ABSTRACT

The concept of ‘Sustainable Development’ is the foundation of international environmental jurisprudence. The concept is of pivotal importance; international environmental law itself has been developed on its basis. The term ‘sustainable development’ was brought into common use by the Brundtland Commission in its 1987 report Our Common Future. The report has given the definition of sustainable development as follows:

*Sustainable development is the development that meets the needs of the present generation without compromising the ability of the future generations to meet their own needs*.

Sustainable development does not imply absolute limits to growth and it is not a new name of environmental protection. It is a new concept of economic growth. It is a process of change, in which economic and fiscal policies, trade and foreign policies, energy, agricultural and industrial policies, all aim to induce development paths that are economically, socially, and ecologically sustainable.

Sustainable development requires that the rate of depletion of natural resources should take into account the criticality of the resource, the availability of technologies for minimizing depletion and the likelihood of substitutes being available. The adverse impacts on the quality of air, water and other natural elements are minimized so as to sustain the ecosystem’s overall integrity. In essence, sustainable

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development is a process of change in which the exploitation of resources, the direction of investments, the orientation of technologies and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations.²

The fundamental legal principles upon which the current liberal trade regime rests are to be found in the text of GATT 1994 as well as its predecessor, GATT 1947. The first requirement is the 'most favoured nation' requirement in Art I, which stipulates that all parties are to be treated alike. The second is to be found in Article III, which prohibits discrimination as between similar imported and domestic products thus laying down the 'national treatment' requirement. A third rule is articulated in Art XI, prohibiting quantitative restrictions on imports and exports, except in certain limited cases.

These rules, upon which more detailed rules in the successive GATT rounds were built, aim at the removal of barriers to trade. But seeking to remove the bases for differential treatment as between parties and products can run against certain other international objectives that can be met only by making such distinctions. In the case of environmental goals, it is sometimes necessary to treat countries differently, for example on the basis of how responsible their actions are in relation to the environment. Likewise, sometimes products deserve differential treatment on the basis of whether the products themselves, or their production and processing methods, are sustainable.

² Anupam Goyal ; the WTO and International Environmental Law:- Towards Conciliation : Oxford University Press, 2006 P.44
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GATT 1947 made no express mention of the word ‘environment.’ The reason not to mention the word environment was that environmentalism was not a global issue. By most standards, the Uruguay Round’s most significant achievement was the formation of the WTO. Initially, environmental organizations were concerned about the WTO. Since the GATT was to be reconstituted into a functioning institutional structure, environmentalists wanted to make sure that the environment was included in the WTO working committees. The WTO Agreement consciously makes some references to the concerns of environment.

In the preamble to the Marrakesh Agreement establishing the World Trade Organization (WTO), a reference was made to the importance of working towards sustainable development. WTO members recognize:

That their relations in the field of trade and economic endeavor should be conducted with a view to raising standards of living, ensuring full employment and a large and steadily growing volume of real income and effective demand, and expanding the production of and trade in goods and services, while allowing for the optimal use of the world’s resources in accordance with the objective of sustainable development.\(^1\)

The WTO takes into account environmental concerns and no longer allows the full use of the world’s resources. The objective of ‘full use of the resources of the world’s set forth in the preamble of the GATT 1947 was no longer appropriate to the world trading system of the 1990s in the face of increasing environmental problems.

\(^1\)Agreement establishing the WTO
A product of the General Agreement on Tariffs and Trade (GATT), the World Trade Organization (WTO), was established in 1995 to create a stronger set of institutions to administer the various trade agreements negotiated under the GATT framework. Since its inception, the WTO has been dogged by controversy. With a wider mandate and greater enforcement powers than its predecessor GATT institutions, the WTO is widely perceived to pose a greater threat to national sovereignty. While corporations and traditionalists oppose extending the organization’s reach beyond trade, consumer groups and environmental organizations complain that the WTO favours trade at the expense of environmental and health objectives. They fear that new provisions negotiated during the Uruguay Round (1986-1994) threaten industrialized nations’ high environmental and health standards by promoting the adoption of international standards and requiring governments that choose higher standards to provide scientific justification. On the other hand, critics in the developing world charge that the provisions allow wealthy nations to impose their standards on their trade partners and to engage in a new form of protection in which measures that favor domestic producers act as environmental or health regulations.

Since 1995, the WTO has made rulings in various disputes involving environmental and public health measures affecting gasoline, shrimp-turtles, hormones, asbestos, salmon, apples, other agricultural products, generic drugs and genetically modified organisms (GMOs). These disputes, collectively address nearly all of the environmental and health controversies surrounding the WTO.
Although the rulings in these disputes affirm national sovereignty over environment and health policy, they have not been seen as doing so because most have gone against the governments imposing the regulations in dispute owing to discriminatory implementation or lack of scientific support. Embedded in trade terminology, the rulings tend to be dense and lengthy. Drafted by trade experts, they often dwell on quite subtle and narrow sets of issues. They are not easily understandable, especially for those untrained in trade law. Many of the environment and health provisions are new, virtually all are complex. In some cases, the rulings explore multiple provisions containing different requirements. In other instances, the provisions are defined in broad terms and, arguably, are open to varying interpretations. Because governments tend to present self-serving arguments to defend their regulations and to challenge those of their trade partners, their arguments tend to cloud rather than clarify the issues in dispute. Finally, as the controversies suggest, the pursuit of trade, the environment and public health is inherently divisive. Most nations will pursue goals in all three areas. However, they are likely to do so in ways that differ from other nations in view of varying preferences, resources and other factors. Hence, disputes are likely to arise between nations pursuing different strategies. The outcomes of these disputes are likely to leave some constituencies confused and unhappy especially in the early going when new rules and procedure are being developed and implemented.

The considerable controversy that marked the creation of the WTO has not abated in the ensuing years. Instead, the organization has become the embodiment of globalization in a period when globalization has come under fire from all directions. Anti-globalization forces
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include such diverse groups as environmentalist, consumer advocates, union members, protectionists, anarchists, academics, policy makers and other both in developing and developed nations. While these groups oppose globalization and the WTO, they do so for different reasons. These differences are quite striking in the debate over the WTO's impact on the environment and public health. This debate frequently confronts policymakers and activists in developed and developing nations against one another. While groups in both regions oppose many of the environmental and health provisions negotiated during the Uruguay Round, they cite different and, at times, conflicting grounds.

On the one hand, activists and some policymakers in developed nations fear that the WTO poses several threats to the environment and public health. They claim that harmonization provisions affecting food and product safety will encourage nations to adopt international standards that will level down the generally higher ones in their nations. They also argue that the scientific justification requirements affecting food safety standards might stop nations from taking preventative measures against health risks in the absence of scientific certainty. They favor the precautionary principle, which holds that governments may take action against potential as well as proven health threats.

On a more fundamental level, environmentalists, consumer advocates and others in the developed world object to the WTO's priorities. These critics hold that the organization advances trade at the expense of the environment, public health and other social objectives. Some object to requirements that nations pursue environmental and

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4 Trish Kelly: The Environment, public Health and Sovereignty: Edward Elgar Publishing Inc. Massachusetts USA P.2
health goals in ways that are least disruptive to trade. They fear that these requirements jeopardize multilateral environmental agreements (MEAs) that use trade restrictions to conserve wildlife, prevent climate change and pursue other environmental goals. Others question whether it is legitimate for the WTO to address non-trade goals. With a relatively low budget and small staff of primarily trade experts, some wonder whether the organization has the resources, expertise or will to grapple with environments, health and other non-trade issues.

On the other hand, critics in developing nations believe that linking trade to the environment, labor and other social issues jeopardizes economic growth in the South. They assert that non-trade issues are beyond the purview of the WTO and should be addressed by other institutions. These critics charge that expanding the WTO's mandate beyond trade will allow wealthy nations to impose their environmental and health agendas on their partners. As a result, developing nations will be forced to adopt higher and more costly standards. Meeting these standards will strain already thin technical and financial resources and become especially burdensome if countries choose different standards. Consequently, officials in some developing nations favor strengthening the WTO's harmonization provisions in order to improve access to markets in developed nations.

Environmental and consumer advocates in developed and developing nations find common ground on some issues. Both groups have grave concerns about the commitments made with respect to intellectual property. These commitments are seen as promoting biotechnology despite uncertainty about its short and long run impact on the environment and public health. In addition, environmentalists object
that biotechnology might pose a risk to biodiversity through various mechanisms including cross-pollination between genetically modified organisms (GMOs) and traditional plant life.

Environmentalists also emphasize that new intellectual property rules favor corporations at the expense of indigenous communities because the new rules facilitate the former's ability to secure property rights over the latter's traditional knowledge. For some, these changes amount to legalizing biopiracy and creating a new form of colonialism. These critics view traditional knowledge as cultural heritage that is nurtured and managed by the community rather than property that is sold to the highest bidder.\(^5\)

Others emphasize the need to prevent the misappropriation of genetic resources and to promote an equitable distribution of their benefits along the lines laid out in the Convention on Biological Diversity. Those who share this perspective believe that it is essential to clarify the relationship between the WTO and multilateral environmental agreements (MEAs) like the Convention on Biological Diversity (CBD) and to do so in ways that do not advance trade at the expense of the environment. Further, assuring that nations can impose environmental measures that restrict trade is likely to require strengthening the governance and enforcement mechanisms of the CBD and other MEAs in order to counterbalance those of the more powerful WTO.

Similarly, organizations in the developing and developed worlds dispute the requirement that governments in developing nation’s honour

\(^5\) Ibid
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patents on medicine. Non-governmental organization protest that the requirement threatens developing nation’s access to the low-cost, generic drugs used to combat AIDS, tuberculosis, malaria and other life-threatening diseases. The same concern led developing nations to launch a campaign within the WTO to waive certain requirements affecting access to generic drugs.

There is near universal agreement amongst activists that the WTO and especially the revamped dispute resolution process pose a threat to national sovereignty. As under the GATT, the WTO’s dispute resolution process begins with mandatory consultations between the disputants. And when consultations are not able to resolve the matter, a panel is formed to investigate the dispute. But to address concerns that the GATT process was lengthy and ineffective, several changes were instituted. First, timetables apply to each phase of the process. Second, the appellate Body was created to hear appeals of panel rulings. And third, dispute rulings are now binding as they go into effect unless there is a consensus against adoption. This ‘reverse consensus’ approach ensures that the adoption of dispute resolution rulings is virtually automatic because ‘winners’ are unlikely to oppose decisions that favor them. By contrast, the GATT process required a consensus supporting adoption. Consequently, ‘losers’ were able to block the adoption of panel reports. WTO panel and appellate reports urge governments to remove offending regulations but do not mandate specific implementation steps. However, the dispute resolution rules oblige governments to comply within a reasonable period of time (no more than 15 months); those that do not comply must pay compensation to or face trade penalties from the other parties to the dispute.
An economic view of trade policy states generally that government intervention in trade is justified only in those cases of market failure, in which the price mechanism does not fully reflect the costs and benefits experienced by consumers and producers. Most environmental issues involve a case of domestic market failure, in which the best policy would be a tax that discourages "bad" behavior or a subsidy that encourages "good" behavior. By this standard, restrictions on imports for environmental reasons would be justified economically only if imports themselves were causing pollution, in which case a nondiscriminatory tariff would be the best policy. When the foreign activity creates transborder pollution, a different economic problem arises; who pays for the damage when an internationally shared public good (clean air or water) is depleted? The Organization for Economic Cooperation and Development (1976) has established the "polluter pays" principle as the means of resolving such issues, but this approach leaves open difficult issues of measurement, responsibility, and burden sharing. If the pollution is limited geographically, a resolution is usually possible through bilateral or regional negotiations. If the scope of the problem extends to the global commons, the issues of responsibility, burden sharing, economic impacts on countries, and enforcement compliance in the face of free riding become much more difficult. *Free riding* in this context refers to countries that contribute to the global pollution problem but refuse to carry any of the burden of fixing it voluntarily. Trade restrictions usually enter the picture as a means of enforcement rather than as a way of correcting the market failure itself.6

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6 Kent A. Jones; Who is afraid of the WTO: Oxford University Press 2004, P.114
In contrast to the market-failure approach, a number of proposals for an environmentally sensitive trade regime require countries to harmonize their environmental regulations. In particular, environmental regulations that affect manufacturing costs would extend to the high level of countries with stricter standards. Proposals for environmental anti dumping duties, based on the calculated differences in unit production costs due to "lax" environmental protection, would, it is argued, prevent countries from gaining unfair competitive advantage. In this manner, a global environmental regime would avoid a race to the bottom by countries seeking to outdo each other in exporting pollution-intensive products.

Economic considerations suggest that harmonization at times does not seem to be a workable idea, however, for several reasons. First, the impositions of an environmental tariff would merely tend to encourage pollution-intensive production at home, while not necessarily reducing pollution in the foreign country. In addition, the economic costs of pollution abatement differ from country to country, and national preferences for environmental quality are a matter for domestic policy and not international coercion. The argument for harmonization comes close in this sense to the discredited reasoning of the "scientific tariff" applied in U.S. trade policy in the past. The argument behind the scientific tariff was that it was unfair for a country to have lower labor costs; therefore an offsetting tariff to equalize costs was justified. The harmonization proposal suggests that it is equally unfair for countries to have lower environmental costs, and countervailing duties should close the resulting cost gap."
A broad perspective shows that environmental and liberal trade policy goals are not necessarily in conflict. Reductions in agricultural subsidies and trade restrictions in foodstuffs would, for example, in many cases improve both environmental quality and economic welfare. In many less developed countries, trade liberalization in pollution-intensive industries would shift production towards areas where cleaner technologies prevail, improving global environmental quality. Recent studies indicate that trade that aids development also tends to increase preference for environmental quality. Furthermore, increasing income in less developed countries would tend to increase the alternatives for household fuel and thereby decrease an important cause of deforestation. Trade liberalization and environmental protection are therefore not at odds in all cases and arguably have an overlapping agenda of mutually beneficial goals⁷.

However in view of the prevailing dichotomy among the developing and developed nations in general and particularly in the areas of economy and development, still a word of caution would be necessary to protect the interest of developing countries from being jeopardized due to their inherently inferior position in the arena of international policy making and negotiations.

The US in its communication presented to the WTO General Council on August 6, 1999 referred explicitly to the fact that we must pursue trade liberalization in a way that is supportive of high public health and environmental standards. But the question as to what should take precedence health and environmental considerations on trade and

⁷ Ibid; P. 115
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fierce transnational competitions, still needs to be addressed at the appropriate international forum.

In order to examine the issue of green consumerism and new environmental conscientiousness, the study has touched the subjects like TRIPS and privatization of collective knowledge particularly in the area of pharmaceuticals and public health, Non party state provisions and free trade obligations, synergy between the WTO and other bodies like UNEP and WHO, besides the Dispute settlement mechanism under WTO which is gradually gaining momentum through the rulings.

Objective of the Study

The objective of this research captioned "Environmental Protection and Public Health: A Study of WTO Regime" is the resultant of researcher's keen interest in the subject. There needs to be a scientific study of the subject in order to understand the complex relation of World Trade and Environment, harmony and conflict in various instruments of International Law in respect of environment and trade measures. Here the word 'scientific' connotes the systematic observation, classification and interpretation of the available data and the existing knowledge.

The issue of accommodation of environmental concerns in the international trade policy has multiple dimensions. This study makes an attempt to examine and evaluate these dimensions particularly in the areas of multilateral environmental agreements, specific trade obligations vis-a-vis environmental protection, impact of TRIPS Agreement on the public health measures in developing countries. The study also makes an endeavor to understand the newly developed
mechanism for the settlement of international trade disputes and its efficacy.

In order evaluate the complex relationship between trade and environment, the study seeks to examine the trade obligations pursuant to WTO agreements and other multilateral environmental agreements outside the purview of WTO. Further the study attempts to evaluate the TRIPS Agreement on the public health concerns of developing countries through a discussion on specific health issues and diseases prevalent in these countries.

Mechanism for the settlement trade disputes is another important area of WTO functioning. This aspect is also covered in this study by having a discussion on the rulings made by WTO Dispute Settlement Body (DSB), Appellate Body reports and on the process of dispute settlement.

Since the primary endeavor of scientific method is to find out the causal relationship and to make the generalization. The study formulates a hypothesis and attempts to verify the hypothesis by a first hand study of authoritative sources by applying the doctrinal research method.

Review of Literature

A report by the United Nations Environment Programme (UNEP) and World Trade Organizations captioned 'Trade and Climate Change' published by WTO Secretariat in 2009 observed that a continuing debate with in political discussions and among academia has been whether the protection of intellectual property rights- such as copyrights, patents or trade secrets- impedes or facilitates the transfer of technologies to
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developing countries. One key rationale for the protection of intellectual property rights, and in particular patents, is to encourage innovation: patent protection ensures that innovation can reap the benefits and recoup the costs of their research and development (R&D) investments. On the other hand, it has also been argued that, in some cases stronger protection of intellectual property rights act as an impediment to the acquisition of new technologies and innovations in developing countries. While strong patent laws provide the legal security for technology related transactions to occur, firms in developing countries may not have the necessary financial means to purchase expensive patented technologies.

The importance of intellectual property rights needs to be set in a relevant context. In fact, many of the technologies which are relevant to addressing climate change, such as better energy management or building insulation may not be protected by patents or other intellectual property rights. Moreover, even where technologies and products benefit from intellectual property protection, the likelihood of competing technologies and substitute products being available is thought to be high. Further studies in this area would be useful.

A Joint Study Report of the WHO and the WTO Secretariat captioned ‘WTO Agreements and Public Health’ published in 2002 observed that the TRIPS Agreement attempts to strike a balance between the longer term objective of providing incentives for future inventions and creations, and the shorter term objective of allowing people to use existing inventions and creations. The Agreement covers a wide range of subjects, from copyrights, patents and trademarks to integrated circuit designs and trade secrets.
In the article entitled 'A Critique of the WTO Jurisprudence on Necessity' published in the journal of British Institute of International and Comparative Law, Vol. 59 Part I, January, 2010, it was observed that The preliminary question that needs to be answered is what balance is struck between competing interests under the WTO agreements. The WTO system was, of course, intended to develop 'an integrated, more viable and durable multilateral trading system', serving the GATT embodied goal of the substantial reduction of tariffs and other barriers to trade. However, while the system clearly promotes trade liberalization, it can be said that the WTO's core principle is non-discrimination. This distinction goes to the very heart of the debate as the interpretation of 'necessity' is informed by the object and purpose of the treaties.

In stark contrast to the harmonization/positive integration goals of other regimes such as the European Union (EU) and the United States (US) federal system, which seek to create uniformity amongst their members in accordance with supra-nationally imposed standards, the WTO regime imposes no such requirements. Instead, the WTO permits Members to implement regulatory and legislative regimes freely to promote whatever public policy objectives they deem to be in their national interests, with only one restriction: these measures cannot discriminate between imported and domestically produced goods of the same kind, or between trading partners. Non-discrimination has been hailed for its facilitation of regulatory heterogeneity by identifying measures without excessive review of domestic policy choices. However, in order to ensure sufficient protection for domestic measures designed to achieve non-trade goals, the Members included safeguards in the form of the article XX general exceptions. Under article XX,
domestic policy choices aimed at protecting certain non-trade values are afforded such high importance that Members are permitted to escape their GATT obligations. Even measures that involve discrimination are acceptable but only if such discrimination is not arbitrary or unjustified. This limitation on absolute freedom to regulate illustrates the dual objectives of article XX and embodies the broader challenge facing the WTO system as a result of its negative integration character. Importantly, it also demonstrates that the resolution of competing interests in the WTO is the product of political negotiation.

K.R. Gupta in his book entitled 'A Study World Trade Organization', Atlantic Publishers and Distributors-New Delhi (2000) observed that the environmental lobby from the west has been raising its voice against the damage to the environment by poor countries in their efforts to increase their exports. They point out that the increase in exports has been at the cost of environmental degradation.

Developing countries like India have strongly opposed the inclusion of environmental standards in the agenda of WTO because it is viewed as a tool by the rich countries to create non-tariff barriers to trade.

The rich countries remain the world's biggest polluters in terms of the chemicals and gases they release into the atmosphere and the garbage they throw out every day.

The rich countries have enforced strict environmental protection standards on their own industries as a result of which many multinational corporations have had to shift their production bases to poorer countries which do not have such high environmental standards.
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Many industries like leather tanning have been banned in the rich countries because of their polluting effect on the environment through the discharge of effluents. NGOs from developing countries have been protesting against this aspect of globalization in which the rich countries are transferring their polluting industries to the poor.

M.B. Rao and Manjula Guru in their book entitled 'WTO Disputes Settlement and Developing Countries', Lexis Nexis Butterworth (2004) observed that the main gains from the WTO systems are said to be MFA elimination, removal of VERs, bindings on agriculture, market access and from the developing countries' point of view, provision of special and differential treatment with the aims of greater FDI, flow of technology etc, the elimination of unilateral actions outside the system (like resort to section 301), less regional arrangements (trade flaws) vis-a-vis free flow of trade. Indeed the preamble to the Agreement establishing WTO explicitly recognizes that 'with a view to raising standards of living, ensuring full employment, expanding production and trade in goods and services, optimal use of world resources with the objective of sustainable development' is called for. The systems overriding purpose is to help trade flow freely and for that purpose, to remove restrictions and barriers. Knowledge circles are of the view that none of the above stated gains have materialized - the poor have become poorer and the rich, richer. To establish a fairer and freer trade regime, countries need to adhere to certain basic principles. Evidence shows that things are not moving as per the premises on which the multilateral trading system is written into the WTO Code.

ELS Reynaes in the book 'Beyond the Transition Phase of WTO' (2005), observed that 'tension between two equally legitimate goals of
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liberalized trade and environmental protection has existed for at least a century. For instance, the first recorded use of international trade restrictions to protect human health can be traced back to 1906, when an international conference convened by Switzerland adopted a treaty to end the production and importation of white phosphorus matches, believed to cause a “loathsome occupational disease”. Since then, environmental concerns have expanded from occupational health and public safety concerns to a board range of ecological and global concerns. And as of today around 250 multilateral environmental agreements (MEAs) have been adopted.

According to Kent A. Jones in his book ‘Who’s Afraid of the WTO’, Oxford University Press (2004), ‘the environmentalists’ concerns were not lost on governments in the industrialized countries, particularly in the United States and Europe, which gave rise in 1995 to the CTE in the newly founded WTO. Yet it was immediately clear that whatever reports came out of the committee would not be able to endorse any substantive WTO reforms, since trade-and–environment policy issues go beyond the limits of an identifiable WTO consensus.

Shaw and Schwartz (2002) argue that “the relationship between trade and environment in the WTO is, in effect, being created through disputes.” Aside from lofty and hopeful expectations and anodyne generalities that state the merits of both trade and environmental goals. What concrete environmental guidelines acceptable to all WTO members are possible?

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(2006), observed that since 1995, the WTO has made rulings in nine disputes involving environmental and public health measures affecting gasoline, shrimp-turtles, hormones, asbestos, salmon, apples, agricultural products, generic drugs and genetically modified organisms (GMOs). These nine disputes address nearly all of the environmental and health controversies surrounding the WTO, yet they have done little to defuse these controversies because all but the asbestos and generic drugs rulings went against the government imposing the regulations in dispute.

Steve Charnovitz in his article entitled 'Trade and the Environment in the WTO' published in the Journal of International Economic Law (Vol. 10, September 2007) has depicted that during the past decade, as the WTO system has matured, some of the environmental omissions in WTO law have become more evident. For example, the GATS, unlike the GATT does not contain a policy exception for conservation measures. The TBT Agreement lacks an environmental exception to its requirement that measures accord national treatment, accord most favored-nations treatment (MFN), and 'not be more trade restrictive than necessary to fulfil a legitimate objective'. Another example is the Understanding on Rules and Procedures Governing the Settlement of Disputes (DSU) which requires that panel adjudicating GATS disputes regarding 'prudential issues and other financial matters' have the necessary expertise to the specific financial service under dispute. Yet the DSU lacks an analogous requirement for expertise in environmental disputes.

Besides above a review of important multilateral agreements i.e. (i) CITES (ii) Basel Convention (iii) Montreal Protocol (iv) Cartagena
Protocol (v) Rotterdam Convention (vi) Stockholm Convention, in the context of WTO regime suggests that they contain important trade applications.

On this point, Aparna Sawhney in the article entitled “WTO-Related matters in Trade and Environment; Relationship between WTO Rules and MEAs”, published by Indian Council for Research on International Economic Relations in May 2004 observed that Multilateral environmental agreements (MEAs) have evolved over the years as a cooperative means of protecting and conserving environmental resources or controlling for pollution that are transboundary or global in nature. The Agenda 21, adopted in 1992, noted that since MEAs are based on international consensus, they provide the best way of coordinating policy action to tackle global and transboundary environmental problems cooperatively.

Trade measures have been incorporated in MEAs where uncontrolled trade can potentially lead to environmental damage (say, loss of biological diversity for species threatened with extinction as in the Convention on International Trade in Endangered Species), or even as a means of enforcing the agreement and prevent free-riding by banning trade with non-parties (as in the Montreal Protocol). The trade measures in MEAs include a wide range of measures including monitoring of export-import permits and consents; identification label requirements; and export-import bans in specific products and states. While some of the trade measures are outlined within the agreements as specific obligations, other trade measures may be neither specific nor mandatory. It is pertinent to note that, in 1992 the GATT Secretariat had
observed “as long as participation in a MEA is not universal, trade provisions will be, like negative trade incentive, discriminatory”.

Thus, the available literature on the subject suggests that environment is a horizontal issues cutting across sectors and disciplines within the multilateral trading system of the WTO. Accordingly, the issues pertaining to the subjects like trade-environment relationships, compatibility and conflicts between important instruments of International law, impact of TRIPS Agreement on Public health sectors in developing countries and the mechanism developed for the settlement of international trade disputes need to be studied and concluded in a systematic manner.

Hypothesis

Hypothesis is a proposition, condition or principle which is assumed perhaps without belief, in order to draw out its logical consequences by this method to test its accord with facts which are known or may be defined in a research. The main important thing is the hypothesis should be capable of being verified. It is further said that hypothesis should be such as can be put to empirical text. For the purpose of this study, following hypothesis has been designed in the form of assumptions.

- There is direct or indirect relationship between trade and environment which needs to be examined in order to protect the environment.
- There is either harmony or conflict between the different instruments of international law i.e. WTO Rules and MEAs.
• Non-tariff barriers have been effective measures of environmental protection.

• The new patent regime pursuant to the TRIPS has not provided any encouragement for better Research and Development (R&D) in the developing countries particularly in the pharmaceutical and health sectors.

• The new system of patent protection under the TRIPS Agreement has given rise to biopiracy and monopolization of traditional knowledge.

• The new system under WTO for the settlement of disputes is efficient and capable of protecting the interest of developing countries.

Chapterization

Besides introduction, the study has been conducted under the six different chapters.

Chapter I named 'Environmental Degradation and International Measures to Save Environment' deals with the present state of environment, various hazards posing threats to the environment and measures undertaken by the international community to save the environment. The chapter further deals with multilateral work done in the area of trade and climate change.

Chapter II entitled 'Relationships between International Trade and Environment' deals with pro-trade views and environmentalists views, trade environment debate and developing nations, historical background of trade environment linkages, important multilateral
environmental agreements, trade obligations in environmental agreements and compatible WTO provisions.

Chapter III entitled 'Environment: A WTO Concern' deals with relevant WTO rules, specific trade obligations, committee on trade and environment, the agreements on technical barriers to trade, sanitary and phytosanitary measures, harmonization of International standards, process and production methods, concepts of like product and newly emerging non-tariff barriers to developing countries trade.


Chapter V entitled 'Biopiracy and Specific Health Issues' presents a discussion on the concept of biopiracy and monopolistic rights over traditional knowledge and also the specific issues relating to trade and public health like food safety, infectious disease control and tobacco control etc.

Chapter VI entitled 'Dispute Settlement Mechanism under WTO' deals with the WTO bodies involved in the disputes settlement process, procedure of dispute settlement, international law and the WTO dispute settlement system, dispute settlement under GATT 1947/WTO and developing countries access to WTO litigation services.
Concluding Remarks

Some of the major forms of environmental degradation are air and water pollution, global warming, desertification etc. The human action persuaded by extreme profit embedded in industrial growth, accompanied by population explosion and heightened consumerism has precipitated in the irrevocable and non-reversible distortion in environment and ecological balances. These distortions have started affecting the natural processes and have taken forms of air and water pollution, loss in biodiversity, global warming and desertification and deforestation. The study categorically redefines the graveness, and vulnerability associated with the environment and its conservation. The predictions of the near future are extremely threatening and fragile. The study also traces the history of international environment conventions and meetings. It becomes pertinent to mention that the emergence of environment politics was accompanied by the emergence and strengthening of another global process called globalization. The two seemingly non-compatible forces were placed and were at the mercy of same dynamics of international politics. From the genesis of UNEP, to various other conventions and meetings like CITES in 1973 aiming to ameliorate the abysmal condition of biodiversity loss globally endangered through increased trade, and relentless industrialization. Brundtland Report 1987 reflected its adherence to the principle of ‘sustainable development’ an integration of economics and ecology in all decision making process. Basel Convention 1989, with objectives ‘to minimize the generation of hazardous wastes, control and reduce their Trans boundary movement, protect human health and environment and dispose them of as close as possible to there place where they were
generated. The Montreal Protocol, 1987, reflects the alarming status of ozone depletion which may lead to the exposure to ultra violet rays which may in turn be harmful to human body and may also alter environmental balances. It put strict restriction on the manufacture, trade and consumption of Ozone depleting substances (ODS). In 1992, Rio de Janeiro became host to more than hundred countries in the United Nations Conference on Environment and Development (UNCED), which was popularly known as Earth Summit. The summit undersigned some other treaties also like Agenda 21, Forest Principles, Climate Change Convention and Convention on Biodiversity. The World Summit on sustainable development conducted at Johannesburg in August 28th -Sept 4th 2002, was attended by 40,000 delegates including representatives from 190 countries, NGOs and a host of environmental groups, social organization as well as business houses. The conference identified with five thrust areas–water and sanitation, energy, health, agricultural productivity and biodiversity and ecosystem. Finally the Kyoto Protocol demanded more stringent commitments from the developed countries in regard with the emissions of greenhouse gases.

The critical understanding regarding the environmental conservation and environmental politics as have been studied remain fairly enigmatic. The concept of environment conservation and degradation is one the most publicized concepts globally. The media has done a commendable job in the cause of creating awareness and sensitivity towards environment. However these attempts are generally perceived insufficient and dwarf in the comparison to the size of the

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problem. As these scientific researches do not include social variables, the recommendations of such reports are mere incomplete and prejudiced opinions. There are several reports arguing poverty is one of the major causes regarding environment degradation. However no one specifies the poverty is not choice based or voluntary action. Any way these reports definitely provide us with the facts and figures related to damage in terms of environment degradation — so it helps us in being updated with the fragile situation and thereby pushes us to take actions in terms of consolidation of environment and its upgradation.

Whereas the various international conventions and meetings in concern with environmental protection and preservation lack the required amount of political will to enforce it. Still many developed and developing countries are striving to match or identify their national policies with the aim and objectives of international conventions. As above described, firstly these conventions lack enforceable political will secondly these are highly marked by the concept of international power. Like many of such conventions, their targets or their agenda are generally constructed with the consensus of few major powers. Such acts one way or the other enhance their power positions, as these conventions are restrictive in nature, which may be negatively affecting some economies and not to other economies. Thus these negotiations are not mere acts of consolidating environment protection and conservation but much more. For e.g. the Kyoto Protocol is still waiting to be ratified by the US government, whereas rest all the members including EU has ratified. This has gathered strong criticism from all the quarters specially the environmentalist, and developing nations signatories to it. Thirdly the major reason for the failure or partial success of these conventions is
based in the debate of North-South claims that environment has reached such a fragile and vulnerable condition due to preposterous motives of the North in terms of industrialization, trade and also colonialism.

Till now it is North which has consumed the largest share of the natural resources and benefited most from it. Whereas the south was forced to follow the same development models to North, which never clicked for south, the act of following has induced extreme negative effects to the environmental balances and also to the national economies. The South is indifferent towards environmental conservation as it perceives the idea as a mere restriction or impediment in its national growth and development. Whereas West also generally refrain from providing adequate and genuine incentives to developing nations for following the 'green' policy. Like US remained hesitant to be a signatory of convention on Bio Diversity, as one of its clauses included transfer of technology in the biotechnology area. Thus these conventions are often ripped and fissured on the fault lines of north and south debate.

The sanitary and phytosanitary measures require a pertinent enquiry in order to understand the association between the trade and environment. Sanitary or Phytosanitary measures include all relevant laws, decrees, regulations, requirements and procedures including *inter alia*, end product criteria; processes and production methods; quarantine treatments including relevant requirement associated with the transport of animal or plants, with the material necessary for their survival during
Transport; provision on relevant statistical methods of risk assessment; and packaging and labeling requirements directly related to food safety.9

These measures are embedded in the rationale of "scientific Justification" and risk assessment. Under the Article 5.1 of SPS, the risk assessment term stand for identifying the disease whose entry, establishment or spread may result in public health hazards and member wants to prevent within its territory, as well as the potential biological and economic consequences associated with entry, establishment or spread of these diseases.10 Sanitary and phytosanitary measures reflect or address the sensitivity to the cause of environment protection and conservation in a feeble manner. The cases involved and decided under the SPM reflect the force of WTO and the west environmental protection. In most of the cases the ban or restriction in the name of food safety are mere garbs to further their profits or trade, whether its EU Beef Hormone case or Japan Agricultural Products. These cases employed trade restriction according to the principles of SPM, in order to manifest larger profits and advantage. Such acts of west at times may definitely dilute the authencity of SPM regulations, specially in the eyes of developing nations and transforming economies, of which these are already critical. The south accepts SPM regulation as a tool of North for restricting South Participation in global trade and shrinking their space, and thereby consolidating and continuing their hegemony over south. Such act of West reflects their projected affair with the concept of environment conservation and thereby human safety and has increased

inhibitions of South towards it by many times. The SPM were however used to dilute negative impacts of the developed world, which it considerably failed to express in its employment. One important aspect is that the whole debate is centered on trade/profit and neither on food safety nor environment conservation.

However, the MEAs have attempted to fill the gap between the trade and environment. These Agreements strongly support the cause of environmental conservation. The scope of MEAs under the WTO regime in furthering the environmental protection in terms of reducing loss of biodiversity, water pollution, hazardous wastes, toxic emission etc. is extremely important. The relationship between these MEAs and WTO regulations seems extremely complex and non compatible. The exceptions in Article XX of the GATT provide enough space and legality for the proper functioning of these MEAs. The MEAs can be located as a point of reconciliation between trade and environment. However these MEAs are a limited effort to control the griminess of the situation. The third chapter of the thesis also starkly articulates the debate which is basically based to clarify the legality of clauses of MEAs under the WTO norms of ‘non discrimination’ and ‘most favoured nation’. This debate in between misses a very critical point of priority towards environmental protection and conservation expressed in the MEAs categorically.

The role of TRIPS, in empowerment of the movement towards environmental conservation highlights the present status of public health in the context of globalization. It also looks into the burgeoned industry of pharmaceuticals. The limitations drawn from the desire of extreme and eternal profits, of pharmaceutical industry influenced by the patent
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laws embedded in neo liberal agenda, on the people living at margins is a matter of grave concern for developing countries.

The study covers in depth analysis of the formation, aspects and the explicit and implicit implications of TRIPS on the developed and developing world. It highlights as to how the agenda of the developed world and the TRIPS agreement has reduced to a measure to instigate a monopoly over twenty years on the both product and process. TRIPS agreement remains a force in implementing its innate characteristics of impetus to technological to technological advancement and creating and the dissemination of knowledge. "The world development report 1998-99 examined the experience of more than eighty countries and found that the effort of intellectual property rights on trade flows in high-tech goods was insignificant. The human development report, 1989 of the UNDP also indicates that tighter intellectual property rights do not spur multinationals to carry out in country research and development. IPR systems is in fact inducing shift from the public domain to the private domain, and from the South to the North". It has impeded the egalitarian approach to the access to natural resources, traditional knowledge, community heritage etc. and restrained and retarded the steady advancement of pharmaceutical companies of developing countries. Thereby making the developing countries additionally dependent for life saving drugs on the developed countries. The developing countries may be victimized by the TRIPS agreement as, due to lack of technology they are unable to patent their own natural resources and traditional knowledge and also pay the royalty for their

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own traditional knowledge and community heritage. Patent System are therefore a drain of technology and wealth from the south to the North, not a mechanism for technology transfer from rich countries to poor countries. The developing countries are alienated from the benefits of TRIPS Agreement due to the aspect of differential development and doubly exploited as these are unable to patent their own natural resources and also pay the royalty for their own traditional knowledge and communitarian heritage. The inclusion of intellectual property standards in the treaty establishing the WTO was deeply unpopular with the developing countries and source of considerable friction during the negotiations. The myth that patents contribute to the stimulation of creativity and inventiveness and their absence lack of creativity and ingenuity is based on an artificial construction of knowledge being isolated in time and space without being connected to the social fabric and contributions from the past. For developing countries the TRIPs Agreement is perceived as an instrument of the enhancement of monopolization and registers a decline in the accessibility of drugs and medicines. It is said that the TRIPs Agreement has made life a marketable product, which could be sold and bought.

Another anomaly which has been the by-product of the TRIPs Agreement is biopiracy. Biopiracy refers to the use of intellectual property system to legitimize the exclusive ownership and control over biological resources and biological products and processes that have

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12 Ibid P.29.
been used over centuries in non-industrialized cultures.\textsuperscript{15} The Agreement on TRIPS epitomizes the trend of commodification of knowledge under neo liberal forces. Whereas non western societies are still embedded in the concept of collectivity, plurality, diversity, heterogeneity, unlike those of western societies based on individualism, atomization, homogenization and standardization. The variance from the western ideology has led to perceive and accept 'Knowledge' a part of tradition and collectivity by the non western societies against alternative sources of knowledge present in non western societies.

The act of biopiracy is principled on hegemonic biasness against other culture. This fallacy of sociological and cultural displacement as an epistemological shift generating new knowledge is made possible as a result of colonial biases which have treated western knowledge systems as exclusively scientific and non-western knowledge system as unscientific.\textsuperscript{16}

Among the many developing countries, India has also suffered from the acts of biopiracy. The Indian herbs of medicinal values have been patented by the western research laboratories. These patents include, Jamun, Karela, Amla, turmeric, neem, basmati, etc. The chapter highlights the cases of turmeric and need in detail. These cases confirm the act of biopiracy of, in cure of monopolization and thereby super profits. Thus this act of biopiracy reinforces and establishes the discrimination of TRIPs Agreement against the developing countries and the west developed countries.

\textsuperscript{15} Ibid, p. 49.
The agreement has led to extreme concentration in resource appropriation, flow of funds, exorbitant drug prices and starved domestic pharmaceutical industry. The chapter articulates the anxieties of the developing countries regarding TRIPs Agreement. The twenty year protection to the patented object potentially perpetuates an effective monopoly, free from competition. The monopoly is considered as one the major distortions for free market. By the virtue of TRIPS protection, no generic equivalent can come into market until expiry of the 20 years, denying patients cheaper alternatives. Another aspect is of the patent system regarding product and the process. The TRIPS Agreement applies patent coverage on both product and process. The process patent unlike product patent is capable of intending a stimulus for higher level of healthy competition, thereby cheaper products of drugs and higher accessibility. This aspect denies any form of information discrimination, leading to an adverse impact on domestic pharmaceutical industry. The WTO regime through the employment of TRIPs Agreement had compelled the developing countries or least developed countries to deteriorate into colonies for the consumption of highly expensive patented life saving drugs and eliminate any option of transfer of technology, knowledge or investments. Against the rhetorics of the Agreement, it remains a force in addressing the grievances of the non developed world.

However limited and insufficient, the TRIPS Agreement seeks to provide measures for the non developed societies in order to get some life on lease. These measures are compulsory licensing and parallel

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imports. Compulsory licensing enables a competent government authority to license the use of an invention to a third party or governmental agency without the consent of the patent holder.\textsuperscript{18} Whereas parallel imports enable a country to take advantage of products which the right holder has put on the market in another country at lower price.\textsuperscript{19} The concept of parallel import aims to address the predicament offered by the TRIPS Agreement, of the developing and least developed country members. The Doha `Declaration makes it clear that each member has the right to determine what constitutes a national emergency on other circumstances of extreme urgency and that public health crises, including those related to HIV/AIDS, tuberculosis, malaria and other epidemics, can represent such circumstances.\textsuperscript{20} The Doha declaration brings a human face to the unbridled and thoughtless globalization and patent regime. The above stressed measures are discussed in detail and objectively in the study.

The study also draws attention regarding specific public health issues. The chapter highlights the point of intersection between TRIPs Agreement and Public Health. It articulates the shift of health from public and government domain to private market sphere. Under auspices of capitalism, neo-liberal forces and the framework of new public management, `minimalist role of state is envisaged’ whereby health receiving an inadequate attention. Public health may be exposed to ravages of the market forces. This development has failed in even substantially addressing the grievances of non developed societies and

\textsuperscript{18} WHO, WTO Agreements and Public Health: A joint study by the WHO and WTO, Secretariat Press, 2002, paragraph 182, p. 93.
\textsuperscript{19} Ibid, paragraph 185, p. 100.
\textsuperscript{20} Ibid, paragraph, 83, p. 100.
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engendered in immense difficulties in production, accessibility and distribution of drugs. Thus the developing and least developing countries are being deprived of life saving drugs at affordable prices and generate income through strengthening the domestic pharmaceutical industry and remain a perpetual victim to such a critical situation.

Research and Development sector, after the TRIPs Agreement, gained a redefined significance and continued to be central to the pharma industry. Owing to the exclusive rights (monopoly over market) to the patent holder, the R & D sector received immense and unprecedented amount of investments. Whereas the Indian pharmaceutical industry survived the blow of TRIPS Agreement with the tinge of professionalism and by Act of 2005 on Patents, inaugurated its the full compliance to the TRIPS obligations. The industry is appreciated for being able to readjust according to the new norms and strike for capturing new ventures and avenues.

The dispute settlement body of WTO and the some very famous cases of WTO explain every bit regarding the dispute settlement mechanism, right from its inception, founding principles, structure, procedure and the arbitrations. It also covers its implications on developing country specially, India. The cases dealt in detail in the study are European Communities Measures Affecting Asbestos and Asbestos – containing Products, Thailand Cigarettes, United States –Taxes on Automobiles, Hering and Salmon and Tuna and Dolphin I and II. The asbestos case was principally characterized ‘like product concept’ and so was the case of Thailand cigarettes. In both cases AB recognized the right features on which the concept of ‘like product concept’ should be based or located. Another case of United States – Taxes on Automobile
was also based on 'like product concept'. Whereas the Canada-measures Affecting Exports of Unprocessed Herring and Salmon, case dealt under the reinterpretation of Article XX and the principle of 'National Treatment' of the WTO. However the case which gathered maximum publicity in media and world wide attention was cases of Tuna/dolphin I & II. The jurisdiction stated in above cases categorically reflect the tendency of WTO to provide upper hand to trade rules of liberalization over environmental sensitive regulations and MEAs. Apart from the asbestos and asbestos containing products, and in some cases partially (Shrimp and Turtle case), WTO jurisdictions have always been negative towards environmental measures. WTO regulations and jurisdictions failed to rise upto the level of the situation and reflect some sensitivity regarding environment conservation. Trade always ruled the WTO ruling and judgments.

The thesis seeks refuge in the modest concepts of sustainable development which aims in balancing the both accordingly without adversely affecting each other. Sustainable development seems to be a considerable answer to queries related the trade and environment as a converging point. It is not a panacea to the problems confronted by environmental politics due to the presence of a very strong and consolidated form of global trade, yet it serves as a bridge between the two concepts. The idea of sustainable development has been forwarded through various mediums of communication as literature, surveys seminars and conventions. The concept has gained immense popularity globally and has become a positive response to anxieties of advocates of both global trade and environment protection and conservation. It is submitted that there are several grey areas of international Trade regime.
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Trade and environment concerns can be addressed simultaneously by the globalised world only if the concept of sustainable development becomes a little more specific, taking into account the socio-legal and cultural dimensions of developing nations. Undoubtedly it requires further research in the area.