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The Convergence of Trade and Environment and the Relative Role of WTO

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(Under the Direction of Daniel M. Bodansky)

ABSTRACT

The purpose of this thesis is to give a comprehensive explanation of the worldwide trade and environment conflicts and a thorough analysis of the trade and environment debate between trade specialists and environmentalists. After a general introduction of the origin of and the critical issues involved in the trade and environment debate, this thesis discusses the complicated relation between trade and environment on the basis of economic theory and empirical studies. Then it examines the resolution of specific trade and environment conflicts within a multilateral trading system and the relative role of WTO in accommodating environmental interest into the trade liberalization. At last it comes to its conclusion that there is no inherent conflict between trade liberalization and environmental protection and trade and environment should go hand in hand to achieve a sustainable development and the improvement of human welfare as a whole.

INDEX WORDS: Trade, Environment, Thesis guidelines, Graduate School, Student, Graduate Degree, The University of Georgia

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DEDICATION

To mum, dad, and Nathan.

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INTRODUCTION

The past decade has witnessed two different aspects of the development of human society: on the one hand, the blinding pace of economic growth all over the world created by the liberalization of trade on the one hand, and on the other, the dramatic degradation of environment on our planet in both international and national level, on the other. Not only the scope and the severity of them attract the worldwide attention, the complicated relation between international economy especially international trade and environmental protection has made "trade and environment" a hot topic in every aspect of human life. As a result, two camps, which are led by environmentalists and free traders respectively, and a trade and development debate between these two camps, have appeared. The main issue here is whether there is a fundamental conflict between trade liberalization and environmental protection, or put in another way, can the goal of trade liberalization be achieved without the sacrifice of environmental interests, or even benefiting environmental protection at the same time? This article serves as an effort to address this issue by a thorough analysis of the relation of trade and environment, and, in particular, the relative role of WTO as the leader of the trade regime. Chapter 1 gives a general introduction of the Trade and Environment debate; Chapter 2 addresses three critical questions about the relation between trade and environment involved in the debate and the possibility of their convergence; Chapter 3 discusses the role of WTO in accommodating environmental interests into the multilateral trading system by analyzing the key environment-related issues under WTO; Chapter 4 concludes that there is no

fundamental conflict between trade and environment, and WTO can help to achieve the goal of trade liberalization while maintaining or promoting environmental interests.

CHAPTER 1

TRADE AND ENVIRONMENT DEBATE

Origins of the trade and environment debate

Trade and environment used to be two completely distinct worlds that developed on separate tracks and neither trade specialists nor environmentalists ever perceived their realms as interacting. The recent clash between trade and environment can be traced back to some newly developed social trends all over the world[1]:

• *Rising interest in the environment*

During the past several decades, more than two hundred multilateral environmental agreements have been created, governmental or non-governmental environmental organizations have spread to every corner of the world, while the number of environmentally conscious consumers also keeps growing. This dramatic rise of interest in the environment is, in part attribute to the increased social wealth, especially in developed countries, where the quality of life becomes more salient and at the same time people can afford a higher environmental standard. In addition, the increasing visibility of environmental problems, especially the occurrence of several of the most notorious environmental accidents such as the Exxon Valdez oil spill and the Chernobyl nuclear accident has extended this trend across the world, including some of the least developed countries.

• *Ecological interdependence*

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[1] *See* DANIEL C. ESTY, GREENING THE GATT: TRADE, ENVIRONMENT, AND THE FUTURE, INSTITUTE FOR INTERNATIONAL ECONOMICS, Cha 1, 9-23, 1994.

In the field of environmental policy making, the interdependence of the ecological systems on the earth has been realized with the emergence of global environmental problems such as ozone depletion and climate change. Even a current local environmental problem, such as the loss of wetlands in China, will cause significant negative effect on the global environment in the near future. As a result, coordinated, multilateral environmental programs are required to address environmental problems. Thus, it has been more and more popular to use market-access or other trade measure in international environmental agreements to encourage broad participation. The best example would be the Montreal Protocol, which generally bans the trade of certain products with ozone depletion substances between members and nonmembers to protect the members from a potential competitive disadvantage in the international market of these products[2]. In addition, some countries such as the United States have begun to use trade measures unilaterally to affect the environmental policies in other countries[3]. This has got on the nerves of trade specialists, who fear the more and more common use of trade restrictions or penalties for an environmental purpose will impair the multilateral trade systems as well as the open and uniform world market, especially when environmental protection is used as an excuse for a disguised protectionism.

• *Economic interdependence*

Another factor that drives trade and environment together is the economic integration and interdependence among countries promoted by trade liberalization. The intensity of global competition makes one country's own environmental policy an international

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[2] *See* DAVID HUNTER, JAMES SALZMAN & DURWOOD ZAELKE, INTERNATIONAL ENVIRONMENTAL LAW AND POLICY, Cha 9, 544 (2nd ed. 2002).
[3] *See* Ilona Cheyne, *Environmental Unilateralism and the WTO/GATT System*, 24 GA. J. INT'L & COMP. L. 433.

concern, since it may affect this country's competitiveness in the world market. Environmentalists particularly fear the pressure from international competition will force governments to choose lax environmental standards with less cost to achieve a competitive advantage.

The arguments in the trade-environment debate[4]

A number of arguments from environmentalists suggest that trade liberalization constitutes a serious threat to the world environmental quality and protection:

• Without environmental safeguards, trade may cause environmental harm by promoting economic growth that results in the unsustainable consumption of natural resources and waste production.

• Trade liberalization enables pollution industries to move from countries with tough environmental standards to countries with lax environmental standards to reduce the costs of pollution abatement, which will increase the total amount of pollution all over the world.

• Even if the pollution they cause does not spill over into other nations, countries with lax environmental standards have a competitive advantage in the global marketplace and put pressure on countries with high environmental standards to reduce the rigor of their environmental requirements, or feel reluctant to develop new environmental policies.

• In practice, trade restrictions that should be available as leverage to promote worldwide environmental protection, particularly to address global or transboundary environmental problems and to reinforce international agreements have been limited or forbidden by trade rules and the multilateral trade regimes, led by WTO.

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[4] *See* ESTY, *supra* note 1, Cha 2, at 42; *see also* HUNTER, SALZMAN & ZAELKE, *supra* note 2, Cha 15, at 1127.

As a response, trade specialists argue that:

• International trade helps specialize the production of goods and services and maximize economies of scale, thus promoting the efficient use of natural resources with the force of international competition.

• International trade promotes economic growth and wealth creation and thus generates the political demand and capacity for environmental protection, particularly in developing countries.

• Increased commercial transactions among different nations and cultures driven by liberalized trade stimulate the sharing of experiences, policies, and ideas, which in turn stimulate the dissemination of environment-friendly technology and the public conscious of environmental problems.

CHAPTER 2

ANALYZING THE TRADE-ENVIRONMENT DEBATE:

THE COMPLICATED RELATION BETWEEN TRADE AND ENVIRONMENT

In summary, the three key questions involved in the trade-environment debate are the following: first, whether economic integration through trade and investment constitutes a threat to the environment. Second, whether trade undermines the regulatory efforts of governments to control pollution and resource degradation. And third, whether economic growth driven by trade will simply result in a more unsustainable consumption all over the world, beyond the carrying capacity of our environment or, on the contrary, promote a sustainable use of the world environmental resources.

Before addressing these questions, a brief review of the root causes of environmental degradation will be important so that we can know from where trade can affect the environment. Generally all the factors that speed up environmental degradation can be traced back to "market failures" and "policy failures".[5]

"Market Failures" refer to situations in which the market forces of supply and demand fail to deliver an optimal outcome for society as a whole, which commonly occurs when producers and consumers do not have to bear the full cost of their actions, or the property rights over resources are undefined[6]. An extreme example is the "tragedy of commons", a phenomena in which open-access and ruleless resources are often exploited

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[5] *See* Hakan Nordstrom & Sott Vaughan, *Special Studies 4: Trade and Environment*, 13, WTO Publications, 1999, http://www.wto.org/english/res_e/booksp_e/environment_e.pdf.
[6] *See id.*

due to the market's failing to reflect the scarcity of these resources through price signal[7]. Many environmental resources are "public goods" and thus continue to suffer the "tragedy of the commons". Clean air, water, and especially marine resources such as whale stocks, are free for all but valued by no one.

In some cases people can work out some conservation-cum-distribution scheme between themselves. For example, in the sheep hypothesis of Hardin, the shepherds may come together and issue some limit on the use of pastures and sanctions for overuse. Then the pastures may be maintained to a sustainable level.[8] But when the given resources are diffuse or the people are too many or too difficult to organize, which is always the case in environmental problems, a market solution may not be possible and thus it's up to the government to correct the market failure by proper environmental policies. However, chances are that governments may not omit to do so but may also add a few distortions of their own, which is described as "policy failure"[9].

Ideally, governments would use proper environmental policies, such as "polluter pays principle" to internalize the full environmental costs of production and consumption, and the market failure would be corrected directly at the source by appropriate tax and regulations. However, governments are not always responsive to their citizens' welfare and values. In the real world, the environmental policies reflect the nature of the government and the influence of dominant economic or political factions. Some governments may be shortsighted, incompetent or even corrupt[10] and thus fail to adopt

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[7] *See* HUNTER, SALZMAN & ZAELKE, *supra* note 2, Cha 3, at 127-129 (quoting GARRETT HARDIN, TRAGEDY OF THE COMMONS, 168 Science 243 (1968)).
[8] *See* HUNTER, SALZMAN & ZAELKE, *supra* note 2, Cha 3, at 129 (quoting GARRETT HARDIN, TRAGEDY OF THE COMMONS, 168 Science 243 (1968)).
[9] *See* Nordstrom & Vaughan, *supra* note 5, at 14.
[10] *See* H. JEFFREY LEONARD, POLLUTION AND THE STRUGGLE FOR THE WORLD PRODUCT, Cambridge University Press, 1988, at 226.

adequate laws or enforce them effectively. When this is the case, trade liberalization could exacerbate the consequences of poor environmental policies.[11] For example, without scientific, efficient management of the natural resources within a nation, the competition pressure from the world market may encourage unsustainable fishing and logging and thus aggravate the degradation of natural resources. On the other hand, trade itself, as well as the environment, may suffer from policy failures such as fishing subsidy, which not only distorts international trade but also contributes to over-fishing.

When trade interacts with market failures and policy failures, it affects the environment directly or indirectly. And it should be made clear that what we talk about here is whether there is a fundamental, inherent conflict between trade and environment. Trade and environment conflicts with each other everywhere and new trade and environment conflicts are on the horizon especially in the areas of intellectual property, subsidies, and trade in services. But do these conflicts attribute to some inherent negativity of trade against the environment, or attribute to some other factors such as inappropriate international or national policies or laws, which distort not only environment, but also trade? Now, we will discuss this issue around the three key questions mentioned at the beginning of this chapter.

The effect of economic integration through trade on environment

The worldwide economic integration through liberalized trade has significant and complicated effects on both the domestic and international market. One is the industrial restructuring that takes place when a country exposes itself to the world market, which is called "composition effect"[12]. After examining its comparative advantage and

[11] *See* Nordstrom & Vaughan, *supra* note 5, at 26.
[12] *See* Nordstrom & Vaughan, *supra* note 5, at 29.

disadvantage, a country may choose to expand its export in some sectors or, on the contrary, to expand import in other sectors. Here trade is associated with a relocation of pollution problems around the world. It is always assumed by the environmentalists that polluting industries are likely to migrate from developed to developing countries to take advantage of lax regulations and therefore increase overall pollution in the world. However, this assumption does not seem to be supported by either trade theory or empirical evidence. For example, in a recent study, Birdsall and Wheeler[13] examined changes in the pollution intensity of output in various industrial sectors in developing countries from 1960 through 1990 that had resulted from shifts in the sectoral composition of output in order to test the hypothesis that international trade in product and investment would lead to the migration of industry to less developed countries that tend to have less stringent environmental requirements. With this hypothesis, a faster growth in industrial pollution intensity should be expected in economies that are relatively open to trade (those with low trade barriers and few restrictions on capital flows) as opposed to those relatively closed economies. Contrary to their hypothesis, they found that the relatively closed economies were more pollution intensive. Another study examining direct investment by heavily regulated U.S. industries in facilities abroad found a small increase in such investment by the chemical and mineral processing industries from 1970-80, but this increase in heavily regulated industries' investment in developing countries was no greater than that of U.S. industry as whole.[14]

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[13] *See* Richard B. Stewart, *Environmental Regulation and International Competitiveness*, 102 YALE L.J. 2039, 2077 (quoting Nancy Birdsall & David Wheeler, *Trade Policy and Industrial Pollution in Latin America: Where Are the Pollution Havens?* 159, 167).

[14] *See id.* at 2078 (quoting H. JEFFREY LEONARD, POLLUTION AND THE STRUGGLE FOR THE WORLD PRODUCT, 94, 96).

Several factors may explain these findings. First, polluting industries tend to be capital-intensive industries such as chemicals, pulp and paper, and oil refining. Theoretically these industries are more likely to conglomerate in capital-abundant countries, which are usually developed or newly industrialized countries. Developing countries, on the contrary, are usually label-intensive.[15] In addition, in decisions regarding the setting of new facilities, some traditional factors, such as raw material, access to markets, transportation, and general business climates tend to be more determinative than the differences in environmental standards.[16] There are of course some exceptions, but data tells us that developed countries' share of pollution countries has remained at about 75-80 percent in recent decades and has even increased slightly in the 1990s.[17] Even for those industries that have moved to developing countries, studies of industrial development in Chile, the fertilizer industry in Bangladesh, and steel manufacturing in developing countries have found that new industrial projects achieved much higher degrees of pollution control than legally required, some even comparable to those achieved in developed countries.[18] This may reflect that, for many multilateral firms, it is less costly to duplicate the home technology than to modify the process in each country.

On the other hand, the moving of pollution industries from countries with tougher environmental regulations to countries with comparatively laxer environmental regulations or standards may not be a bad thing for the environment if such differences in environmental standards among countries appropriately reflect the different assimilative

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[15] *See* Nordstrom & Vaughan, *supra* note 5, at 32.
[16] *See* Stewart, *supra* note 13, at 2077.
[17] *See* Nordstrom & Vaughan, *supra* note 5, at 32.
[18] *See* Stewart, *supra* note 13, at 2070.

capacities in those countries. A country's capacity to assimilate pollution depends on its geographic, ecological, and demographic characteristics, which vary from one country to another.[19] A country with fast-running, short rivers can assimilate a higher level of water pollution with less environmental harm than a country with slow-running, long rivers. Also, with a given level of air pollution, a large sparsely populated country will suffer adverse health and environmental effects than will a small, densely populated country.[20] As a result, when pollution industry moves from countries with lower assimilative capacity to countries with higher assimilative capacity, even if the total emission increases slightly, the actual environmental harm may be the same or even less. Thus as long as the environmental policy in a country reflects its assimilative capacity correctly, liberalized trade can help raise consumption without compromising the natural environment and therefore benefit the welfare of human beings and its environment as a whole. At least in this sense, there are no inherent conflicts between trade and environment.

However, conflicts do arise when the political institutions in different countries fail to make appropriate environmental policies, regulations or standards that reflect their actual environment-carrying capacity in these countries. Then comes the second question, whether the pressure from international competition driven by a multilateral trade system will undermine environmental policies.

The effect of liberalized trade on domestic environmental policies

A classical critique from environmentalists against trade liberalization is that the globalization of the world economy promoted by trade makes industries more foot-loose

[19] *See id.* at 2052.
[20] *See* Stewart, *supra* note 13, at 2052.

and more difficult to regulate, and at the same time, the governments, due to the pressure from international competition, tend to relax their current environmental standards, or at least are reluctant to develop new environmental policies in order to keep or increase their competitiveness in the international market. But against the assumption of environmentalists, the cost of environmental regulation does not seem to be enough to affect the competitiveness of a country significantly. For example, studies of the United States environmental regulation costs found that though compliance expenditures for pollution control are large in absolute terms, they represent an average of only .54% of total production costs for industry as a whole and from 1% to 3% for the most heavily regulated industries.[21] It is questionable whether a regulatory cost-disadvantage of few percentage points will turn comparative advantage around. Also, the compliance costs are always overestimated since in practice the pressure from tough environmental regulations usually encourages industries to develop new technologies that reduce both the input of energy and resources and the pollution during the production process, thereby offsetting the direct compliance costs. For example, the costs of federal air and water pollution control in the United States for 1981, which was estimated by EPA at $42.5 billion, were only $28 billion when indirect effects such as the substitution effects that result in fewer purchases thus reducing output of products whose price has increased as a result of regulation were analyzed.[22] Moreover, the cost of the environmental rules or standards with the same level of stringency may vary from one another due to the different policy instruments and legal and administrative approaches chosen to implement theses standards. Command-and-control regulations, like those used in the United States, are

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[21] *See* Stewart, *supra* note 13, 2062-2063.
[22] *See id*. 2066-2067, (quoting Michael Hazilla & Raymond J, Kopp, *Social Cost of Environmental Quality Regulations: A General Equilibrium Analysis*, 98 J. POL. ECON. 853 (1990), at 865).

considerably more costly than market-based instruments that allow producers greater flexibility. It has been found that compared to that in the United States (.28%), the adverse impact of environmental regulation on productivity in Japan, which has comparable stringent environmental standards, was quite small (.06%), due to the greater flexibility of the Japanese regulatory systems.[23]

On the other hand, though it is that true stringent environmental regulations cost more than lax ones, they also bring significant benefit to society and the quality of life. Some may argue that many of the benefits of environmental regulation are nonpecuniary such as the enjoyment of clean air, and thus will not be taken into account in a government's cost-benefit analysis for its choice of environmental policies. However, first whether most countries will be so shortsighted is still questionable and second, stringent environmental requirement does bring observable pecuniary benefits. Cleaner water will lower the costs of treating water by industries in their production processes, cleaner air and more nutritious soil will help reduce crop injury and boost agricultural output, and more importantly, the improved environmental quality will bring a healthier and therefore more productive workforce. [24]Compared to the few percentage points cost, the significant benefits of enhanced environmental protection are more possible to play an important role in governments' cost-benefit balancing.

What is more, though the production cost may be an important factor that affects competitive advantage, it is not the only factor that counts. With the number of environment-conscious consumers growing, firms, especially those multinational firms that are based in countries with active environmental communities, become more and

[23] See Stewart, *supra* note 13, at 2069.
[24] *See id.* at 2065.

more sensitive to their reputation in the international market.[25] We should not forget that it was the unilateral public announcement by Johnson Wax, the consumer products company, to replace CFCs in its brand-leading products such as Pledge and Glade in 1975, ten years before the creation of the Vienna Convention for the Protection of the Ozone Layer that triggered a competitive race for CFC-free aerosols in the United States.[26] Without any government intervention, most companies' fear of losing sales to environmentally conscious consumers drove them voluntarily away from CFCs to butane propellants. Empirical studies have shown that industrial environmental leaders can always recoup costs in the marketplace, and, under some circumstances may even enjoy certain competitive advantages. As an example, firms that accord with the environmental management standards promulgated by the International Organization for Standardization (ISO 14000) seem to enjoy certain competitive advantages, including lower liability insurance, less regulatory oversight, and increased access to customers[27]. And in certain fields, the adoption of ISO 14001 has become a prerequisite for market access to international markets. For example, the car manufacturers Rover and Jaguar, located in the UK, have required that more than 1000 of their first tire suppliers of products either achieve or move towards ISO 14001.[28] Indeed, with more and more consumers willing to pay extra money for environment-friendly products, "green products" and "green technology" themselves become a new market focus. This explains the phenomenon that organic grocery stores like Earth Fare within which the price for an apple may be two or three times higher than that in Wal-Mart still enjoy high profitability. In short, when

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[25] *See* Nordstrom & Vaughan, *supra* note 5, at 41.
[26] *See* HUNTER, SALZMAN & ZAELKE, *supra* note 2, Cha 9, at 535.
[27] *See* Nordstrom & Vaughan, *supra* note 5, at 41.
[28] *See* HUNTER, SALZMAN & ZAELKE, *supra* note 2, Cha 18, at 1422.

consumers care, market forces often reward good environmental performance rather than cost savings at any price. And in this case a high environmental standard may serve as a comparative advantage itself.

Yet market force cannot be counted to solve all the problems themselves. It is only recently that the consumers become sensitive to environmental profile of products and producers, which attribute greatly to the persistent efforts of non-governmental organizations around the world. Also, governments may be incompetent, shortsighted, or even corrupt so that they may not weigh the benefits of environmental protection against it costs correctly. Yet this may happen with or without trade. From the discussion above we can conclude that the difference in the stringency of environmental standards among countries barely affect their competitiveness as a whole and it is definitely not reasonable to regard the competitive concern rather than a country's actual assimilative capacity as a decisive factor in the country's adoption of certain environmental policies. If for some reasons the governments do *think* so, it is not trade that should be blamed. Governments should play their part by basing their policy choice on scientific analysis rather than unreasonable assumption. And as a matter of fact, the competitiveness concerns are only enough to make governments seek cooperative solution to environmental problems before they apply certain environmental measures unilaterally, which actually serves as a positive force for the growing number of multilateral environmental agreements.

The effect of economic growth promoted by trade on environment

Trade is an approach mastered by human society to promote economic prosperity and finally improve the welfare of human beings as a whole. However, it has been claimed that economic growth leads to unsustainable consumption beyond the environmental

carrying capacities and finally exhausts all the natural resources necessary for human activities, especially those non-renewable resources such as fossil fuels. Thus trade, as the promoter of economic growth, should be limited. However, the consistent discovery of new deposits of fossil fuels has met the demand, and a more practical question now is whether we should use them considering the negative effect on global climate. In addition, as long as poverty is still a common phenomenon on this planet and the rich developed countries do not want to help their poor neighbors for free, economic growth is still necessary. Indeed, one reason for the environmental problems in many developing countries is that these countries could not afford an adequate level of environmental protection. Economic growth can allow these countries to shift from some more immediate concerns to long-run sustainability issues. A famous example here is the Kuznets curve[29], which shows that pollution increases at the early stages of development but decreases after a certain income level has been reached.

But it is not right to think the Kuznets curve will turn naturally and necessarily. It will only turn when the income growth is accompanied by improved political conditions, and in developing countries, the quality of environment will be improved only if economic growth and institutional and democratic reforms go hand in hand. Yet even this is more practical than an effort to stop economic growth all over the world by eliminating international trade. Trade can help achieve a more sustainable economic growth by spreading environmental-friendly technologies around the world.

In summary, the relation between trade and environment is much more complicated than a simple question of yes or no. Yet both economic theories and empirical studies fail to support there is any inherent or fundamental conflict between the protection of

[29] *See* HUNTER, SALZMAN & ZAELKE, *supra* note 2, Cha 2, at 55.

environment and an open, multilateral trading system. Accompanied with appropriate political mechanisms and social policies, trade can benefit the resolution of environmental problems by rationalizing the use of natural resources. A good example here is the policies that aim at the internalization of environmental externalities. As addressed above, theoretically, trade liberalization and environmental protection both aim at "rationalizing" the use of resources. However, because many environmental resources are "public goods" and thus priced as zero in the market and the cost of pollution and other environmental impairment is usually bore by the whole society rather than the producers themselves, which is usually referred to as environmental externalities, the price mechanism sometimes fail to reflect the true cost of the totality of the resource being used during production in the international market thus far.[30] A number of political efforts have been made to address this problem, including tax or fees imposed on a source in proportion to the environmental degradation it imposes, such as the wetland compensation fees in the United States and pollution permit systems requiring each source to hold permits corresponding to the amount of pollution it emits.[31] As long as these policies will spread around the world and work well enough to make the market price of certain products closer to their actual costs, liberalized trade will help transfer the focus of international markets from industries with high input of environmental resources to those with less environmental costs such as industry of services or technology.

In this chapter we mainly discussed the general relation between trade and environment. Yet another important respect of the trade-environment debate is

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[30] *See* HUNTER, SALZMAN & ZAELKE, *supra* note 2, Cha 3, 129-130 (quoting David Pearce et al., *Blueprint for a Green Economy* 154-57 (1989)).
[31] *See* Alan Carlin, U.S. E.P.A., *the United States Experience with Economic Incentives to Control Environmental Pollution*, EPA-230-R-92-001, Cha 3, July 1992.

practically, whether trade measures could be used as a leverage to reach specific environmental purpose both domestically and internationally under a multilateral trading system. Considering the critical role of WTO in trade liberalization and disputes settlement in environment-related trade issues, we will use WTO as an example to discuss this practical issue in the following chapter.

CHAPTER 3

THE ROLE OF WTO IN ADDRESSING THE TRADE-ENVIRONMENT ISSUE

In 1991, a dispute settlement panel under the old GATT concluded that the United States violated its GATT obligations for its embargo on tuna caught by fishing methods causing high dolphin mortality.[32] Since this well-known Tuna-Dolphin case, the decisions or actions of WTO/GATT on environment-related trade issues have kept attracting the attentions, if not only critics, of both trade specialists and environmentalists. Has WTO provided chances for the greening of international trade so that to achieve "the objective of a sustainable development, seeking both to protect and preserve the environment and to enhance the means for doing so in a manner consistent with their respective needs and concerns at different levels of economic development"[33], which has given color, texture and shading to the rights and obligations of Members under the WTO agreement generally and under the GATT 1994 particularly? Before these issues are discussed, a brief overview of the history and the treaty structure of the WTO/GATT system and the different types of environmental measures that may raise WTO concerns under these treaties will assist a better understanding of the materials that follows.

A brief overview

1. The history[34]:

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[32] *See* United States –Restrictions on Imports of Tuna, Report of the Panel, DS21/R – 39S/155, September 3, 1991[hereinafter Tuna 1].

[33] JOHN H. JACKSON, WILLIAM J. DAVEY, ALAN O. SYKES, JR., DOCUMENTS SUPPLEMENT TO LEGAL PROBLEMS OF INTERNATIONAL ECONOMIC RELATIONS, Agreement Establishing the World Trade Organization, preamble, para.1, at 3 [hereinafter Documents Supp.]

[34] *See* JOHN H. JACKSON, WILLIAM J. DAVEY AND ALAN O, SYKES, JR., LEGAL PROBLEMS OF INTERNATIONAL ECONOMIC RELATIONS, American Casebook Series, Cha 6, 209-210 (4th ed., 2002).

With the original idea to create a broader international organization to be named the "International Trade Organization" (ITO), a full preparatory conference convened in Geneva from April to October 1947. The General Agreement on Tariffs and Trade (GATT) was drafted at the Geneva conference, simultaneously with the tariff negotiations and the work on the ITO charter. The basic idea for the General Agreement was to embody the results of the tariff negotiations and also include some of the general protective clauses to prevent evasion of the tariff commitments, as a subsidiary agreement under the ITO Charter. However, though the General Agreement was accepted and applied through "Protocol of Provisional Application" (PPA) soon after the conference, the ITO was dead due to the persistent resistance from the Congress of the United States, and thus the GATT became the central organization for coordination national policies on international trade, a role it was not intended to perform. Due to this troubled history, the GATT was crippled in many ways and faced many problems. As a result, at the end of the Uruguay Round of trade negotiations in 1994, a new and better-defined international organization and treaty structure was created to carry forward GATT's work.

2. The treaty structure[35]and potential trade-environment conflicts under these treaties.

GATT 1947&1994: the General Agreement on Trade and Tariff, as amended and changed through the Uruguay Round, embraces a variety of treaty instruments and provides an important code of rules regulating international trade. With the objective to liberalize trade, one of the core rules in the GATT is to constrain governments from imposing or continuing a variety of measures that restrain or distort international trade, including tariffs (Article II), quotas, internal taxes and regulations, subsidy and dumping

[35] *See* JACKSON, DAVEY & SYKES, JR., *supra* note 34.

practices and other non-tariff measures (Article XI) that distort trade. At the core of the General Agreement are two nondiscrimination principles: the most-favored-nation principle and the national treatment principle. The most-favored-nation principle of Article I provides equal treatment of "like products" originating or destined for all other contracting parties. The national treatment principle of Article III provides equal treatment between domestic and imported products. The General Agreement also has a number of exceptions, most of which are provided under Article XX. Trade-related environmental measures regulating production process that will not affect the characteristics of the products produced such as trade restriction on shrimp caught at the risk of high mortalities of sea turtles are most controversial under the General Agreement. Because all the obligations above point to "like products", the determination of which is mainly based on the characteristics of product itself, such environmental measures will constitute violation of the obligations under the General Agreement for providing different treatment for "like products" unless they are justified by any particular exception under Article XX.

TBT&SPS: Through the Uruguay Round, a number of side agreements on 12 topics ranging from agriculture to preshipment inspection were created. The Agreement on Technical Barriers to Trade and the Agreement on the Application of Sanitary and Phytosanitary Measures, two of these side agreements that have direct environmental implication, regulate the application of technical regulations and standards, including measures taken for health reasons and they are mutually exclusive: the SPS Agreement deals with diseases, pests, disease-causing organisms, as well as additives, contaminants, toxins or disease-causing organisms in foods, beverage or feedstuffs, while the TBT

applies to all other product standards. Both TBT and SPS seek to promote the use of harmonized international standards among Members while allowing Members a certain degree of freedom to set their own standards. Environmental measures related to the characteristics of product itself including regulation of pesticide residues in food, taxes on the lead content of fuels, standard for sanitary conditions in slaughterhouses are covered under these two agreements.

GATS: The General Agreement on Trade in Services, created in the Uruguay Round, regulates a broad range of different service sectors, such as banking, tourism insurance, brokerage, tourism, etc. The GATS agreement is comparable to the GATT agreement, which has counterpart provisions to MFN, national treatment and general exceptions.

TRIPS: The Agreement on Trade-Related Aspects of Intellectual Property Rights is designed to require governments to ensure a certain minimum level of protection, both substantively and procedurally, for patents, copyrights, industrial designs, trademarks, business matters and similar matters. It also has clauses concerning MFN, national treatment as well as exceptions for national security. TRIPS agreement embraces a number of intellectual property rights with implication for environmental protection, such as *sui generis* systems for plant variety protection. It may also be relevant to the transfer and disseminating of environmental technology.

Along with the major substantive agreements above are the WTO Charter and the Dispute Settlement Understanding (DSU), a document that established a new dispute settlement system and has in effect played an important role in the trade and environment issues. Under the DSU, when a dispute appears, the disputing parties are first asked to enter consultation to seek a consensus solution. If this fails, as it always does, the WTO

Dispute Settlement Body (DSB) establishes a panel to hear the dispute. The panel makes its findings and submits an interim report to the parties and then to the DSB for final adoption. The losing party may appeal to an Appellate Body for review of issue of law. A dramatic difference between the current WTO dispute settlement system and the one previously practiced under GATT is the panel and the Appellate Body reports are automatically adopted unless the membership decides by consensus against adoption, which is almost impossible in practice. This difference gives the new WTO dispute settlement system a significant advantage of effectiveness and efficiency in handling large numbers of disputes, including environment-related trade disputes, over other international dispute-resolution mechanisms.

Finally it should be mentioned that a Committee on Trade and Environment (CTE)[36] was established as the result of the Uruguay Round of multilateral trade negotiations to identify the relationships between trade and environmental measures and make appropriate recommendations for modification of the rules of the multilateral trading system when necessary. However, the CTE has failed to make any substantive action, largely due to its consensus-based decision-making process, with which a decision can be taken by a majority vote only after it has failed to be reached by consensus, and amendments to GATT 1994 or the multilateral trade agreement require a two-thirds, three-fourths or unanimous vote. Thus compared to the DSB, the role of CTE in the trade-environment debate is quite limited.

Key trade-environment issues under WTO

1. The environmental exceptions to GATT- Article XX

[36] Trade and Environment, GATT Ministerial Decision of 14 April 1994, 33 ILM 1267 (1994).

Article XX of GATT provides general exceptions to the GATT obligations, including the three most substantive ones: most-favored-nation treatment obligation (MFN), National Treatment obligation and prohibition on quantitative restriction[37]. Though the word "environment" is not used, paragraph (b) and paragraph (g) of Article XX provide member states chances to justify their environment-inspired measures that collide with international trade:

> Subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade, nothing in this Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures:
>
> …
>
> (b) necessary to protect human, animal or plant life or health;
>
> …
>
> (g) relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption;…[38]

The language of Article XX was first touched and interpreted in the Tuna-Dolphin case[39] in 1991, which turned out to be a nightmare both for environmentalists and GATT/WTO[40]. After 20 years, with the far reaching Standard Gasoline case in 1996[41],

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[37] *See* Documents Supp. *supra* note 33, General Agreement on Tariffs and Trade 1947, as Amended, Article I, Article II, and Article XI, at 17-18, 20-21, 28-29.
[38] Documents Supp., *supra* note 33, General Agreement on Tariffs and Trade 1947, as Amended, Article XX, 45-46.
[39] Tuan 1, *supra* note 32.
[40] *See* DANIEL C. ESTY, GREENING THE GATT: TRADE, ENVIRONMENT, AND THE FUTURE, Institute for International Economics, Cha 2, at 55.

the Shrimp-Turtle case in1998[42] and the United State final success in the Shrimp-Turtle case in 2002[43], great changes have taken place in the interpretation of Article XX.

1) A brief introduction of cases.

A. Tuan-Dolphin

In 1989, based on the recognition that the nets used to harvest tuna in the Eastern Tropical Pacific (ETP) were causing a significant rate of injury and death to dolphins entangled into the nets[44], the United States revised the Marine Mammal Protection Act of 1972 (MMPA) with the stated goal that the incidental kill or serious injury of marine mammals in the course of commercial fishing be reduced to insignificant levels approaching zero. [45]The MMPA required that United States fishermen and others operating within the jurisdiction of the United States to use certain fishing techniques to reduce the incidental taking of dolphin in the harvesting of fish, [46]and the United States Government ban the importation of commercial fish or products from any country that failed to establish a dolphin-protection regime "comparable" to that of the United States. In order to satisfy this requirement, foreign governments were required to prove to U.S. authorities that the incidental dolphin harm caused by their tuna fleet during a representative time period was no more than 1.25 times higher that the average taking by the U.S. fleet during the same time period. [47]In addition, the MMPA provided that importation of certain tuna and tuna products from any "intermediary nation" shall also

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[41] United States-Standards for Reformulated and Conventional Gasoline, Report of the Panel, WT/DS2/R, January 29,1996 [hereinafter Reformulated Gasoline]
[42]*See* United States-Import Prohibition of Certain Shrimp and Shrimp Production, Report of the Panel, WT/DS58/R, May 15, 1998, [hereinafter Shrimp 1]
[43] United States-Import Prohibition of Certain Shrimp and Shrimp Products, Report of the Panel, WT/DS58/RW, June 15, 2001, [hereinafter Shrimp 2]
[44] Inter-American Tropical Tuan Commission, 1987 Annual Report 8-9 (1978).
[45] *See* Tuna 1, *supra* note 32, para.2.3
[46] *See id.* para.5.1.
[47] *See id.* para.5.2.

be prohibited, unless the intermediary nation proves that it too had acted to ban imports of such tuna and tuna products from the country subject to the direct import embargo.[48]

In 1991, Mexico challenged the MMPA to the GATT, arguing that the measures under the MMPA were quantitative restrictions on importation that were forbidden under Article XI of GATT and also violated the National Treatment Obligation under Article III. The United States argued that (1) these measures were internal regulations under Article III: 4 and the Note Ad Article 3[49] and (2) even if these measures did violate Article XI and Article II, they were justified by Article XX exceptions for protection of animal life and conservation of exhaustible natural resources[50]. After finding that the MMPA was in violation of Article III and Article XI since the restriction under MMPA was based on the harvesting of tuna rather than the imported tuna as a product itself[51], the Panel came to examine, for the first time in the history of GATT, whether a trade measure could be justified under Article XX. With the following findings, the Panel concluded that the United States failed to justify the MMPA with Article XX:

a) The exceptions under Article XX should not be applied to measures that protect human, animal, and plant life or health or conserve natural resources outside the jurisdiction of the Contracting party taking the measure.

b) A limitation on trade based on such unpredictable conditions as linked to the actual taking rate for United States fishermen during a particular period could not be regarded as necessary to protect the health or life of animals under Article XX (b).

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[48] *See* Tuna 1, *supra* note 32, para.5.3.
[49] See id. para.5.8.
[50] See id. para.5.22.
[51] See id. para.5.9-15.

c) Also, a limitation on trade based on unpredictable conditions could not be regarded as being primarily aimed at the conservation of dolphins and could not be considered as "related to the conservation of exhaustible natural resources" under Article XX (g).[52]

The MMPA was challenged again by the European Union in 1994[53] and, with some difference in the reasoning from the former panel, the new Panel came to the same conclusion. And for both the two Tuna-Dolphin cases, the United States exercised its right to block adoption of the panel decision in the GATT, which left the dispute legally unresolved.

B. Reformulated Gasoline case:

Along with the two most criticized panel decisions of the Tuna-Dolphin cases came a number of international efforts aimed at balancing the economic growth and environmental goals, the most influential of which may be the "Agenda 21"from the Rio Conference in 1992. The "Agenda 21" urged states to ensure that international trade and environmental policies are "mutually supportive" with a view of "achieving sustainable development," and called on governments to clarify the relationship between GATT provisions and multilateral environmental agreements. At the same time, a centralized, independent World Trade Organization was established by the Uruguay Round of negotiations in 1994, which included a new Preamble that expressly recognizes the obligation of governments to act in accordance with the objective of "sustainable development," and to seek to "protect and preserve the environment". The new WTO established a permanent Committee on Trade and Environment to address environmental

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[52] *See* Tuna 1, *supra* note 32, para.5.22-34.
[53] United States – Restrictions on Imports of Tuna, Report of the Panel, DS29/R, June 16, 1994[hereinafter Tuna 2]

issues, and more important, it made great changes in the dispute settlement process and established a new permanent tribunal, WTO Appellate Body. Exactly under such a background came out one of the most far-reaching cases about Article XX in the GATT/WTO history: the Reformulated Gasoline case.

In 1996, the Venezuelan and Brazilian governments challenged a United States regulation (the "Gasoline Rule") concerning the maximum levels of gasoline emissions permissible in domestic and imported gasoline to the new WTO. The Gasoline Rule, promulgated by the US Environmental Protection Agency (EPA) under the Clean Air Act with the aim to reduce air pollution in the United States established the reformulated gasoline program and conventional gasoline program, both of which required changes in the composition of gasoline sold to consumers, using 1990 as a baseline year. However, the baseline establishment rules distinguished between foreign and domestic refiners: domestic refiners were permitted to establish individual baselines with three methods, while foreign refiners were generally not allowed to do so and were required instead to use the statutory baseline established by the EPA.[54] Venezuela and Brazil argued that the Gasoline Rule unlawfully discriminated against imported gasoline and thus violated the National Treatment obligation. The United States responded that the treatment accorded to imported gasoline was "on the whole" no less favourable since the statutory standard baseline for foreign refiners and the average of the sum of the individual baselines for domestic refiners both corresponded to average gasoline quality in 1990 and thus the domestic and imported gasoline was treated equally "overall".[55]

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[54] *See* Reformulated Gasoline, *supra* note 41, para.6.1, 6.4.
[55] *See id.* para.6.14.

In addition, United States argued that even if the rule did violate the National Treatment obligation, it was nevertheless justified under Article XX since it "was primarily aimed" at conserving clean air and "necessary" to protect human, animal and plant life against air pollution.[56] The United States further explained that an individual baseline for foreign refiners was not feasible for the goal of the Gasoline Rule because the verification of the data submitted by foreign refiners on which a reliable individual baseline can be established and the enforcement techniques such as criminal and civil sanctions for false data would not be possible against foreign refiners located outside the jurisdiction of the United States.[57]

Finding that the "no less favourable" treatment of Article III: 4 has to be applicable to each individual case and less favourable treatment of particular imported products in some instances could not be balanced by more favourable treatment in other instances,[58] the panel rejected the US argument and concluded that the Gasoline Rule violated the National Treatment obligation.

Noting that under the application of antidumping law, the United States permits foreign companies to submit individual data, which was comparable to the foreign data in this case, the Panel rejected the United States' argument that individual baselines for foreign refiners were not available and found that the baseline establishment method of the Gasoline Rule was not "necessary" under Article XX (b).[59] In addition, in the Panel's view, since the United States could have afforded treatment of imported gasoline consistent with its Article III: 4 obligations without hindering its pursuit of conservation

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[56] *See* Reformulated Gasoline, *supra* note 41, para.6.22, 6.36.
[57] *See id.* para.6.23.
[58] *See id.* para.6.14.
[59] *See id.* para.6.28, 6.29.

policies under the Gasoline Rule, the less favourable baseline establishments methods were "not primarily" aimed at the conservation of natural resources under Article XX (g).[60]

The United States appealed the panel finding that the Gasoline Rule was not justified under the Article XX (g) exception, and thus the case came before the Appellate Body.[61] This is exactly the first case before Appellate body. The final 25-page Appellate Body report, which has been one of the landmarks in the history of the WTO disputes settlement, readdressed some most controversial considerations by the Panel and provided more flexible interpretations for the Article XX (g) and, more importantly, the introductory clause of Article XX (the Chapeau).

In examining whether a trade measure could be justified under Article XX, the Appellate body took a new two-tiered test: first, the provisional justification of the particular exceptions- paragraphs (a) to (j); second, further appraisal of the same measure under the Chapeau.[62]

The Appellate Body came to examine, first, whether the baseline establishment rules fell within the terms of paragraph (g) of Article XX. Against the Panel's reasoning whether the "less favourable treatment" of imported gasoline was related to the conservation of natural resources, the Appellate Body found it was the "measure", namely the baseline establishment rules as a whole that should be examined[63]. In addition, the Appellate Body Found that within certain terms of paragraph (g), "related

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[60] *See* Reformulated Gasoline, *supra* note 41, para.6.40.
[61] United States – Standards for Reformulated and Conventional Gasoline, Report of the Appellate Body, WT/DS2/AB/R, April 29, 1996[hereinafter Reformulated Gasoline App.]
[62] *See id.* at 14.
[63] *See id.* at 8-10.

to" could not be interpreted as "primarily aimed at"[64] and "in conjunction with" did not require identical treatment of domestic and imported products, but rather "even-handedness" in the imposition of restrictions[65]. Based on the findings above, the Appellate Body rejected the Panel's notion and concluded that the Gasoline Rule fell within the terms of Article XX (g).

Then the Appellate Body came to examine whether the Gasoline Rule could pass the test of the Chapeau, the purpose of which, in the view of the Appellate Body, was to avoid abuse or illegitimate use of the exceptions to substantive rules under the GATT available in Article XX[66]. And the Appellate Body found that the United States had failed: first, to explore adequate alternatives, including in particular cooperation with the governments of Venezuela and Brazil, of mitigating the administrative problems[67]; second, to count the costs for foreign refiners that would result from the imposition of statutory baselines[68]. Since the resulting discrimination must have been foreseen, and was not merely inadvertent or unavoidable, the Appellate Body concluded that the baseline establishment rules in the Gasoline Rule, in their application, constituted "unjustifiable discrimination" and a "disguised restriction on international trade" that is prohibited under the Chapeau and thus were not entitled to the justifying protection afforded by Article XX as a whole.[69]

C. Shrimp-Turtle

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[64] *See* Reformulated Gasoline App., *supra* note 61, at 12.
[65] *See id.* 13-14.
[66] *See id.* at 15.
[67] *See id.* at 19.
[68] *See id.* at 20.
[69] *See id.*

Beginning in 1987, the United States issued a series of regulations requiring U.S. shrimp trawl vessels to use approved "turtle-excluder devices" (TEDs) in all areas where there was a risk of interaction with the protected sea turtle species. In 1989, the United States enacted Section 609 of the Endangered Species Act, which called on the Secretary of State to initiate international negotiations for the purpose of entering into treaties to protect the endangered sea turtles. In addition, Section 609 imposed a ban on shrimp imports from states that failed to establish a sea turtle protection program "comparable" to that of the United States, which took effect in May of 1991. However, the Department of State issued guidelines providing that the ban applied only to fourteen countries in the Caribbean/Western Atlantic region, granting these countries a three-year period in which to phase-in measures to avoid the ban. In December 1995, the Court of International Trade issued a decision ruling against the guidelines and directed the Department of the State to impose the ban worldwide within the next four months. The latter complied the ruling in April 1996. Four countries (India, Pakistan, Malaysia, and Thailand) that were subject to the new ban, but had previously been exempted from the ban under the old guidelines, filed a WTO complaint, claiming the United States import ban under Section 609 was quantitative restriction eliminated under Article XI:1. Once again the United States claimed Article XX (b) and (g) as defense.[70] In examining whether the import ban under Section 609 was justified by Article XX, the Panel recalled the finding against unilateralism of the Panel in Tuna Dolphin 2 that:

If Article XX were interpreted to permit contracting parties to deviate from the obligations of the General Agreement by taking implement policies, including conservation policies, within their own jurisdiction, the basic objectives of the General

[70] Shrimp 1, *supra* note 42.

Agreement would be maintained. If however Article XX were interpreted to permit contraction parties to take trade measures so as to force other contraction parties to change their policies within their jurisdiction, including their conservation policies, the balance of rights and obligations among contracting parties, in particular the right of access to markets, would be seriously impaired. Under such an interpretation the General Agreement could no longer serve as a multilateral framework for trade among contracting parties.[71]

In the light of this analysis, the Panel found that Section 609, as applied, conditioned access to the US market for a given product on the adoption by exporting Members of conservation policies that the United States considers to be comparable to its own terms of regulatory programmes and incidental taking and accordingly the measure constituted unjustifiable discrimination between countries where the same conditions prevail forbidden by the Chapeau and thus was not permitted under Article XX.[72]

The United States appealed and the Appellate Body began its analysis of Article XX with an overall rejection of the reasoning process of the Panel.[73]

The appellate Body first reaffirmed the two-tiered analysis of Article XX, emphasizing that the sequence of steps was the reflection of the fundamental structure and logic of Article XX, not inadvertence or random choice. Thus the panel's disregarding the specific exceptions of Article XX (b) and (g) in favor of the Chapeau was inappropriate.[74] Moreover, the Appellate Body held that in interpreting the language of Article XX, the Panel should look at the purpose and object of Article XX itself and

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[71] *See* Shrimp1, *supra* note 42, at 294, n.257.
[72] *See id.* 294,295.
[73] United States – Import Prohibition of Certain Shrimp and Shrimp Products, Report of the Appellate Body, WT/DS58/AB/R, October 12, 1998[hereinafter Shrimp1, App.]
[74] *See id.* para.118-122.

maintaining the WTO multilateral trading system was not a right or an obligation and could not be employed to interpret the Chapeau.[75]

Finally, the Appellate Body rejected the notion of the Panel that WTO members may not unilaterally prescribe conditions for access to their markets, noting that conditioning access to a Member's domestic market on exporting Members' compliance or adoption of policies unilaterally prescribed by the importing Member, in which important and legitimate domestic policies have been embodied, may be a common aspect of measures falling within the scope of one or another of the exceptions (a) to (j) of Article XX, and the interpretation of the Panel would render most of the specific exceptions of Article XX inutile.[76]

After reversing the Panel's findings, the Appellate Body came to examine the justification of Section 609 under Article XX. Appellate Body came to the first tier of the analysis and found that Section 609, in its general design and structure, was a measure relating to the conservation of sea turtles since the import ban was imposed on shrimp that have been harvested with commercial fishing technology which may adversely affect sea turtles and excluded the shrimp harvested under conditions that did not adversely affect sea turtles or within the jurisdiction of the certified countries.[77] Moreover, Section 609 was an even-handed measure since the United States shrimp trawlers were also required to use approved TEDs where there was a likelihood of intercepting sea turtles and the penalties for violations included civil and criminal sanctions[78]. Thus, the

[75] *See* Shrimp1, App., *supra* note 73, para.116.
[76] *See id.* para.121.
[77] *See id.* para.138-142.
[78] *See id.* para.144.

Appellate Body concluded that Section 609 was characterized as provisionally justified under the terms of Article XX (g).

However, the Appellate Body found that the implementation of Section 609 constituted "unjustifiable" and "arbitrary" discrimination and thus failed to satisfy the second tier of the analysis, namely the Chapeau. The Appellate Body based its conclusion on both substantive and procedural considerations:

First, though the statue of Section 609 itself permitted imports from states with comparable regulation regimes[79], in implementing Section 609, the United States not only failed to engage in serious negotiations for the protection of sea turtles with relative countries[80], but also required other WTO Members to adopt an essentially identical regulatory program as that applied to the United States shrimp trawl vessels excluding all shrimp caught in waters of countries that had not been certified by the United States from the U.S. market, even those caught by using methods identical to those employed in United States[81]. This suggested to the appellate body that the application of the measure was more concerned with effectively influencing WTO Members to adopt essentially the same regime as that applied by United States, rather than to protect sea turtles.[82]

Second, the certification processes followed by the United States in applying Section 609 was neither transparent nor predictable[83] and it did not provide foreign interests any opportunity to be heard, to receive a written, reasoned decision, or to respond to arguments against them[84]. Such a lack of transparency and procedural fairness of the

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[79] *See* Shrimp1, App., *supra* note 73, para.161.
[80] *See id.* para.166.
[81] *See id.* para.163-165.
[82] *See id.* para.165.
[83] *See id.* para.180.
[84] *See id.* para.180.

application of Section 609 reflected that Section 609, as it applied, was a measure of "arbitrary discrimination" under the Chapeau.

Finally, the Appellate Body concluded that Section 609, though recognized as legitimate under paragraph (g) of Article XX, had been applied against the requirement of the Chapeau and thus did not qualify for the exemption of Article XX.[85]

As a response to the Appellate Body Report, on July 8 1999, the United States Department of State issued Revised Guidelines for the implementation of Section 609[86] and submitted it to the DSB. The Revised Guidelines introduced more flexibility in considering the comparability of foreign programs and the US program by, for example, providing criteria with which a country may be certified on the basis of having a regulatory programme not involving the use of TEDs[87]. Moreover increased the transparency and predictability of the certification process by providing foreign interests a timetable and procedures within which review by the Department of the State of the relative information was available by request of the harvesting countries[88] and their special concerns and situations could be taken into account in decision-making of the certifications[89]. As a result, when challenged again by Malaysia to WTO in 2001, Section 609 with the Revised Guidelines for the implementation was finally upheld by the Panel and Appellate Body in 2002[90]. This is the first time in the history of WTO disputes settlement that a trade-related environmental measure was justified under Article XX.

2) Interpreting Article XX: WTO's effort to green international trade and the GATT

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[85] *See* Shrimp1, App., *supra* note 73, para.186.
[86] *See* United States-Import Prohibition of Certain Shrimp and Shrimp Products, Report of the Panel, WT/DS58/RW, para.2.22-2.32, June 15, 2001 [hereinafter Shrimp2]
[87] *See id.* para.2.28.
[88] *See id.* para.2.27.
[89] *See id.* para.2.30.
[90] *See* United States-Import Prohibition of Certain Shrimp and Shrimp Products, Report of the Appellate Body, WT/DS58/AB/RW, October 22, 2001[hereinafter Shrimp2, App.]

The language of Article XX is so general that whether an environmental trade measure can be justified under Article XX usually depends on how it is interpreted by the Panel or the Appellate body of WTO. With both determination and discretion of WTO in opening the door for environment-inspired trade measures, the interpretation of Article XX by the Panel or the Appellate body in different cases may differ from one another or even be in conflicts. The following are the main focuses of controversy.

A. The jurisdiction of paragraphs (b) and (g):

Non-extraterritorial→ No territorial limitation→ "sufficient nexus"

Is there any jurisdictional limitation on the application of Article XX? Should the "human, animal or plant life or health" under paragraph (b) or the "exhaustible natural resources" under paragraph (g) be limited to be within the territory of the country invoking Article XX? These questions first appeared in the two Tuna-Dolphin cases and to some extent are still left in doubt since, not only the plain language of Article XX itself does not give any answers to these questions, but also the theories about the jurisdiction in international law are distinct and controversial. Under public international law, there are several relative principles about the jurisdiction of a state: (a) the territorial principle that the state may control activities or resources within its territory, which has received universal recognition; (b) the nationality principle that a state may control the activities of its own citizens, no matter whether inside or outside its territory, which is limited by many states; (c) the passive personality principle that a state may have jurisdiction over aliens for acts abroad harmful to its nationals, which is the least justifiable of the various bases of jurisdiction.[91] In Tuna-Dolphin 1, the Panel, which seemed to be in favor of the territorial principle, addressed this issue in the light of "the drafting history of Article XX

[91] *See* IAN BROWNLIE, PUBLIC INTERNATIONAL LAW, 300-307, Clarendon Press, Oxford, 5th ed., 1998.

(b), the purpose of this provision, and the consequences that the interpretations proposed by the parties would have for the operation of the General Agreement as a whole"[92]. It also found that "the concerns of the drafters of Article XX focused on the use of sanitary measures to safeguard life or health of humans, animals or plants within the jurisdiction of the importing country"[93], and with the broad interpretation, the General Agreement would "then no longer constitute a multilateral framework for trade among all contracting parties"[94], thus implicitly denying the extraterritorial application of the provision.

However, such reasoning was rejected completely in Tuna-Dolphin 2[95]. Against the previous panel's finding, the Panel of Tuna-Dolphin 2 found that in the light of the Vienna Convention for the treaty interpretation, the preparatory work of the treaty and the circumstances of its conclusion could only be permitted as supplementary means of interpretation under limited conditions[96]. Even if it could be used in this certain case, the Panel found the statements and drafting changes made during the negotiation of the General Agreement did not provide clear support for any particular contention on the question of the jurisdiction limitation of paragraph (g)[97] and thus could not support the conclusion that the provisions of Article XX (g) apply only to policies related to the conservation of exhaustible natural resources located within the territory of the contracting party.[98] Then, with the further considerations that: (1) the text of Article XX (g) does not spell out any limitation on the location of the exhaustible natural resources to

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[92] *See* United States –Restrictions on Imports of Tuna, Report of the Panel, DS21/R – 39S/155, para.5.25, September 3, 1991[hereinafter Tuna 1]
[93] *Id.* para.5.26.
[94] *Id.* para.5.27.
[95] *See* United States – Restrictions on Imports of Tuna, Report of the Panel, DS29/R, June 16, 1994 [hereinafter Tuna 2]
[96] *See id.* para.5.20.
[97] *See id.*
[98] *See id.* para.5.20.

be conserved; (2) measures with respect to things located, or actions occurring, outside the territorial jurisdiction of the party taking the measure could in principle be taken under other paragraphs of Article XX and other Articles of the General Agreement, such as Article XX (e), which relates to products of prison labour; (3) under general international law, a state may in particular regulate the conduct of its fishermen, or of vessels having its nationality or any fishermen on these vessels, with respect to fish located in the high seas,[99]the Panel concluded that the United States' policy to conserve dolphins in the eastern tropical Pacific Ocean fell within the range of the policies covered by Article XX (g). Thus, the Panel appeared to accept that Article XX could have extraterritorial reach, in so far as under the limitation of international law.[100] In this case, the Panel's conclusion seemed to be based, in effect, on the active personality principle.[101]

In the Shrimp-Turtle case, the Appellate body took a different approach in addressing this issue. Rather than discussing whether there is a jurisdictional limitation for the measures under Article XX, it provided a new standard, the "sufficient nexus" between the state invoking Article XX and the involved environmental resources.[102] In reaching the conclusion that there was a sufficient nexus between the sea turtles and the United States, the Appellate Body considered that: sea turtles, as highly migratory animals, pass in and out of waters subject to the rights of jurisdictions of various coastal states and the high sea, the sea turtle species covered by Section 609 all occur in waters within the jurisdiction of the United States, and no exclusive ownership is claimed over sea turtles

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[99] *See* Tuna 2, *supra* note 95, para.5.15-20.
[100] *See* Ilona Cheyne, *Environmental Unilateralism and the WTO/GATT System*, 24 GAJICL 433, 1995, at 454.
[101] *See id.*
[102] *See* Shrimp1, App., *supra* note 73, para.133.

in the ocean.[103] With such a concern, dolphins, whales, and other migratory animals that occur within a state's jurisdiction could be considered to have a sufficient nexus with the state. The ozone layer may also fall within the range of paragraph (g) as a certain kind of exhaustible natural resource since it does not belong to any state but exists in the atmosphere of every state. Thus the requirement of "sufficient nexus" appears to be more flexible and encompass a broader range of environmental policies.

B. Paragraph (g): the understanding of "relating to", "exhaustible natural resources", and "in conjunction with"

"Relating to": "substantial relationship" rather than "primarily aimed at"

A principle difference between paragraph (b) and (g) is that they use different standards to test the relation between the given trade measure and the purpose of the measure: "necessary" for the former and "relating to" for the later. Though the exact meaning of "relating to" is unknown, it seems to be less strict than the meaning of "necessary". However, in the Reformulated Gasoline case, the Panel considered that to fall within paragraph (g), the given measure must be "primarily aimed at"[104] the conservation of natural resources, which appeared "to have applied the 'necessary' test not only in examining the baseline establishment rules under Article XX (b), but also in the course of applying Article XX (g)"[105]. As a result, the finding of the Panel was reversed by the Appellate body. The Appellate Body, in the light of the Article 31 of the Vienna Convention on the law of Treaties (Vienna Convention) that "a treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms

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[103] *See* Shrimp1, App., *supra* note 73, para.133.
[104] United States-Standards for Reformulated and Conventional Gasoline, Report of the Panel, WT/DS2/R, para.6.39, January 29,1996 [hereinafter Reformulated Gasoline]
[105] Reformulated Gasoline, App., *supra* note 61, at 10.

of the treaty in their context and in the light of its object and purpose"[106], found that the policies and interests embodied in Article XX and its object and purpose could only be interpreted on a case-to-case basis, "by careful scrutiny o the factual and legal context in a given dispute, without disregarding the words actually used"[107]. It further pointed out that "primarily aimed at" was not itself treaty language and should not be used as a simple litmus test for inclusion or exclusion from paragraph (g)[108]. Then the Appellate Body, considering that without the baseline establishment rules, the scrutiny and monitoring of compliance with the Gasoline Rule would be impossible and the objective of the Gasoline Rule, preventing further air pollution, would be frustrated, concluded that the relationship between the baseline establishment rules and the conservation of clean air was substantial and not incidental or inadvertent.[109] This "substantial relationship" interpretation was further reaffirmed by the Appellate Body in the Shrimp-Turtle case, which found that the means and ends relationship between Section 609 and the United States' policy of conserving the sea turtles was a close and real one and a relationship that was "every bit as substantial as" that between the baseline establishment rules and the conservation of clean air in the Reformulated Gasoline case.[110]

Another important question about the phrase "relating to", the answer of which contributed to the difference between the findings of the Panel and the Appellate Body in the Reformulated Gasoline case, is what should be examined under the "relating to" requirement of paragraph (g). The Panel examined whether the "less favorable treatment"

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[106] Reformulated Gasoline, App., *supra* note 61, 10-11.
[107] *Id.* 11.
[108] *See id.* 12.
[109] *See id.*
[110] *See* United States – Import Prohibition of Certain Shrimp and Shrimp Products, Report of the Appellate Body, WT/DS58/AB/R, para.141, October 12, 1998[hereinafter Shrimp1, App.]

of imported gasoline was related to the conservation of clean air in the United States[111] and thus came to the conclusion against the United States. On the contrary, the Appellate Body found that it was the "measure", i.e. the baseline establishment rules as a whole that should be examined under paragraph (g)[112], and criticized the Panel's referring to its conclusion on Article III: 4 instead of the measure in issue as "turning Article XX on its head"[113]. The Appellate Body further pointed out that the measure, i.e. the baseline establishment rules should not only be examined as a whole, but also be examined in the light of the other requirements of the Gasoline Rule, since the provisions of the baseline establishment rules could not be understood if scrutinized strictly by themselves, totally divorced from other sections of the Gasoline Rule which constituted part of the context of these provisions.[114]

"Exhaustible natural resources": both living and non-living resources

Whether animals such as dolphins or turtles can constitute "exhaustible natural resources" is less controversial than other issues under paragraph (g). Rather, the approach with which WTO/GATT addresses this issue has played a more important role. In the Shrimp-Turtle 1, the Appellate Body, taking into account not only the text of Article XX (g) and the preamble of the WTO Agreement, but also the recent acknowledgement by the international community of the importance of concerted bilateral or multilateral action to protect living natural resources as well as the frequent references to natural resources as embracing both living and non-living resources by the modern international conventions such as the 1982 United Nations Convention on the

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[111] *See* Reformulated Gasoline, *supra* note 104, para.6.40.
[112] *See* United States – Standards for Reformulated and Conventional Gasoline, Report of the Appellate Body, WT/DS2/AB/R, at 10, April 29, 1996[hereinafter Reformulated Gasoline App.]
[113] *Id.*
[114] *See id.* at 12.

Law of the Sea (UNCLS), found that measures to conserve exhaustible natural resources, whether living or non-living, may fall within Article XX (g).[115] This reasoning process of the Appellate Body "has drawn the most praise from commentators for its new-found sensitivity to environmental considerations and welcome reliance on public international law outside the WTO"[116].

"In conjunction with": the requirement of "even-handedness"

The main issue under the second clause of paragraph (g), "if such measure are made effective in conjunction with restrictions on domestic production or consumption", is how to understand the requirement of "in conjunction with", and whether, for example, identical treatment for domestic and imported products is implied under this requirement. These questions did not get addressed until the Reformulated Gasoline case. The Panel did not deal with this issue specifically with respect to the baseline establishment rules since it had earlier failed to past the test of "relating to". But the Panel did make a general finding that a trade measure could only be considered to be made effective "in conjunction with" domestic production restrictions if it was primarily aimed at rendering these restrictions[117]. This finding did not give any light on the issue here since, as discussed above, the phrase "primarily aimed at" was itself not treaty language and need further interpretation. Also, that the Panel used the same standard for the two different but both important terms, "relating to" and "in conjunction with" under paragraph (g) made its finding far from acceptable.

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[115] *See* Shrimp1, App., *supra* note 110, para.130.
[116] Sanford Gaines, *the WTO's Reading of the GATT Article XX Chapeau: A Disguised Restriction on Environmental Measures*, 22 U. PA. J. INT'L ECON. L. 739, at 768.
[117] *See* Reformulated Gasoline, *supra* note 104, para.6.39.

Opposite to the Panel's confusing, if not misleading, understanding of "in conjunction with", the Appellate Body gave a thorough, clear and precise interpretation on this issue. In the light of the basic rule of treaty interpretation that the terms of a treaty are to be given their ordinary meaning, the Appellate body found that the second clause of paragraph (g) referred to governmental measures like baseline establishment rules being "promulgated or brought into effect" "together with" restrictions on domestic production or consumption of natural resources, namely, in the view of the Appellate body, a requirement of "even-handedness" in the imposition of restrictions upon the production or consumption of exhaustible natural resources.[118] In addition, the Appellate Body made special emphasis on understanding the requirement of "even-handedness" that first, there was no textual basis for requiring "identical" treatment of domestic and imported products[119] and second, due to the difficulty in determining causation in both domestic and international law and the substantial period of time before the effect of a given measure may be observable in the field of conservation of natural resources, an empirical effects test should not be used for the availability of paragraph (g)[120].

With these findings, the report of the Appellate Body did make a salutary distinction. With the Appellate Body's more open-minded understanding of the second clause of paragraph (g), an import restriction measure with the policy goal of conservation of natural resources need neither to be companied with an identical treatment on domestic production or consumption, nor to have currently observable effect on the conservation goal to be justified under Article XX (g).

C. The Chapeau: drawing a line of equilibrium

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[118] *See* Reformulated Gasoline, App., *supra* note 112, at 13.
[119] *See id.* at 14.
[120] *See id.*

From a simple, long-untouched piece of language, to the focus of all the concerns or critics, the role changing of the Chapeau in the implementation and interpretation of Article XX may be the best reflection of the changing role WTO/GATT has played in the trade-environment agenda. Before the report of the Appellate Body in the Reformulated Gasoline case, the language of the Chapeau was barely touched since none of the concerned measures, such as the ban on imported tuna product or the baseline establishment rules had satisfied the requirement of the particular provision of paragraph (b) or (g). Only after the Appellate body in the Reformulated Gasoline case concluded that the baseline establishment rules fell within the terms of the paragraph (g), did both the environmentalists and the free traders get a chance to know how a trade-related environmental measure could pass the test of the Chapeau and finally be justified under Article XX.

In the light of its expression, all the exceptions under Article XX are qualified by the Chapeau, the introductory provision, which sets up two tests for a given measure:

a. Whether it is applied in a manner that could constitute arbitrary or unjustifiable discrimination between countries where the same conditions prevail, and,
b. Whether it is applied in a manner that could constitute a disguised restriction on international trade.

Beginning with the report of the Appellate body, the main issues around which the interpretation of the Chapeau is developed are listed below:

(1) The relation between the Chapeau and a particular exception in application

In the Reformulated Gasoline case, the Appellate Body found that to be protected by Article XX, the measure at issue must first, come under one of the particular exceptions, namely paragraph (a) to (j), and second, further satisfy the requirement of the Chapeau.[121] In the view of the Appellate Body, the purpose and object of the Chapeau was the prevention of "abuse", a principle that while the particular exceptions of Article XX may be invoked as a matter of legal right, they should not be applied to frustrate or defeat the legal obligations of the holder of the right under the substantive rules of the General Agreement and thus must be applied with due regard both to the legal duties of the party claiming the exception and the legal right of the other parties concerned.[122] This two-tiered test provided by the Appellate Body in the Reformulated Gasoline case was reaffirmed in the first Shrimp-Turtle case, in which the Appellate Body rejected the Panel's reversing of the sequence of the two-tiered test and found that the sequence of the steps set out in the Reformulated Gasoline case was the reflection of the fundamental structure and logic of Article XX, not inadvertence or random choice.[123]And the Appellate Body, based on the understanding of the purpose and object of the Chapeau by the Appellate Body in the Reformulated Gasoline case, summarized the task of interpreting and applying the Chapeau as "marking out a line of equilibrium" between the right to invoke an exception under Article XX and the other rights under the substantive provisions of the GATT 1994[124].

(2) The subject of the two-tiered test under the Chapeau: the measure itself or the manner in which the measure is applied?

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[121] *See* Reformulated Gasoline, App., *supra* note 112, at 14.
[122] *See id.* at 15.
[123] *See* Shrimp 1 App., *supra* note 110, para.119.
[124] *See id.* para.159.

As early as in the Reformulated Gasoline case, the Appellate Body already answered this question clearly with the finding that the Chapeau addresses, "not so much the questioned measure or its specific contents as such, but rather the manner in which that measure is applied"[125]. However, this general but important point was ignored by the Panel in the first Shrimp-Turtle case, which concluded that Section 609 failed to satisfy the requirement of the Chapeau simply because it was a measure conditioning access to its market upon the adoption by exporting Members of certain policies[126]. The finding was soon reversed by the following Appellate Body. In revering the Panel's finding, the Appellate Body first recalled its finding above in the Reformulated Gasoline case and then further pointed out that the general design of a measure was distinguished from the application of the measure and should be examined in the course of determining whether that measure fell within any particular exception of Article XX following the Chapeau,[127] namely the first tier of the test of the Chapeau. Thus the Panel's repeated focus on the design of Section 609 in examining its consistency with the Chapeau of constituted error in legal interpretation.

(3) The qualification of unilateralism: whether a trade measure is disqualified by the Chapeau simply because it's unilateral characteristics?

Against international cooperation through multilateral agreements among different countries, unilateralism, where a country takes unilateral measure in order to affect other countries for various purposes, is always regarded as inappropriate in the field of international law, including international environmental law. As a multilateral trading

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[125] Reformulated Gasoline, App., *supra* note 112, at 15.
[126] *See* United States-Import Prohibition of Certain Shrimp and Shrimp Production, Report of the Panel, WT/DS58/R, para.7.45, May 15, 1998, [hereinafter Shrimp 1]
[127] *See* Shrimp1, App., *supra* note 110, para.116.

system, WTO/GATT used to hold a very negative attitude toward unilateralism, especially when it comes to measures conditioning market access for a given product to force exporting countries to adopt certain policies. In Tuna-Dolphin 2, the Panel found that permitting contracting parties to take trade measures so as to force other contracting parties to change their policies within their jurisdiction would seriously impair the balance of rights and obligations among contracting parties and the multilateral framework for trade established under the General Agreement; thus Article XX should not be interpreted to do so.[128] This spirit was followed by the Panel in the Reformulated Gasoline case, which further noted that language of the DSU also stresses the primacy of the multilateral system and rejects unilateralism as a substitute[129] and the security and predictability of trade relations under the WTO system would be threatened if Members were allowed to do so[130]. However, this traditional attitude has been changed by the Appellate Body in the first Shrimp-Turtle case. While reversing the Panel's finding, the Appellate Body found that though maintaining the multilateral trading system is a fundamental premise underlying the WTO agreement, it is neither a right nor an obligation, nor could it be used as an interpretative rule in the appraisal of a given measure under the Chapeau.[131] On the contrary, in the view of the Appellate Body, conditioning market access on the exporting Members' adoption of or compliance with policies unilaterally prescribed by importing Members may be a common aspect of measures falling within the scope of the particular exceptions under Article XX [132]. Thus

[128] *See* Tuna 2, *supra* note 95, para.5.26.
[129] *See* Reformulated Gasoline, *supra* note 104, para.7.43.
[130] *See id.* para.7.45.
[131] *See* Shrimp 1 App., *supra* note 110, para.116.
[132] *See id.* para.121.

the Appellate Body has put it clearly on the record of the history of WTO that at least under Article XX, the availability of unilateralism is no longer a question.

(4) The understanding of "arbitrary discrimination", "unjustifiable discrimination" and "disguised restriction"

In the Reformulated Gasoline case, the Appellate Body pointed out that "arbitrary discrimination", "unjustifiable discrimination" and "disguised restrictions" should be read side-by-side since one may amount to another when taken in international trade under Article XX and thus the determination of the presence of "arbitrary or unjustifiable discrimination" may also be taken into account in determining the presence of "disguised restriction.[133] This finding of the Appellate Body is much more a general understanding than a detailed, operational standard. However, in the second Shrimp-Turtle case, the new factors below about Section 609 with the Revised Guidelines, which the Panel took into specific consideration in the second Shrimp-Turtle case, may throw some light on this issue:

The improved flexibility of the application of Section 609

Compared to the Section 609 in the first Shrimp-Turtle case, the Section 609 with the Revised Guideline, as it applied, was more flexible, since:

a) The conservation programmes of exporting countries are no longer required to be "essentially the same" as that of the programmes of United States but only comparable in effectiveness;

b) The importation of shrimp harvested in other manners or under other circumstances may be allowed as long as the manner or circumstance does not pose a threat of the incidental taking of sea turtle; and

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[133] *See* Reformulated Gasoline, App., *supra* note 112, at 17.

c) The importation of shrimp harvested by vessels using TEDs is allowed, even if the exporting nation has not been certified pursuant to Section 609.[134]

The transparency in decision-making process for certification

Under the Revised Guidelines, during the decision-making process, exporting countries may request judicial review or reconsideration of the decisions when their certifications are denied.[135]

Sustained pace of the negotiations and the prospect of their conclusion, the effective contribution of the United States in the context of these negotiations

The panel considered that the United States made sustained and efficient scientific, diplomatic and financial contribution in a number of international conventions for the conservation of migratory species, such as the negotiation of the Memorandum of Understanding on the Conservation and Management of Marine Turtles and their Habitats of the Indian Ocean and South-East Asia.[136] Here the Panel specially emphasized that though good faith efforts in these negotiations were required, the United States should not be held exclusively responsible for reaching an agreement.[137]

Other "serious good faith efforts" such as technology transfer made to relative countries by United States since the adoption of the reports of the original Panel and the Appellate body.[138]

It was on the basis of the above considerations that the Panel concluded that the United States has demonstrated that "Section 609 is not applied so as to constitute a

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[134] *See* Shrimp 2, *supra* note, para.5.96-107.
[135] *See id.* para.5.131-135.
[136] *See id.* para.5.69-78.
[137] *See id.* para.5.78.
[138] *See* United States-Import Prohibition of Certain Shrimp and Shrimp Products, Report of the Panel, WT/DS58/RW, para.5.117-120, June 15, 2001 [hereinafter Shrimp2]

disguised restriction on trade"[139] and thus "is justified under Article XX of the GATT 1994 as long as the conditions… in particular the ongoing serious, good faith efforts to reach a multilateral agreement, remain satisfied"[140].

In summary, there is not a detailed, operational standard for what constitutes "arbitrary or unjustifiable discrimination" or "disguised restrictions". The conclusion of the Panel or the Appellate Body about whether a concerned measure would satisfy the requirement of the Chapeau of Article XX should be made on a case-by-case basis, in the light of the purpose of the Chapeau, drawing a line of equilibrium between a Member's right under Article XX and its obligation and other members' rights under substantive provisions of the GATT. As the Appellate Body in the first Shrimp-Turtle case pointed out, the location of the line, "is not fixed and unchanging"[141] and it "moves as the kind and the shape of the measures at stake vary and as the facts making up specific cases differ"[142].

3) Evaluating the development of Article XX

The attitude of WTO/GATT, as a multilateral trade system, towards a trade-related environmental measure that is best reflected in the understanding and interpretation of Article XX, is not unchanging. When the GATT was crafted more than 50 years ago, the connection of environmental protection with the development of human beings was not available, and the concept of environmental law or international environmental law was not mature. Along with the growing and developing of international environmental law and a worldwide acknowledgement of the status of the environment, the attitude of the

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[139] *See* Shrimp2, *supra* note 138, para.5.144.
[140] *Id.* para.6.1.
[141] Shrimp 1 App., *supra* note 110, para.159.
[142] *Id.*

WTO/GATT is evolving. And the language of Article XX of the GATT, which was once interpreted narrowly, must be, as the Appellate Body of the first Shrimp-Turtle case pointed out, read in the light of the contemporary concerns of the community of nations about the protection and conservation of the environment[143]. And from Tuna-Dolphin to Shrimp-Turtle, it is not hard to find out that the Dispute Settlement Body, recalling the explicit recognition by WTO Members of the objective of sustainable development, is making efforts towards a more flexible interpretation of Article XX, and a more environment-friendly attitude of the whole multilateral trade regime of WTO: a unilateral trade-related environmental measure is no longer unacceptable under WTO, the jurisdictional justification of the measure is not so much a question, and most important, the focus of the requirement of Article XX has shifted, from whether the challenged measure itself falls within the provision of Article XX (b) or (g), to whether the implementation of the measure can be justified by the Chapeau. In short, though there is still a long way to go to the final equilibrium and reconciliation between the environment and trade interest, WTO has moved significantly toward such a great goal and offered chances for a trade-related environmental measure to be justified by Article XX, with which environmentalists can expect to continue winning battles in this trade-environment debate.

2. “Like Products” and “Process and Production Methods” (PPMs)

Under GATT, a country cannot discriminate between domestic products and imported products or imported products from different countries only when such products are “like products”. As a result, the meaning of “like products” turns to be very important, for environmental regulations often seeks to distinguish between similar products on the

[143] *See* Shrimp1, App., *supra* note 110, para.129.

basis of their environmental impacts. The main controversy between trade specialists and environmentalists on this issue is whether products with similar characteristics, but produced with different process or production methods, can be treated as like products under GATT.

Generally there are two kinds of PPMs: PPMs that are directly related to the characteristics of the products concerned and PPMs that generally do not affect the products produced[144]. For the former, examples are pesticide used on food crops that produce residues in food products, cattle raised on growth hormones produce meat with hormone residues, unsanitary conditions in slaughterhouse result in meat that may be contaminated by disease-carrying organisms, and etc. Such PPMs are covered by SPS and TBT agreements[145] under WTO and states may regulate such PPMs as long as they adhere to the disciplines in those Agreements.

However, whether the other PPMs, are permissible under WTO is in doubt. Before WTO, the GATT restricted the determination of likeness on the physical characteristics of concerned products and whether these products are produced in different PPMs should not be taken into account in this issue[146]. Under the new WTO, the approach first taken in the Report of the Working Party on Border Tax Adjustments[147] has been developed by several panels and the Appellate Body. The approach now mainly consists of four criteria: the properties, nature and quality o the products, the end-use of the products, consumers' taste and habits, in other words, consumers' perceptions and behaviour in

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[144] See Thomas J. Shoenbaum, *International trade and Protection of the Environment: the Continuing Search for Reconciliation*, 91 AM. J. INT'L L. 268, at 288.
[145] *See* Documents Supp., *supra* note 33, Agreement on Technical Barriers to Trade (TBT), 149-169; Agreement on the Application of Sanitary and Phytosanitary Measures (SPS), 121-134.
[146] *See* United States – Restrictions on Imports of Tuna, Report of the Panel, DS29/R, para.5.9, June 16, 1994 [hereinafter Tuna 2]
[147] *See* Working Party Report, Border Tax Adjustments, adopted 2 December 1970, BISD 18S/97.

respect of the products, and the tariff classification of the products. Though still, the PPMs issue was not addressed directly here, the introduction of consumers' perceptions and behaviour in analyzing the likeness of the products seem to give chances to the consideration of PPMs, since more environmentally-conscious consumers may see environment-safe PPMs as an important factor in their choice of products.

Recently, a small step has been taken towards a more flexible analysis by the Appellate Body in the EU Asbestos case[148]. In this case, the Appellate Body furthered the approach above to four categories of "characteristics": the physical properties of the products, the extent to which the products are capable of serving the same or similar end-use, the extent to which consumers perceive and treat the products as alternative means of performing particular functions in order to satisfy a particular want or demand, and international classification of the products for tariff purpose[149].

However, the Appellate Body pointed out that these criteria or characteristics are "simple tools to assist in the task of sorting and examining the relevant evidence"[150] and are "neither a treaty-mandated nor a closed list of criteria that will determine the legal characterization of products"[151]. Thus they only serve as a framework for analyzing the likeness, which can aid but not dissolve the duty or the need to examine, in each case, all of the pertinent evidence.[152] In this way, the Appellate Body reaffirmed the finding in the Japan-Alcoholic Beverages case that no one approach will be appropriate for all cases

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[148] European Communities-Measures Affecting Asbestos and Asbestos-Containing Products, Report of the Appellate Body, WT/DS135/AB/R, March 12, 2001 [hereinafter EC-Asbestos]
[149] *See id.* para.101.
[150] *Id.* para.102.
[151] *Id.*
[152] *See id.*

and an assessment utilizing an unavoidable element of individual, discretionary judgment has to be made on a case-by-case basis[153].

For the application of the four-criteria approach above, if adopted in an analysis, the Appellate Body required that a Panel should examine "the evidence relating to each of those four criteria" and weigh "all of that evidence, along with other evidence, in making an overall determination"[154].

The most innovative part of this report may be the claim of competitiveness as the fundamental for the determination of "likeness" under Article III. In its own words,

As products that are in a competitive relationship in the marketplace could be affected through treatment of import "less favourable" than the treatment accorded to domestic products, it follows that the word "like" in Article III: 4 is to be interpreted to apply to products that are in such a competitive relationship. Thus, a determination of "likeness" under Article III: 4 is, fundamentally, a determination about the nature and extent of a competitive relationship between and among products.[155]

With all the considerations above, this new approach to the "like-product" determination is much welcomer to the PPMs supporters. The case-by-case analysis can be applied to give appropriate deference to national political determinations, and the requirement of weighing all of the evidence relating to each of the four criteria along with other evidence makes it no longer appropriate to determine the likeness of products merely on the basis of their physical characteristics. More importantly, the claim of competitive relationship between or among products as the fundamental factor for the

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[153] *See* Japan-Alcoholic Beverages, Report of the Appellate Body, WT/DS8/R, November 1, 1996, para.113, 114.
[154] *See* EC-Asbestos, *supra* note 148, para.109.
[155] *Id.* para.99.

determination of “likeness” gives more chance to the consideration of PPMs in the course of analysis, sinceince, with other things equal, whether the PPMs of given products have environmental-negative impact will play a critical role in the competitiveness of these products, as long as consumers do care about environment.

3. TBT and SPS: promote rather than require standards harmonization.

Currently the product standards and regulations in different countries may differ from each other to a certain degree. Some of these distinctions are justified by differences in economic and social circumstances. However, others may serve as non-tariff impediments in international trade with the standards and regulations deliberately crafted to impose a cost disadvantage on foreign competitors. There are two WTO agreements specially addressing this issue: the Agreement on Sanitary and Phytosanitary Measures (SPS), which applies in general to measures taken to protect human, animals and plant life or health from certain specified risks, and the Agreement on Technical Barriers to Trade (TBT), which applies to the use of other technical regulations and standards. One approach used by these Agreements to combat nontariff barriers is promoting the harmonization of different product regulations and standards in the member states on the basis of international standards.

Such an approach is criticized by some environmentalists, who argue that the requirement of using international standards may force the downward harmonization of environmental laws. However, after examining the provisions of these two agreements carefully, we will conclude that such an argument is not reasonable, because while promoting standards harmonization, SPS and TBT both allow states enough freedom to set environmental standards higher than international standards.

1) The right of Members to adopt or enforce measures or standards

In their preamble, both of the Agreements recognize the right of members to adopt or enforce measures necessary to protect human, animal or plant life or health[156], or for other purposes including the protection of environment[157] as long as the application of such measures, standards or regulations does not constitute arbitrary or unjustifiable discrimination between Members where the same conditions prevail or a disguised restriction on international trade[158]. Put in another way, Members can apply higher product standards as long as they are necessary to fulfill a justified purpose, such as the protection of environment, and are not applied in a way aiming at disturbing international trade.

2) Substantive provisions about a higher standard

A. SPS

The use of higher sanitary or phytosanitary protection is justified substantially under the first part of Artcile3, paragraph 3:

> Members may introduce or maintain sanitary or phytosanitary measures which result in a higher level of sanitary or phytosanitary protection than would be achieved by measure based on the relevant international standards, guidelines or recommendations, if there is a scientific justification or as a consequence of the level of sanitary or phytosanitary protection a Member determines to be appropriate in accordance with the relevant provisions of paragraphs 1 through 8 of Article 5[159]…[160]

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[156] *See* SPS, *supra* note 145, preamble, para.1.
[157] *See* TBT, *supra* note 145, preamble, para.6.
[158] *See id.*
[159] Requirement of Risk Assessment.

The second part of this provision requires such measures shall not be inconsistent with any other provisions of the Agreement[161].

So for a member to justify a measure with a higher level under SPS, it has to provide a scientific justification or risk assessment under Article 5 for such a measure. *Scientific justification:* according to the footnote of Article 3.3, a scientific justification is assumed if "on the basis of an examination and evaluation of available scientific information in conformity with the relevant provisions of this Agreement, a Member determines that the relevant international standards, guidelines or recommendations are not sufficient to achieve its appropriate level of sanitary or phytosanitary protection"[162]. The "relevant provisions" here mainly include Article 2.2 and Article 5.7. Article 2.2 requires Members to maintain their measure with sufficient scientific evidence[163] except as provided for in paragraph 7 of Article 5:

> In cases where relevant scientific evidence is insufficient, a Member may provisionally adopt sanitary or phytosanitary measures on the basis of available pertinent information, including that from the relevant international organizations as well as from sanitary or phytosanitary measures applied by other Members. In such circumstances, Member shall seek to obtain the additional information necessary for a more objective assessment of risk and review the sanitary or phytosanitary measure accordingly within a reasonable period of time.[164]

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[160] SPS, *supra* note 145, art. 3.3.
[161] *See id.*
[162] *Id.* n.2.
[163] *See id.* Art. 2.2.
[164] *Id.* Art. 5.7.

This provision is usually considered as a reflection of the Precautionary Principle in WTO. In the EC Hormones case[165] about an EC prohibition of imports of meat and meat products derived from cattle to which either the natural hormones or the synthetic hormones ("MGA") were administered for growth promotion purposes, European Communities made an effort to use the Precautionary Principle directly as a defense for the prohibition in its appeal[166]. Though the Appellate Body concluded that the principle could not override the provisions under SPS, it showed an open mind in addressing the relation between the Precautionary Principle and Article 5.7 and other provisions under SPS. First, it affirmed that the Precautionary Principle is not only reflected in Article 5.7, and also in the paragraph 6 of the preamble and in Article 3.3.[167] Then, it pointed out that a panel should, in the analysis of "sufficient scientific evidence", "bear in mind that responsible, representative governments commonly act from perspectives of prudence and precaution where risks of irreversible, e.g. life-terminating, damage to human health are concerned"[168].

With these considerations, it is clear that Precautionary Principle does have a place in the SPS agreement and in addition, it is required as guidance for a panel to analyze relative cases under SPS. The only thing that you cannot do is to use Precautionary Principle itself as an absolute defense for your measure. As the Appellate Body concluded, the Precautionary Principle "does not, by itself, and without a clear textual directive to that effect, relieve a panel from the duty of applying the normal principles…

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[165] EC Measures Concerning Meat and Meat Products (Hormones), Report of the Appellate Body, WT/DS26&48/AB/R [herein after EC-Hormones]
[166] *See id.* para.16.
[167] *See id.*
[168] *Id.*

in reading the provisions of the SPS Agreement"[169]. This reasoning is desirable since the meaning and application of the Precautionary Principle need further authoritative formulation even in the field of international environmental law. And it is not reasonable to put such a burden on WTO, as an international trade organization.

Risk assessment and the level of protection: a basic obligation of Members under SPS is to base their measures on a risk assessment, which is addressed in detail in Article 5[170]. Generally, in the assessment of risks, Members shall take into account scientific evidence[171], economic factors[172] and other relative factors, as well as the objective of minimizing negative trade effects[173]. For the level of protection to be appropriate, Members are required to avoid arbitrary or unjustifiable distinctions that result in discrimination or disguised trade restrictions on international trade[174] and to ensure the measures are not more trade-restrictive than required[175]. And a measure is assumed not to be more trade-restrictive than required, unless there is another measure reasonably available, taking into account technical and economic feasibility to achieve the appropriate level of protection[176].

In the EC-hormones case above, the Appellate Body gave a rather flexible interpretation of Article 5 and its application:

First, there is no quantitative requirement of risk. The Appellate body, against the panel's finding, emphasized that there is no quantitative requirement of risk, such as "a minimum magnitude of risk" in risk assessment in the text of SPS. A panel is authorized

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[169] EC-Hormones, *supra* note 165, para.16.
[170] *See* SPS, *supra* note 145, art. 5.1-5.8.
[171] *See id.* Art. 5.2.
[172] *See id.* Art. 5.3.
[173] *See id.* Art. 5.4.
[174] *See id.* Art. 5.5.
[175] *See id.* Art. 5.6.
[176] *See id.* n.3.

only to determine whether an SPS measure is sufficiently supported or reasonably warranted by the risk assessment, not whether there is a demonstration of certain risk in the risk assessment.[177]

Second, there is no procedural requirement for the risk assessment. The Appellate body rejected the panel's requirement that the Member should actually take into account a risk assessment when it enacted or maintained the SPS measure, and concluded that the requirement of "basing on" under Article 5.1 is a substantive one, that there be a rational relationship between the measure and the risk assessment. Particularly, it pointed out that the Member does not have to carry out its own risk assessment. Rather, it can justify its SPS measure by a risk assessment carried out by another Member or international organization.[178]

Third, there is no requirement of "mainstream" scientific opinion. According to the Appellate body report, Article 5.1 does not require that the risk assessment must necessarily embody only the view of a majority of the relevant scientific community. And the risk assessment can set out both the prevailing view as well as the opinions of scientists taking a divergent view and the existence of such divergence does not signal the absence of a reasonable relationship between the SPS measure and the risk assessment, especially where the risk is life-threatening. As a conclusion, the determination of the presence or absence of the relationship can only be done on a case-to-case basis.[179]

Under such interpretation, to justify a SPS measure with a higher level of protection by a risk assessment, the Member does not have to do actually risk assessment by itself; does not have to show "identifiable risk" in the assessment, nor does the assessment have

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[177] *See* EC-Hormones, *supra* note 165, para.186.
[178] *See id.* para.188, 189, 190.
[179] *See id.* para.194.

to reflect any mainstream scientific opinion. All it has to do is, when such a measure is challenged before WTO and so required, to show the panel that there is a rational relation between the measure and the risk assessment. In addition, the Appellant Body, reversing the panel's finding that the burden of proof under Article 3.3 was on European Communities, reaffirmed that the complaining party should have to bear the burden of proof at first under each Article of SPS, including Article 3.3.[180] All these considerations above are more than enough to show that a Member's right to adopt a higher SPS standard based on certain requirement of the SPS Agreement is substantively and procedurally protected to a great extent.

TBT

The substantial provision about the use of international standard and the exception is under Article2, paragraph 4:

> Where technical regulations are required and relevant international standards exist or their completion is imminent, Members shall use them, or the relevant parts of them, as a basis for their technical regulations except when such international standards or relevant parts would be an ineffective or inappropriate means for the fulfillment of the legitimate objective pursued, for instance because of fundamental climatic or geographical factors or fundamental technological problems.[181]

The requirement for an exception here is less strict than the SPS Agreement. Members can have their own standard without the international standard as a basis as

[180] *See* EC-Hormones, *supra* note 165, para.109.
[181] TBT, *supra* note 145, art. 2.4.

long as the international standards are "ineffective or inappropriate" for the fulfillment of the legitimate objective.

So far there is only one case about TBT before DSB, the EC-Sardines case[182], which mainly concerned a measure of European Communities prohibiting other species of sardines rather than the one called "sardine pilchardus walbaum" marketed in EC as preserved sardines[183].

The most important conclusion of the report of the Appellate Body in this case is about the burden of proof under Article 2.4[184]. The Appellate Body referring to the conclusion in the EC-hormones case, concluded that the complaining party, in this case, Peru bears the burden of proof. This means the member who complains about a given technical regulation or standard of another member not justified under Article 2.4 should provide evidence that the relevant international standard is "efficient" and "appropriate" to fulfill the legitimate objective of the claimed member.

In addition, the Appellate Body gave some interpretation for the terms "legitimate objective", "ineffective" and "inappropriate"[185]. For the term "legitimate objectives", the Appellate Body reaffirmed the panel's conclusion that it must cover all the objectives explicitly mentioned in Article 2.3[186], such as the protection of human health or safety, animal or plant life or health, or the environment and at the same time it extends beyond the list of Article 2.3.[187] For the other two terms, the interpretation did not give much light and may need further address in the future. However, with the conclusion about

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[182] European Communities – Trade Description of Sardines, the report of the Appellate Body, WT/DS231/AB/R [hereinafter EC-Sardines]
[183] *See id.* 1-4.
[184] *See id.* 269-282.
[185] *See id.* 285-286.
[186] *See* TBT, *supra* note 145, art. 2.3.
[187] *See* EC-Sardines, *supra* note 182, at 286.

burden of proof above and the flexibility compared to SPS of the language of TBT, we can expect a even broader interpretation of Article 2.4 and its application may be given in the near future.

With the analysis of the SPS and TBT Agreements above, we can conclude that 1) there is no interference with the right of a member state itself to choose the level of protection it wants to adopt regarding its own natural resources, environmental quality, and the health and safety; 2) harmonization and the adoption of international standards are encouraged but not mandated; 3) only the measure chosen to implement these domestic policies will be subject to WTO review when they affect international trade, and the tests employed set an appropriate balance between the accommodation of national interests, on the one hand, and the need to police disguised trade restrictions, on the other.[188]

4. NGOs' participation: The transparency of WTO

Non-Governmental Organizations have played an important role in the development of international environmental protection and even international environmental law. Compared to governmental organizations, NGOs have the following advantages: *Technological advantage*: the most powerful weapon of NGOs is the Internet, which provides a vast opportunity for sharing experiences and mobilizing activists to push for stronger environmental policies. With the control of Internet, NGOs make the once officially restricted information available to everyone with a computer, thus affect public opinion dramatically which forces policy-makers to think twice before any final decision.

[188] This is the conclusion of most experts. See, e.g., Marsha A. Nichols, *Sanitary and Phytosanitary Measures*, in THE WORLD TRADE ORGANIZATION 191 (Terence P. Stewart ed., 1996).

Also, the rich and low-cost recourse of expertise and knowledge of NGOs provides analytical support for government officials in policy making.

Monitoring and improving compliance and implementation: the enforcement of most international environmental agreements generally depends on national law and the member states' self-report. On the one hand, NGOs can serve as a watchdog and increase the credibility of the relative reports by the governments, and, on the other, NGOs may provide technical, professional and even economic support to improve the governments' capacity in implementing international agreements, especially those in developing countries.

Sounding the Alarm: the technological advantage and, more important, the independent role of NGOs make NGOs more sensitive to any new potential threats to environment and public health without the twist from the political pressure.

Recognizing these advantages of NGOs, some international environmental agreements have explicitly provided that NGOs could be invited as observers in the conferences of the parties.

Here comes the question: should and will WTO, an international trade organization among governments devoted to promoting trade liberalization, welcome NGOs' participation?

One direct beneficiary of the NGOs' participation is the Dispute Settlement Body of WTO. The members of the Panel or Appellate Body are mainly experts in the field of international trade, which may not be capable enough in disputes involving environmental considerations. With the advantages above, the NGOs' participation will

increase the authority of DSB and make the report of the Panel or Appellate Body more acceptable to both the dispute parties and the publicity.

More important, the participation of NGOs in the whole WTO regime will *promote* to a great extent *the transparency and accountability* of WTO. The unflattering and inaccurate portrait of the old GATT as a secretive cabal of "faceless bureaucrats"[189] painted by the environmental communities was largely due to the old GATT's indifference to public participation and ignorance of the power of NGOs. For the new WTO, it is vital for the public to understand the aims of the WTO and to develop trust in this organization. As WTO requires transparency in the member states' implementation of national trade law and decision-making, the transparency of WTO itself is and should be claimed too. Otherwise WTO would still be considered as some instrument with which big corporations hammer out deals secretly on the sacrifice of environmental interest and would suffer the same fate as its precedent.

Fortunately, WTO seems to have learned the lesson from the old GATT and has attempted to welcome NGOs. Exactly at the time of its establishment, WTO has provided legal foundation for the NGOs' participation in WTO:

"The General Council may make appropriate arrangements for consultation and cooperation with non-governmental organizations concerned with matters related to those of the WTO."[190]

This provision has drawn a clear line between WTO and the old GATT. Under such a provision, whether NGOs can participate in WTO is no longer a question, but rather "in what forms of consultation and cooperation are appropriate."[191]

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[189] See DANIEL C. ESTY, GREENING THE GATT: TRADE, ENVIRONMENT, AND THE FUTURE, Cha 2, at 55.
[190] *See* Documents Supp., *supra* note 33, Agreement Establishing the World Trade Organization, art.5.2, at 3.

Under this constitutional provision, WTO has made stable efforts towards more participation by NGOs, despite constant criticism from WTO governments against the involvement of NGOs[192]. Examples are informal sessions with NGOs by the Secretariat, the General Council's permitting NGOs to attend the WTO Ministerial Conference, symposia sponsored by WTO with broad participation of NGOs and etc[193]. Recently the most important development may be the accepting of Amicus Reports under DSB:

In the Shrimp-Turtle 1, the Panel received two documents called amicus briefs submitted by non-governmental organizations in the course of the proceedings. Holding that accepting non-governmental sources would be incompatible with the provisions of the DSU as currently applied, the Panel did not take the documents into consideration.[194] However, the Appellate Body reversed the findings, noting that accepting non-governmental sources is not incompatible with the provisions of DSU. Rather, the panel and appellate body have the discretionary authority either to accept and consider or to reject information and advice submitted to it, whether requested or not, and "…that authority, and the breadth thereof, is indispensably necessary to enable a panel to discharge its duty imposed by Article 11 of the DSU to 'make an objective assessment of the matter before it, including an objective assessment of the facts of the case and the

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[191] Steve Charnovitz, *Opening the WTO to Nongovernmental Interests*, 24 FDMILJ 173, at 203.
[192] *See id.* 186-187
[193] *See id.* 181, 190. See also Report of the WTO Informal Sessions with Non-Governmental Organizations (NGOs) on Trade and Environment, Trade and Environment News Bulletin, TE/016; World Trade Organization, Annual Report 1998 135-36; WTO Symposium of NGOs on Strengthening Complementarities Between Trade, Environment, and Sustainable Development, at http://www.iisd.ca/linkages/sd/wtongo.html and WTO High-level Symposia on Trade and Environment and Trade and Development, at http://www.iisd.ca/linkages/sd/wtohls.html (last visited July 1, 2003).
[194] *See* United States-Import Prohibition of Certain Shrimp and Shrimp Production, Report of the Panel, WT/DS58/R, para.7.7, 7.8, May 15, 1998, [hereinafter Shrimp 1]

applicability of and conformity with the relevant covered agreements…."[195] The Appellate body did accept three Amicus briefs attached to the submission of the United States as well as one brief from CIEL(Center for Marine Conservation and the Center for International Environmental Law).[196] Though under such a finding, it's still left to the Panel or the Appellate Body to decide whether to accept amicus briefs or not, the involvement of NGOs in WTO's judicial function no doubt has been authorized.

With all these substantive actions above, as well as an official webpage offering public access to full text of once-restricted WTO documents, from the basic WTO/GATT agreements, the decisions and reports of panel and Appellate Body to the new development of current WTO issues and a schedule of upcoming WTO events[197], the transparency and accountability of WTO has been increasing. As a result, the first Global Accountability Report[198] made by a group of experts from NGOs, universities and international institutions has given high marks to the WTO, ranking it third in access to online information, eighth on member control and fourth overall among 18 inter-governmental organizations, transnational corporations and international NGOs.

In conclusion, though NGOs' participation in WTO is still in a limited and informal form, especially in its executive and legislative functions[199], WTO's sincerity and substantial efforts in inviting a broad public participation is undeniable and it should be trusted to be able to make further achievement in transparency and accountability.

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[195] *See* United States – Import Prohibition of Certain Shrimp and Shrimp Products, Report of the Appellate Body, WT/DS58/AB/R, para.106, October 12, 1998[hereinafter Shrimp1, App.]
[196] *See id.* para.83.
[197] *See* http://www.wto.org.
[198] *See* http://www.wto.org/english/news_e/news03_e/global_account_report11feb03_e.htm
[199] *See* Charnoviz, *supra* note 91, 213-215.

Future issues

1. Environmental Amendment to the TRIMs agreement

Recognizing that restrictions on investors might impermissibly encourage the purchase of domestic over imported goods, the TRIMs[200](Trade related Investment Measures) agreement was negotiated during the Uruguay Round to prohibit trade-related investment measures that conflict with Article III or Article XI of GATT. Certain domestic content restrictions and other restrictions on the ability of investors to import or export are illustrated in the annex to TRIMs[201]. But nothing in TRIMs refers to effect of global capital mobility on the environment. Though as discussed in the early part of this article, there is not enough empirical support for the race-to-the bottom argument that countries will be forced by the pressure from international competition to lower their environmental standards in order to attract more foreign direct investment, at least to decrease the hostility from environmentalists and show its concern of environmental interests in every aspect of its current structure, WTO should make an amendment to the TRIMs Agreement. A good model is Article 1114.2 of NAFTA:

The Parties recognize that it is inappropriate to encourage investment by relaxing domestic health, safety, or environmental measures. Accordingly, a Party should not waive or otherwise derogate from, or offer to waive or otherwise derogate from, such measures as an encouragement for the establishment, acquisition, expansion, or retention in its territory of an investment of an investor. If a Party considers that anther Party has

[200] *See* Documents Supp., *supra* note 30, Agreement on Trade-Related Investment Measures, 170-173.
[201] *See id.* at 173.

offered such an encouragement, it may request consultations with the other Party and the two Parties shall consult with a view to avoiding any such encouragement.[202]

The most acceptable point of this provision is that it doesn't set up any substantive requirement for the standard of environmental protection in the host countries of FDI. Rather, it provides a legal foundation for the affected countries to complain when environmental laxity is used to attract investment. The addition of such a provision to the Agreement on TRIMs, combined with the efficient, authoritative dispute settlement of DSB under WTO, will eliminate the fear of a "race to the bottom" of environmentalists, guarantee an environmental-upward international investment flow, and may even contribute to a "race-to-the top" international trade.

2. The potential trade-environment conflicts under TRIPS

With the objective to reduce distortions and impediments to international trade and promote effective and adequate protection of intellectual property rights, the Agreement on Trade-related Aspects of Intellectual Property Rights (TRIPS)[203] mainly addresses the applicability of basic GATT obligations such as MFN and national treatment, the principle of adequate intellectual property rights and the principle of effective enforcement measures for these rights.[204]

Some potential trade-environment conflicts under the TRIPS have been noticed. One is about the relation between the protection of Patent and the right of indigenous people and the protection of traditional knowledge. Recently, with the emergence and

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[202] *See* Documents Supp., *supra* note 30, North American Free Trade Agreement Between the Government of the United States of America, the Government of Canada and the Government of the United Mexican States, at 626.
[203] *See* Documents Supp., *supra* note 30, Annex 1C Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), 335-366.
[204] *See* GATT Focus Newsletter, December 1993, at 12.

developing of an international biotechnology market and its observable profitability, developing countries with rich biodiversity have begun to claim their national sovereignty over their biodiversity resources and demand benefit sharing from the biotechnology developed, usually by developed countries. As a response to these claims, in its preamble, the parties of Convention on Biological Diversity[205] (CBD) reaffirm states' sovereignty over their own biological resources[206] and recognize the desirability of sharing equitably the benefits arising from the use of traditional knowledge. What's more, the Convention provides substantial obligation for the parties to "respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles" related to biodiversity and "promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices".[207]

Though under the TRIPS agreement, members can, as a general principle, adopt measures necessary to protect public health and nutrition[208] and provide limited exceptions to the exclusive rights conferred by a patent[209] as long as they are consistent with the provisions of the Agreement, the plain language here fails to give us a clear expectation about how and to what extent special measures such as benefit sharing can be taken to protect the right of indigenous people.

In the Doha ministerial conference, a declaration was adopted by ministers about the relation of the TRIPS Agreement and public health. The declaration agrees TRIPS

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[205] Convention on Biological Diversity, U.N. Doc. DPI/130/7, June 1992, 31 I.L.M. 818 (1992).
[206] *See id.* Preamble, para.4, 12.
[207] *See id.* Art. 8 (j).
[208] *See* TRIPS, *supra* note 203, art. 8.
[209] *See id.* Art. 30.

Agreement does not and should not prevent Members from taking measures to protect public health and reaffirms that flexibility provided in the Agreement should be fully used for this purpose. Particularly, it instructs the Council for TRIPS to find an expeditious solution to the problem about WTO members without sufficient or any manufacturing capacity in the pharmaceutical sector before the end of 2002. However, the Council failed to reach any conclusion before the deadline.[210]

Another potential conflict is about the protection of intellectual property law and the requirement of technology transfer or support from developed countries to developing countries provided in many international environmental agreements. For example, the London Amendments in 1990 to the Montreal Protocol provide:

> Each Party shall take every practicable step, consistent with the programmes supported by the financial mechanism, to ensure:
>
> (a) That the best available environmentally safe substitutes and related technologies are expeditiously transferred to Parties operating under paragraph 1 of Article 5[211]; and
>
> (b) That the transfers referred to in subparagraph (a) occur under fair and most favourable conditions.[212]

Though the TRIPS Agreement recognizes the special need of least-developed countries and gives an extended transition period to least developing countries of their obligations under the Agreement[213], such advantage is very limited.

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[210] *See* JOHN H. JACKSON, WILLIAM J. DAVEY & ALAN O. SYKES, JR., LEGAL PROBLEMS OF INTERNATIONAL ECONOMIC RELATIONS, Cha 27, 1225-1227 (4th ed., 2002).
[211] *See* Article 5: Special Situation of Developing Countries, Montreal Protocol on Substances That Deplete the Ozone Layer, 1522 U.N.T.S. 3. (1987)
[212] London Amendments to the Montreal Protocol on Substances That Deplete the Ozone Layer, Annex 2, U.Art.10A, UNEP/Oz.L.Pro.2/3 (Annexes 1,2,3).
[213] *See* TRIPS, *supra* note 203, preamble, para.6, and Art.66

However, it should be noticed that the provisions about intellectual property rights or technology transfer in these international environmental agreements are themselves general rather than substantive and need further explanation. What is more, the potential conflicts above may be first of all a problem of law, including both Intellectual Property Law and International law (addressing the relation between different international agreements), rather than a problem of international trade. Before they are addressed in these two levels, WTO should not be expected to do more on these issues.

CHAPTER 4

CONCLUSIONS

In this article we discuss both the general relation between trade and environment and the resolution of specific trade and environment conflict in practice. What we can conclude here is there is no fundamental conflict between environmental protection and a multilateral trading system. Rather, trade liberalization and environmental protection should develop hand in hand towards the improvement of human welfare. In particular, WTO, as the leader of the trade regime, provide broad chances to accommodate environmental goals, including environment exceptions under Article XX of GATT, the SPS and TBT Agreements for the maintenance of high environmental standards, the participation of NGOs, and the flexibility provided by the Dispute Settlement Body in applying these environment-related trade rules. And WTO should be trusted to have the capacity and sincerity in resolving various current and potential trade and environment conflicts. The process of accommodation will be ongoing. At the same time, environmentalists should admit that environmental protection does not require the erection of new trade barriers and learn to work within the context of the legal framework for international trade to achieve their goals. At last, the opportunity to advance both environmental protection and trade liberalization under the overarching goal of sustainable development relies on both the international trade and environment regimes to facilitate cooperation and mutual support.

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