTO members all trade restrictions that are "necessary to protect human, animal or plant life or health" (Article XX(b) GATT) or that are "relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production and

[10] Terence P. Stewart & David S. Johanson, *"The SPS Agreement of the World Trade Organization and the International Trade of Dairy Products,"* Food and Drug Law Journal (1999).
[11] Charnovitz, Steve. 2003. *Trade and Climate: Potential Conflicts and Synergies*. Washington: Pew Center on Global Climate Change.

consumption" (Article XX(g) GATT).[12] Both exemptions are restricted by the chapeau of Article XX, which subjects exceptions 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".

The vast majority of the world's governments have signed up to both the rules of the World Trade Organization (WTO) and to the major multilateral environmental agreements (MEAs).[13] However, the relationship between these bodies of law has been a troubled one. There are potential conflicts between the rules and procedures, as well as areas where more positive synergies between policy objectives have yet to be achieved. The relationship that evolves between trade and environmental norms has been an outstanding issue in the last few years since the establishment of the World Trade Organization, engaging Member States in debates on changing the rules of the multilateral trading system as well as gathering intense interest outside the diplomatic circles of Geneva addressing trade and environmental linkages at the WTO is one of its most challenging tasks. The Committee on Trade and Environment (CTE) was established aiming to identify the relationship between trade and environmental measures in order to promote sustainable development. However, so far the connections between the two fields remain unresolved and controversial. It is clear that the opinions of those who are primarily concerned with the environment are completely different from those prefer free trade, and there are also obvious difference in attitude to the issue between developed and developing countries.[14]

There are different opinions and attitudes towards the relationship between trade and environment. Those prefer free trade regard environment factors as part of the comparative advantages that one country may have to another. If all the countries have the same environmental standards or environmental resources, it will distort the free

[12] *Neumayer, Eric* 2004: The WTO and the Environment: Its Past Record is Better than Critics Believe, but the Future Outlook is Bleak: Global Environmental Politics

[13] Uppal Shaban, *The WTO and Environment, Economic Review* (January 2005, Vol. 36 Issue 1).

[14], Adil Najam et.al, *Trade and Environment a resource book,* International Center for Trade and Sustainable Development (New York, 2007).

trade because it is negative to comparative advantages that are the basis of the belief of free trade. They believe that a country would only raise its environmental standards when the marginal benefits of that protection would be equal to the marginal costs.[15] It is this market-based idea that determines the efficient allocation of resources between environment and other concerns. Another point of those in favour of free trade is that there should be no inherent conflict between trade and environment. The common objective of the two sides is better life, trade is regarded as a means to attain sustainable development, and we should use trade measures to further protect the environment, but not use environmental measures to restrict trade.

Some countries especially developing countries argue that economic growth and trade liberalization have a positive role to play in the achievement of sustainable development. And an open, equitable and non-discriminatory multinational trading system has a key contribution to make to national and international efforts to better protection and conserve environmental resources and promote sustainable development.[16] Further liberalization of international trade has a crucial role to play in order to generate revenue that can be devoted to environmental protection, to allow for a more efficient allocation of environmental resources and for the removal of trade restrictive policies. It is also argued that trade restrictions are neither the only nor necessary policy instruments to use in multilateral environmental agreements. It is also stated in Principle 21 of the Rio Declaration that unilateral measures should be avoided as far as possible.[17]

There is no doubt that the developing countries are the initiators and supporters of above said opinions. The developing countries are also concerned with the attitude of the developed countries. The developing countries argue that developed countries are seem to be more concerned with environment, but actually not, because they consume

[15] Guru, Manjula and Rao, M.B., WTO Dispute Settlement and Developing Countries, Lexis Nexis Butterworth, 2004
[16] Copeland, B. R. and Taylor, M.S. (2003) *Trade and the Environment: Theory and Evidence*. Princeton University Press. Princeton, USA.
[17] World Bank (1999). Trade, Global Policy and Environment, World Bank Discussion Paper No. 402, Washington, D.C.: World Bank.

more energy and thus cause more pollution, but they are unwilling to reduce energy consuming. It seems that they are more concerned with promoting environmental protection, but actually not, because environment standards they use are not always for environmental protection, but for something else. The North American Free Trade Area (NAFTA) is a good example, what the US labour unions wanted to do was that they want to prevent the loss of job to lower-cost Mexico. It seems that they are more concerned with environment of the whole world, but actually not, because they export goods that are domestically prohibited in their own territory to the developing countries, they even export hazardous and other wastes to the developing countries. It seems that they are more concerned with environment of the whole world, but actually not, because they are more powerful, they use the carrot and the stick to raise environmental standards, but they are miserly in finance and technology assistance. The developing countries are left to be lack of information and technology to change their production methods to meet the environmental standards.[18]

However, on the other hand, many environmentalists are critical of trade liberalization. In their view, free trade is responsible for many aspects of environmental degradation and for the failure of policy makers to protect the environment adequately. They argue that free trade shifting the production of pollution-intensive goods toward the low-income, high-polluting South and that will increase global pollution, because the decrease in northern emissions is insufficient at the margin to compensate for the increase in southern emissions. They also think that because pollution is not local but trans-boundary or global in nature so pollution in one country may affect another country's environment. Green house is a good example.[19]

Another important argument that environmentalists hold is that the trade liberalization can make the developing countries and developed countries lower the environment standard together. Why, in practice, every businessman wants to make the great profits in the international business, whereas lowering the cost is the best and

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[18] Charnovitz, S. "Exploring the Environmental Exceptions in GATT Article XX." In *Journal of World Trade* 25(5),1991

[19] Centre for International Environmental Law and Greenpeace International, Safe Trade in the 21st Century – A Greenpeace Briefing Kit, September, 1999

most efficient way. Since WTO agreements require member states to abolish the tariff barrier so as to make trade flow free and thus develop the domestic economy, the importation and exportation became easy. With revoking the tariff barrier, businessman thinks much more about the other aspects of the investment surroundings than the tariff. For some pollution-intensive products, the environment requirements become the most important. The developing countries want to develop the economy as soon as possible. For them, the first important thing is to attract the foreign investment to develop domestic economy.[20]

The environmentalists also criticize the world trade organization plays negative role as to the environmental protection. On very few occasions in the history of the post-war global trading system members have assembled to start negotiations but failed to do so. The WTO has unfortunately, tended to treat the environment as a narrow technical issue, and an opportune one despite the fact that the environment is an important aspect of economic development. Indeed, the environment is simply not an unwelcome add-on to the trade debate. It is central to trade and to the concept of sustainable development which the Marrakesh Agreement recognizes as the main objective of the WTO. As such, environmental issues cannot be put aside out of discussion of the trade issues.[21]

The relationship between international trade and environmental rules has been on the agenda of the World Trade Organization (WTO) for many years, and elsewhere. In a few celebrated decisions, the WTO Appellate Body has interpreted several of the WTO jurisprudence that applies to this interface such as the *US-Gasoline case* (clean air), the *US-Shrimp case* (turtles), the *EC-Asbestos case* (human life and health) and the *Brazil-Retreaded Tyres case* (human, animal and plant life and health).[22] Nonetheless, a number of issues remain unresolved. The current momentum behind

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[20] Stanton, G. *The multilateral trading system and the SPS Agreement*. Paper presented at the forum: Quarantine and market access: Playing by the WTO rules (Canberra, 6-7 September 2000)

[21] Zarrilli, S. *International Trade in GMOs and GM Products: National and Multilateral Legal Frameworks*. United Nations Conference on Trade and Development. Policy Issues in International Trade and Commodities. Study Series No. 29. New York and Geneva (2005)

[22] J. Pauwelyn, *Conflict of Norms in Public International Law: How the WTO Relates to other rules of International Law* (Cambridge University Press, 2003);

climate change policy-making will likely bring into sharper focus the potential clashes and synergies with international trade law, especially since unlike most other environmental problems, climate change is a global phenomenon. The international community has continued to use trade measures in a variety of multilateral environmental agreements (MEAs) in order to contain harm to human, animal and plant life and health.

In some of the more important MEAs, trade measures have proved particularly valuable, for example the 1973 Convention on International Trade in Endangered Species (CITES).[23] Not surprisingly, some recent MEAs, including the Kyoto Protocol to the UN Framework Convention on Climate Change and the Rotterdam Convention on Prior Informed Consent Procedures on Hazardous Chemicals, also contain trade measures. Generally restraint on trade is inconsistent with the rules of the World Trade Organization (WTO) and a clear distinction can be seen between trade measures expressly directed by the MEA and the measures permitted to be taken in compliance with its trade provisions by implementing parties.

Statement of the Study

The linkage between the World Trade Organization and aspects of environmental norms is undoubtedly highly emotive and polarized one. More importantly, the nexus between the two is complex and multifaceted. The plethoras of cases that have been decided under the WTO dispute settlement body have given rise to campaigns by Non-governmental Organizations to the World Trade Organization to take environmental protections seriously. The rationale being that the present generation in its enjoyment of natural resources must undertake measures aimed at preserving both the ecosystem and natural resources from degradation and depletion for the benefit of future generations. One source of inherent conflict is in light of the concept of non discrimination. Free trade practices are based on the idea that countries should not

[23] These include the Convention on International Trade in Endangered Species 1973, the Basel Convention on the Control of Transboundary Movements of Hazardous Waste 1989, the Rotterdam Convention on the Prior Informed Consent (PIC) Procedure for Certain Hazardous Chemicals and Pesticides in International Trade; and the Cartagena Protocol on Biosafety

discriminate against the products of other countries on the basis of where or how they were produced (the Product and Process Measures). This principle of non-discrimination runs counter to the basic premise of international environmental norms. In terms of the policies, countries should discriminate against products that involve processes that harm the environment and favour those that minimize harm. This potential conflict was brought out in World Trade Organization Appellate Body deciding the *Tuna Dolphin* case.[24] And thus the writer takes such concerns as a motive to offer in this study a closer look at whether a synergy and harmonization of the environmental norms under the world trade organization can be devised particularly in balancing potential conflicts that may arise between them.

Purpose of the Study

Multilateral trade rules are meant to be instruments for improving trade growth and liberalization while compatible with multilateral environmental policies and norms. Nevertheless, the two values of trade promotion and environmental protection are always seen to be clashing and, this study therefore intends to explore the best possible means of harmonizing aspects of environmental norms under the world trade organization with the trade rules.

Research Objectives

General: this study will determine the correlation between aspects of environmental norms and the world trade organization rules.

Specific: the study will specifically further attempt to determine objectives as follows:

1. To determine whether environmental interests are affected by multilateral trade rules.
2. To determine whether GATT Article XX provides appropriate protection to environmental policies and norms.

[24] Caldwell, D. (1998) Multilateral Environmental Agreements and the GATT/WTO Regime, US National Wildlife Federation, Washington, D.C., www.wtowatch.org/library/index.cmf .

3. To identify areas of potential conflicts between the environmental norms and the world trade organization rules.
4. To establish whether there is significant conflict between environmental norms and the world trade organization rules.
5. To compare whether there is conformity between environmental norms and the world trade organization.

Research Questions

This study will seek to answer the following research questions:

1. Are environmental interests affected by multilateral trade rules?
2. Does GATT Article XX provide appropriate protection to the environmental policies and norms?
3. What are the areas of potential conflicts between the environmental norms and the world trade organization rules?
4. Is there a significant conflict between the environmental policies and trade rules in term of their relationship?
5. Is there a significant conformity between the environmental policies and trade rules?

Alternative Hypothesis

1. There is a significant conflict between the environmental policies and trade rules in term of their relationship and compatibility.
2. There is no significant conformity between environmental policies and multilateral trade rules.

Scope

Geographical Scope

This study will be conducted in a selected number of government trade-environment related institutions in East Africa region and among some international agencies for promotion of international trade and environmental protection particularly in Uganda, Kenya and in the Republic of South Sudan.

Content Scope

This study intends to determine the levels of compatibility of the environmental norms under the world trade organization, significant difference on their compatibility, and will look into the significant causes and implications of relationship between independent variable (Aspects of environmental norms) and the dependent variable (world trade organization).

Given that the environmental concept and liberalization of trade being very broad concepts; it is important to note that there are four issues involving trade and environment namely:

1. Rules on trade and environmental protection.
1. Reduction of tariffs on green products and technologies.
2. Reduction of logging and fishing.
3. Rights associated with environment such as access to information, participation, healthy environment, clean environment, and healthy life.
4. Finally, Intellectual Property (IP) protection as it is being extended to the animals as well as to indigenous species of plants used in the pharmaceutical products.

The content scope of this study is thus limited to environmental norms under the world trade organization. The study will therefore cover the international trade rules under the World Trade Organization (WTO) that affect environmental norms and policies and to explore the work of the committee on trade and environment (CTE) on balancing potential conflict them.

Theoretical Scope

Perroni and Wigle (1994) theory of international trade and environmental quality will be studied and proven or disapprove in this study. It is a numerical general equilibrium model of the world economy with local and global environmental externalities.[25] The model is then used to investigate the relationship between trade and the environment. The authors' results suggest that international trade has little impact on environmental quality. Furthermore, the magnitude of the welfare effects of environmental policies is not significantly affected by changes in trade policies. At the same time, the size and distribution of the gains from trade liberalization appear to be little affected by changes in environmental policies. In their analysis, a move to free trade only leads to a slight reduction in environmental quality. The result implies that the nexus between commodity trade and environmental quality is not very tight and, as a consequence, that the second-best problem arising from commodity trade is not substantial.

Significance of the study

The following disciplines will benefit from the findings of the study.

The **employees** of the selected institutions are expected to recognize the roles they have to play in managing potential conflict between multilateral trade rules and the environmental protection policies. Government institutions such as **ministries of trade, tourism, wildlife, environment and agriculture** among others are expected to benefit from this study on framing policies regarding trade promotion and environmental protection.

Given the fact that there is an on-going debate around the question whether the multilateral trade rules are conflicting or compatible with the environmental policies, this study is expected to benefit the **multilateral negotiators** on harmonizing the conflict between the WTO rules and the environmental policies.

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[25] Brian R. Copeland and M. Scott Taylor (2004). "Trade, Growth, and the Environment," Journal of Economic Literature, Vol. XLII (March 2004)

Advocacy groups on environmental conservation as well as for international free trade are expected to use the study as tool for promoting their agenda at national and international level. The study is also expected to be beneficial to the **academicians** who to strike and highlight most importantly the need to balance the arguments, as the available literature deals with the issue but without constructively solving the conflict.

Operational Definitions of Key Terms

In the light of this study, the following key terms are defined as they are applied in the study.

World trade organization refers to law and policy of the World Trade Organization as regard to the trade rules that are applicable and able to co-exist with environmental protections and rules. This WTO jurisprudence defines the relationship between the trade and environment in this study in term of GATT 1994 Articles; Principle of non-discrimination (Most Favoured Nation and National Treatment Obligation); Agreements on Technical Barriers to Trade (TBT); and Agreement on Sanitary and Phytosanitary Measures (SPS).

Environmental norms refer to multilateral environmental agreements (MEAs) and domestic environmental rules that provide protection against harmful trade as in the study. These are rules between states that may take the form of soft-law, setting out non-legally binding principles which parties will respect when considering actions which affect a particular environmental issue or hard-law which specify legally-binding actions to be taken to work toward an environmental objective. These environmental trade measures include the 1973 Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES); The 1989 Basel Convention; The Montreal Protocol on Substances that Deplete the Ozone Layer 1987; and The Bio-safety Protocol of the Convention on Biological Diversity (CBD) among others.

Strengths and weaknesses mean indicators of the highest or lowest means in term of the levels of potential conflict of the aspects of environmental norms under the World Trade Organization in the study.

CHAPTER TWO
REVIEW OF RELATED LITERATURE

Introduction

Trade and environment intersect in many ways. Besides the broad debate as to whether economic growth and trade adversely affect the environment, linkages are recognized between existing rules of the World Trade Organization (WTO) and rules established in various Multilateral Environmental Agreements (MEAs).[26]This chapter therefore covers the legal framework and literature under the trade and environment according to the objectives of this study and they include aspects of environmental norms that are relating to the trade and the WTO provisions relevant to the protection of the environment.

Concepts, Opinions, Ideas from Authors/Experts

Aspects of Environmental Norms

Neither environmental resources such as wildlife species and forests nor environmental problems such as air or water pollution respect the political and administrative boundaries imposed by humans on the Earth that we all inhabit. As a result, many aspects of environmental norms are regional or global in nature that needs to give environmental protections accordingly.

Multilateral environmental agreements (MEAs) or environmental conventions or treaties, are the main vehicles used by governments across the globe in order to achieve this. A multilateral environmental agreement is a legally binding agreement between two or more countries containing commitments to meet specific environment-related objectives.[27] MEAs are legal instruments and they bind the countries that have agreed to become a Party through ratification or accession. Countries that have signed

[26] Esty, Daniel C. 1994. Greening the GATT: Trade, Environment, and the Future. Washington DC: Institute for International Economics.

[27] Heinrich Boll Foundation. (2001). *Trade and environment, the WTO and MEAs: Facets of a complex relationship*. Papers presented at a March 29, 201 conference cosponsored by the Heinrich Böll Foundation, the Woodrow Wilson International Center for Scholars, and the National Wildlife Federation. Washington, DC: Heinrich Böll Foundati

but have not yet ratified an MEA are nonetheless expected not to do anything that could affect the aims and purposes of the agreement. MEAs are not declarations of intention but are rules of international law. As such, an MEA is a powerful tool for the implementation of policies with environmental protection and sustainable development goals. The better known environmental agreements are multilateral in the sense that they involve many nations and generally deal with broad aspects of environment for instance climate, and biodiversity among others.[28]

However, the term MEA can refer to any treaty between two or more nations if, and when, it deals with direct environmental objectives. MEAs, in some form, have been in place for about a hundred years. However, most have developed in the last three decades, especially since the 1972 International Stockholm Conference on Human Environment. Some studies conservatively estimate that approximately 700 MEAs are currently in place. Their proliferation is mainly due to an appreciation of the gravity of environmental problems facing our planet today largely as a result of human activity, plus a growing understanding that environmental issues are often not only local in nature, but also regional and global.[29]

The later MEAs were born out of the United Nations Conference on Environment and Development(UNCED) in 1992 (otherwise known as the 'Earth Summit' or 'Rio Conference') where governments across the globe acknowledged the interaction between society and biophysical problems, and began to recognize intimate links between development and the environment. Recent MEAs fully concede these aspects as crucial. The Earth Summit was held in Rio de Janeiro, Brazil in 1992 and was attended by government representatives from approximately 180 States, including Afghanistan. Two new conventions were opened for signature here The UN Framework Convention on Climate Change (UNFCCC), which is sectoral in that it deals with climate

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[28] Choo, Myung Hoon 1997: "An Institutionalist Perspective on Resolving Trade-Environmental Conflicts." *Journal of Environmental Law and Litigation*, Vol. 12,

[29] McCallion, Kenneth F. and H. Rajan Sharma 2000: "Conference on International Environmental Dispute Resolutions: Environmental Justice without Borders: The Need of an International Court of the Environment to Protect Fundamental Environmental Rights." *George Washington Journal of International Law & Economics*, Vol. 32,

and the atmosphere but also recognizes the broader impacts of climate change on ecosystems, food production and sustainable development; and The Convention on Biological Diversity (CBD), which seeks to bring together agriculture, forestry, fishery, land use and nature conservation in new trade measures taken pursuant to MEAs come in many forms.[30]

They include bans, quotas, labeiling requirements or requests for information prior to export. It is estimated that around 10% of some 200 multilateral environmental agreements require or permit the employment of trade measures either to limit environmental harm or to encourage universal participation by denying benefits to non-parties Examples of MEAs that require or permit trade measures include the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which provides for trade restrictions on identified endangered species; the Montreal Protocol on Substances that Deplete the Ozone Layer (Montreal Protocol), regulating trade in ozone depleting substances; and the Basel Convention on the Transboundary Movement of Hazardous Wastes and their Disposal (Basel Convention), controlling trade in hazardous waste.[31]

More recent MEAs containing trade measures include the Cartagena Protocol on Biosafety (Biosafety Protocol) concerning trade in certain genetically modified organisms (GMOs); the Rotterdam (PIC) and Stockholm (POPs) Conventions regulating the trade in certain chemicals. In addition, the UN Framework Convention on Climate Change and its Kyoto Protocol controlling greenhouse gas emissions may be further developed so as to include trade-related measures. some WTO Members distinguish between trade-related measures specifically mandated in an MEA (which they say are the only types of measures contemplated by the DMD term specific trade obligations or 'STOs') and trade-related measures that purportedly serve the objectives of an MEA but are not expressly mandated by the MEA Accordingly, trade-related measures pursuant to MEAs not only have direct environmental consequences (e.g. preventing

[30] Cartagena Protocol on Biosafety to the Convention on Biological Diversity. (2001). Available: http://www.biodiv.org/biosafe/BIOSAFETY-PROTOCOL.htm

[31]Claussen, Eileen. (2001, January/February). "Global environmental governance: Issues for the new U.S. administration." *Environment 43*(1),

environmentally harmful emissions), but also often act to enhance the integrity of multilateral environmental agreements by providing incentives for universal participation and compliance.[32]

The Montreal Protocol, for example, imposes import restrictions on ozone-depleting substances (ODS) from countries that are not a party to the Protocol. Indeed, a positive connection with the international trade regime is expected to be among the principal factors that will influence the further development of key MEAs, such as the climate change regime MEA trade measures do not sit comfortably with several rules contained in the WTO Agreements. For example, rules in the General Agreement on Tariffs and Trade (GATT) and other WTO Agreements do not allow bans or quotas (for example GATT Article XI).

Environmental Norms Relevant to the Trade

There are many Multilateral Environmental Agreements (MEAs) that were adopted and entered into force on regulating variety of issues ranging from sustainable development to trade liberalization.[33] These MEAs are defined as those agreements with more than two parties, that is, multilateral is anything bigger than bilateral however the word has taken on a slightly different meaning in term of trade regimes, where multilateral is referred to mean global. Some of the MEAs which are particularly relevant to the trade regimes include among others, The Convention on International Trade in Endangered Species (CITES); The Vienna Convention on Substances that Deplete the Stratospheric Ozone Layer, with the Montreal Protocol; The Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal; Rotterdam Convention on the Prior Informed Consent (PIC) Procedure for Certain Hazardous Chemicals and Pesticides in International Trade; Cartagena Protocol

[32] Dunoff, Jeffrey L. (2001). "International dispute resolution: Can the WTO learn from MEAs?" In Heinrich Böll Foundation, *Trade and environment, the WTO and MEAs: Facets of a complex relationship* (pages 63-70). Washington, DC: Heinrich Böll Foundation.

[33] French, Hillary F. 1994. "Strengthening International Environmental Governance," Journal of Environment and Development, Vol. 3

on Biosafety; Stockholm Convention and UN Framework Convention on Climate Change (UNFCCC).

Convention on International Trade in Endangered Species (CITES)[34]

Among the earliest key MEAs is The Convention on International Trade in Endangered Species of Fauna and Flora which was drawn up in 1973 and then entered into force two years later. CITES seeks to control trade in endangered species and their parts, as well as products made from such species. Three annexes list species identified by the Conference of Parties on scientific advice as being endangered to various extents. It establishes trade controls, ranging from a complete ban to a partial licensing system.[35] CITES has long been known for the unusually active participation of non-governmental organizations such as scientific and advocacy organizations in particular in its deliberations. CITES bans commercial international trade in an agreed list of endangered species. It also regulates and monitors by use of permits, quotas and other restrictive measures trade in other species that might become endangered.

The principle objective of CITES, which entered into force in July 1975, is to ensure that international trade in specimens of certain wild animals and plants does not threaten the survival of these species. Annual international wildlife trade is estimated to be worth billions of dollars and to include hundreds of millions of plant and animal specimens. Levels of exploitation of some animal and plant species are so high that unregulated trade in them, together with other factors such as habitat loss, is capable of heavily depleting or destroying their populations.[36] CITES was thus conceived as an international effort to safeguard certain species from over-exploitation. The CITES Preamble recognizes that wild fauna and flora are an irreplaceable part of the natural

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[34] CITES website, "What is CITES?" (http://www.cites.org/eng/disc/what.shtml).

[35] Assuncao, L. (1998a), The Buenos Aires Tango: What Trade-Related Consequences?", *Bridges Between Trade and Sustainable Development,* Vol. 2,

[36] Runge, C. Ford, with François Ortalo-Magne and Philip Vande Kamp. 1994. Freer Trade, Protected Environment: Balancing Trade Liberalization and Environmental Interests. New York: Council on Foreign Relations Press.

systems of the Earth that must be protected for future generations. Contracting States were also conscious, however, of the ever-growing value of wild fauna and flora from aesthetic, scientific, cultural and economic points of view.[37] CITES therefore does not serve as an embargo on wildlife trade but subjects international trade in selected species to certain controls. It requires that the import, export, re-export and introduction from the sea of these species be authorized through a permitting system.

The species covered by CITES are listed in three Appendices, depending on the level of the threat of extinction they face as a result of international trade. Appendix I includes species threatened with extinction, in which trade is only exceptionally permitted. Appendix II includes species not necessarily currently in danger of extinction but in which trade must be controlled in order to avoid utilization incompatible with their survival. Finally, Appendix III contains species that are protected in at least one country, which has asked other CITES Parties for assistance in controlling the trade. CITES is among the largest conservation agreements in existence, with over 170 Parties, and has had significant success in curbing, and arguably halting, species extinction resulting from international trade.

Trade-related measures represent an integral part of CITES given that the treaty itself focuses on ensuring that international trade in wild fauna and flora does not threaten their survival.[38] Nevertheless, in CITES, as in other MEAs, these trade-related measures are supported by a broad range of other measures established to further the agreement's objectives, including technical assistance, capacity building and a number of flexibility provisions. Trade-related measures in CITES include provisions for a permitting system for international trade in listed species, requirements for trade with non-Parties, and measures for cases of noncompliance. CITES provides a regulatory framework for the international trade in specimens of certain wild animals and plants through a system of permits and certificates based on the listing of the species. Thus,

[37] Charnovitz, Steve. 1993. "A Taxonomy of Environmental Trade Measures," Georgetown International Environmental Law Review, Vol. 6

[38] Convention on International Trade in Endangered Species of Wild Fauna and Flora. 1973.

controls for Appendix I species those threatened with extinction are strict, limiting their trade to exceptional circumstances that do not further endanger their survival. The import of specimens of Appendix I species for primarily commercial purposes is prohibited. For Appendix I species, an export permit is required and shall only be granted when the following conditions are met, the exporting Party has advised that the export will not be detrimental to the survival of the species; the exporting Party is satisfied that the species has been legally acquired; the exporting Party is satisfied that the method of shipment for the specimens will minimize risks of injury, damage to health, and cruel treatment; and that the exporting Party is satisfied that an import permit has been granted for the specimen.[39]

In turn, an import permit may only be granted when the following conditions have been met, the importing Party has advised that the import will be for purposes that are not detrimental to the survival of the species; the importing Party is satisfied that the recipient is suitably equipped to care for any live specimen; and the importing Party is satisfied that the species will not be used for primarily commercial purposes. Trade in Appendix II and III species which are not currently threatened with extinction only requires an export permit with some of the described characteristics or a certificate of origin in the case of certain Appendix III species.[40] CITES also requires that permits and certificates granted under a Party's permitting system be in accordance with the Convention.

Each permit or certificate, for instance, must contain the title of the Convention, the name and any identifying stamp of the national Management Authority granting it, and a control number assigned by the national Management Authority. All permits and certificates should follow the standard format provided. These measures encourage a harmonized system that will avoid the proliferation of different standards and contribute to effective compliance monitoring. The problems of insufficient information and lack of

[39] Whalley, John and Ben Zissimos. 2002. "An Internalisation-based World Environmental Organisation," *The World Economy*,
[40] CITES, Articles III, IV and V.

effective monitoring are also addressed by the CITES requirement that Parties maintain records of trade in covered species and submit periodic reports to the Secretariat.

CITES also includes certain exceptions. For instance, CITES facilitates certain kinds of trade that are less likely to cause detrimental impact on wild populations through the provision of exemptions and special procedures. CITES also allows trade with non-Parties to the Convention under special circumstances. Trade in listed species with non-Parties is possible when comparable documentation, which substantially conforms with the CITES requirements for permits and certificates, is issued by the competent authorities in those countries.[41] Limiting trade with non-Parties to situations where CITES requirements are met aims to further enhance the conservation objectives of CITES while simultaneously encouraging membership to the Convention. It also aims to avoid trade in listed species by non-Parties from undermining the conservation achievements of CITES Parties.

It should be noted, however, that it does not prevent trade among two or more non-Parties to the Convention. Article XIII of CITES on International Measures (i.e. the key compliance-related article), while not referring expressly to trade-related measures, does authorize the COP to recommend appropriate measures in certain cases. The COP has delegated such authority to the Standing Committee on a number of occasions.[42] One of the measures available to the COP or Standing Committee is the recommendation that Parties temporarily suspend trade with a Party or non-Party in question. The focus of Article XIII, however, which addresses cases where species included in Appendix I or II are adversely affected by trade in specimens of that species or where CITES provisions are not being effectively implemented, is on working with the Party in question to achieve remedial action. Of the various measures to address a Party's non-compliance, and bring about full compliance with the Convention, a recommendation of a temporary suspension of commercial or all trade in specimens of one or more CITES-listed species is generally used as a last resort. The use of trade related measures in this context would normally only occur where a Party's non-

[41] CITES, Articles IV and V.
[42] CITES, Article III, para. 3(c).

compliance is unresolved and persistent, including cases in which a Party does not follow recommendations, take advantage of offers of assistance, agree to a compliance action plan, or comply with an agreed plan. As mentioned, CITES' trade-related measures function in the context of an integrated package of measures, which is intended to achieve effectiveness, efficiency and equity.

In terms of equity, CITES contains a number of exceptions and flexibilities.[43] CITES general trade provisions do not apply to pre-Convention specimens, personal or household effects and species bred in captivity or artificially propagated. In addition, Parties have the right to opt out of specific listings by entering a reservation at the time of adherence to the Convention or, thereafter, at the time of listing. This means that, for a particular species, the State is treated as a non-Party with respect to trade if a reservation has been entered. Moreover, the CITES permitting system is dynamic and can adapt to changing needs and circumstances. Appendices I and II may be amended by two-thirds of the Parties present and voting at a meeting of the COP, while Appendix III species may be submitted and withdrawn by Parties unilaterally at any time.[44] Though not provided for in the Convention itself, another critical part of CITES is the broad range of training and technical assistance activities conducted by the Secretariat under its capacity building programme and by the Parties themselves. The main capacity building objectives are to ensure that Parties have and are able to use all of the technical information, knowledge and skills necessary for them to fulfill their responsibilities under the Convention and thus ensure the achievement of the CITES objectives.

The Vienna Convention on Substances that Deplete the Stratospheric Ozone Layer (Montreal Protocol)

The Montreal Protocol[45] establishes a regime of control for several classes of industrial chemicals now known to harm the stratospheric ozone layer. The result has

[43] CITES, Article VII
[44] CITES, Article X.
[45] Montreal Protocol, Preamble.

been a ban on the production and use of several of them, together with severe limitations on others. It has successfully implemented the principle of precaution, by acting before the availability of clear scientific evidence, and that of common and differentiated responsibility, by establishing a fund to assist developing countries in their transition away from dependency on controlled substances.[46] Its principal enforcement tool apart from continuing public pressure is the control of trade in ozone-depleting substances and trade in products containing controlled substances. It included the possibility of imposing controls on trade in products produced with (but no longer containing) controlled substances, but the parties have not considered it necessary to implement such controls. Parties may only export a hazardous waste to another party that has not banned its import and that consents to the import in writing. Parties may not import from or export to a non-party. They are also obliged to prevent the import or export of hazardous wastes if they have reason to believe that the wastes will not be treated in an environmentally sound manner at their destination.

The Montreal Protocol aims to protect the stratospheric ozone layer, and thus human health and the environment, by equitably controlling the production and consumption of substances that deplete it, with the ultimate objective of their elimination.[47] Following the discovery of the Antarctic ozone hole in 1985, governments recognized the need for measures to reduce the production and consumption of a number of gases harmful to stratospheric ozone the protective layer shielding the Earth from harmful ultra-violet radiation. Certain industrial processes and consumer products result in the atmospheric emission of halogen source gases that are known to be harmful to the ozone layer. For example, chlorofluorocarbons (CFCs), once used in almost all refrigeration and air conditioning systems, eventually reach the stratosphere and release ozone-depleting chlorine atoms. The increased UV-B radiation resulting from stratospheric ozone depletion can be extremely harmful, causing, for example,

[46] UNEP website, "2002 Environmental Effects Assessment - Questions and Answers About the Effects of the Depletion of the Ozone Layer on Humans and the Environment," (http://www.unep.org/ozone/Public_)
[47] UNEP website, "Evolution of the Montreal Protocol," (http://www.unep.ch/ozone/Ratification_status/)

skin cancer and cataracts in humans and some animals, and inhibiting growth and photosynthesis in certain plants.

The Montreal Protocol, adopted in 1987, thus addresses the need to take appropriate measures to protect human health and the environment against adverse effects resulting from human activities that modify the ozone layer. To achieve these objectives, the Montreal Protocol requires Parties to establish controls on the national production and consumption of ozone-depleting substances (ODS).[48] The core of the Montreal Protocol is thus the control measures it requires Parties to impose on the production and consumption of ODS. Article 2 of the Protocol defines phase-out schedules for the various categories of ODS. In addition, the Protocol was designed so that the phase-out schedules could be revised on the basis of periodic scientific and technological assessments. Following such assessments, the Protocol has been adjusted five times between 1990 and 1999 to accelerate the phase-out schedules of ozone-depleting substances. It has also been amended to introduce other kinds of control measures and to add new controlled substances to the list.

It should be noted, however, that not all Parties have ratified all of these amendments. As a result of the Protocol, now ratified by over 190 states and the European Community, the total abundance of ozone-depleting gases in the atmosphere has begun to decrease in recent years and, if States continue to follow its provisions, effective levels of ozone depleting gases should fall to early 1980s levels by the middle of this century. Although regulating trade in ODS is not the primary concern of the Montreal Protocol, it does contain trade-related measures to supplement and strengthen the controls on production and consumption.[49]

Similarly, a broad range of other measures ensure the effectiveness of the control system, including those regarding financial assistance and those promoting research, development, and exchange of information on best management technologies and possible alternatives for controlled substances. Article 4 contains some of the Montreal

[48] Report of the Fifteenth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer, UNEP/OzL.Pro.15/9, Decision XV/20 (http://www.unep.org/ozone/Meeting_Documents/mop/15mop/15mop- 9.e.pdf).
[49] Montreal Protocol, Article 3 and Annexes A, B and C.

Protocol's main trade-related provisions. With respect to controlled substances, Article 4 prohibits the import and export to non-Parties, and establishes a process for Parties to limit the international movement of products containing controlled substances or produced with controlled substances.[50]

Nevertheless, the imports and exports of controlled substances may be permitted from, or to, any non-Party, if a meeting of the Parties determines that country to be in full compliance with the Protocol's control measures. These trade restrictions thus aim to promote broad participation in the agreement, and they seek to ensure that the environmental gains made by Parties are not undermined by activities in other countries that may not be party to the Protocol. Article 4A concerns trade between Parties to the Montreal Protocol. In particular, it addresses the situation in which a Party is unable, despite having taken all practicable steps to comply with its obligations under the Protocol, to cease production of a controlled ozone-depleting substance for domestic consumption. In those circumstances, Article 4A ensures there is no perverse incentive to maintain that production by requiring Parties to ban the export of used, recycled and reclaimed quantities of the substance produced, other than for the purpose of destruction.[51] Trade-related measures thus support the phase-out of controlled substances. Article 4B requires Parties to establish and implement a system for licensing the import and export of controlled substances, in order to monitor the imports and exports of ODS, prevent illegal trade, and enable data collection.

These information requirements, along with reporting and other measures of the Montreal Protocol, have been significant in effectively reducing global emissions of ODS. In rare circumstances, implementation of Article 8 could result in application of trade-measures. Article 8 instructs the COP to establish the procedures and institutional mechanisms for determining non-compliance, as well as the treatment of Parties found to be in non-compliance. The non-compliance procedure adopted in 1992 focuses primarily on providing parties with the incentives and assistance they require to meet their obligations under the Protocol. Nevertheless, in certain cases of non-compliance

[50] Montreal Protocol, Article 5.1.
[51] UNEP website, "Action on Ozone," 2000 (http://www.unep.org/ozone/pdfs/ozone-action- en.pdf

Parties may suspend the rights of the non-complying Party to trade controlled substances and technologies with other Parties. Not only trade-related provisions but also other types of measures support the Protocol's control system. For instance, the control measures themselves provide flexibilities that seek to facilitate compliance. The formula used to determine consumption, the granting of an ozone depleting value to each covered substance, among other measures, affords countries the possibility of choosing how to best satisfy their obligations.[52]

In addition, the Protocol recognizes that the burdens of the control system are sometimes disproportionate for developing countries and seeks to offset some of the economic and social costs associated with ratification and compliance. For instance, the Protocol allows developing country Parties with a limited annual per capita consumption of controlled substances to defer their phase-out obligations for up to ten years. Further, the Protocol establishes mechanisms for providing technological and financial assistance to these Parties as they make the transition to more ozone-friendly technologies. The London Amendments, adopted at the Second COP, require Parties to establish a mechanism of financial and technical cooperation to enable developing country Parties to comply with the Protocol. In particular, the establishment of the Multilateral Fund has ensured that adequate and consistent financing is available for developing country Parties.[53] Moreover, developing countries' compliance was made contingent upon the effective implementation of these financial and transfer of technology provisions. As a result, these positive measures not only make trade-related measures more efficient, but also, in some cases, decrease the need for their actual use.

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[52] Fahey, D.W. "Twenty Questions and Answers About the Ozone Layer," *2002 Scientific Assessment Report*, (http://www.unep.org/ozone/pdfs/Scientific_assess_depletion/11

[53] Agriculture, trade, and the environment : discovering and measuring the critical linkages / edited by Maury E. Bredahl, et al. Boulder, Colo.: Westview Press, 1996.

The Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal (Basel Convention)

The Basel Convention[54] resulted from the concern of developing countries, particularly in Africa, that they could become the dumping ground for hazardous wastes that could no longer be disposed of in the developed world. Developing countries and non-governmental organizations have continued to play a significant role in developing the regime. The Basel Convention has been marked by disputes over the most appropriate strategy for controlling the movement of hazardous waste regional bans versus prior informed consent and the technical difficulty in establishing unambiguous distinctions between wastes and materials for recycling. Parties have adopted amendments banning the export of hazardous waste from mainly OECD to non-OECD countries.

The Basel Convention addresses the challenges posed by the generation, transboundary movement and management of hazardous wastes and other wastes. In the late 1980s, stricter environmental standards and higher disposal costs in developed countries increased the shipment of hazardous waste to countries that were not always able to adequately manage the waste.[55] Improper management, indiscriminate dumping, and the accidental spill of wastes can result in, *inter alia*, air, water, and soil pollution that endangers entire communities, burdens countries with colossal clean up costs, and undermines prospects for development. A public outcry over the mounting evidence of uncontrolled movement and dumping of hazardous wastes, including incidents of illegal dumping in developing nations by companies from developed countries, led to the adoption of the Basel Convention in 1989. The Basel Convention came into force in 1992. Its fundamental aims are the control and reduction of transboundary movements of hazardous wastes and other wastes subject to the provisions of the Convention, the disposal and treatment of such wastes as close as possible to their source of generation, the reduction and minimization of their

[54] Basel website, "Origins of the Basel Convention" (http://www.basel.int/convention/basics.html)
[55] Basel Convention, Article 6.3.

generation, the environmentally sound management of such wastes and the active promotion of the transfer and use of cleaner technologies.[56]

One of the key elements in the Basel Convention is thus a control system for the transboundary movement, management and disposal of such wastes that requires that transboundary movements of hazardous wastes and other wastes for disposal can only take place upon prior written notification by the State of export to the competent authority of the State of import, and upon the prior informed consent by the importing State to the import.[57] The State of export must ensure that the waste does not leave its territory until prior informed consent is received. Another central element of the Basel Convention system is the requirement for the environmentally sound management of waste, which aims to protect human health and the environment against the adverse effects which may result from such wastes by, *inter alia*, minimizing the generation of hazardous waste whenever possible.

Environmentally sound management requires addressing the issue through an integrated life-cycle approach, and integrated waste management, which involve strong controls from the generation of a waste to its collection, storage, transport, and final disposal. During its first decade, the Basel Convention was primarily devoted to setting up the legal framework for controlling the transboundary movements of hazardous wastes. At its sixth COP meeting in 2002, Parties to the Basel Convention decided to build on this framework by emphasizing the full implementation and enforcement of treaty commitments at the national level, the minimization of hazardous waste generation, as well as the importance of capacity building. It was at this COP that a mechanism for promoting implementation and compliance was established to assist Parties to comply with their obligations under the Convention and to facilitate, promote, monitor and aim to secure the implementation of and compliance with the obligations under the Convention. Due to the fact that the Basel Convention regulates transboundary movements of hazardous wastes and other wastes by establishing a

[56] Report of the Conference of the Parties to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal," 10 February 2003, UNEP/CHW.6/40 (http://www.basel.int/meetings/cop/cop6/ english/Report40e.pdf).
[57] Basel Convention, Annex V.A.

regulatory framework for the import and export of these wastes, its implementation may have implications for the multilateral trade regime.

Article 6 of the Convention, which establishes the procedures for prior informed consent requires Parties to notify in writing the intended country of import and countries of transit of any proposed Transboundary movement of hazardous wastes and other wastes.[58] The notification must include information such as, *inter alia*, the reason for the waste export; the generator, exporter, intended carrier if known, and disposer of the waste; the countries of export, transit and import of the waste, and the competent authorities; information relating to insurance; designation and physical description of the waste and information on any special handling requirements, including emergency provisions in case of accidents; and method of disposal. The Party of import is obliged to respond to the notifier in writing, either by consenting to the movement with or without conditions, denying permission for the movement, or requesting additional information.[59] Until written consent has been received, along with a confirmation of the existence of a contract between the exporter and the disposer specifying environmentally sound management of the wastes in question, the State of export must not allow the generator or exporter to commence the transboundary movement. Other elements of the regulatory framework of the Basel Convention, such as those regarding the import, export, packaging, and labeling of hazardous and other wastes, may also have implications for the multilateral trade regime.

Other Parties to the Convention are obliged to recognize the exercise of that right by not allowing the export of hazardous wastes and other wastes to the Parties which have established such prohibitions, if these have been notified to the other Parties through the Secretariat. Parties are also required to not allow the import and export of wastes if there is reason to believe the wastes will not be managed in an environmentally sound manner. In addition, Article 4 prohibits Parties from permitting

[58] Basel Convention, Article 6.2.

[59] Basel Convention, Article 6.3. Information requirements are also addressed elsewhere in the Basel Convention. For example, Article 13 of the Basel Convention requires Parties to inform those states that might be at risk in the case of an accident occurring during the transboundary movement or disposal of hazardous wastes or other wastes, which are likely to present risks to human health and the environment.

the export of hazardous wastes or other wastes to a non-Party or to import such waste from a non-Party. Nevertheless, transboundary movements to or from non-Parties are allowed as long as it is subject to a bilateral, multilateral or regional agreement or arrangement, the provisions of which are no less stringent than those of the Basel Convention and thus do not derogate from the environmentally sound management of hazardous wastes.[60] Finally, Article 4 requires that hazardous wastes and other wastes that are the subject of a Transboundary movement be packaged, labeled, and transported in conformity with generally accepted and recognized international rules and standards, as well as be accompanied by a movement document from the point at which a transboundary movement commences to the point of disposal. These measures ensure environmentally sound management of wastes, while addressing information requirements and promoting harmonized identification systems.

In 1995, the Basel COP adopted at its third meeting, an amendment to the Convention that is known as the Ban Amendment, which has not yet entered into force. This amendment requires Parties listed in Annex VII of the Convention (OECD, EC and Liechtenstein) to prohibit all transboundary movements of hazardous wastes that are destined for final disposal in States not listed in Annex VII.[61] The Ban Amendment also requires Parties listed in Annex VII to phase out by 31 December 1997 and, prohibit, as of that date, all transboundary movements of hazardous wastes which are destined for operations which may lead to resource recovery, recycling reclamation, direct re-use or alternative uses to States not listed in Annex VII. The Ban Amendment is intended to respond to lingering problems relating to illegal traffic in waste, and the concerns expressed by some developing countries about their inability to effectively monitor and enforce their own import restriction policies. Similar measures were also adopted, for instance, by African nations in the Bamako Convention in 1991. Nevertheless, the Ban Amendment has been criticized by some countries that claim it will prevent the growth

[60] Basel Convention, Article 4.1 (a), (b), and (e).

[61] interventions by developing country representatives during the third COP meeting stressing the need for technical assistance to prevent illegal traffic into their territories, "Report of the Third Meeting of the Conference of the Parties to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal," paragraph 21 (http://www.basel.int/meetings/cop /cop1-4/cop3repe.pdf)

of legitimate and potentially profitable recycling industries in developing countries. These Parties have also questioned why the ban should be applied to an arbitrary list of countries rather than countries that lack capacity to handle the hazardous wastes, and question the presumption that developing countries as a group lack the capacity to manage waste in an environmentally sound manner.[62]

In addition to trade-related provisions, a number of non-trade related measures are also incorporated in the Basel Convention to achieve its objectives. The Convention contains provisions, for instance, on the collection of information and on the supply of legal and technical assistance. In addition, the COP meetings have developed a number of important mechanisms. For instance, the Basel Protocol on Liability, although not yet in force, was adopted at the fifth meeting of the COP to establish a comprehensive regime for liability, including both strict and fault-based liability that aims at providing for adequate and prompt compensation for damage occurring during a transboundary movement of hazardous wastes and other wastes.[63] Another example is Article 14, which contains a commitment to establish regional or sub-regional centers for training and technology transfer that has also been built upon by the COP meetings, leading to the designation of centers all over the world.

The core functions of the centers include, inter alia, developing and conducting training programmes in the field of environmentally sound management of hazardous wastes, identifying, developing and strengthening mechanisms for the transfer of environmentally sound technologies, and providing assistance and advice to the Parties and non-Parties of the region at their request on any relevant matters and on the implementation of the Convention. Moreover, the compliance mechanism, adopted at the sixth meeting of the COP, consists of a non-confrontational, facilitative procedure that aims to assist Parties facing compliance difficulties through advice and non-binding recommendations. The Basel Strategic Plan sets out the guidelines for the Convention's activities up to 2010, focusing on the minimization of hazardous waste generation. Particularly, the Strategic Plan focuses on developing countries establishing a vision that

[62] Basel Convention, Article 4.7 (b) and (c).
[63] Basel Convention, Articles 4, 13, 10 and 16.

environmentally sound management should be accessible to all Parties and a commitment to improve their institutional and technical capabilities and further develop regional and sub-regional centers to achieve that vision.[64] Finally, the last meeting of the COP held in December 2006, recognized that new waste streams pose new challenges which may also have trade-related implications, e.g. e-waste and computers.

The Rotterdam Convention on the Prior Informed Consent (PIC) Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (Rotterdam Convention)[65]

Many domestically banned or severely limited goods are traded internationally. For years there was controversy over the procedures to ensure that the appropriate authorities in the importing country were informed promptly. Indeed, a GATT working group devoted several years of negotiation to this topic, without achieving a generally acceptable result. UNEP responsible for arrangements for managing potentially toxic substances and the Food and Agriculture Organization concerned with pesticide use had a strong interest in developing a uniform system of notification.[66] This needed to offer adequate assurance that information would be provided quickly, but also that it would reach the necessary authorities when needed. And it needed to create a system that permitted developing countries to stop the import of certain substances if they felt a need to do so. This goal has been served by the Rotterdam Convention.

The Rotterdam Convention provides countries considering the importation of certain hazardous pesticides and chemicals the tools and information they need to identify potential risks and exclude chemicals they cannot manage safely. In addition, if a country agrees to import chemicals, the Rotterdam Convention promotes their safe

[64] Earth Negotiations Bulletin, "Basel Convention COP 7 - Summary and analysis," Vol. 20 No. 18, November 2004 (http://www.iisd.ca/download/pdf/enb2018e.pdf)
[65] Rotterdam Convention website, "What is the Rotterdam Convention" (http://www.pic.int/home.)
[66] The Rotterdam Convention covers pesticides and industrial chemicals that have been banned or severely restricted for health or environmental reasons and that Parties have notified for inclusion in the PIC procedure. One notification from each of two specified regions triggers consideration of the addition of a chemical to the PIC procedure, while severely hazardous pesticide formulations that present risks under conditions of use in developing countries may also be nominated for inclusion in the procedure.

use through labelling standards, technical assistance, and other forms of support. Hazardous pesticides and other chemicals create significant risks to human health and the environment, killing or seriously affecting the health of thousands of people every year and also damaging the natural environment and many wild animal species. Governments began to address the problem in the 1980s by establishing a voluntary Prior Informed Consent (PIC) procedure and in 1998 strengthened the procedure by adopting the Rotterdam Convention, which makes PIC legally binding.[67]

The Rotterdam Convention has two primary objectives. First, it aims to promote shared responsibility and cooperative efforts among Parties in the international trade of certain hazardous chemicals in order to protect human health and the environment from potential harm. Second, it seeks to contribute to the environmentally sound use of those chemicals by facilitating information exchange about their characteristics. The Rotterdam Convention initially covered 22 pesticides and 5 industrial chemicals, with the possibility of more being added by the COP.[68] Since the Rotterdam Convention entered into force in February 2004, the first COP has already added fourteen chemicals, including several forms of asbestos, two lead additives for gasoline, and a range of hazardous pesticides. The Rotterdam Convention focuses on the regulation of international trade of certain hazardous chemicals as a way to protect human health and the environment from potential harm and to contribute to their environmentally sound use. Whereas the use of both industrial and agricultural chemicals has traditionally been greatest in industrialized counties, their fastest growing market is now in developing countries.[69] Of the challenges raised by the use and management of hazardous pesticides and other chemicals, international attention has centered on the fact that many countries lack the institutional capacity to make informed decisions on chemical imports and their subsequent management, which raises concern for human health and the environment. The regulatory framework for international trade in certain

[67] The First Ministerial Conference of Rotterdam Convention was held in Geneva in September 2004.
[68] Rotterdam Convention, Articles 7.3 and 10.2.
[69] Rotterdam Convention website, "95 Countries Agree On New International Convention On Dangerous Chemicals And Pesticides," *News and Highlights*, 16 March 1998 (http://www.fao.org/ WAICENT/FaoInfo/Agricult/AGP/AGPP/ Pesticid/PIC/picnews6.htm).

hazardous chemicals established by the Rotterdam Convention thus emphasizes information exchange and adequate national decision-making processes. The PIC procedure, the core of the Convention and main trade-related measure, is designed to overcome the problem of lack of adequate and precise information. It ensures that countries have accurate data on which to base their policy decisions concerning harmful effects of certain banned or severely restricted chemicals and severely hazardous pesticides.[70] Informed choices are also fundamental for acceptable national regulations concerning the manufacture, use, and disposal of the chemicals. As a result, other measures within the Rotterdam Convention also aim to address information gaps or deficiencies. In that context, both trade-related and other measures are an integral part of the regulatory package of the Convention.

Article 10 establishes the obligations in relation to imports of substances subject to the PIC procedure. It sets forth means for formally obtaining and disseminating the decisions of Parties on future shipments of specified chemicals. Once a chemical is included in the PIC procedure, a "decision guidance document" (DGD) containing information concerning the chemical and the regulatory decisions to ban or severely restrict the chemical for health or environmental reasons is circulated to importing countries. These countries are given nine months to prepare a response concerning the future import of the chemical. The response can consist of either a final decision to allow import of the chemical, not to allow import, or to allow import subject to specified conditions or an interim response, which may entail a request for additional information or assistance by the Secretariat. To ensure decisions are not made in a protectionist manner, any prohibitions or specific conditions must apply equally to domestic production. Exporting Parties must also comply with PIC procedure requirements.

Article 11 establishes the obligations in relation to exports of covered substances in the PIC procedures. It provides that exporting Parties are obliged to take appropriate measures to ensure that exporters within their jurisdiction comply with decisions in each

[70] Batabyal, A. A. & Beladi, H. (2007). Introduction and Overview of the Economics of International Trade and the Environment. In A. Batabyal & H. Beladi (Ed.), *The Economics of International Trade and the Environment*

response, as well as to ensure that exports to an importing Party that has not produced a response only take place if there is explicit consent or the chemical is already registered or used in that country, or six months after the Secretariat has informed Parties of the failure of the importing Party to produce a response. In addition, Article 12 establishes that even if a chemical is not included in the Convention, if it is banned or restricted within the jurisdiction of the exporting Party, that Party is obliged to provide notification of the first export after the regulatory measures and then for the first export in each calendar year, and provide the same information as it would for a covered substance.[71]

Finally, Article 13 states that, without prejudice to any requirements of the importing Party, each exporting Party must require that chemicals listed in Annex III of the Convention, chemicals banned or severely restricted in its territory and chemicals subject to labeling requirements in its territory, when exported, are subject to labeling requirements that provide adequate information with regard to risks and/or hazards to human health or the environment. As mentioned above, trade-related measures within the PIC procedure are complemented by a number of other provisions in the Rotterdam Convention. For instance, beyond the exchange of information resulting from PIC, Article 14 provides that Parties are obliged to promote the exchange of scientific, technical, economic and legal information concerning the covered chemicals, including toxicological and safety information. Also, Article 16 provides that Parties must cooperate in promoting technical assistance for the development of the infrastructure and the capacity necessary to manage chemicals to enable implementation of the Rotterdam Convention. Finally, Article 17 calls for Parties to develop and approve procedures and mechanisms for addressing compliance issues with the Convention. The Parties are currently working towards establishing the compliance procedures and mechanisms.

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[71] 1987 the UNEP Governing Council adopted The London Guidelines for the Exchange of Information on Chemicals in International Trade, UNEP/GC, 14/17, Annex IV. In addition, in 1985, the FAO adopted the first International Code of Conduct on the Distribution and Use of Pesticides, which established voluntary standards to aid countries without existing pesticide regulation, M/R8130, E/8.86/1/5000.

Cartagena Protocol on Biosafety

Cartagena is a Protocol to the CBD,[72] covering trade in most forms of living genetically modified organisms and the risks it may present to biodiversity. It creates an advanced informed agreement system for LMOs destined to be introduced to the environment such as micro-organisms and seeds, and a less complex system for monitoring those destined for use as food, animal feed or processing. It sets out a procedure for countries to decide whether to restrict imports of LMOs, spelling out, for example, the type of risk assessment that must be carried out. In allowing such decisions to be taken even where the risks are unknown, the Cartagena Protocol operationalizes the precautionary principle perhaps more clearly than any other international agreement to date.[73] The Cartagena Protocol on Biosafety seeks to protect biological diversity from the potential risks posed by living modified organisms resulting from modern biotechnology, taking into account risks to human health. Genetic modification, achieved by the application of recombinant DNA technology, allows for genes to be transferred in ways that are not possible in nature, which may lead to useful products and technologies. Agenda 21, for example, states that modern biotechnology could significantly contribute to improving health care and enhancing food security through sustainable agricultural practices. However, there is also concern about the potential risks of genetic modification for biodiversity, including potential dispersal of genetically modified organisms in the environment, potential impacts on non-target species, and potential transfer of the inserted genetic material to other organisms.[74]

Given the growth of the international market for genetically modified organisms and products made from them, an international framework to ensure their safe transfer, handling and use and to achieve an adequate balance between their potential benefits and risks is of fundamental importance. The Cartagena Protocol on Biosafety, a

[72] Biosafety Protocol, Article 1.
[73] Biosafety Protocol, Article 3. Some categories of LMOs or transboundary movements were also excluded, either as general exclusions from the Protocol or as specific exclusions to the AIA procedures.
[74] It should be noted that the scope of the AIA mechanism is narrower than that of the Protocol. LMOs in transit or destined for contained use, for instance, are not subject to the AIA mechanism.

supplementary agreement to the Convention on Biological Diversity (CBD), recognizes both the potential of modern biotechnology for human well-being and its potential adverse effects on biological diversity and human health. Its objective is to contribute, in accordance with the precautionary approach, to ensuring an adequate level of protection in the field of the safe transfer, handling and use of living modified organisms, taking also into account risks to human health, and specifically focusing on transboundary movements. Its scope is thus limited to living modified organisms (LMOs) biological entities capable of replicating or transferring genetic material and constituting a novel combination of genetic material obtained through use of modern biotechnology.[75]

The Biosafety Protocol establishes an advance informed agreement (AIA) procedure for ensuring that countries are provided with the information necessary to make informed decisions before agreeing to the import into their territory of living modified organisms that are intended for release into the environment. It also reaffirms the precautionary approach contained in Principle 15 of the Rio Declaration on Environment and Development. In addition, the Biosafety Protocol establishes a Biosafety Clearing House to facilitate the exchange of information on living modified organisms and to assist countries in the implementation of the Protocol. The Biosafety Protocol, although containing a broader overall objective, primarily focuses on Transboundary movements of LMOs.[76]

Thus, a number of provisions are related to trade, most significantly the measures within the AIA mechanism, but also those that refer to trade with non-Parties and to the handling, transport, identification and packaging of LMOs. The AIA mechanism is considered the backbone of the agreement. The need to know and to take informed decisions was identified from the outset of negotiations as a crucial element for adequate biosafety in light of the possible risks of LMOs, including that they could be environmentally hazardous, cause environmental damage, or pose risks to human health. Article 7 requires the first importation of an LMO destined for intentional

[75] Biosafety Protocol, Article 10.
[76] Biosafety Protocol, Articles 6 and 17.

introduction in the environment and not identified by a decision of the Parties as unlikely to have adverse effects to comply with the AIA procedure.

This procedure centers around two components, notification and decision-making. Article 8 establishes the notification procedure, requiring the Party of export to notify to the Party of import, in writing, the proposed transboundary movement. The notification must contain, at least, the information specified in Annex I, which includes the taxonomic status, common name, point of collection or acquisition, and characteristics of recipient organism or parental organisms related to biosafety; the centers of origin and centers of genetic diversity of the recipient organism and/or the parental organisms and a description of the habitats where the organisms may persist or proliferate; a description of the nucleic acid or the modification introduced, the technique used, and the resulting characteristics of the LMO; and the intended use of the LMO or products thereof. Article 10 establishes the decision procedure, which the Party of import must follow to either approve the import, with or without conditions, prohibit it, or request additional time or information.[77]

The basis for the decision must be a risk assessment carried out in a scientifically sound manner and in compliance with requirements contained in Article 15 and Annex III of the Protocol. In addition, the Parties may establish and maintain appropriate mechanisms, measures and strategies to regulate, manage and control risks identified in the risk assessment provisions. Moreover, in order to avoid or minimize potential adverse effects, a lack of scientific certainty does not prevent Parties from taking a decision. LMOs destined for direct use as food, feed or for processing (FFP) are not subject to the AIA mechanism but rather to a set of simplified procedures.

Article 11 establishes a multilateral information exchange process: where a Party makes a decision on domestic use of an LMO that may be exported for FFP, it must notify the Biosafety Clearing House within fifteen days and provide the information contained in Annex II. Annex II includes such information as the name and contact details of the applicant for a decision and of the authority responsible for the decision;

[77] Biosafety Protocol, Article 10.

the name and identity of the LMO; the description of the gene modification, the technique used, and the resulting characteristics of the LMO; the approved uses of the LMO; a risk assessment report; and suggested methods for the safe handling, storage, transport and use, including packaging, labeling, documentation, disposal and contingency procedures, where appropriate.

As in the AIA mechanism, Article 11 provides that the lack of scientific certainty does not prevent Parties from taking a decision. With respect to decision making on import of LMO-FFPs, the Party of import may follow its own domestic regulatory framework.[78] Other trade-related measures in the Biosafety Protocol include the provision of trade with non-Parties and handling, packaging, identification and transport requirements. Article 24 does not prohibit Transboundary movements of LMOs between Parties and non-Parties, but rather sets up a flexible system to ensure the environmental objectives of Protocol are not undermined. It requires trade with non-Parties to be consistent with the objective of the Protocol, though it does not require that they follow the Protocol's specific provisions, such as AIA. Moreover, though Article 24 foresees the possibility of these movements being subject to other agreements, it does not require them to be.[79]

Article 18 establishes handling, transport, packaging, identification and documentation requirements for LMOs subject to intentional transboundary movement within the scope of the Protocol. The provision encourages harmonized systems of identification requiring, for instance, relevant international rules and standards to be considered and certain information to be included in the accompanying documentation and also requires that transportation takes place under conditions of safety in order to avoid adverse effects on the conservation and sustainable use of biological diversity, taking also into account risks to human health. Although one of the Protocol's primary measures, the AIA mechanism, is related to trade, the scope of the agreement is broader, and a number of other measures complement the trade-related provisions. The scope of the Protocol is established in Article 4, which refers to the transboundary

[78] Biosafety Protocol, Article 11.
[79] Biosafety Protocol, Article 24.

movement, transit, handling and use of all living modified organisms that may have adverse effects on the conservation and sustainable use of biological diversity, taking also into account risks to human health.[80]

Thus, the Protocol also contains measures regarding unintentional transboundary movements and the transit or passage of an LMO through the territory of a State, and its provisions apply to a variety of operations involving LMOs. In addition, the Protocol provides a framework for achieving adequate implementation. Article 20, for instance, establishes a Biosafety Clearing House to facilitate the exchange of scientific technical, environmental and legal information on LMOs, while also actively assisting Parties in implementing the Protocol. Article 22 promotes implementation by requiring Parties to cooperate in the development and strengthening of human resources and institutional capacities in biosafety in developing countries.[81] While no specific commitments are articulated, a Compliance Committee was established and procedures were adopted under Article 34, which required the first meeting of the COP serving as the Meeting of the Parties to the Biosafety Protocol (COP-MOP) to develop cooperative procedures and institutional mechanisms to promote compliance and to address cases of non-compliance.

The Compliance Committee may, taking into account the capacity of the Party in question, in particular that of developing countries, request or assist the Party in developing a compliance action plan, or invite the Party to submit progress reports on the measures it is taking to bring itself into compliance. Depending on factors such as the cause, degree, type and frequency of non-compliance, the Committee may also recommend that the COP-MOP decide, *inter alia*, to provide financial or technical assistance, transfer of technology, training measures, or to issue a caution to the Party concerned. As a final step, and only in cases of repeated non-compliance, the COP-MOP may decide on supplementary measures, as it deems appropriate. However, it should be noted, that the COP-MOP has not yet adopted any such supplementary measures.

[80] Biosafety Protocol, Article 4.
[81] Biosafety Protocol, Articles 20 and 22

Finally, Article 35 of the Protocol calls for an evaluation of the effectiveness of the Protocol to be undertaken at least every five years.[82]

Stockholm Convention

The Stockholm Convention[83] is a global treaty focused on protecting human health and the environment from persistent organic pollutants (POPs). POPs are chemicals that remain intact in the environment for long periods, become widely distributed geographically, accumulate in the fatty tissue of living organisms, and are toxic to humans and wildlife. With the evidence of long-range transport of these chemicals to regions where they have never been used or produced and the consequent global threats they pose to human health and the environment, States recognized the need for global actions to reduce and eliminate releases of these chemicals. The Stockholm Convention, which is the first global, legally binding agreement designed to protect human health and the environment from the harmful impacts of POPs, came into force in May 2004. In order to achieve its objective, the Stockholm Convention seeks to eliminate or restrict the production and use of intentionally produced POPs. It also seeks to continue minimizing and, where feasible, ultimately eliminate releases of unintentionally produced POPs.[84]

In addition, the Stockholm Convention requires Parties to develop strategies for identifying POPs stockpiles and wastes and to ensure that they are managed or disposed of in an environmentally sound manner. In line with its objectives, the core measures of the Stockholm Convention are those that require eliminating and restricting the production and use of listed chemicals. The Convention contains trade-related measures to support these aims. For example, the Stockholm Convention requires Parties to limit trade in POPs to those countries that comply with the Convention's provisions, in order to ensure that all POPs existing or produced within the Parties are used and disposed of subject to its restrictions. Article 3, for instance, requires Parties

[82] Biosafety Protocol, Article 35.
[83] POPS website, "Stockholm Convention on Persistant Organic Pollutants" (http://www.pops.int/)
[84] UNEP website, "Persistant Organic Pollutants" (http://www.chem.unep.ch/pops/)

to ban imports of listed chemicals, except if the import is from another Party and is destined for environmentally sound disposal or the chemical is covered by a specific exemption. Article 3 also requires all Parties to ban the export of listed chemicals to other Parties except for the purpose of environmentally sound disposal. In addition, Parties can export those chemicals to Parties subject to a specific exemption as well as to non-Parties that certify compliance with the Convention's provisions. In this regard, trade related measures constitute an important supplementary element in promoting the protection of human health and the environment from POPs.[85]

As mentioned above, the Stockholm Convention contains a wide range of measures to promote the environmentally sound management of POPs. Article 5, for example, requires Parties to take measures to reduce or eliminate releases from the unintentional production of POPs, including developing national action plans to identify, characterize and address the release of these chemicals and promote the development and use of substitute or modified materials, products, and processes. In addition, Article 6 requires Parties to take measures to reduce or eliminate releases from stockpiles and wastes which is a significant measure in light of the large number of waste stockpiles and contaminated sites containing persistent pesticides and PCBs, particularly in the developing world. The provision also calls for close cooperation with the Basel Convention to establish levels of appropriate POPs destruction and determine methods for their environmentally sounds disposal.[86]

Article 8 establishes the procedures for the listing of new chemicals under the Convention. The core measures of the Stockholm Convention are established in the context of other measures that complement, reinforce, and balance them. Such measures include provisions on information exchange and public information, as well as technical and financial assistance. Article 9, for instance, mandates Parties to facilitate or undertake the exchange of information relevant to reduction or elimination of POPs,

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[85] Some of the POPs initially covered by the Stockholm Convention include: aldrin (a pesticide applied to soils to kill termites, grasshoppers, corn rootworm, and other insect pests); chlordane (used extensively to control termites and as a broad-spectrum insecticide on a range of agricultural crops)

[86] Stockholm Convention, Article 3.2 (b). Once all specific exemptions for a POP chemical are eliminated, Parties would be required to prohibit trade in that chemical.

with the aim of facilitating the implementation of the control measures and of promoting the use of alternatives, and establishes a clearinghouse mechanism within the Secretariat to facilitate POPs information exchange. Article 10 calls on Parties to, within their capabilities, promote awareness of the risks of POPs, and Article 11 outlines the requirements to support and further develop international programmes for conducting and financing POPs research, taking into account the special needs of developing countries.[87]

Article 12 recognizes that timely and appropriate technical assistance in response to requests is essential and calls for the establishment of regional and sub regional centers for capacity building and transfer of technology to assist Parties in fulfilling their obligations under the Convention, and Article 13 establishes a financial mechanism to ensure adequate and sustainable financial resources to enable Parties to do so. Thus, trade related measures are only an element of a broader framework of provisions established to pursue the goals established in the Convention.[88] Article 16 requires an evaluation of the effectiveness of the Convention to take place four years after the Convention's entry into force and periodically thereafter. Parties have agreed to complete the first effectiveness evaluation by the fourth meeting of the COP scheduled for 2009. Similar to the Rotterdam Convention, Article 17 calls for Parties to develop and approve procedures and mechanisms for addressing compliance issues. These are still under negotiation by the Parties.

UN Framework Convention on Climate Change (UNFCCC)

The FCCC, adopted at the Rio Conference in 1992, is grappling with the most complex of all environmental issues, and the one with greatest potential for economic impacts. Since greenhouse gas emissions can rarely be limited with technical, "end-of-pipe" technologies, the principal strategy of the FCCC must be to change the pattern of

[87] The unintentional production of POPs refers to POPs that are unintentional by-products of industrial and other processes, including dioxins and furans.

[88] According to the FAO, about 20,000 tons of obsolete pesticides are believed to be stockpiled in Africa, with perhaps another 80,000 tons in Asia and Latin America, and at least 150,000 tons in countries of the former Soviet Union.

future investment in favour of activities that generate less greenhouse gases.[89] In December 1997 the Kyoto Protocol was adopted. It created two classes of countries those with greenhouse gas limitation commitments and those without and several institutions governing their relations. Although neither the FCCC nor the Kyoto Protocol includes trade measures, it is highly likely that the parties, in fulfilling their Kyoto obligations, will adopt trade-restrictive policies and measures.

The main objectives of the UNFCCC and the Kyoto Protocol are to combat climate change and to promote sustainable development. Key public officials in the European Union, the United States, China, and India have already begun to lay down verbal markers on the role of trade measures in addressing climate change. But so far there have not been extensive trade discussions within the UNFCCC and Kyoto Protocol talks. Earlier declarations, echoing the chapeau of the GATT Article XX, explicitly acknowledged that measures taken to combat climate changes should not distort international trade.[90] Article 3.5 of the UNFCCC states, The Parties should cooperate to promote a supportive and open international economic system that would lead to sustainable economic growth and development in all Parties, particularly developing country Parties, thus enabling them better to address the problems of climate change. Measures taken to combat climate change, including unilateral ones, should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade.

Article 2.3 of the Kyoto Protocol states, The Parties included in Annex I shall strive to implement policies and measures under this Article in such a way as to minimize adverse effects, including the adverse effects of climate change, effects on international trade, and social, environmental and economic impacts on other Parties, especially developing country Parties and in particular those identified in Article 4, paragraphs 8 and 9, of the Convention, taking into account Article 3 of the Convention. At the 13th

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[89] Aaron Cosbey (2004). The Kyoto Protocol and the WTO, Seminar Note, Energy and Environment Program, The Royal Institute of International Affairs, London: Chatham House.

[90] Thomas L. Brewer (2003). The Trade Regime and the Climate Regime: Institutional Evolution and Adaptation, Climate Policy, Volume 3, Issue 4.

COP meeting of the UNFCCC in Bali in December 2007, countries agreed to launch negotiations to write a successor accord to the Kyoto Protocol. At an August 2009 informal group meeting under the Ad Hoc Working Group on Long-term Cooperative Action (AWG-LCA) held in Bonn, India proposed the inclusion of a draft paragraph in the negotiating text, which reads as follows: *Developed country Parties shall not resort to any form of unilateral measures including countervailing border measures, against goods and services imported from developing countries on grounds of protection and stabilization of climate.*[91] Such unilateral measures would violate the principles and provisions of the Convention, including, in particular, those related to the principle of common but differentiated responsibilities Article 3, paragraph 1; trade and climate change Article 3, paragraph 5; and the relationship between mitigation actions of developing countries and provision of financial resources and technology by developed country Parties Article 4, paragraphs 3 and 7. Yet while developing countries were seeking ways to prevent countries from using border measures against them, the US Congress was seeking ways to address competitiveness concerns and incorporate them into the post-Kyoto treaty.[92]

At the 13th UNFCCC COP meeting in Bali in December 2007, countries agreed to launch negotiations to write a successor accord to the Kyoto Protocol and adopted the Bali Action Plan, a comprehensive process to enable the full, effective, and sustained implementation of the convention through long-term cooperative action, now, up to, and beyond 2012. While the Bali Action Plan requires both developed and developing countries to take action, its requirements differ between the two groups, expressed by the principle of common but differentiated responsibilities. A related concern is that, in the end, domestic action by developed countries will make no difference to climate change if emissions activity simply migrates to other countries and if domestic GHG-control policies do not create enough leverage to prod China and India and other large but reluctant emitters to take action. To address these concerns, the United States and

[91] UNFCCC, 2009, Second synthesis report on technology needs identified by Parties not included in Annex I to the Convention, Bonn: UNFCCC.
[92] World Trade Organization (WTO) and United Nations Environmental Programme (UNEP). 2009. Trade and Climate Change. Geneva: WTO/UNEP.

other countries are contemplating corrective provisions in their national GHG-control programs, such as the allocation of free allowances, special exemptions from new controls, and border measures.[93]

In particular, border measures that penalize imports from countries that do not take comparable action enjoy broad political support. Production subsidies through free allocations and exemptions, unilateral trade restrictions through border adjustments, and performance standards adopted in the name of GHG controls all promise commercial friction and stand a fair chance of being challenged in the WTO. Among the mitigation and adaptation policy options that countries have introduced or considered, several may have trade implications. For example, product or performance standards for example, labeling requirements or energy efficiency standards could easily be operated as technical barriers to imports.[94] Policy options well advanced in legislation entail both overt subsidies in the form of free allowances and quasi-subsidies in the form of exemptions. These are designed to address competitiveness concerns, both for exports and imports. In US draft legislation but not in Australia, such allowances and exemptions are buttressed by border adjustment mechanisms that would likely discriminate between domestic and foreign producers and among different foreign producers.

Under the WTO,[95] countries have great flexibility to design environmental regulations that have effects only within their territories. However, the same discretion does not apply to measures that affect exports or imports. In the absence of clearer guidelines than now exist, it is difficult to predict whether various policy options would be compatible with WTO rules. For example, it remains uncertain whether border adjustments are allowable for carbon taxes or permits that are based on energy consumed or carbon emitted, either in making a product or inputs to the product. It is also unclear whether the Agreement on Technical Barriers to Trade (TBT) would allow

[93] World Bank. 2007. International Trade and Climate Change: Economic, Legal, and Institutional Perspectives. Washington DC: World Bank.
[94] Swedish National Board of Trade. 2004. Climate and Trade Rules: Harmony or Conflict? Stockholm: Kommerskollegium
[95] Hufbauer Gary et al. *Global Warming and the World Trading System*, (1st edn, 2009,)

standards and labeling requirements based on production and processing methods (PPMs) that do not affect the physical characteristics of the product. The prior record of panel and Appellate Body decisions on these and other climate-related questions is sparse. If the rule book is filled out through case-by- case litigation, it could be years before an overall framework is established. Moreover, case outcomes may depend heavily on how disputed measures are designed and implemented, making for a pretty complicated rule book Beyond the questionable effectiveness of these measures.[96]

disputes over border measures could arise under several core WTO provisions, GATT Article I (most favored–nation treatment), Article II (tariff schedules), Article III (national treatment), Article XI (quantitative restrictions), Article XX (general exceptions), and the Agreement on Subsidies and Countervailing Measures. Collisions could occur especially when GHG border measures are mixed with mechanisms designed to alleviate the burden of emission controls on domestic firms. If the United States or any other country enacts its own unique brand of import bans, border taxes, or comparability mechanisms hoping that measures that flaunt GATT Articles I, III, and XI will be saved by the exceptions in GATT Article XX the outcome could be a drawn-out period of trade friction.[97]

The World Trade Organization (WTO)

The rules of the WTO are directed at the liberalization of international trade in goods and services. They build upon basic principles, such as the prohibitions against discrimination between goods and services from different foreign countries (Most Favoured Nation principle) and between foreign and domestic products or services (National Treatment principle), and the prohibition against quantitative export and import restrictions.[98] The various agreements also set out the conditions under which Members are allowed to deviate from these principles, as well as conditions under

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[96] Hufbauer, Gary Clyde, Steve Charnovitz, and Jisun Kim. 2009. Global Warming and the World Trading System, DC: Peterson Institute for International Economics.

[97] Charnovitz, Steve. 2003. Trade and Climate: Potential Conflicts and Synergies. Washington DC: Pew Center on Global Climate Change.

[98] Palle Krishna Rao, *WTO and cases,* (1st edn, Excell Books, New Delhi, 2005)

which other restrictions on trade may be imposed. One such condition consists of the requirement that a trade-restrictive measure be necessary to attain a specified legitimate policy objective, such as the protection of the environment or the protection of human or animal life or health. This necessity requirement can take different forms depending on the specific WTO agreement it is contained in.

The General Agreement on Tariffs and Trade (GATT),[99] the Agreement on Technical Barriers to Trade (TBT Agreement) and the Agreement on Sanitary and Phytosanitary Measures (SPS Agreement) each contain a variation of the so-called necessity test. As it is shown, the GATT incorporates its necessity tests in Article XX on general exceptions, which allows for derogations from other GATT obligations under specified conditions. The SPS and the TBT Agreements have incorporated their necessity requirements as positive rules laying out the conditions under which a Member may adopt trade-restrictive sanitary or Phytosanitary measures or technical regulations, as defined under the respective agreements.

Trade policies have an impact on the environment, because; they stimulate economic growth, which induces a higher demand for polluting goods, but also for a cleaner environment, they reallocate production around the world, affecting the distribution of pollution sources and sinks.[100] On the other hand, environmental policies also have an impact on trade patterns, because; they alter domestic and international prices, which in turns affect the terms of trade, they create new markets, for instance, pollution permits, affecting the trade balance, they may induce dirty industries to relocate to countries with lax environmental regulation. Despite these obvious linkages, international trade bodies have been reluctant to link trade and environmental policy-making. Given the rising importance of non-tariff barriers as obstacles to free trade, there is a fear that environmental measures may become the Trojan horse of a renewed protectionism. Because of these and other reasons, some prominent economists have also argued against the linking of trade and environmental objectives

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[99] Deborah Z. Cass, *The "Constitutionalization" of International Trade Law: Judicial Norm-Generation as the Engine of Constitutional Development in International Trade*, 12 EUR. J. INT'L L. 39, 42 (2001),
[100] Jha, Veena et al (2000): *Achieving Objectives of Multilateral Environment Agreements: A Package of Trade Measures and Positive Measures,* United Nations Publication.

but, for a different opinion. On the other hand, environmental organizations seem often to be unaware of the role played by changes in the terms of trades on the cost and effectiveness of environmental policies.[101] Many sophisticated models used in this field simply disregard the existence of international trade. The text of many international environmental protocols, like the Kyoto protocol, makes hardly any reference to the consequences of these agreements on the world trade.

The principle of non-discrimination stipulates that a member shall not discriminate between like products from different trading partners (giving them equally most favoured-nation or MFN status, GATT Article I); and between its own and like foreign products (giving them national treatment, GATT Article III).[102] If trade-related environmental or health measures are to be consistent with WTO rules, they cannot result in discrimination between like products. Therefore, the principle of non-discrimination raises two key questions namely; are products at issue like products? If so, is the foreign product treated less favourably than the domestic product or than another foreign product?

The Agreement Technical Barriers to Trade (TBT)[103] deals with food labels and other national requirements established for reasons other than to protect the life or health of people, animals, or plants. Article 2 of the TBT Agreement provides that such a labeling requirement even if does not treat imports differently than domestic products is illegal if it restricts international trade more than is necessary to fulfill a legitimate objective, taking account of the risks non-fulfillment of that objective would create. While the TBT Agreement does not contain an explicit environmental exception, its preamble contains language paralleling that found in Article XX of the GATT. The preamble of the TBT Agreement recognizes that "no country should be prevented from taking measures necessary to ensure the protection of human, animal or plant life or

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[101] Jha, G Hewison and M Undenhills (eds), *Trade, Environment and Sustainable Development: A South Asia Perspective,* Macmillan Press, London, 123-42. Cato, J C (1998): *Economic Issues Associated with Seafood Safety and Implementation of Seafood HACCP Programmes*, FAO, Rome.

[102] World Trade Organization, (WTO), 1995. Environmental disputes in GATT/WTO. http://www.wto.org/english/tratop_E/

[103] World Trade Organization, (WTO), 2009. The "Tuna-Dolphin" case was brought by Mexico against the United States under the old GATT dispute settlement procedure.

health, or of the environment at the levels it considers appropriate. In addition, Article 2.2 of the TBT Agreement provides that the legitimate objectives of technical regulations include protection of human health or safety, animal or plant life or health, or the environment.

The Agreement on Sanitary and Photosanitary Measures (SPS)[104] sets out the basic rules for food safety and animal and plant health standards. It allows countries to set their own standards. But it also says regulations must be based on science. They should be applied only to the extent necessary to protect human, animal or plant life or health. And they should not arbitrarily or unjustifiably discriminate between countries where identical or similar conditions prevail. Member countries are encouraged to use international standards, guidelines and recommendations where they exist. However, members may use measures which result in higher standards if there is scientific justification. They can also set higher standards based on appropriate assessment of risks so long as the approach is consistent, not arbitrary. The agreement still allows countries to use different standards and different methods of inspecting products.

WTO Provisions Relevant To the Environment

There are many provisions of GATT 1994 and of several WTO Agreements which are of direct relevance to the environment. The primary aim of the WTO system is to liberalize international trade. Apart from providing a common set of international trade rules, the WTO system is meant to offer an effective dispute settling system facilitating the settlement of trade disputes among its member nations. The core principles of the WTO system are expressed in the original General Agreement on Tariffs and Trade (GATT) of 1947. Of those the most vital ones include the Most-Favoured-Nation (MFN) principle, expressed in article I of the GATT, requiring the members to treat products from other members in the same way. Moreover, the principle on national treatment in article III requires members to treat any imported product in the same way as domestic

[104] World Trade Organization, (WTO), 1995. Preamble' to the agreement establishing the world trade organization. http://www.wto.org/english/docs_e/legal_e/04- wto.pdf

"like products" would be treated. This principle shall prevent that domestic products will secure market advantages through imposing discriminatory measures on imported products.[105]

Additionally, article XI, involves a prohibition on quantitative restrictions, aiming at prohibiting quotas, embargoes, and licensing schemes on imported as well as exported products. If any of the core principles, like the ones mentioned, is violated a claim of any WTO member could be justified trough a general exception under article XX. These exceptions are only permitted when the measures are shown not to be applied in a manner constituting means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade. However, articles XX (b) and XX (g), which are the ones with relevance for an environmental perspective, do only apply to violations of general WTO obligations and not to every measure imposed for environmental protection.

GATT 1994 – Articles I and III on Non-Discrimination of Like Products

Articles I and III of GATT are the legal home of the core principles: most-favoured nation and national treatment.[106] These principles are described as together constituting the critical WTO discipline of non-discrimination. Article I establishes the most-favoured nation rule. This requires parties to ensure that if special treatment is given to the goods or services of one country, they must be given to all WTO members. No one country should receive favours that distort trade. This provision originated because states had different tariff levels for different countries, and it was designed to reduce or eliminate those differences. The principle has now also been extended to other potential barriers to trade. This rule has two major exceptions. The first applies to regional trade agreements. Where these have been adopted, preferential tariffs may be

[105] International Trade Law & The GATT/WTO Dispute Settlement System 129 (Ernst-Ulrich Petersmann ed., Kluwer Law International 1997).

[106] Williams, Marc. 2001. 'Trade and Environment in the World Trading System: A Decade of Stalemate?' *Global Environmental Politics*

established between the parties to these agreements. The second exception is for developing countries, and especially the least developed countries. GATT allows members to apply preferential tariff rates, or zero tariff rates, to products coming from these countries while still having higher rates for like products from other countries. This exception is designed to help promote economic development where it is most needed.[107]

Article III establishes the national-treatment rule. This requires that the products of other countries be treated the same way as like products manufactured in the importing country. No domestic laws should be applied to imported products to protect domestic producers from the competing like products. And imported products should receive treatment under national laws that "is no less favourable" than the treatment given to like domestic products.[108] Defining "like products" has important environmental implications. Consider two integrated circuit boards, one produced in a way that emits ozone-depleting substances, and another produced in a non-polluting way. If they are like product, then environmental regulators cannot give preference to the green product over the other when both arrive at the border. Nor can they discriminate against the polluting product if it arrives at the border to compete against domestically produced clean versions.

Although the term "like" has not been specifically defined, the WTO's dispute settlement system has several times had to wrestle with whether certain products were like, and has developed some criteria to help it do so. These include the end uses in a given market, consumer tastes and habits, and the products' properties, nature and qualities. Most recently, the dominant criterion that has emerged in applying the like-products test is commercial substitutability, that is, whether the two goods compete against each other in the market as substitutes. For example, although vodka and gin are not identical, their physical properties alcohol content and end use drinking are

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[107] Shaffer, Gregory C. 2002. 'The Nexus of Law and Politics: The WTO's Committee on Trade and Environment'

[108] Stilwell, Matthew and Tarasofsky, Richard. 2001. *Towards Coherent Environmental and Economic Governance: Legal and Practical Approaches to MEA-WTO Linkages*. Gland, Switzerland: WWF-World Wide Fund for Nature.

similar enough that they could be substituted one for the other. They might therefore be considered like.

The Most-Favoured-Nation (MFN) principle means that WTO members are bound to treat the products of one country no less favourable than the *like products* of any other country. The National-Treatment (NT) principle (III) means that once goods have entered a market, they must be treated no less favourably than *like products* of national origin. The term *like products* has been defined in past dispute panel decisions to mean products with the same or similar physical characteristics or end uses. This has resulted in a debate on Production and Processing Methods (PPMs).[109] WTO allows countries to adopt trade measures regulating product characteristics or their related processes and production methods, but does not allow trade restrictions on the basis of *unrelated* PPMs, that is, PPMs not related to product characteristics such as the quality or safety of a product. The 1991 report of the GATT dispute settlement panel in the "*Dolphin-Tuna*" case interprets the MFN and NT principles for labelling rules regarding unrelated PPMs. Although the report was never adopted, it is one of the few Panel reports on PPM-labelling to guide further interpretation. Although the report was not adopted, the Panel's decision concerning voluntary single-issue environmental labelling remains largely unchallenged.[110]

The report states that, the labelling provisions of the DPCIA do not restrict the sale of tuna products; tuna products can be sold freely both with and without the Dolphin Safe label. Provisions governing the right of access to the label should meet the requirements of Article I:1. So the report states that labelling on the basis of unrelated PPMs is allowed under GATT, as long as the labelling is voluntary, because it does not restrict trade. The right to use the label was not considered an advantage granted from the government any advantage would depend on the free choice of consumers. However, the criteria for certification and labelling should be applied in a non-discriminatory way to all applicants. The panel report also made clear that GATT Article

[109] Nissen, J.L. 1997. 'Achieving a Balance Between Trade and the Environment: The Need to Amend the WTO/GATT to Include Multilateral Environmental Agreements', *Law and Policy*
[110] McDonald, Janet. 1993. 'Greening the GATT: Harmonization, Free Trade and Environmental Protection in the New World Order', *Environmental Law*,

I was relevant for labelling schemes. For Article III, this is less clear. It is argued that it is not certain that Article III was meant to apply to voluntary schemes as they may not be regulations or requirements in the sense of Article III.1. And even if they are, it is not sure they will be viewed as affecting the internal sale, offering for sale, purchase, transportation, distribution or use of products, because of their voluntary nature.

The most favoured nation clause requires a party to treat like products alike and not to discriminate between trading partners of like products.[111] In line with this principle countries should not discriminate between domestic and foreign producers by introducing trade restrictions. The prerequisites for the parties to qualify for equal treatment under Articles I and III are linked to the concept of a 'like product'. An examination of the meaning of this phrase is essential to an understanding of the Most Favoured Nation (MFN) and national treatment principles and their impact upon the environment. The phrase, 'like product', has been the subject of considerable debate in the area of environmental protection because national health and safety standards often restrict the use of polluting or environmentally harmful goods, such as non - recyclable items, products that emit ozone - depleting gases or harmful chemicals. The debate centres on the question of how the likeness of a product may be determined.[112]

Traditionally, 'like products' refers to products with similar physical characteristics. A 'like product', according to the WTO, is a product which is alike in all respects to the product under consideration. In the absence of such a product, a 'like product' is one which has characteristics closely resembling those of the product under consideration. However, the interpretive process of WTO dispute resolution has established that the term 'like product' refers to the nature of the product itself and not its production and processing methods. Similarly, 'like products' may not be distinguished on the basis of manufacturing process so long as the physical characteristics are the same. As a result, a product cannot be treated differently because it is produced using an environmentally

[111] Esty, Daniel. 2002. 'The World Trade Organization's Legitimacy Crisis', *World Trade Review*
[112] DeSombre, Elizabeth and Barkin, Samuel J. 2002. 'Turtles and Trade: The WTO's Acceptance of Environmental Trade Restriction', *Global Environmental Politics*

damaging production process rather than an environmentally friendly one. A 1971 GATT industrial pollution study concluded that the low price of goods produced in a state that lacks environmental regulations is simply part of that country's competitive advantage, and may not be viewed as unfair. This interpretation is generally supported by developing countries whose lower environmental standards may provide them with cost advantages and export market access. Developing countries fear that the definition of 'like products' on the basis of PPMs may be used as a protectionist measure by developed countries.[113]

GATT Article III restricts taxes that afford protection to domestic production. Consequently a nation cannot provide subsidies for a product which is made according to a strict environmental process to make it more competitive nor can they favour imports from countries with sound environmental regulation. Environmentalists argue that distinguishing products based on PPMs will help internalize environmental costs. However, the challenge is to find an interpretation of 'like products' that ensures developing countries have continued access to export markets whilst allowing industrialized countries to address unsustainable consumption patterns. This limited interpretation of 'like product' first appeared in the *Tuna-Dolphin* dispute in 1991.[114]

In this case Mexico challenged US restrictions on the import of tuna whose acquisition harmed dolphins. Mexico argued that the Mexican tuna and tuna available in US markets were like products and that US restrictions were discriminating against the Mexican product. The GATT Panel ruled that Article III, insofar as it dealt with the national treatment principle, covered only those measures that are applied to products as such. Thus, where the physical characteristics of a product were the same, differential treatment on the basis of any other factor was held to be inconsistent with the national treatment principle. As a result the US *Marine Mammal Protection Act*

[113] Trebilcock, Michael J. and Howse, Robert. 1995. *The Regulation of International Trade*. London: Routledge.
[114] Holmes, P., Rollo, J., and Young, A. (2003), 'Emerging trends in WTO dispute settlement: back to the GATT?', *World Bank Policy Research Working Paper, no. 3133*, Washington D.C.: World Bank

1972 regulations were held to be in violation of Article III because they treated the Mexican products less favourably than the domestic US products although the incidental taking rates in no way affected tuna as a final product.[115]

The GATT Panel concluded that 'a contracting party may not restrict imports of a product merely because they originate in a country with environmental policies different from its own'. It went on to state that Article III: 4 calls for a comparison of the treatment of imported tuna as a product with that of domestic tuna as a product. Regulations governing the taking of dolphin's incidental to the taking of tuna could not possibly affect tuna as a product. Article III:4 therefore obliges the United States to accord treatment to Mexican tuna no less favourable than that accorded to United States tuna, whether or not the incidental taking of dolphins by Mexican vessels corresponds to that of United States vessels.[116]

In keeping with the *Tuna-Dolphin case*, the *Thai cigarettes case, the Canadian Fisheries Case, the Danish Beer bottle case and* the *Reformulated gasoline case* have all indicated that discriminatory trade practices will not be tolerated under GATT, even if there is some justification for them on environmental, health or conservation grounds. The non-discrimination principle, with its narrow scope, does not permit parties to impose import or export restrictions for the sake of environmental protection without violating GATT obligations. This situation leads parties to rely on the exceptions to their obligations when adopting trade - related environmental measures.

GATT 1994 – Article XI on General Elimination of Quantitative Restrictions

Article XI of the GATT 1994 addresses the elimination of quantitative restrictions introduced or maintained by countries on the importation or exportation of products. It prohibits such restrictions with the objective of encouraging countries to convert them into tariffs, a more transparent and less-trade distortive instrument. This Article has been violated in the context of a number of environmental

[115]GATT (1994), *United States – Restrictions on Imports of Tuna,* Report of the Panel, Geneva: GATT
[116] Hurlock, M. (1992), The GATT, US law and the environment: a proposal to amend the GATT in the light of the tuna/dolphin Decision', *Columbia Law Review*, vol. 92,

disputes in which countries have imposed bans on the importation of certain products, and is thus relevant to trade and environment discussions. Article XI might conceivably lead to conflicts with the trade mechanisms in some MEAs. For example, the Basel Convention and CITES impose license or permit requirements for trade in the materials they control. To date these types of provisions in MEAs have never been challenged under trade laws.[117]

GATT Article XI bans quotas and the use of import or export licenses. However, some existing MEAs impose licensing requirements, which might violate Article XI. No prohibitions or restrictions other than duties, taxes or other charges, whether made effective through quotas, import or export licenses or other measures, shall be instituted or maintained by any contracting party on the importation of any product of the territory of any other contracting party or on the exportation or sale for export of any product destined for the territory of any other contracting party. GATT rules prohibit the use of quantitative restrictions such as quotas and import and export licenses.[118] Article XI provides for exceptions to these restrictions. Under Article XI, countries are allowed to impose trade restrictions if they experience shortages of essential products or where it is necessary for trade in commodities or agricultural or fisheries products. Article XI sets out the exceptions to import and/or export prohibitions in the following paragraphs: Export prohibitions or restrictions temporarily applied to prevent or relieve critical shortages of foodstuffs or other essential products (paragraph 2(a)); Import and export prohibitions or restrictions necessary for the application of standards or regulations for the clarification, grading or marketing of commodities in international trade. (Paragraph 2(b)); Import restrictions on any agricultural or fisheries product necessary to the enforcement of certain governmental policy measures (paragraph 2(c)).

However, it is doubtful whether parties can use this exception on environmental grounds. Governments may take measures for export restrictions for the following

[117] World Trade Organization, Understanding the WTO, 3rd Edition(World Trade Organization, 2007)
[118] Oren Perez, "Multiple Regimes, Issue Linkage, and International Cooperation: Exploring the Role of the World Trade Organization," University of Pennsylvania Journal of International Economic Law (Spring 2006),

reasons such as protection of natural resources and endangered species; promotion of higher - value - added downstream industries; upgrading the quality of export products; and ensuring adequate supply of essential products. Measures taken by countries for the attainment of environmental objectives may violate the GATT Article XI. A case in point is *Canada-Measures Affecting Exports of Unprocessed Herring and Salmon.*[119] In this case, the US alleged that Canada's prohibition on the export of unprocessed pink and sockeye salmon and herring contravened Article XI and was intended to protect domestic fish processors by preventing foreign competitors from gaining access to Canadian fish. Canada claimed that the measures were an integral and long - standing component of its fisheries conservation and management regime, and were thus justified under Article XI paragraph 2(b) and Article XX (g).[120] It was significant that the export prohibitions did not limit access to herring and salmon supplies in general and that the purchase of unprocessed fish was limited in the cases of foreign purchasers only – not in the cases of domestic processors and consumers. It was on the basis of this information that the Panel found that, since the prohibition applied to all unprocessed salmon and herring, the Canadian argument that the prohibition was necessary to prevent the export of unprocessed salmon and herring not meeting its quality standards did not stand.

Thus, the export prohibitions could not be considered 'necessary to the application of standards' within the meaning of Article XI 2(b), nor could they be considered to consist of 'regulations for the marketing' of the goods in international trade within the meaning of Article XI 2(b). Countries which impose export restrictions while tackling the uncontrolled exploitation of natural resources may violate their GATT obligations under Article XI.[121] In developing countries, the government might want to use such restrictions to make sure of the availability of domestic resources, or to stop the

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[119] Environmental Disputes in GATT/WTO: http://www.wto.org/english/tratop_e/envir_e/edis00_e.htm

[120] Article XX (b) and (g) of the GATT 1947. Note: these are only two of the ten possible exceptions listed under Article XX.

[121] Daniel C. Esty, Greening the GATT: Trade, Environment, and the Future (Washington, DC: Institute for International Economics, 1994)

uncontrolled exploitation of those resources. This situation is illustrated by the Indonesian measures which were imposed in 1986 to restrict the export of unprocessed rattan and proposed for imposition on semi - processed rattan from 1 January 1989. The measures were imposed in an attempt to prevent the uncontrolled exploitation of forest resources and to address shortages in the availability of rattan. The EU raised the matter in GATT, expressing its concern that the prohibition on exports did not conform to GATT Article XI. Indonesia argued that the measures were justified under the provisions of Part IV of GATT and Article XI 2(a).[122]

During the bilateral discussions, the EU persuaded Indonesia to replace the prohibition with taxes on exports which were more consistent with GATT rules than export restrictions. This example shows that developing countries, while taking measures to protect their natural resources, may come under GATT scrutiny for violations of their obligations under Article XI. As observed, in taking measures for environmental or ecological production, the policy makers in developing countries have to weigh carefully the implications which such policies may have on economic development, particularly the need to provide employment and a source of livelihood to the millions of people living at or near subsistence levels.

GATT 1994 – Article XX on general exceptions

GATT exceptions (GATT Article XX)[123] permit a party to restrict or prohibit imports employ trade measures that depart from its GATT obligations under certain conditions. Trade measures must be; necessary to protect human, animal or plant life or health Article XX.(b), or related to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption Article XX.(g). A party must also satisfy the following requirements in the application of the above measures; the measures cannot be applied to discriminate arbitrarily or unjustifiably between countries where the same conditions prevail, they

[122]Jose Alvarez, "The WTO as Linkage Machine," The American Journal of International Law 96:1 (2002),
[123]gatt/wto Dispute Settlement Practice Relating To GATT Article XX, Paragraphs (b), (d) and (g)

must be necessary i.e. exhausting all less trade restrictive alternatives, and they must not be a disguised restriction on international trade.

Article XX(b)[124] - Protection of Human, Animal and Plant Life or Health

Article XX (b) allows trade - related environmental measures where they are necessary to protect human, animal or plant life or health. However, the operation and interpretation of Article XX (b) has created debates among trade and environment interest groups. Concerns arising out of the operation of Article XX (b) are discussed next with special reference to GATT Panel Reports.

Necessary test under Article XX.1 (b)

Article XX.1(b) permits a party to invoke the exceptions if they are 'necessary to protect human, animal or plant life or health' but two conditions must be met for that purpose; that they may not discriminate between parties arbitrarily or unjustifiably; and they may not be disguised trade restrictions. The necessity requirement for the measure for which the exception is being invoked has created controversy. In order to pass the necessity test, a party has to show that they have exhausted the alternative, GATT - consistent or less inconsistent options and that the measure in question involves the least degree of inconsistency with GATT provisions. This means that as long as reasonable alternative measures or measures that are not inconsistent with GATT are available they are expected to be employed and so a party cannot adopt a measure and justify its adoption as 'necessary'.[125]

In the 1991 *Tuna-Dolphin case*,[126] the Panel was set to examine the US prohibition on imports of certain tuna and tuna products from Mexico. The US argued that the measures were necessary to protect dolphin life and health and no measure

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[124] gatt/wto Dispute Settlement Practice Relating To GATT Article XX, Paragraphs (b)

[125] World Bank. 2007. *International Trade and Climate Change: Economic, Legal, and Institutional Perspectives.*
Washington.

[126] Mexico etc versus US: 'tuna-dolphin': http://www.wto.org/english/tratop_e/envir_e/edis04_e.htm

other than trade sanctions was reasonably available to them to achieve this objective. However, the Panel found that US trade measures were not necessary because the average incidental taking rate for foreign fisherman was tied only arbitrarily to the U.S average taking rate, thus the regulations could not be necessary to protect dolphins. The Panel found no evidence that the U.S had exhausted all options, particularly the option of negotiating international cooperative arrangements which would have been consistent with GATT, before resorting to trade measures.

The Panel considered that the United States' measures, even if Article XX (b) were interpreted to permit extra jurisdictional protection of life and health, would not meet the requirement of necessity set out in that provision. The United States had no demonstrated to the Panel as required of the party involving an Article XX exception that it had exhausted all options reasonably available to it to pursue its dolphin protection objectives through measures consistent with the General Agreement, in particular through the negotiation of international cooperative arrangements, which would seem to be desirable in view of the fact that dolphins inhabit the waters of many states and the high seas. The term 'necessary' was interpreted to mean that no alternative to trade measures was available. In *Tuna-Dolphin II*,[127] the US ban on tuna imports from intermediate countries was challenged by the European Union. The European Union contended that the US ban violated Articles III and XI of GATT. The United States imposed a ban in accordance with the US *Marine Mammal Protection Act* to prevent intermediary third countries from selling tuna to the US market. The US argued that the ban was necessary to protect dolphins and justified this action under Article XX (b).

The Panel, in examining the application of Article XX (b), considered the meaning of the term 'necessary' to determine whether US actions were necessary to protect dolphins. However, the Panel noted that in the ordinary meaning of the term, 'necessary' meant that no alternative existed. This explanation had its origin in the Article XX (d) interpretation of the Panel in the *United States - Section 337 of the Tariff*

[127] *Busch, Marc L./Reinhardt Eric* 2003. Developing Countries and GATT/WTO Dispute Settlement, in: Journal of World Trade

Act of 1930 case ('U.S. Section 337 case').[128] In that case, the Panel examined the use of the term 'necessary' in Article XX (d) and decided that, a contracting party cannot justify a measure inconsistent with another GATT provision as 'necessary' in terms of Article XX(d) if an alternative measure which it could reasonably be expected to employ and which is not inconsistent with other GATT measures is available to it. By the same token, in cases where a measure consistent with other GATT provisions is not reasonably available, a contracting party is bound to use, among the measures reasonably available to it, that which entails the least degree of inconsistency with other GATT provisions.

The term 'necessary' was interpreted similarly in the *Thai cigarette case.*[129] In this case the Panel was established to examine a complaint by the US about certain import licensing restrictions and internal taxes on cigarettes which they believed were inconsistent with Articles III and XI of GATT. Thailand argued that the import ban fell within the scope of Article XX (b) as the measures were necessary to protect human life and health. The Panel found that Thailand's practice of permitting the sale of domestic cigarettes while not permitting the importation of foreign cigarettes was not necessary within the meaning of Article XX (b). The Panel agreed that smoking constituted a serious risk to human health and that measures designed to reduce the consumption of cigarettes fell within the scope of XX (b). But it followed the interpretation of the term 'necessary' in the *US Section 337* case and concluded that: The import ban imposed by Thailand could be considered to be necessary only if there were no alternative measures consistent with GATT or less inconsistent with it which Thailand could reasonably be expected to employ to achieve its health policy objective. Since Thailand had other measures reasonably available to it, the Panel decided that the trade measures involving import restrictions and internal discriminatory taxes levied by Thailand were not necessary.

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[128] *Busch, Marc L./Reinhardt, Eric* 2002b. Transatlantic Trade Conflicts and GATT/WTO Dispute Settlement.

[129] Thailand – Restrictions on Importation of and Internal Taxes on Cigarettes,(DS10/R – 37S/200), adopted on 7 Nov. 1990

The Proportionality Test

In order to fulfill the requirement of 'necessity' in invoking Article XX (b), a party must ensure that the measures adopted constitute a reasonable, proportionate relationship to the conservation policy or the public health policy.[130] In 1989, the GATT Council laid down substantive guidelines on the application of Art XX (b) which provide that, a measure taken by an importing contracting party should not be any more severe, and should not remain in force any longer than necessary to protect the human, animal or plant life or health involved, as provided in Art XX(b). It was perhaps this proportionality requirement to which the panel in the *Tuna-Dolphin* case was referring when it held that the method of calculating the maximum incidental dolphin taking rate was too unpredictable for trade measures to be regarded as necessary to protect the health or life of dolphins. This proportionality test was also deployed in the *Danish Beer Bottle* case, in which the Panel stated that trade measures should not be disproportionate to their objective and should cause the least disruption to trade. However the 'necessary' requirement has proven to be a barrier to the justification of legitimate environmental protection measures.[131]

The requirement gives the WTO the authority to determine sensitive relative terms such as proportionality and less inconsistent alternative, irrespective of the need and urgency of a situation. As it is pointed out, to require that a party exhaust all remedies that do not violate the GATT before resorting to trade restrictions is onerous because the likely success of GATT consistent alternatives is a subjective determination. Although the 'necessary' requirement demands that a party use the measure that entails the least degree of inconsistency with GATT, it did not set out any guidelines for the determination of the method involving the least degree of inconsistency with other GATT provisions. The result is a situation with great potential for mischief makers. For example, bans on importing ivory could be challenged on the ground that a more

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[130] Pierola, Fernando, 'The Availability of a GATT Article XX Defence with Respect to a Non-GATT Claim: Changing the Rules of the Game?', *Global Trade and Customs Journal* (4) 2010

[131] Howse, Robert, 'GATT Article XX and Domestic Production of Environmental Goods', Comments, *International Law and Policy Blog*, 3 April 2011, available at: http://worldtradelaw.typepad.com/ielpblog/2011/04/article-xx-domestic-production-of-environmental-goods.html.

effective (and more GATT - consistent) way to save African elephants is to privatized them. The 'least restrictive' interpretation of the necessary requirement in Article XX (b) has also been criticized by both trade and environment groups.[132]

It is argued that the 'least trade restrictive' interpretation does not correspond with the ordinary meaning of 'necessary' in Article XX (b), which focuses on the need for measures to achieve the goal of environmental protection and not on its effect on international trade. GATT Panels' attitude towards the interpretation of the term 'necessary' is negative. The Panel has on many occasions deemed State measures to fall outside the scope of what is necessary but has not identified alternative less GATT - inconsistent measures that could be used to protect the environment.[133] GATT dispute settlement Panels should take into account the intent of Article XX and should strike a balance between the policy goals of liberal trade and the goals set out in Article XX.

Article XX (g) – Protection of Exhaustible Natural Resources

The Article XX (g) exception allows restriction on international trade when it is necessary to conserve exhaustible natural resources.[134] GATT Panels' interpretations have established that trade measures must satisfy four requirements in order to qualify as an Article XX (g) exception; the particular trade measure must be 'primarily aimed at' the conservation of exhaustible natural resources; The GATT Panel interpreted 'relating to conservation of natural resources to mean 'primarily aimed at' the conservation of natural resources; It must be made effective in 'conjunction with restrictions on domestic production or consumption'; It must not be arbitrary or unjustifiable discrimination between countries where the same conditions prevail; and it must not be a disguised restriction on international trade.

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[132] *Busch, Marc L./Reinhardt, Eric* 2002: Testing International Trade Law: Empirical Studies of GATT/WTO Dispute Settlement,

[133] DeSombre, Elizabeth and Barkin, Samuel J. 2002. 'Turtles and Trade: The WTO's Acceptance of Environmental Trade Restriction', *Global Environmental Politics*

[134] GATT/WTO Dispute Settlement Practice Relating To GATT Article XX, Paragraphs (g)

Primarily Aimed At

The requirement that a trade measure must be primarily aimed at the related conservation purpose was confirmed in the *Tuna II* Panel report.[135] In this case, the US trade measure was not primarily aimed at conservation, because it was based on unpredictable factors such as the incidental taking rate of US vessels, not to any objective standard of dolphin deaths. In the US *Automobile Taxes* case, it was decided that the less favourable treatment of foreign cars did not conserve gasoline and was not primarily aimed at the conservation of natural resources.

In the *Canadian Tuna* dispute, the US brought a complaint against a Canadian ban on the export of unprocessed herring and salmon. The Panel decided that to rely on an Article XX (g) exception, a trade measure had to be primarily aimed at the conservation of natural resources.[136] Canada's export ban on foreign processors and consumers was not considered to be aimed primarily at conservation as the domestic production and consumption of unprocessed herring and salmon were permitted. Canada's favour of the domestic processor over foreign ones meant that it also failed the 'in conjunction with' test which required that Canada employ the measure against domestic production and consumption at the same time.

In the 1982 Panel Report on the US Prohibitions of Imports of Tuna and Tuna products from Canada, the Panel held that the US measures were unjustified because the Canadian restriction was not in conjunction with domestic consumption. Also, the restriction did not entail that every kind of tuna should be barred from Canada. Despite this definitive interpretation of 'primarily aimed at', the Panels' interpretations of Article XX (g) have left many questions unanswered. It is not clear whether the term 'exhaustible natural resources' covers only commercially valuable resources or all exhaustible natural resources. There have been suggestions that Article XX (g) was inserted to authorize contracting parties to take measures to conserve commercially

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[135] Patrick Low, 'International Trade and the Environment: An Overview' in Patrick Low (ed) *International Trade and the Environment,* World Bank Discussion Paper 159, World Bank, Washington DC, 1992,

[136] K Anderson and J Drake - Brockman, 'The World Trade Organization and the Environment' in Boer, Fowler and Gunningham (eds), Environmental *Outlook: Law and Policy*, No 2, Federation Press, Sydney, 1996,

valuable resources to ensure their availability for future use in international trade. To date, no party has been able to satisfy all the elements of Article XX (g), so it is impossible to anticipate the circumstances in which these tests will be met. It seems clear that the Article XX (g) exception for the conservation of exhaustible natural resources will continue to be interpreted with the same preference for free trade as has the interpretation of Article XX (b)'s health and safety exception.[137]

Chapeau (or Introductory Paragraphs) to Article XX

No arbitrary or unjustifiable discrimination and disguised restriction.[138] The chapeau otherwise the introductory paragraphs to Article XX states that trade measures must not constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade. The same situation connotation of the chapeau seems to include the use of not only identical, but similar measures. The inclusion of the word similar could be construed as a recognition and circumvention of the loophole contained in the Article XX preamble. For example, in the *Shrimp-Turtle* dispute,[139] the Appellate Body decided that the US measure served a legitimate environmental objective under Article XX (g) but that its discriminatory application constituted an arbitrary and unjustifiable discrimination and as such it was incompatible with the requirement of the chapeau of Article XX.

In the 1982 Panel Report on the US Prohibitions of Imports of Tuna and Tuna Products, the Panel interpreted the phrase disguised restriction and concluded that publication of a trade measure was sufficient to prevent that measure being considered a 'disguised restriction'. This interpretation was criticized in subsequent GATT practice because the function of the prohibition on disguised restrictions is not only to ensure transparency, but to supplement the prohibition on unjustifiable discrimination among GATT Contracting Parties via a prohibition on the indirect protection of domestic producers.

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[137] Vinod Rege, 'GATT Law and Environment - Related Issues Affecting the Trade of Developing Countries' (1994), *Journal of World Trade*

[138] Secretariat, p. 40 and the chapeau of Article XX of the GATT 1947

[139] United States – Import Prohibition of Certain Shrimp and Shrimp Products (WT/DS58/AB/R),

Extra-Territoriality

GATT does not permit trade measures which are directed against environmental conditions outside of a country's own territory.[140] In other words, a nation is allowed to set environmental policies within its territorial boundary, but it may not use trade measures to enforce its environmental standards beyond its territorial boundary. In its 1992 Study on Trade and Environment, the GATT Secretariat emphasized that When the environmental problem is due to production and consumption activities in another country, the GATT rules are more of a constraint, since they prohibit making market access dependent on changes in the domestic policies or practices of the exporting country If the door were opened to trade policies unilaterally the trading system would start down a very slippery slope. The *Tuna-Dolphin I* Panel decided that any measures taken to control the production and consumption of exhaustible natural resources can only be effective to the extent that the production or consumption is under its jurisdiction. This view was based on the drafting history of the Article which indicated that 'the concerns of the drafters of Article XX(b) focused on the use of sanitary measures to safeguard life or health of humans, animals or plants within the jurisdiction of the importing country.[141]

It further noted that any broad interpretation of Article XX (b) as suggested by the US would authorize contracting parties to unilaterally determine 'the life or health protection policies' from which other contracting parties could not deviate without jeopardizing their rights under the General Agreement. The *Tuna Panel II* decided that governments could enforce an Article XX (g) restriction extraterritorially only against their own nationals and vessels. The drafters of GATT were also concerned about the far reaching implications of the unilateral use of trade measures. To allow each country

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[140] *Busch, Marc L./Reinhardt Eric* 2001: Bargaining in the Shadow of the Law: Early Settlement in GATT/WTO Disputes, in: Fordham International Law Journal

[141] *Low, Patrick, ed. International Trade and the Environment. World Bank Discussion Papers, 159. Washington, DC: The World Bank, 1992.*

to determine unilaterally the environmental conditions beyond its jurisdiction would result in interference with the sovereignty of nation states and invite chaos and retaliation. This extra - jurisdictional use of trade measures would give large markets the economic leverage to impose their national socioeconomic policies upon smaller countries by forcing them to change their policies and thus reducing international trade to a power based regime.[142]

In this light, GATT rules seem to have restricted member powers to the combat of Transboundary environmental problems in areas which lie outside the legal jurisdiction of any particular country, even where the effect is global. Environmental measures addressing trans - boundary or global environmental problems should, as far as possible, be based on an international consensus. However, in the absence of an international institution that mandates sound environmental policies, the limitation of the extraterritorial scope of Article XX has left nations without the necessary instruments to handle global environmental problems.[143] A review of Article XX shows that although it was fashioned to cover environmental exceptions, its scope has been narrowed by the inclusion of different conditions and their distorting interpretations. In addition, narrow interpretations of the plain meaning of the exceptions may ultimately make them high hurdles to environmental protection. The cases which have been required to interpret the Article XX (b) and XX (g) exceptions have shown that very few trade restrictions which violate GATT will be upheld on the grounds that they were set in place to protect the environment.

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[142] Brian R. Copeland and M. Scott Taylor (2004). "Trade, Growth, and the Environment," Journal of Economic Literature, Vol. XLII (March 2004)

[143] Dale Colyer (2004). "Environmental Provisions In Trade Agreements," Presented at World Bank workshop on Trade and the Environment: Dealing with Pollution and Natural Resource Management Challenges in a Globalized World, December 8, 2004

The Agreement on Technical Barriers to Trade (TBT)

The new Technical Barriers to Trade (TBT)[144] Agreement came into force in 1995 and is binding on all World Trade Organization (WTO) Members, unlike its predecessor, the Standards Code. The objective of the Agreement is to ensure that Members do not use product requirements or compliance procedures to obstruct international trade unnecessarily. All Members do have the right to restrict trade for legitimate objectives under the Agreement. These include the protection of animal, plant and human life or health, the protection of the environment, national security interests and the prevention of deceptive practices.

However, WTO Members must seek to avoid unnecessary obstacles to trade. This means that they should design technical requirements in a way that is not more restrictive than necessary to achieve their goal. By encouraging Members to base measures on international standards for instance, WHO standards for health and safety requirements, the Agreement seeks to reduce administrative and legislative burdens on Members and to reduce the variety of technical requirements and conformity assessment procedures at a national level. The most-favoured-nation and national treatment principles of non-discrimination also both apply to the Agreement.[145]

In 2000, one-third of all TBT regulations notified to the WTO had human health or safety as their objective. These included regulations to reduce electromagnetic radiation from radio communication equipment and to bar potential allergens from cosmetics. Countries are encouraged to use international standards such as the WHO standards of quality applicable to pharmaceutical, biological and food products. However, many low-income countries that are opening up their markets do not have the financial, judicial or state capacity to identify and implement such standards. This can leave low-income countries extremely vulnerable to the negative impacts of globalization. The WTO Agreement on Technical Barriers to Trade the TBT Agreement establishes rules and procedures regarding the development, adoption, and application of voluntary product

[144] Charnovitz, S., 1994. Free trade, fair trade, green trade: Defogging the debate. Cornell Int. Law J.,
[145] World Trade Organization, (WTO), 1995. Preamble' to the agreement establishing the world trade organization. http://www.wto.org/english/docs_e/legal_e/04-wto.pdf

standards, mandatory technical regulations, and the procedures such as testing or certification used to determine whether a particular product meets such standards or regulations.[146]

The aim of the TBT Agreement is to prevent the use of technical requirements as unnecessary barriers to trade. Although the TBT Agreement applies to a broad range of industrial and agricultural products, sanitary and phytosanitary (SPS)[147] measures and specifications for government procurement are covered under separate agreements. The TBT Agreement rules help to distinguish legitimate standards and technical regulations from protectionist measures. Standards, technical regulations, and conformity assessment procedures are to be developed and applied on a nondiscriminatory basis, developed and applied transparently, and should be based on relevant international standards and guidelines, when appropriate. The TBT Agreement seeks to ensure that product specifications, whether mandatory or voluntary also known as technical regulations and standards, as well as procedures to assess compliance with those specifications known as conformity assessment procedures, do not create unnecessary obstacles to trade.

In its Preamble, the Agreement recognizes the right of countries to adopt such measures at the level which they consider appropriate, and recognizes in Article 2.2 the protection of human, animal or plant life or health, and the protection of the environment as being legitimate objectives for countries to pursue. The Agreement calls for non-discrimination in the preparation, adoption and application of product specifications and conformity assessment procedures. It also encourages Members to harmonize these specifications and procedures with international standards. The transparency of specifications and assessment procedures, through their notification to the WTO Secretariat and the establishment of national enquiry points, is a central feature of the Agreement. The first and only ruling of the Appellate Body decided under the TBT Agreement dealt with the marketing of preserved sardines in the territory of

[146] World Trade Organization, (WTO), 1995. Environmental disputes in GATT/WTO. http://www.wto.org/english/tratop_E/envir_e/edis_e.htm

[147] World Trade Organization, (WTO), 2009. The "Tuna-Dolphin" case was brought by Mexico against the United States under the old GATT dispute settlement procedure.

the European Communities: the *European Communities - Trade Description of Sardines.* The *EC-Sardines Case* (2002),[148] this dispute arose when the European Communities prohibited the use of the term "Peruvian sardines" on tins containing sardine-like fish species caught off the Peruvian coast. Peru contended that the EC Regulation was inconsistent with Articles 2 and 12 of the TBT Agreement. At issue were the trade descriptions of two small fish species- *Sardina pilchardus* and *Sardinops sagax*. *Sardina pilchardus* is found mainly around the coasts of the Eastern North Atlantic, in the Mediterranean Sea and in the Black Sea, while *Sardinops sagax* is found mainly in the Eastern Pacific along the coasts of Peru and Chile. Both fish are used in the preparation of preserved and canned fish products.[149]

The relevant EC Regulation provided, *inter alia*, that only products prepared from *Sardina pilchardus* (the "European Sardine") may be marketed as preserved sardines. In other words, only products of this species may have the word "sardines" as part of the name on the container. The Panel, confirmed in September 2002 by the Appellate Body, ruled in favour of Peru. It found that a standard set by the *Codex Alimentarius* Commission for Sardines products constituted a "relevant international standard" under the TBT Agreement. The Codex Standard set forth specific labelling provisions for canned sardines prepared from fish from a list of 21 species, including *Sardina pilchardus* and *Sardinops sagax*. It was found that this standard had not been used as a basis for the EC Regulation and that the standard was not "ineffective or inappropriate" to fulfil the "legitimate objectives" pursued by the EC Regulation.

Therefore, the EC Regulation was inconsistent with Article 2.4 of the TBT Agreement. In July 2003, Peru and the European Communities informed the DSB that they had reached a mutually agreed solution to the dispute. According to the amended EC Regulation, Peruvian sardines can now be marketed on the EC Market under a trade

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[148] *Busch, Marc L./Reinhardt, Eric* 2002a: Testing International Trade Law: Empirical Studies of GATT/WTO Dispute Settlement

[149] Steve Charnovitz, and Jisun Kim. 2009. *Global Warming and the World Trading System.* Washington: Peterson Institute for International Economics.

description consisting of the word "sardines" joined together with the scientific name of the species, i.e. "Sardines - *Sardinops sagax*."[150]

Australia introduced a new draft bill regulating the appearance and features of tobacco packaging. No logos or brand images would be permitted on the packaging. The product brand name would appear in uniform font on the front, top and bottom of the package, and graphic health warnings would continue to be displayed. This measure was notified to the WTO on 8 April 2011. Fourteen Members raised trade concerns with Australia's measure. While Members did not challenge Australia's public health objectives, they argued that such regulations could create an unnecessary barrier to trade, since they viewed the measure as more trade restrictive than necessary to achieve Australia's public health objective. Some members argued that Australia had not provided sufficient scientific evidence linking tobacco plain packaging to a reduction in tobacco consumption, especially among young people. In other words, they questioned the efficacy of the measure to achieve the stated objective. Australia said that the plain packaging legislation was designed to protect public health.

Plain packaging legislation was recommended by Australia's leading public health experts, as it would eliminate one of the last remaining forms of tobacco advertising packaging. Australia declared that plain packaging was the next logical step in its tobacco control efforts, and was part of a suite of new measures including a 25% increase in tobacco excise tax, increased investment in social marketing anti-smoking campaigns, and efforts to curb tobacco advertising on the internet. A representative of the World Health Organization (WHO) attended the meeting and said that tobacco was a grave threat to public health as 6 million people die every year due to smoking. The WHO added that tobacco consumption was the leading global cause of preventable death, and plain packaging was effective in curbing tobacco consumption. It was noted that the WHO Framework Convention on Tobacco Control (WHO FCTC) contains a number of provisions relevant to plain packaging of tobacco products.

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[150] *Bernauer, Thomas* 2003: Genes, Trade and Regulation: The Seeds of Conflict in Food Biotechnology, Princeton, Princeton University Press

Anti-smoking regulations have frequently been discussed in the Technical Barriers to Trade (TBT) Committee over the last two years, as members have intensified their fight against smoking for public health reasons. Brazilian and Canadian regulations aimed at banning additives and flavourings in tobacco products have also been discussed in TBT Committee meetings. Members raised concerns about the negative trade impact of France's Grenelle 2 Law which included provisions on product carbon footprint labelling and environmental lifecycle analysis. The law will put into place a one-year trial program of carbon footprint labelling as of 1 July 2011. In particular, concerns focused on the inclusion of transportation emissions in the product carbon footprint, and the fact that carbon footprint labelling could eventually be made mandatory in France. Members argued that this law could disadvantage imported goods in the French market.

The Agreement on Sanitary and Phytosanitary measures

The SPS Agreement is very similar to the TBT Agreement, but covers a narrower range of measures.[151] It covers measures that are taken by countries to ensure the safety of foods, beverages and feedstuffs from additives, toxins or contaminants, or for the protection of countries from the spread of pests or diseases. It recognizes the right of Members to adopt SPS measures but stipulates that they must be based on a risk assessment, should be applied only to the extent necessary to protect human, animal or plant life or health, and should not arbitrarily or unjustifiably discriminate between countries where similar conditions prevail. Article 5.7 of the SPS Agreement allows Members to take SPS measures in cases where the scientific evidence is insufficient, provided that these measures are only provisional, and that a more objective assessment of risk is being conducted. In general, the TBT and SPS Agreements are designed to complement one another.

[151] Chaturvedi, S (2002): 'WTO, Biosafety Regulatory Regime and Trade in Genetically Modified Goods: Options before Developing Countries – An Indian Perspective', paper presented at International Conference on Biotechnology and Development: Challenges and Opportunities for Asian Region.

The WTO Agreement on Sanitary and Phytosanitary Measures deals with food safety, and human, animal and plant health and safety regulations. It recognizes members' rights to adopt SPS measures but stipulates that they must be based on a risk assessment, should not create unnecessary obstacles to trade (should be applied only to the extent necessary to protect human, animal or plant life or health), and should not arbitrarily or unjustifiably discriminate between members where similar conditions prevail. The Agreement encourages members to adapt their SPS measures to the areas (regions, countries or parts of countries) that supply their imports.[152] The SPS Agreement complements the Technical Barriers to Trade Agreement. It allows members to adopt SPS measures for environmental purposes, but subject to such requirements as risk assessment, non-discrimination and transparency. Under the SPS Agreement, WTO may force a nation to choose between weakening its health standards for humans, animals, or plants, and paying an international penalty.

The penalty can take the form of either compensating the foreign government whose exports to the nation are limited by the stricter standard or permitting that country to impose additional trade restrictions on exports from the nation with the more protective health standard. A national health standard is illegal under the SPS Agreement if WTO decides that it is not "based on scientific principles and is maintained without sufficient scientific evidence." In making this judgment, WTO examines the extent to which the country has done a scientific assessment of the risk to "human, animal, or plant life or health."[153] Article 5 of the SPS Agreement further provides that "members shall ensure that such measures are not more trade-restrictive than required to achieve their appropriate level of sanitary or phytosanitary protection, taking into account technical and economic feasibility." By contrast, most federal and state food safety laws do not contain such requirements.

The first and only WTO decision applying the SPS Agreement to food regulation has led to numerous problems. In January 1998, the appellate body of WTO affirmed a

[152] Chaturvedi, S and Gunjan Nagpal (2001): 'Product Standards and Trade in Environmentally Sensitive Goods: A Study of South Asian Experience', RIS discussion Paper No 22.
[153] Jha, Veena and Rene Vossenaar (2000): 'Trade, Environment and Development' in UNCTAD, *Positive Agenda for Future Trade Negotiations*, New York and Geneva.

Panel decision sustaining complaints by the United States and Canada that the European Union's (EU's) ban on imported beef produced from cattle treated with growth hormones violated the SPS Agreement because the EU had not conducted the type of risk assessment required by Article 5.8 Growth hormones were used in the EU until the mid 1980s. Opposition to their use arose after newspapers reported that farmers in Italy were misusing the drugs and that consumption of hormone treated meat could interfere with the normal development of children. European consumer groups waged a vigorous campaign to prohibit the use of hormones. While such groups acknowledged that most problems could be avoided if hormones were used appropriately, they argued that regulatory officials could not be relied upon to effectively regulate the use of such drugs on the farm. Hence, the only way to protect the public was to ban their use completely.[154]

Such a large controversy never arose in the United States where hormone use generally is regarded as safe. While this matter is thus of more concern to European consumers rather than their U.S. counterparts, it illustrates how food regulations designed to protect consumers can come under attack. While the United States won this case, its legal victory at WTO has not led to any exports of hormone-fed beef to the EU because the EU refused to comply with WTO's decision.[155] Thus, the current operation of the SPS Agreement has led to higher prices and social unrest, two of the very problems that free trade is supposed to help prevent. Clearly, not even the most ardent free trade supporters can say that the current system is off to a smooth start. Even more problems are occurring behind the scenes. For example, governments may threaten action under the SPS Agreement as a way of pressuring another country to lower its food safety standards by accepting imports that do not meet that country's sanitary requirements.

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[154] Nordstrom, Hakan and Scott Vaughan (1999): 'Trade and Environment', WTO Special Studies 4, WTO, Geneva. OECD (2001): 'Biotechnology Statistics in OECD Member Countries: Compendium of Existing National Statistics', STI working paper No 6.

[155] Sup Lee, Legitimation of Trade Related Environmental Measures Under the WTO 5 (Berkeley Electronic Press 2006), *available at* http://law.bepress.com/cgi/viewcontent.cgi?article=8474&context=expresso

GATS 1994 - General Agreement on Trade in Services

Negotiated during the Uruguay Round, the GATS contains a General Exceptions clause in Article XIV, similar to that of GATT Article XX.[156] In addressing environmental concerns, GATS Article XIV(b) allows WTO Members to maintain GATS-inconsistent policy measures if this is "necessary to protect human, animal or plant life or health" (and is identical to GATT Article XX(b)). However, this must not result in arbitrary or unjustifiable discrimination and must not constitute disguised restriction on international trade. The Article starts with a chapeau that is identical to that of GATT Article XX. Services are key factors in the transnational production chains that shape today's global economy. They touch nearly every aspect of the natural world and the environment, including energy extraction and production, transport, water, travel and tourism, construction, distribution, waste disposal and sewage.[157]

The activities of multinational service corporations including oil companies, electricity producers, waste disposal businesses, private water companies and hotel chains have major environmental impacts around the world. Once the market access and national treatment provisions of GATS are applied to particular sectors as they are intended to be under the current request offer negotiations, the following kinds of regulatory actions to protect the environment could be found WTO-illegal, limitations on the number of oil or gas extractive operations in a particular market or community; restrictions on the volume or number of bulk surface or groundwater extractions by a water service operator; requirements for the use of a certain percentage of renewable sources in electricity supply that disadvantage the cross-border provision of electricity from another country that does not use such renewable sources; a ban on the use of nuclear energy in electricity supply that disadvantages a foreign nuclear power producer; limitations on the number of diving boats allowed on coral reefs; preferences for granting of resource extraction licenses such as for fishing to members of local or indigenous communities.

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[156] Najan, A. (2002) – Trade, environment and sustainable development: towards a Southern agenda, paper presented at the WTO Symposium 2002,

[157] *Busch, Marc L./Reinhardt Eric* 2001: Bargaining in the Shadow of the Law: Early Settlement in GATT/WTO Disputes, in: Fordham International Law Journal

In addition, Article VI imposes restrictions on the domestic regulatory efforts of governments, including environmental laws and regulations affecting service operations. These restrictions currently apply to the particular sectors in which countries have taken commitments, but the current negotiations could expand the restrictions to all service sectors. The Article VI criteria place restrictions on 'technical standards', which can include almost any type of environmental law or regulation.[158] To be acceptable under Article VI, environmental protection must be "based on objective and transparent criteria" and must "not be more burdensome than necessary to ensure the quality of the service". That effectively means that a country must cross a number of hurdles to show that its environmental regulatory efforts are appropriate. First, the country must prove to a WTO disputes panel, in the event of a challenge, that its environmental standards are objective. Under that requirement, panels might demand proof that the environmental standard is based on absolute evidence that the harm that will be caused is scientifically ascertainable.

Such a requirement would depart from the standard precautionary approach, which requires scientific proof of environmental safety for a product or service and would allow for regulation even when there is a lack of full scientific certainty of possible harm. While environmental protection has traditionally rested on the principle of requiring producers to demonstrate safety, past WTO decisions have shifted much of the burden of proof to the regulators. Second, in what has come to be known as the 'necessity test', a country must prove to a WTO disputes panel that its environmental protection rules are the least burdensome possible. In other words, a country cannot simply adopt a reasonable regulatory approach, but must instead identify a full range of alternative approaches and adopt the approach that will affect the economic interests of Foreign Service operators the least. Such requirements under GATS can clearly hinder if not entirely halt reasonable efforts to protect the environment.[159]

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[158] Scha t an, C. (1999) – The environment in r egiona l agr eement s: pr ecedent s or isolated events? Latin American Trade Network (LATN) series brief

[159] Parikh, J K, V K Sharma, U Ghosh and M K Panda (1994): 'Trade and Environment Linkages: A Case Study of India', report prepared for United Nations Conference on Trade and Development,

GATS requires that any disciplines needed to implement these domestic regulation requirements be adopted across all sectors, and negotiations are currently underway that would do just that. The adoption of a 'necessity test' across the board, as the European Union has proposed, would have a significant and chilling impact on domestic regulatory efforts. The latest EU environmental services negotiations proposal also includes a major new area to be subject to GATS disciplines, Water supply is rapidly becoming a privatized sector, with large multinational companies increasingly collecting, extracting and distributing bulk and retail water.[160] Given the increasing water scarcity in many communities, both in developing and developed countries, the proposed inclusion of water collection in GATS raises troubling concerns. Market access commitments, which prohibit quantitative restrictions, could limit the right of governments to restrict the amount of water taken from lakes, rivers and groundwater sources. The resulting increased pressure on water sources could lead to sustained environmental damage.

The Agreement on Trade-related aspects of Intellectual Property Rights

Designed to enhance the protection of intellectual property rights, the TRIPS Agreement makes explicit reference to the environment in Section 5 on Patents. Article 27 (2-3) of Section 5 states that Members may exclude from patentability inventions, the prevention of which within their territory is necessary to protect, amongst other objectives, human, animal or plant life or health or to avoid serious prejudice to the environment.[161] Under the Agreement, Members may also exclude from patentability plants and animals other than microorganisms, as well as essentially biological processes for the production of plants or animals. However, Members must provide for the protection of plant varieties either by patents or by an effective *sui generis* system

[160] ITC (2001): 'Environmental Trade Barriers: Who Wins, Who Loses, What's the Score? *International Trade Forum,* August 3. Jha, Veena (2001)
[161] Anuradha, R.V. 1999. Between the CBD and the TRIPs: IPRs and What It Means for Local and Indigenous Communities.

or a combination of the two. These provisions are designed to address the environmental concerns related to the protection of intellectual property.[162]

The Agreement allows Members to refuse the patenting of inventions which may endanger the environment provided their commercial exploitation is prohibited as a necessary condition for the protection of the environment, as well as to exclude from patentability plants or animals frequently undertaken on ethical concerns. Under the Agreement, Members must provide for the protection of different plant varieties, for the purposes of biodiversity, through patents or other effective means referred to in the Agreement. A member can exclude an invention from patentability if it believes the invention has to be prevented within its territory for these and certain other objectives; and Plants and animals. Micro-organisms have to be eligible for patenting. So do non-biological and microbiological processes for the production of plants or animals. Invented plant varieties have to be also eligible for protection either by patenting, or by an effective system specially created for the purpose ("sui generis")[163], or a combination of the two. Otherwise, plants and animals do not have to be eligible for patenting. These provisions are designed to address the environmental concerns related to intellectual property protection. For ethical or other reasons, they can also exclude plants or animals from patentability, subject to the conditions described above. Until the conclusion of the Uruguay Round, intellectual property rights (IPRs) were not considered to be part of the international trade policy agenda.[164]

However, the adoption of the WTO Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) has brought, albeit uneasily, IPRs into the centre of debates over international trade and globalization. Also in the 1990s, the relationship between IPRs and sustainable development gained prominence in international environmental law and policy making, especially in the Convention on Biological Diversity (CBD). The main issues at the intersection of IPRs and environmental policy

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[162] Dhar, B. and Chaturvedi, S. 1999. Implications of the Regime of Intellectual Property Protection for Biodiversity: A

[163] Dutfield, G. 1997. Background Paper on Intellectual Property Rights in the Context of Seeds and Plant Varieties. IUCN Project on the Convention on Biological Diversity and the International Trade Regime

[164] Gene Campaign. 1998. *Convention of Farmers and Breeders: A Forum for Implementing Farmers and Breeders Rights in Developing Countries.*

are the protection of traditional knowledge; promotion of technology transfer; prevention of bio piracy threats to agricultural biodiversity; and impacts on social equity These issues are being debated and developed in various international fora, including the WTO, the World Intellectual Property Organization (WIPO),[165] the FAO International Treaty on Plant Genetic Resources for Food and Agriculture, and UPOV. In addition, they are prominent in bilateral and regional negotiations on trade liberalization, such as the Free Trade Agreement of the Americas (FTAA) and integrated into inter-regional agreements, such as the Cotonou Agreement. They also appear in regional instruments, such as the Andean Pact, and national legislation on biodiversity. The assertion that the TRIPS Agreement is incompatible with the CBD, made by a number of advocacy NGOs and some developing countries, has several aspects, the main argument is that the TRIPS Agreement is incompatible with Article 8(j) of the CBD, which seeks to protect traditional and local knowledge relating to the conservation of biological diversity.[166]

The CBD requires parties to co-operate to ensure that patents and other intellectual property rights are supportive of and do not run counter to its objectives, implicitly recognizing the potential for conflict. The main potential problems stem from the CBD's emphasis on ensuring that local and indigenous communities mainly in developing countries have control over and reap a share of the benefits from their own biodiversity-related traditional knowledge and "informal" innovations. An example of traditional knowledge is the oral history held by an indigenous community of the herbs and plants that have medicinal properties information of great value to pharmaceutical researchers searching for new drugs. Informal innovation is innovation that is carried out by the actual user of the product or system. For example, farmers have traditionally created innovative new plant varieties by saving seed from previous crops, selecting and planting, generation after generation, those that perform best under their local conditions. This kind of knowledge and innovation has immense and growing value. Genetic resources provide the foundation for a range of new products and technological

[165] Kothari, A. 1997. *Conserving India's Agro-biodiversity: Prospects and Policy Implications.* Gatekeeper Series

[166] Kothari, A. 1999. Intellectual Property Rights and Biodiversity: Are India's Proposed Biodiversity Act and Plant Varieties Act Compatible?

applications in biotechnology, agriculture, medicine and other areas. Knowledge developed and held in traditional knowledge systems of indigenous and local communities can provide clues to genetic resources or biochemicals that can be used for pharmaceuticals, herbal medicines and other products.[167]

No mechanisms are spelled out that grant traditional communities control over their knowledge and innovations, or that ensure they reap a share of the benefits there from. This treatment fails to deliver the kinds of incentives recognized by the CBD as essential to helping preserve biodiversity. Local communities will have much more reason to help preserve biodiversity if they derive some income from it. TRIPS, however, does not require national intellectual property rights regimes to be identical. Individual countries have the right to adopt higher standards than TRIPS requires, and they can address concerns related to the CBD by imposing certain requirements on the process of applying for intellectual property rights protection, such as certification of origin. Countries can also create mechanisms within intellectual property rights law to achieve specific objectives, such as benefit sharing.[168]

The Agreement on Subsidies and Countervailing Measures

The Agreement on Subsidies, which applies to non-agricultural products, is designed to regulate the use of subsidies.[169] Under the Agreement, certain subsidies referred to as "non-actionable" are generally allowed. Under Article 8 of the Agreement on non-actionable subsidies, direct reference had been made to the environment. The SCM Agreement provides for a complex web of provisions aimed at regulating subsidies to ensure that they do not injure the domestic economy of another country, nullify or impair benefits accruing to members under GATT or pose a serious prejudice to the interest of another member. Recognizing the special nature of subsidies, it provides for

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[167] Chaturvedi, S (2002): 'WTO, Biosafety Regulatory Regime and Trade in Genetically Modified Goods: Options before Developing Countries – An Indian Perspective', paper presented at International Conference on Biotechnology and Development: Challenges and Opportunities for Asian Region.

[168] *Bernauer, Thomas* 2003: Genes, Trade and Regulation: The Seeds of Conflict in Food Biotechnology, Princeton, Princeton University Press

[169] Brack, Duncan, Michael Grubb, Craig Windram, 2000. International Trade and Climate Change Policies. RIIA and Earthscan, London

procedural rules on countervailing measures that are different from yet complement the rights of members under the WTO's Dispute Settlement Understanding (DSU). Notably, the SCM Agreement only applies to subsidies granted for goods but not for services. Services subsidies continue to be addressed through the country specific concessions as amongst the non-actionable subsidies that had been provided for under that Article were subsidies used to promote the adaptation of existing facilities to new environmental requirements (Article 8.2(c)).[170]

It was intended to allow Members to capture positive environmental externalities when they arose. The other area of potential conflict is under the WTO agreement on Subsidies and Countervailing measures. When Kyoto parties exempt particular favored industries from an energy tax, or give out domestic emission permits in a non-neutral way, or reward their companies with credits for CDM and JI projects, they might be liable to complaints under the subsidies agreement. In agriculture, payments under environmental programs are exempt from restrictions on subsidies. For example, subsidies for carbon sequestration in forestry or for reduction of methane emissions in agriculture should be permitted under WTO.[171] If we regard their distribution as a financial contribution from government to industry, then that contribution may be considered a subsidy under the WTO's Agreement on Subsidies and Countervailing Measures (SCM). Such subsidies are not automatically prohibited or actionable. To be so they first must be 'specific'—granted to a specific enterprise, industry or sector, and not generally available. Most conceivable allocations would likely go to a small group of industries, with a few getting the lion's share, and so would probably be found specific.

To run afoul of the SCM, however, they must also be shown to either be export promoting, or to harm some foreign competitor. The former is unlikely. The latter might be possible, and parties to the Protocol should bear that possibility in mind when designing national systems of allocation. Under the Agreement on Subsidies and Countervailing Measures (the Subsidies Agreement), a subsidy is defined as a financial

[170] Murase S. 2003. WTO/GATT and MEAs: Kyoto Protocol and Beyond: GETS/FTC/GISPRI Project
[171] Jinnah, S (2003), 'Emissions Trading Under the Kyoto Protocol: NAFTA and WTO Concerns', Georgetown International Environmental Law Review

contribution or benefit conferred by a government to its domestic industries. More specifically, it can take the form of direct transfers, loan guarantees, fiscal incentives such as tax credits, provision of goods and services other than general infrastructure, or direct payments to a funding mechanism. In the context of combating global climate change, the possibilities for fuel substitution and technical innovation are essential to the success of Annex I countries meeting their national emissions targets.[172]

In the WTO jargon, these subsidies "capture positive environmental externalities". It is conceivable that in introducing subsidy incentives to domestic firms, governments will obviously attempt to foster industrial development and, at the same time, achieve reductions in present or future greenhouse gas emissions.[173] However, if the sector where such subsidies are introduced is significantly open to foreign trade, such subsidies could potentially be challenged under WTO rules. The question is then the conditions under which such subsidies would run against WTO rules. Article 3.1 of the Subsidies Agreement prohibits government subsidies that are contingent on export performance or use of domestic over imported products. Subsidies of this sort are prohibited regardless of whether they are applied generally or to specific industries and regardless of whether they are going to cause adverse effects to foreign competitors or not.

Accordingly, subsidies made available for firms to use domestic low carbon-emitting products over foreign, high carbon-emitting like products are considered GATT-illegal. A subsidy is still actionable if it is granted to certain enterprises only and if it causes injury to the domestic industry of another member or serious prejudice to the interests of another member Article 5 of the Subsidies Agreement. Put another way, a subsidy is actionable if it is found either *de jure* or *de facto* specific or if it causes injury or serious prejudice to the economic interests of foreign competitors. Under Article 2.1(a) of the Subsidies Agreement, a subsidy is considered *de jure* specific if only "certain"

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[172] WTO 2004. Note on Code of Good Practice, TBT. http://www.wto.org/english/thewto_e/whatis_e/eol/e/wto03/wto3 WTO 2004. Subsidies and Countervailing Measures

[173] Zarilli, S. Domestic Taxation of Energy Products and Multilateral Trade Rules: Is this a case of unlawful discrimination? Journal of World Trade.

enterprises are eligible. Aimed at helping reduce carbon emissions, climate change-related subsidies are most likely to be granted to few energy intensive sectors rather than to be made available economy-wide. Thus, they could be challenged under the *de jure* specificity requirement of the Subsidies Agreement. If they are found to be *de jure* specific, the specificity analysis terminates.

The Agreement on Agriculture

Adopted during the Uruguay Round, the Agreement on Agriculture seeks to reform trade in agricultural products and provides the basis for market-oriented policies. In its Preamble, the Agreement reiterates the commitment of Members to reform agriculture in a manner which protects the environment. Under the Agreement, domestic support measures with minimal impact on trade known as *green box policies* are excluded from reduction commitments contained in Annex 2 of the Agreement.[174] These include expenditures under environmental programmes, provided they meet certain conditions. The exemption enables Members to capture positive environmental externalities. Changes in the laws that govern international agricultural trade will have major and complex sustainable development impacts.

Agriculture and trade in agriculture are economically important for virtually all regions of the world. The highly industrialized economies are overwhelmingly dominant as both exporters and importers of agricultural products, with the U.S. clearly in a leader's position. But the relative importance of agricultural trade to economies in Asia, Latin America and Africa is rising. Agriculture is also of key environmental importance. Irrigation is the largest single user of water in most countries. Agricultural runoff and seepage of fertilizers and pesticides are major sources of groundwater pollution.[175]

Changing patterns of land use, for example from forest to agriculture, can destroy habitat for plant and animal species. Intensive livestock operations in many countries have grown so large that they pose major problems of waste management

[174] Barbour T, Institute for Global Dialogue, workshop on trade and environmental linkages –implications for sustainable development A South African response An overview of trade in EGS
[175] Bond, P. "The Dispossession of African Wealth: Perverse Subsidies and Reverse Resource Flows" 2005

and disposal, and are sources of air and water pollution. Changing patterns of trade and production can have social as well as environmental impacts. Falling prices can increase pressures to migrate from farms, affecting the health of rural communities and institutions as well as reducing the human and financial capital available for long-term maintenance of the land. Agriculture was arguably the subject of the most difficult negotiations of the Uruguay Round. Previously, agriculture had been accorded special status that allowed countries to protect their domestic industries in ways not permitted in other sectors. The Uruguay Round's Agreement on Agriculture was a first step to bringing agriculture under the normal rule of trade law, mandating among other things the capping of farm export subsidies, reductions in both the value of subsidies and the volume of subsidized exports, and reductions in the domestic support provided to farmers.[176]

From an environmental perspective, one of the key areas of interest in the liberalization agenda is subsidies and other forms of support. At the outset, it is important to distinguish between support that distorts production decisions, and support that does not affect production. A subsidy paid for each hectare under cultivation, for example, affects production by encouraging more land to be cultivated. Farm income insurance, on the other hand, is a form of support that has no such undesirable incentives though some economists argue that any payment to farmers distorts production decisions even income insurance reduces risks and thus increases expected returns. This type of non-distorting support is termed "decoupled," and is preferred by both economists and environmentalists.[177]

Agricultural support is also a key development issue. Many developing countries have an advantage in agricultural products compared with their developed country trading partners, but are unable to harness this potential engine for growth. Despite reductions in export subsidies and domestic farm programs, the Agreement on

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[176] Philippe J. Sands, The Environment, Community and International Law, *30 Harv. Int'l L.J. 393, 406 (1989).*

[177] Catherine A. Cooper, The Management of International Environmental Disputes in the Context of Canada-United States Relations: A Survey and Evaluation of Techniques and Mechanisms, 24 Can. Y.B. Int'l L. 247, 252 (1986).

Agriculture allows continued support for certain policies designated as falling within the "green box." These include agro-environmental policies with insignificant impacts on production or trade, such as support for research, disaster payments and structural adjustment programs. In addition, the Agreement has exceptions under a "blue box" for direct payments made under production-limiting programs. One of the key issues for future negotiations is the scope of these exceptions.[178] Some countries point out that agriculture is "multifunctional" that sustainably practiced it not only produces food products, but also protects biodiversity, conserves soil, ensures national food security and so on. They argue that these social benefits should be paid for by the state, and that the resulting support payments belong in the green box.

Environmental concerns over using GMOs have included, among others, the possibility that the insect or herbicide resistant traits of GMOs will spread to other less desirable plant varieties or that they pose unknown risks to human health by containing, for example, allergy- or cancer-causing substances. Others are concerned about GMOs being controlled by a relatively small number of companies and the possible implications for consumers and small-scale agricultural producers, particularly in developing countries.[179] A number of issues could involve GMOs in trade. Conflicts over GMOs could lead to reduced market share if they are stopped at the border by importers. And, the potential disruption of trade flows in agriculture causes problems for less developed countries seeking to use GMOs to explore a potential for enhanced food production.

Aspects of Environmental Norms under the World Trade Organization

The conflict between the WTO jurisprudence and environmental rules such as Multilateral Environmental Agreements (MEAs) could take various forms which include a conflict of basic constitutional principles; a conflict in the methods of regulation; a

[178] Paskura, Jr., Carl A., and Deborah Vaugn Nestor. 1992. "Environmental Protection Agency, Trade Effects of the 1990 Clean Air Act Amendments

[179] Staffin, Elliot B. 1996. "Trade Barrier or Trade Boon: A Critical Evaluation of Environmental Labeling and It Role in Greening of World Trade," Columbia Journal of Environmental Law

conflict arising from the means taken for domestic implementation of environmental policies and rules; and finally, a conflict arising out of the means taken to ensure effectiveness of those rules and regulations.[180] First, there are explicit or inherent differences between the GATT/WTO rules and MEAs on the level of basic constitutional principles. The basic norm of the GATT, as expressed in its Articles I and III, is equal treatment and non-discrimination, and if there are exceptions to this principle, they are recognized only on the specifically prescribed basis, whereas MEAs, for the protection and use of the global environment, are based on the principle of common but differentiated responsibility, according to which developed States bear special responsibility under Principle 7 of the Rio Declaration, while the special situation and needs of developing countries which are given special priority in Principle 6 of the same declaration.[181]

Thus, for example, the UN Framework Convention on Climate Change and the Kyoto Protocol impose on Annex I parties for industrialized and developed countries targets for the emission reduction/restriction of greenhouse gases (GHGs), with no such obligation prescribed for developing countries. As a result, goods produced in developing countries enjoy comparative advantages in the developed countries' markets. Since WTO/GATT law requires that all members be placed, in principle, under the same privileges and obligations, the Annex I countries may assert to impose, in accordance with the WTO rules, countervailing measures or labelling requirements on these goods in order to reduce such advantages enjoyed by the developing countries under the Convention and the Protocol. Such a call is stronger in view of the fact that the total amount of GHG emissions from developing countries is seen to be higher than that from developed countries beginning around the year 2011-20.[182] Country such as the United States Senate passed a resolution in 1997 to the effect that unless there is

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[180] Wofford, Carrie 2000: "A Greener Future at the WTO: The Refinement of WTO Jurisprudence on Environmental Exceptions to GATT." *The Harvard Environmental Law Review*, Vol. 24,

[181] Fredriksson, P.G. (ed.), 1999. *Trade, Global Policy, and the Environment.* World Bank Discussion Paper, No. 402, The World Bank, Washington D.C.

[182] Cf. Switzerland, *The Relationship between the Provisions of the Multilateral Trading System and Multilateral Environmental Agreements (MEAs): Submission to the Committee on Trade and Environment*, WTO Doc. WT/CTE/ W/139 of 8 June 2000

meaningful participation by major developing countries, most notably, China, India, Indonesia, Brazil and Nigeria, the United States would not be a party to the Protocol. Eventually, the Bush administration unsigned the Protocol in April 2001 for the same reason.

Furthermore, there is a difference in the methods of regulation between the WTO/GATT and the environmental rules from which a conflict may arise. One such question is processes and production methods (PPMs)[183] used in MEAs. This kind of regulation was not known to the GATT, which applies its rules primarily on products. In the long history of GATT practice, it was not until 1987 that the GATT was faced squarely with the question of Protocol on Substances that Deplete the Ozone Layer, the committee that drafted the Protocol's Article 4 relating to the trade restriction with non-parties to the Protocol discussed the question of compatibility of the PPM requirements with the GATT. It was understood then that such requirements were permissible under GATT law. As a result, Article 4 of the Montreal Protocol provides not only for the restriction of CFCs themselves and goods containing CFCs, but also of goods which are produced with CFCs even where the goods do not contain them, if the restriction is deemed feasible after a certain period of time. It is this last category of regulations that concern PPMs.

In the context of global warming, it is possible to imagine a wide range of measures that may be contestable under the WTO rules. A party might impose equivalent energy efficiency standards on domestic and imported refrigerators and automobiles. Or a party might ban the national production or import of rice grown under methane intensive cultivation methods or wood harvested under non-sustainable forestry practices. All these measures are related to the question of permissibility of PPMs under the WTO/GATT. The *Tuna/Dolphin* and the *Shrimp/Turtle* disputes were cases involving PPM regulation. There was nothing wrong with either the tuna or the shrimp as products. Presumably, they were clean, healthy tuna and shrimp. The concern of the United States was that the methods and processes of harvesting tuna

[183] Trebilcock, Michael J., and Robert Howse. 1999. *The Regulation of International Trade* (second edition). New York: Routledge.

and shrimp allegedly caused the incidental killing of dolphins and turtles. It should be noted however that dolphins and turtles are not the species protected by treaties, and the fishing nets and equipment used were not of the type prohibited by international law.[184]

In other words, the PPM regulations in question were not treaty-based, unlike the above-mentioned Montreal Protocol, which led to the decision in these two cases that they were not GATT-consistent. The sea turtles are covered by the 1973 Convention on International Trade in Endangered Species (CITES), but the CITES is an instrument which restricts international trade and, strictly speaking, is not an instrument for the protection of such species.[185] Nonetheless, the *Shrimp/Turtle* ruling by the WTO's Appellate Body seems to have broken new ground for PPM requirements under the GATT law, for better or worse. The complaint brought by India, Malaysia, Thailand and Pakistan concerned in this case the prohibition by the United States of the importation of certain shrimp and shrimp products because fishing vessels of these countries did not use turtle excluder devices (TEDs) or equally effective means of protecting turtles from shrimp-trawling activities.[186] The Appellate Body implicitly indicated in its finding that such a PPM requirement might not be inconsistent by its very nature with GATT Article XX(g), although it held that the measures in question be considered unjustifiable under the chapeau of Article XX because of insufficient efforts made by the United States to secure a multilateral acceptance of its exclusionary program. Although there is not yet a universally accepted interpretation of the *Shrimp/Turtle* decision, an argument has been advanced that PPMs may no longer be considered incompatible with the GATT.

If that is the case, however, then the Appellate Body has exceeded its competence as a judicial organ that is supposed to interpret and apply the existing law and not create a new law. It is believed that the Appellate Body's judicial legislation is not

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[184] Tussie, D. e Va squez, P. (2000) – The international negotiation of PPMs: possible, appropriate, convenient? in Tussie, D. (ed.). The environment and international trade negotiations: developing count r ies st akes, McMillan Pr ess / IDRC. Uimonen,

[185] Peel, Jacqueline 2002: "Confusing Product with Process: A Critique of the Application of Product-based Tests to Environmental Process Standards in the WTO." *Environmental Law Journal*, Vol.

[186] Bhagwati. J and R Hudec (1996): *Fair Trade and Harmonisation –Prerequisites for Free Trade*? The MIT Press

acceptable while the CTE, as the WTO's legislative body, has been considering the topic of PPMs for several years now without reaching a consensus.[187] With regard to a difference between the GATT and MEAs on the basis of the methods of regulation, there may be another possibility of conflict. The method of regulation presupposed in the WTO/GATT has been the direct administrative regulation generally called command and control, such as imposition of tariffs and restriction of imports. However, in the field of international environmental law, there has been increasing support for the use of economic instruments that are considered more cost-effective. As a method of indirect regulation, these instruments include deposit-refund systems, charges and taxes, emission trading and financial assistance, and they are premised to use market mechanisms in order to realize the environmental objectives. They have been incorporated in some of the MEAs, most notably in the Kyoto Protocol.[188]

Another type of conflict between the WTO/GATT and MEAs is one that may arise out of the means of domestic implementation. Within the bounds of an MEA, a State party may take different means and measures for its domestic implementation in order to fulfill the objectives of the MEA in question. This may create a situation where the domestic measure is challenged by another State under the relevant rules of WTO/GATT. This is exactly the situation that most countries might face in respect of national implementing legislation taken in accordance with the relevant environmental rules. For example, a national system on the allocation of permits for tradable emissions that is set up in implementation of the Kyoto Protocol but that actually works in favour of domestic firms may well be contested as being GATT-incompatible by exporting countries. Finally, a conflict can occur when an environmental rule incorporates certain measures to ensure its effectiveness by way of sanctions either on non-parties or on non-compliant parties. This is referred to Article 4 of the Montreal Protocol which provides for restriction of trade with non-parties and another discussion was debated in

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[187] Chaturvedi, S and Gunjan Nagpal (2001): 'Product Standards and Trade in Environmentally Sensitive Goods: A Study of South
Asian Experience', RIS discussion Paper No 22.

[188] Petersmann, Ernst-Ulrich. 1997. *The GATT/WTO Dispute Settlement System: International Law, International Organizations and Dispute Settlement*

respect of compliance mechanisms under Article 18 of the Kyoto Protocol which poses the problem of sanctions on the parties that have not complied with the commitments set out in the Protocol.

Theoretical Perspectives

This study is based on Perroni and Wigle (1994)[189] theory of international trade and environmental quality is a numerical general equilibrium model of the world economy with local and global environmental externalities. The model was then used to investigate the relationship between trade and the environment. The study performed by Perroni and Wigle (1994) is most often cited for the lack of impact trade restrictions, and therefore trade, have on the environment and the type of intervention most successful in promoting environmental protection. The authors attempted to assess international trade's relationship to environmental degradation by examining the effects on environmental quality and welfare of the following environmental policies; by adopting Business as usual, which is, current environmental protection levels; a move to full global internalization meaning, that the internalization rate for the domestic and international components of environmental externalities is 1 or 100%, and Unilateral domestic environmental action by North America, meaning that the internalization rate for the domestic component of environmental externalities was 1 or 100% in North America.[190] The authors also examined three trade-policy scenarios, such as benchmark trade barriers; a removal of all trade barriers (free trade); and a three-fold increase in trade barriers (trade wars).

Other theories on the trade and environment such as the Trade and transboundary pollution theory of Scott Taylor and Brian Copeland (1994, 1995) examine the

[189] P. Koenz, C. Bellmann and L. Assuncao (eds.), *Trade, Environment and Sustainable Development: A Reader*, Institute of Advanced Studies/United Nations University, Tokyo.
[190] Barde, J.P. (1997), Economic Instruments for Environmental Protection: Experience in OECD Countries, in OECD (ed.), *Applying Market-Based Instruments to Environmental Policies in China and OECD Countries*, Paris

relationship as well.[191] The model works on quantifying the Effects of trade Liberalization on carbon dioxide (CO2) Emissions Copeland and Taylor (1994), show that environmental considerations can drive industries out of countries even when environmental policies are the same. The authors construct a model with a continuum of goods indexed by their emissions intensity, with pollution affecting welfare as a bad, and an efficient government taxing emissions at their marginal damage level. Since the marginal damage, increases with income, that is, environmental quality is a normal good, when countries trade the richer country specializes in cleaner goods reducing pollution *vis-à-vis* autarky, while the poorer country specializes in the dirtier goods augmenting pollution. Overall pollution increases for the same reasons there are standard gains from trade, the specialization expands output.

One of the first studies to bring the bits and pieces together into a coherent trade model was that of Copeland and Taylor (1994).[192] They present a model with two sets of countries, North (developed) and South (developing), and a range of goods with inherently different pollution intensities. The pollution problems are assumed to be of a local nature, that is, there are no transboundary or global repercussions of domestic production. Both governments are assumed to control pollution by pollution taxes, with North choosing to set higher tax rates because of higher incomes.

As trade is liberalized between North and South, a complicated set of adjustments is set in motion. The first adjustment is a change in the industrial composition whereby polluting industries contract in North and expand in South because of different environmental standards driven by different incomes. The composition effect mitigates pollution in North and magnifies it in South. In addition, there is a scale effect that emanates from an overall expansion of economic activity, which is bad for the environment everywhere. At the same time, the associated income growth brings with it an increased willingness to pay for abatement costs. Pollution taxes will be raised (the

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[191] Antweiler, W., Copeland, B. and Taylor, S. (2001) "Is Free Trade Good for the Environment?" *American Economic Review,*

[192] Krist, William. 2001. "Multilateral Environmental Agreements and the World Trade Organization," discussion paper, Woodrow Wilson Center, March <http://wwics.si.edu/tef/wtoconfpap.htm> (accessed 9 August 2001).

governments in the model act in the interests of the population as a whole), which in turn induce firms to take additional abatement measures to avoid the tax. The pollution per unit of output will then decline (the technique effect).[193]

The authors show that, if the demand for environmental quality increases more than proportionally with income, it is theoretically possible that the technique effect will neutralize the scale effect. However, the technique effect will not neutralize *both* the scale effect and the negative composition effect for South, which has a comparative advantage in polluting industries due to more lax environmental standards. The conclusion is therefore that trade liberalization will mitigate local environmental problems in developed countries (North) and magnify the problems in developing countries (South).[194] Another interesting result from this model, which has a bearing on trade, is that balanced growth between North and South does not increase pollution in the world. The reason is that environmental standards in North and South will then rise in tandem and thereby keep the industrial composition unchanged. Should North grow faster than South, however, emission standards will diverge further, leading to the expansion of polluting industries in South and corresponding contractions in North. This would increase overall pollution, since the average pollution per unit of output will go up. Should South grow faster than North, the opposite pattern will emerge. South's emissions standards will converge upward towards the standards of North, thereby reducing overall pollution. A corollary of this finding is that trade liberalization, to the extent it adds momentum to income convergence, may help solve the world's pollution problems. Indeed, since open economies grow faster than closed economies, and since trade barriers are generally higher in developing countries than in developed countries (with some notable exceptions, including agriculture, textiles and beneficial to the global environment.

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[193] Grossman, Gene M. and Krueger, Alan B. "Environmental Impacts of a North American Free Trade Agreement," in Peter M. Garber, ed., *The U.S.–Mexico free trade agreement.*Cambridge, MA: MIT Press, 1993,

[194] Mani, Muthukumara and Wheeler, David. "In Search of Pollution Havens?: Dirty Industry Migration in the World Economy." World Bank Working Paper No. 16, April 1997.

In a companion study, Copeland and Taylor (1995)[195] carry out a similar exercise; with the critical difference that pollution is no longer assumed to be local but global. An example would be global warming driven by CO2 emissions. The authors assume that emissions are limited by self-imposed national quotas implemented with nationally tradable emissions permits. As trade is liberalized between North and South, the usual composition effect arises, with clean industries expanding in North and polluting industries in South. The market price of pollution permits will then fall in North (since less polluting industries do not have as much use for them) and rise in South. The second set of adjustments is that South will find it optimal to increase the number of emissions permits to accommodate the more polluting composition of the national output. North's best response is to call in some of the emissions permits at home in order to offset the effects on the global environment. However, unless the offset is 100 per cent, which is unlikely, the trade equilibrium will involve higher emissions in the world than before trade was liberalized.

Related Studies

Aspects of Environmental Norms under the World Trade Organization

Starting with Grossman and Krueger's (1991)[196] study on NAFTA's environmental effects, it has become customary to decompose the environmental impact of trade into three interacting elements: a composition effect, a scale effect, and a technique effect. The *composition effect* arises from trade-induced specialization in the world. That is, countries that used to produce a wide range of products to satisfy local demand will now specialize in a subset of the product range and import the other products. This gives economic benefits through increased efficiency and economies of scale in production. The net effect on the local environment will be positive if expanding export

[195] **Copeland, Brian R. and Taylor, M. Scott.** "North- South Trade and the Environment." *Quarterly Journal of Economics,* August 1994, *109*(3), pp. 755–87.

[196] Barkin, J. Samuel. 1998. "International Trade and Environmental Management: Why a Global Environmental Organization is not needed To Balance the GATT and WTO

sectors are less polluting on average than contracting import-competing sectors, and negative if the opposite relation holds.

Since one country's exportables are another country's importables, all countries cannot specialize in the inherently cleaner industries. International trade will therefore redistribute local pollution problems in the world from less polluting to countries that have a comparative advantage in industries that are inherently more polluting, whatever the basis for these comparative advantages may be. Second is the *scale effect*. For given pollution coefficients and a given composition of production, enhanced economic activity will increase pollution. Economic growth at given production composition and given pollution coefficients is therefore always harmful for the environment.[197]

The silver lining of the scale effect is the associated income growth that drives the demand for a cleaner environment in the world. The willingness to pay for goods produced according to stricter environmental standards increases with income. Stricter environmental standards and taxes that reduce pollution per unit of output can thus be expected to follow rising incomes, provided of course that the political process is not captured by polluting industries or compromised by unelected governments that are not held accountable for their actions, or lack of them. The income-induced reduction in pollution per unit of output is known as the *technique effect*. What matters for the environment is the net result of the composition, scale and technique effects, not the individual components.[198] Decomposition is still valuable, however, since it allows us to identify what drives the results.

A related study by Chichilnisky (1994)[199] takes as its starting point the observation that property rights over natural resources are often ill-defined in the South (developing countries) in comparison with the North (developed countries). Specifically, natural resources are often managed as common property systems in the South, with open free

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[197] Baumol, William J. and Wallace E. Oates. 1988. *The Theory of Environmental Policy*. Cambridge: Cambridge U. Press.

[198] Conconi, Paola. 2003. "Green Lobbies and Transboundary Pollution in Large Open Economies,"

[199] **Antweiler, Werner; Copeland, Brian R. and Taylor, M. Scott.** "Is Free Trade Good for the Environment?" National Bureau of Economic Research (Cambridge, MA) Working Paper 6707, August 1998.

access. As noted in the previous section, such policies are renowned for causing overexploitation, since nobody has an individual incentive to conserve the resource. A simple model is used to show that the "tragedy of the commons"[200] is exacerbated by trade between the North and the South. What drives the result is essentially that South has an apparent as opposed to genuine comparative advantage in natural resource extraction because of ill-defined property rights. South will then specialize in resource-intensive goods to a greater extent than it would have done had the property rights been well defined and natural resources managed in a sustainable way.

Again, the problem is not trade per se, but weak property rights regimes and associated overexploitation of natural resources, which become even worse as demand from the world market is added to domestic demand. The results reported above are based on the critical assumption that comparative advantages in the world are determined by differences in environmental standards and resource management. These differences are in turn related to differences in per capita incomes, whereby richer countries adopt stricter environmental standards and better resource management schemes. If this were the whole story, trade liberalization would reduce environmental degradation in developed countries, exacerbate the degradation in developing countries, and increase degradation as far as global environmental problems are concerned. [201]

The moral of the story is that trade liberalization needs to be accompanied by multilateral agreements to safeguard the global environment. However, the assumption that comparative advantages are driven solely by differences in environmental standards must be questioned. Moreover, it is the absolute difference in regulatory stringency that matters for comparative advantages not the abatement cost in any individual country. If the regulations in developing countries are, say, half as stringent, the cost disadvantage would be limited to an average of 0.5 per cent of production

[200] Charnovitz, Steve. 1995. "Improving Environmental and Trade Governance," International Environmental Affairs, Vol. 7,

[201] **Levinson, Arik.** "Environmental Regulations and Industry Location: International and Domestic Evidence," in J. N. Bhagwati and R. E. Hudec, eds., *Fair trade and harmonization: Prerequisites for free trade?* Cambridge, MA: MIT Press, 1996, pp. 429–57.

costs, rising to 2.5 per cent for the most polluting industries. Other factors determining comparative advantage could easily dominate such small policy-induced cost differences. The classical explanation of comparative advantage focuses on two factors: capital and labour. Other things being equal, countries with a capital-labour ratio that exceeds the world average have a comparative advantage in capital-intensive goods, and vice versa. Since developed countries tend to be capital abundant relative to developing countries, the former have a comparative advantage in capital-intensive production and the latter in labour-intensive production.[202]

As shown by Antweiler, Copeland, and Taylor (1998),[203] trade between developed and developing countries will then rather increase pollution in developed countries because of increased specialization in capital-intensive production, reduce pollution in developing countries because of increased specialization in labour-intensive production, and reduce pollution overall in the world because a large share of the polluting production will take place in developed countries with stricter environmental regulations. To summarize this theoretical review which has been demonstrated, is to say that there is no simple one-to-one relationship between trade and the environment, and that the results are often sensitive to the assumptions adopted by individual models. The most robust result is that trade will mitigate local pollution problems in countries with a comparative advantage in industries that tend to be inherently cleaner and magnify local pollution problems elsewhere.

This result is almost definitional. As trade is liberalized, global pollution problems will get worse if differences in environmental standards dominate classical factors of comparative advantage (capital abundance for developed countries and labour abundance for developing countries), and improve if classical factors of comparative advantage dominate differential environmental standards.

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[202] Kraushaar, Jack J. and Ristinen, Robert A. *Energy and problems of a technical society.* New York: Wiley, 1998.

[203] Antweiler, Werner; Copeland, Brian R. and Taylor, M. Scott. "Is Free Trade Good for the Environment?" National Bureau of Economic Research (Cambridge, MA) Working Paper 6707, August 1998.

CHAPTER THREE
METHODOLOGY

Resign design

This study takes the form of an analytical comparative case study of environmental norms relationship with rules of the WTO. The case study methodology is an in-depth contextual analysis of a single set of events, group of people or similar related or grouped phenomena. This qualitative method has been selected because it is well suited to the examination of explanatory how questions such as the one posed by this study of how treatment of environmental norms under the WTO can best harmonized.

Research Population

The study will use states as its basis of analysis because they are member states to the WTO as well as to a number of multilateral environmental agreements. The cases on trade and environmental disputes that were brought before the GATT/WTO were done through the member states and the analysis for relationship between the trade and environment will be done the use of these cases.

Sample Size

The study will involve the analysis of ten different environmental disputes that were handled by GATT/WTO Disputes settling body in order find different rulings from the panels regarding environment protection against harmful trade.

Research Instruments

The research tools that will be utilized in the study will involve through analysis of primary sources which are the reports of the GATT and WTO disputes as well as the legal documents constituting the GATT and WTO and secondary sources in the form of academic books and journals.

Validity and Reliability of the Instruments

Content for reliability and validity will be ensured by subjecting the researcher to select GATT/WTO cases for analysis on the aspects of environmental norms under the world trade organization to judgment by the content experts (who shall estimate the validity on the basis of their experience) such as professors (3), associate professors (3) and senior lecturers (3) in Public International Law.

Data Gathering Procedures

Data gathering procedures will use more of the available literature as well as various articles from journals from the libraries. An overview of the most relevant environmental norms and GATT 1994 jurisprudence will be referred to, to substantiate some of the arguments made. The Internet will be used to access the debates on trade and environment that have been made recently as the debates will form the platform of the study suggestions and views.

Data Analysis

The data analysis will base on rulings handled by the panels on the conflict between the international trade rules and the environmental protection measures. The frequency in which the cases show much divergence in the different interests of trade against environmental norms and policies will be used to determine the levels of conflicts and compatibility of two values of trade promotion and environmental conservation.

Ethical Considerations

To ensure confidentiality of the information retrieved by the researcher and to ascertain the practice of ethics in this study, the following activities will be implemented by the researcher:

1. Acknowledge the authors quoted in this study and the author of the standardized instrument through citations and referencing.

2. Present the findings in a generalized manner.

Limitations of the Study

One of limitations of this study is the outcome of the analysis cannot be used to generalize widely because it is based on too small sample of original data.

CHAPTER FOUR

PRESENTATION, INTERPRETATION AND ANALYSIS OF ENVIRONMENTAL DISPUTES UNDER THE GATT/WTO[204]

Introduction

Disputes between States lie at the core of the debate over the interface between trade liberalization and environmental protection. Given the explosive growth of environmental policy over the last decades, such that it impacts increasingly on economic policy, it is perhaps not surprising those trade disputes over environmental resources have risen in prominence during this time. The result has been a growing conflict between international trade law specifically the World Trade Organization and smaller multilateral environmental agreements (MEAs)[205] over the proper course of action for harmonization. This conflict has been particularly pointed in the area of litigation about the general exceptions article (Article XX) in the General Agreement on Tariffs and Trade (GATT), as countries have become more likely to plead environmental or health concerns as a pretext for implementation of national policies inconsistent with GATT standards. This chapter therefore, explains the findings of the study according to the research objectives and questions as described in chapter one. The results are the reflections of investigations, presentation, analysis and study of selected environmental disputes under the GATT/WTO in relations to the different WTO articles that are inconsistent with the environmental regimes.

GENERAL AGREEMENT ON TARIFFS AND TRADE (GATT) CASES

regarded as emblematic of the trade-environment debate, the two General Agreement on Tariffs and Trade (GATT) Tuna-Dolphin Disputes (1991 Tuna-Dolphin I

[204] Holmes, P., Rollo, J., and Young, A. (2003), 'Emerging trends in WTO dispute settlement: back to the GATT?', *World Bank Policy Research Working Paper, no. 3133*, Washington D.C.: World Bank.

[205] Huang, H., and Labys, W.C. (2002), 'Environment and trade: a review of issues and methods', *International Journal of Global Environmental Issues*, vol. 2

and 1994 Tuna-Dolphin II)[206] were the first to test the legitimacy of using environmentally-unfavourable foreign process and production methods (PPMs) as justification for trade restrictions. The disputes came at a time when trade and environment issues were lurking in the wings of the GATT. Tuna-Dolphin I revolved around a US primary embargo on Mexican tuna caught using purse-seine nets that incidentally trapped a high number of dolphins, while Tuna-Dolphin II centred on a secondary US embargo against countries who re-exported tuna from nations under the US primary embargo.

In great part due to the impact of the Tuna-Dolpin cases, the GATT Working Group on Environmental Measures and International Trade that had been dormant since its inception in 1971 was reactivated a few months after the first Tuna-Dolphin decision in 1992. Under the GATT, six panel proceedings involving an examination of environmental measures or human health-related measures under Article XX were completed. Of the six reports, three have not been adopted by GATT Contracting Parties. Under the WTO Dispute Settlement Understanding, three such proceedings have been completed. The following provides a factual analytical overview of these disputes which include *United States - Canadian Tuna, Canada - Salmon and Herring, Thailand – Cigarettes, United States - Tuna (Mexico), United States - Tuna (EEC), and United States – Automobiles*.

In the case of United States v Canadian Tuna; *United States: prohibition of imports of tuna and tuna products from Canada (1982) of which Canada was the complaining party*[207]*:* The impetus of this dispute was Canada's seizure of 19 United States tuna boats caught fishing inside Canada's 200 mile of fisheries zone. The United States retaliated by prohibiting the importation of all types of tuna and tuna products from Canada pursuant to section 205 the fishery conservation and management act of

[206] Hurlock, M. (1992), The GATT, US law and the environment: a proposal to amend the GATT in the light of the tuna/dolphin Decision', *Columbia Law Review*, vol. 92,

[207] Choi, W-M. (2003), *'Like Products' in International Trade Law: Towards a Consistent GATT/WTO Jurisprudence*, Oxford: Oxford University Press.

1976. These events were part of broader disagreement between Canada the United States relating to jurisdiction over the specific fisheries. The GATT panel first determined that the united import ban constituted a quantitative prohibition for purposes of general proscriptions against quantitative trade measures in the GATT Article XI.

The panel determined that the ban did not fall under the exception in Article XI:2(C) for limits on agricultural and fisheries imports in connection with domestic production restrictions, even though the united state had limited the catch by united states boats of some specifies of tuna such as pacific and atlantic yellowfin, and atlantic bluefin and bigeye.[208] The exception did not apply because; the ban applied to the catch species, for instance, albacore and skipjack whose domestic production the united states had not limited; the ban continued even after the limitation on domestic catch of specific yellowfin tuna was ended; while Article XI:2(a) on quantitative measures to relieve food shortages and Article XI:2(b) on quantitative measures for grading an classification cover both prohibition and restrictions article XI:2(c) extends only to restrictions. The United States ban was a prohibition. The panel then considered the United States claim that measure fell within the general exception in general exception in natural resources.[209]

Referring first to the limitations in Article XX preamble, the panel noted that united states might not necessarily have discriminate against Canada in an arbitrary or unjustifiable manner since it had taken similar actions for similar reasons against costa rica, Ecuador, mexico and peru. Furthermore, according to the panel, the United States did not constitute a disguised restriction on international trade because it had been take as a trade measure and publicly announced as such. This latter finding is important because it makes part of XX preamble hollow. If publicly announcing a measure is all that it takes to overcome the limitation against a disguised restriction on international

[208] *Bridges Trade BioRes* (2003), 'US Commerce Department suspends changes to 'dolphin safe' tuna label', vol. 3, no. 1, 23 January.

[209] Bhagwati, J.N. (2000), 'On thinking clearly about the linkage between trade and the environment', *Environment & Development Economics*, vol. 5,

trade, then the limitation offers little help in screening or curbing protectionist trade restrictive posing as safety or environmental initiatives thus perhaps bringing pressure to bear to interpret the individual paragraphs of article XX restrictively. This interpretation of the disguised restriction language was essentially followed in GATT other cases.[210]

The panel noted that both Canada and the united states had agreed that tuna stocks constituted an exhaustible natural resources in need of conservation management for purposes of GATT article XX(g). However, to fall within ambit of article XX(g), the united states needed to have acted in conjunction with restrictions on domestic production or consumption. The panel noted that the united import ban on all tuna products from Canada went far beyond its restrictions on domestic catches of certain tuna specifies.[211] Moreover the United States offered no evidence of any restrictions on domestic consumption of tuna products. The panel concluded that the united states embargo did not meet the requirements of article XX(g)[212] also was a prohibited quantitative restriction under article XI:1.

In the case of Canada - Salmon and Herring: This is a case in which Canadian export restrictions of certain types of fish were defended by Canada as a fisheries management tool but opposed by the United States as non-tariff barriers masquerading as conservation measures.[213] In May 1986, United States fish producers initiated an investigation of Canadian restrictions on some unprocessed herring and pink sockeye salmon exports. Bilateral consultations under the General Agreement on Tariffs and Trade (GATT) failed to reach a solution. Consequently, the United States requested the establishment of a dispute settlement panel. The GATT panel found against Canada's export prohibitions on Pacific roe herring and two species of salmon. In April, 1989, Canada eliminated those export prohibitions and instead instituted requirements that all Pacific roe herring and five species of salmon be landed in Canada before export, so they could be inspected. The United States disputed the landing

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[210] Esty, D.C. (2000), 'Bridging the trade-environment divide', *Journal of Economic Perspectives*, vol. 15,
[211] GATT (1991), *United States – Restrictions on Imports of Tuna*, Report of the Panel, Geneva: GATT, DS21/R.
[212] *United States - Prohibition of Imports of Tuna and Tuna Products from Canada*, adopted on 22 February 1982.
[213] *Canada - Measures Affecting Exports of Unprocessed Herring and Salmon*, adopted on 22 March 1988.

requirements before a U.S.-Canada Free Trade Agreement (FTA) panel on the grounds that the new requirement perpetuated the GATT-illegal restriction. The panel found the landing requirements were inconsistent with the FTA. The United States has urged Canada to implement that finding to eliminate trade restrictions.[214]

In February 1990, the United States and Canada reached an agreement on an outline for a temporary settlement of the dispute. Covering a four-year window, Canada allowed pacific salmon and roe herring to be eligible for at-sea inspection and export to the U.S., at a rate of 20 percent in 1990 and 25 percent for 1991-93. Under the 1970 Canadian Fisheries Act, Canada maintained regulations prohibiting the exportation or sale for export of certain unprocessed herring and salmon.[215] The United States complained that these measures were inconsistent with GATT Article XI. Canada argued that these export restrictions were part of a system of fishery resource management aimed at preserving fish stocks, and therefore were justified under Article XX(g). The Panel found that the measures maintained by Canada were contrary to GATT Article XI:1 and were justified neither by Article XI:2(b), nor by Article XX(g)[216]

In the case of Thailand – Cigarettes[217]: Under the 1966 Tobacco Act, Thailand prohibited the importation of cigarettes and other tobacco preparations, while authorizing the sale of domestic cigarettes. Moreover, cigarettes were subject to an excise tax, a business tax and a municipal tax. The United States complained that the import restrictions were inconsistent with Article XI:1, and considered that they were justified neither by Article XI:2(c), nor by Article XX(b). It also argued that the internal taxes were inconsistent with Article III:2. Thailand argued, *inter alia*, that the import restrictions were justified under Article XX(b) because the government had adopted measures which could only be effective if cigarette imports were prohibited and

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[214]Charnovitz, "Exploring the Environmental Exceptions in GATT Article XX," Journal of World Trade
[215] Canada: Measures Affecting Exports of Unprocessed Herring and Salmon, Report of the Panel, GATT, BISD 35 Supp. 98 (1988).
[216] T. L.. McDorman, "International Trade Law Meets International Fisheries Law: The Canada-U.S . Salmon and Herring Dispute, "Journal of International Arbitration, December 1990,
[217] *Thailand - Restrictions on Importation of and Internal Taxes on Cigarettes,* adopted on 7 November 1990.

because chemicals and other additives contained in US cigarettes might make them more harmful than Thai cigarettes.[218] The Panel found that the import restrictions were inconsistent with Article XI:1 and not justified under Article X1:2(c). It further concluded that the import restrictions were not "necessary" within the meaning of Article XX(b). The internal taxes were found to be consistent with Article III:2.

In the case of United States - Tuna (Mexico)[219]: The Marine Mammal Protection Act (MMPA) required a general prohibition of the "taking" and importation into the United States of marine mammals, except when explicitly authorized. It governed, in particular, the taking of marine mammals incidental to harvesting yellowfin tuna in the Eastern Tropical Pacific Ocean (ETP), an area where dolphins are known to swim above schools of tuna. Under the MMPA, the importation of commercial fish or products from fish which have been caught with commercial fishing technology which results in the incidental kill or serious injury of ocean mammals in excess of US standards were prohibited.

In particular, the importation of yellowfin tuna harvested with purse-seine nets in the ETP was prohibited *primary nation embargo*, unless the competent US authorities established that the government of the harvesting country had a programme regulating the taking of marine mammals, comparable to that of the United States, and the average rate of incidental taking of marine mammals by vessels of the harvesting nation was comparable to the average rate of such taking by US vessels. The average incidental taking rate in terms of dolphins killed each time in the purse-seine nets for that country's tuna fleet were not to exceed 1.25 times the average taking rate of US vessels in the same period.[220]

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[218] The panel in a subsequent case involving access of U.S. cigarettes to Thailand's market in fact relied on this case in interpreting the "necessity" requirement in Article XX(b). See the description of Thailand: Restrictions on Importation of and Internal Taxes on Cigarettes, Report of the Panel, GATT, BISD 37 Supp. 200 (1990),

[219] *United States - Restrictions on Imports of Tuna, circulated on 3 September 1991*, not adopted.

[220] Schalatek, Liane, *Trade and Environment, the WTO, and MEAs, Facets of a Complex Relationship*, The Heinrich Böll Foundation, Washington, 2001

Imports of tuna from countries purchasing tuna from a country subject to the primary nation embargo were also prohibited *intermediary nation embargo*. Mexico claimed that the import prohibition on yellowfin tuna and tuna products was inconsistent with Articles XI, XIII and III. The United States requested the Panel to find that the *direct embargo* was consistent with Article III and, in the alternative, was covered by Article XX(b) and (g). The United States also argued that the *intermediary nation* embargo was consistent with Article III and, in the alternative, was justified by Article XX, paragraphs (b), (d) and (g). The Panel found that the import prohibition under the *direct* and the *intermediary* embargoes did not constitute internal regulations within the meaning of Article III, was inconsistent with Article XI:1 and was not justified by Article XX paragraphs (b) and (g). Moreover, the *intermediary* embargo was not justified under Article XX(d).

In the case United States - Tuna (EEC)[221]***:*** The EEC and the Netherlands complained that both the *primary* and the *intermediary* nation embargoes, enforced pursuant to the MMPA, did not fall under Article III, were inconsistent with Article XI:1 and were not covered by any of the exceptions of Article XX. The United States considered that the *intermediary* nation embargo was consistent with GATT since it was covered by Article XX, paragraphs (g), (b) and (d), and that the *primary* nation embargo did not nullify or impair any benefits accruing to the EEC or the Netherlands since it did not apply to these countries. The Panel found that neither the *primary* nor the *intermediary* nation embargo were covered under Article III, that both were contrary to Article XI:1 and not covered by the exceptions in Article XX (b), (g) or (d).

In the case of United States – Automobiles[222]***:*** Three US measures on automobiles were under examination in this case; the luxury tax on automobiles "luxury tax", the gas guzzler tax on automobiles "gas guzzler", and the Corporate Average Fuel

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[221] *United States - Restrictions on Imports of Tuna, circulated on 16 June 1994,* not adopted.
[222] *United States - Taxes on Automobiles (hereinafter US - Automobiles), circulated on 11 October 1994,* not adopted.

Economy regulation "CAFE". The European Communities complained that these measures were inconsistent with GATT Article III and could not be justified under Article XX(g) or (d). The United States considered that these measures were consistent with the General Agreement. The Panel found that both the luxury tax -which applied to cars sold for over $30,000 - and the gas guzzler tax - which applied to the sale of automobiles attaining less than 22.5 miles per gallon (mpg) - were consistent with Article III:2 of GATT. The CAFE regulation required the average fuel economy for passenger cars manufactured in the United States or sold by any importer not to fall below 27.5 mpg. Companies that were both importers and domestic manufacturers had to calculate average fuel economy separately for imported passenger automobiles and for those manufactured domestically.[223]

The Panel found the CAFE regulation to be inconsistent with Article III:4 because the separate foreign fleet accounting system discriminated against foreign cars and the fleet averaging differentiated between imported and domestic cars on the basis of factors relating to control or ownership of producers or importers, rather than on the basis of factors directly related to the products as such. Similarly, the Panel found that the separate foreign fleet accounting was not justified under Article XX(g); it did not make a finding on the consistency of the fleet averaging method with Article XX(g). The Panel found that the CAFE regulation could not be justified under Article XX(d).[224]

World Trade Organization (WTO) CASES

In the case of United States - Gasoline[225]: Following the 1990 amendment to the Clean Air Act, the US Environmental Protection Agency (EPA) promulgated the Gasoline Rule on the composition and emissions effects of gasoline, in order to reduce air pollution in the United States. The Gasoline Rule permitted only gasoline of a specified cleanliness "reformulated gasoline" to be sold to consumers in the most polluted areas

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[223] Caldwell, Jake, *Multilateral Environmental Agreements and the GATT/WTO Regime*

[224] *United States - Standards for Reformulated and Conventional Gasoline,* Appellate Body Report and Panel Report, adopted on 20 May 1996.

[225] *United States - Standards for Reformulated and Conventional Gasoline,* Appellate Body Report and Panel Report, adopted on 20 May 1996.

of the country. In the rest of the country, only gasoline no dirtier than that sold in the base year of 1990 "conventional gasoline" could be sold. The Gasoline Rule applied to all US refiners, blenders and importers of gasoline required any domestic refiner which was in operation for at least six months in 1990 to establish an individual refinery baseline, which represented the quality of gasoline produced by that refiner in 1990. EPA also established a statutory baseline, intended to reflect average US 1990 gasoline quality.[226]

The statutory baseline was assigned to those refiners who were not in operation for at least six months in 1990, and to importers and blenders of gasoline. Compliance with the baselines was measured on an average annual basis. Venezuela and Brazil claimed that the Gasoline Rule was inconsistent with GATT Article III, and was not covered by Article XX. The United States argued that the Gasoline Rule was consistent with Article III, and, in any event, was justified under the exceptions contained in Article XX, paragraphs (b), (g) and (d). The Panel found that the Gasoline Rule was inconsistent with Article III, and could not be justified under paragraphs (b), (d) or (g). On appeal of the Panel's findings on Article XX(g), the Appellate Body found that the baseline establishment rules contained in the Gasoline Rule fell within the terms of Article XX(g), but failed to meet the requirements of the chapeau of Article XX.

In the case of United States - Shrimp: Initial Phase[227]: Seven species of sea turtles have been identified world-wide. They spend their lives at sea, where they migrate between their foraging and their nesting grounds. Sea turtles have been adversely affected by human activity, either directly exploitation of their meat, shells and eggs, or indirectly incidental capture in fisheries, destruction of their habitats, pollution of the oceans. In early 1997, India, Malaysia, Pakistan and Thailand brought a joint complaint against a ban imposed by the United States on the importation of certain shrimp and shrimp products.

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[226] Marceau, Gabrielle, *Conflicts of Norms and Conflicts of Jurisdictions, The Relationship between the WTO Agreement and MEAs and other Treaties*, Journal of World Trade 35(6): 1081-1131, 2001

[227] *United States - Import Prohibition of Certain Shrimp and Shrimp Products*, Appellate Body Report and Panel Report adopted on 6 November 1998.

The US Endangered Species Act of 1973 ("ESA") listed as endangered or threatened the five species of sea turtles that occur in US waters and prohibited their take within the United States, in its territorial sea and the high seas. Pursuant to ESA, the United States required that US shrimp trawlers use "turtle excluder devices" (TEDs) in their nets when fishing in areas where there is a significant likelihood of encountering sea turtles. Section 609 of Public law 101-102, enacted in 1989 by the United States, provided, *inter alia*, that shrimp harvested with technology that may adversely affect certain sea turtles may not be imported into the United States, unless the harvesting nation was certified to have a regulatory programme and an incidental take-rate comparable to that of the United States, or that the particular fishing environment of the harvesting nation did not pose a threat to sea turtles.[228]

In practice, countries having any of the five species of sea turtles within their jurisdiction and harvesting shrimp with mechanical means had to impose on their fishermen requirements comparable to those borne by US shrimpers, essentially the use of TEDs at all times, if they wanted to be certified and to export shrimp products to the United States.[229] The Panel considered that the ban imposed by the United States was inconsistent with Article XI and could not be justified under Article XX. The Appellate Body found that the measure at stake qualified for provisional justification under Article XX(g), but failed to meet the requirements of the chapeau of Article XX, and, therefore, was not justified under Article XX of GATT 1994.

In the case of United States - Shrimp: Implementation Phase (Article 21.5)[230]: In 1997, Malaysia introduced an action pursuing to Article 21.5 of the Dispute Settlement Understanding (DSU), arguing that the United States had not properly implemented the findings of the Appellate Body in the Shrimp/Turtle dispute. The implementation dispute revolved around a difference of interpretation between Malaysia

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[228] Favre, S. David, *International Trade in Endangered Species, A Guide to CITES*, Martinus Nijhoff Publishers, Dordrecht, 1989

[229] Center for International Environmental Law – CIEL (1999), *On United States – Import Prohibition of Certain Shrimp & Shrimp Products*, Amicus Brief to the WTO Appellate Body, Washington: CIEL

[230] *United States - Import Prohibition of Certain Shrimp and Shrimp Products*, Recourse to Article 21.5 by Malaysia, Appellate Body Report and Panel Report, adopted on 21 November 2001

and the United States on the findings of the Appellate Body. In Malaysia's view, a proper implementation of the findings would be a complete lifting of the US ban on shrimps. The United States disagreed, arguing that it had not been requested to do so, but simply had to revisit its application of the ban.[231]

In order to implement the recommendations and rulings of the Appellate Body, the United States had issued *Revised Guidelines for the Implementation of Section 609 of Public Law 101-162 Relating to the Protection of Sea Turtles in Shrimp Trawl Fishing Operations* (the "Revised Guidelines"). These Guidelines replaced the ones issued in April 1996 that were part of the original measure in dispute. The Revised Guidelines set forth new criteria for certification of shrimp exporters. Malaysia claimed that Section 609, as applied, continued to violate Article XI:1 and that the United States was not entitled to impose any prohibition in the absence of an international agreement allowing it to do so. The United States did not contest that the implementing measure was incompatible with Article XI:1, but argued that it was justified under Article XX(g). It argued that the Revised Guidelines remedied all the inconsistencies that had been identified by the Appellate Body under the chapeau of Article XX.

The implementation panel was called upon to examine the compatibility of the implementing measure with Article XX(g). It concluded that the protection of migratory species was best achieved through international cooperation. However, it found that whereas the Appellate Body had instructed the United States to negotiate an international agreement for the protection of sea turtles with the parties to the dispute, the obligation at issue was an obligation to negotiate, as opposed to an obligation to conclude an international agreement. It then found that the United States had indeed made serious "good faith" efforts to negotiate such an agreement. The implementation panel therefore ruled in favour of the United States. Malaysia subsequently appealed against the findings of the implementation Panel. It argued that the panel erred in concluding that the measure no longer constituted a means of "arbitrary or unjustifiable discrimination" under Article XX. Malaysia asserted that the United States should have

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[231] Krajewski, Markus, *The Dispute Settlement "Chill Factor" and Conflicts of Jurisdiction - Dispute Settlement in MEAs and in the WTO*, The Heinrich Böll Foundation, Washington, 2001

negotiated and *concluded* an international agreement on the protection and conservation of sea turtles before imposing the import prohibition.[232]

The Appellate Body upheld the implementation panel's finding and rejected Malaysia's contention that avoiding "arbitrary and unjustifiable discrimination" under the chapeau of Article XX required the *conclusion* of an international agreement. Malaysia also argued that the measure at issue resulted in "arbitrary or unjustifiable discrimination" because of its lack of flexibility. However, the Appellate Body upheld the panel's finding and rejected this claim.

In the case of European Communities - Asbestos[233]: Chrysotile asbestos is generally considered to be a highly toxic material, exposure to which poses significant threats to human health (such as asbestosis, lung cancer and mesothelioma). However, due to certain qualities (such as resistance to very high temperature), chrysotile asbestos has been widely used in various industrial sectors. To control the health risks associated with asbestos, the French Government, which had previously been an importer of large quantities of chrysotile asbestos, imposed a ban on the substance as well as on products that contained it. The European Communities justified its prohibition on the grounds of human health protection, arguing that asbestos was hazardous not only to the health of construction workers subject to prolonged exposure, but also to population subject to occasional exposure.[234]

Being the second largest producer of asbestos world-wide, Canada contested the prohibition in the WTO. While it did not challenge the hazards associated with asbestos, it argued that a distinction should be made between chrysotile fibres and chrysotile encapsulated in a cement matrix. The latter, it argued, prevented release of fibres and did not endanger human health. It also argued that the substances which France was using as substitutes for asbestos had not been sufficiently studied and could themselves

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[232] Jackson, J.H. (2000), 'Comments on shrimp/turtle and the product/process distinction', *European Journal of International Law*, vol. 11

[233] *European Communities - Measures Affecting Asbestos and Asbestos-Containing Products*, Appellate Body Report and Panel Report, adopted on 5 April 2001

[234] Constantini P (2001), 'What's wrong with the WTO? asbestos case', http://www.speakeasy.org~peterc/wtow/wto-case.h

be harmful to human health. Canada claimed that the Decree violated GATT Articles III:4 and XI, and Articles 2.1, 2.2, 2.4 and 2.8 of the TBT Agreement, and also nullified or impaired benefits under GATT Article XXIII:1(b). The EC argued that the Decree was not covered by the TBT Agreement. With regard to GATT 1994, it requested the panel to confirm that the Decree was either compatible with Article III:4 or necessary to protect human health within the meaning of Article XX(b).[235]

Despite finding a violation of Article III, the Panel ruled in favour of the European Communities. Under Article III (which requires countries to grant equivalent treatment to like products) the Panel found that the EC ban constituted a violation since asbestos and asbestos substitutes had to be considered "like products" within the meaning of that Article. The panel argued that health risks associated with asbestos were not a relevant factor in the consideration of product likeness. However, the Panel found that the French ban could be justified under Article XX(b).[236] In other words, the measure could be regarded as one which was "necessary to protect animal, human, plant life or health." It also met the conditions of the chapeau of Article XX. It therefore ruled in favour of the European Communities. On appeal, the WTO Appellate Body upheld the panel's ruling in favour of the EC, while modifying its reasoning on a number of issues. For instance, it reversed the Panel's finding that it was not appropriate to take into consideration the health risks associated with chrysotile asbestos fibres in examining the "likeness" of products under GATT Article III:4. The Appellate Body also argued that the case should have been looked at under the TBT Agreement rather than under GATT rules, but did not itself pursue the analysis under TBT since the Appellate Body only has a mandate to examine issues of law in dispute settlement and cannot itself embark on new analyse.

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[235] Shaw, Sabrina and Schwartz, Risa, *Trade and Environment in the WTO, State of Play*, Journal of World Trade

[236] Van den Bossche, Peter, *The Law and Policy of the World Trade Organization,* Cambridge University Press, Cambridge, 2005

CHAPTER FIVE
FINDINGS, RECOMMENDATIONS AND CONCLUSION

Introduction

This chapter summarized the main findings to the research objectives and questions, conclusions were drawn to the study from the findings and proposed possible recommendations that would improve the harmonization and relationships of environmental norms under the WTO with multilateral trade rules.

FINDINGS

1. The findings show that some risk of conflict exists between provisions of MEAs permitting trade measures and WTO rules.
2. The GATT Article XX on environmental general exceptions is widely defined to harmonize the conflict between MEAs and WTO rules.
3. No WTO/GATT dispute resolution panel has addressed the conformity of any MEA trade restrictions with GATT rules and there is no set mechanism in place if this happens.
4. Member states use MEAs as a disguised restriction on trade claiming that an "environmental goal" is the inherent choice of achieving environmental objectives.

RECOMMENDATIONS

Because the MEAs generally do not have the enforcement ability or the provisions for binding compulsory settlement of disputes, this study's focus is the essential changes that the WTO could make to handle the potential situation of a MEA-WTO dispute. The WTO has dealt, albeit unilaterally, with environmental actions in the past and has a

more efficient dispute resolution body than a typical MEA.[237] It has been suggested that there may be value in strengthening the MEA dispute-settlement mechanisms, but that is not the case here as the WTO Dispute Settling Body is presently much stronger than any MEA Dispute Settling Body. The following are the main recommendations for the harmonizing WTO rules and environmental norms.

1. **WTO case by case examinations**

One recommendation for balancing the conflict is for the WTO's Appellate Body to assess the MEA-WTO[238] ambiguities case-by-case. This may be more desirable to develop a political consensus in determining the relationship between trade and the environment in regulatory form. It may be more satisfactory at this time to achieve results on a case-by-case basis with no predetermined rules. Thus, a case can be decided in a more flexible and context-specific manner. Analyzing arguments and evidence in the structured mechanism of the WTO dispute settlement system could be a better way to achieve a greater understanding of the relationship between multilateral environmental agreements and international trade law. MEA instruments are rarely binding, compulsory, or enforceable, which explains why under unilateral environmental agreements, the disputes over trade rules have been in compulsory proceedings before the WTO Dispute Settlement Body, such as *Tuna-Dolphin I and II* and *Shrimp-Turtle*. Under the old GATT procedure, disputes were investigated by a special panel, but its rulings were subject to a consensus among all the GATT members; every nation possessed a veto over any adverse judgment.

[237] Biermann, Frank, *The Rising Tide of Green Unilateralism in World Trade Law, Options for Reconciling the Emerging North-South Conflict*, Journal of World Trade, 2001
[238] Hilary F. French, Costly Tradeoffs: Reconciling Trade and the Environment (1993).

2. Amendment of Article XX for better environmental protections

A second option is to amend the Article XX general exceptions to permit trade measures specific to the MEA or simply broaden the exception to provide more room for environmental provisions or to adopt a collective interpretation of Article XX that would validate the existing MEAs and provide for notification of future MEAs and setting out a 'safe harbour' they' have to fulfill to receive approval." There could be exceptions for trade measures imposed pursuant to obligations in international agreements that are otherwise illegal under the GATT. It would closely resemble *Shrimp-Turtle*, in which the WTO upheld the right of WTO members to legislate for protection of environment beyond national boundaries, provided they do so pursuant to an MEA. The WTO could adopt an environmental clause that defines the WTO-MEA relationship, so that the WTO members could directly negotiate the clause. However, the broadening of the Article XX clause may not be applicable to all types of MEAs, and because the WTO is an economically based organization, it may not distinguish trade issues from environmental issues, regardless of the language of the WTO Preamble.

3. WTO must give MEA obligations in order to immunize MEA from WTO attack

The international trade rules and dispute settlement procedures should give great deference to highly protective environmental policies, that is, WTO should give MEA policies deference and immunize them from WTO attacks in accordance with the Preamble of the WTO. The Committee on trade and environment (CTE) should create criteria that allow it to defer to TREMs, taken pursuant to MEAs that promote sustainable development. However, since MEAs have unclear dispute settlement mechanisms and a low level of enforcement, the WTO is a better place to resolve disputes. The WTO is perhaps the most developed, legalized, and enforced international dispute resolution system in existence, aside from regional regimes. A similar approach

is found in the North American Free Trade (NAFTA), which allows certain MEAs, such as Montreal Protocol, CITES, and Basel Convention, to take precedence over NAFTA obligations.

4. **WTO improve case-by-case consistency by creating interpretive clause with conditions and principles for environment**

The GATT Article XX General Exceptions are not specific for environmental protection, thus it is easier for the WTO dispute panel or appellate body to overlook the principles of environment and sustainable development in favor of trade principles. More case-by-case consistency may be created by implementing an interpretive clause with conditions and principles for the environment. It is preferred that the interpretive decision would allow disputes to be deferred to a MEA dispute settlement, provided both parties are members of the MEA and the WTO and that the MEA is transparent and nondiscriminatory. Adopting an interpretive decision may be the favored approach because it enables the WTO members to discuss and define the relationship between the WTO and MEAs.

CONCLUSION

The tension relationship between international free trade and environmental protection has been a widely debated topic in the past two decades. It is important to reconcile the differences between MEAs, especially those with TREMs, with the WTO rules now because it is inevitable that a dispute will occur between them in the future. Because no central international dispute mechanism exists to deal with this problem, the WTO should address it. Although MEAs generally lack dispute settlement bodies and enforcement mechanisms to deal with any disputes, even with the positive steps the WTO has taken towards the environment; it is still an economic body with the primary goal of free trade. With a number of solutions on the horizon, it is possible that policymakers may find reconciliation between trade and environment in the future.

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APPENDIX 1 A

TRANSMITTAL LETTER

OFFICE OF THE DEPUTY VICE CHANCELLOR (DVC)
SCHOOL OF POSTGRADUATE STUDIES AND RESEARCH (SPGSR)

Dear Sir/Madam,

RE: INTRODUCTION LETTER TO CONDUCT RESEARCH IN YOUR INSTITUTION

Mr. Ador William Miabek is a bonafide student of Kampala International University pursuing a Master of laws in Public International Law.

He is currently conducting a field research for his dissertation entitled, **Aspects of Environmental Norms under the World Trade Organization.**

Your institution has been identified as a valuable source of information pertaining to his research project. The purpose of this letter then is to request you to avail him with the pertinent information he may need.

Any data shared with him will be used for academic purposes only and shall be kept with utmost confidentiality.

Any assistance rendered to him will be highly appreciated.

Yours truly,

Novembrieta R. Sumil, Ph.D.

Deputy Vice Chancellor, SPGSR

APPENDIX 1B

TRANSMITTAL LETTER FOR THE RESPONDENTS

Dear Sir/ Madam,

Greetings!

I am a Master of laws in Public International Law candidate of Kampala International University. Part of the requirements for the award is a dissertation. My study is entitled, **Aspects of Environmental Norms under the World Trade Organization.** Within this context, may I request you to participate in this study by answering the questionnaires. Kindly do not leave any option unanswered. Any data you will provide shall be for academic purposes only and no information of such kind shall be disclosed to others.

May I retrieve the questionnaire within five days (5)?

Thank you very much in advance.

Yours faithfully,

Mr. Ador William Miabek

APPENDIX 11

CLEARANCE FROM ETHICS COMMITTEE

Date_____

Candidate's Data

Name_____

Reg.# _____

Course _____

Title of Study _____

_____

Ethical Review Checklist

The study reviewed considered the following:

___ Physical Safety of Human Subjects

___ Psychological Safety

___ Emotional Security

___ Privacy

___ Written Request for Author of Standardized Instrument

___ Coding of Questionnaires/Anonymity/Confidentiality

___ Permission to Conduct the Study

___ Informed Consent

___ Citations/Authors Recognized

Results of Ethical Review

___ Approved

___ Conditional (to provide the Ethics Committee with corrections)

___ Disapproved/ Resubmit Proposal

Ethics Committee (Name and Signature)

Chairperson _____

Members

APPENDIX III

INFORMED CONSENT

I am giving my consent to be part of the research study of Mr. Ador William Miabek that will focus on emotional intelligence and leadership styles.

I shall be assured of privacy, anonymity and confidentiality and that I will be given the option to refuse participation and right to withdraw my participation anytime.

I have been informed that the research is voluntary and that the results will be given to me if I ask for it.

Initials:_____

Date_____