TRADE IN RENEABLE ENERGY: NORMS CONFLICT IN TRADE AND ENVIRONMENTAL TREATIES

A Dissertation submitted

To

Sikkim University

In Partial Fulfillment of the Requirement for the Degree of Master of Philosophy

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January, 2018.

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DECLARATION

I declare that the dissertation titled **"Trade in Renewable Energy: Norms Conflict in Trade and Environmental Treaties"** is work of my own and has not been submitted to this or any other University for any degree.

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CERTIFICTAE

We recommend that this dissertation is placed before the examiner for evaluation.

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TRADE IN RENEWABLE ENERGY: NORMS CONFLICT IN TRADE AND ENVIRONMENTAL TREATIES

Submitted by **Miss Neelam Rai** under the supervision of **Mr. Veer Mayank,** Assistant Professor, Department of Law, School of Social Sciences, Sikkim University, Gangtok, Sikkim-737102, India.

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ACKNOWLEDGEMENTS

I would like to express my special appreciation and thanks to my supervisor Shri. Veer Mayank, Assistant Professor, Department of Law, Sikkim University, Gangtok for his incredible and valuable support and supervision throughout my research. In fact, no words would suffice to express my deep sense of gratefulness towards him, who has been a source of stimulation as well as encouragement throughout my research work without his kind support and cooperation the study would not have been possible. He has been a source of constant motivator in my critical situation. I would like to extend my heartfelt gratitude towards Dr. Nidhi Saxena for her precious and valuable advices.

I am grateful to Hon'ble Vice Chancellor, Professor Dr. J.P. Tamang, and Ex- Vice Chancellor Professor. T. B Subba, Sikkim University for the opportunity and the facilities that were provided at every step, has helped in numerous ways in the completion of my Research Paper. I am thankful to the Head of Department of law Prof. (Dr.) Imtiaz Gulam Ahmed and the faculty members of the Law Department for their continued support and advice which was a continued guidance for me in my dissertation.

Along with, I would also like to extend my sincere gratitude towards entire faculty as well as non-faculty members (including library staffs) of the Sikkim University for providing immense support and guidance which they provided while researching for the materials related to my research paper.

I would be failing in my duties if I do not thank the University Grants Commission for providing me the scholarship for undertaking the research work.

I would also like to extend my sincere appreciation towards my elder brother for the fruitful, meaningful and an enjoyable time that we spent while preparing for my research paper.

Last, but not the least special thanks to my parents for their encouragement and sacrifices during the preparation of my Research work.

Neelam Rai

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ABBREVIATION

APC Air pollution control

ASEAN Association of Southeast Asian Nation

AIDCP Agreement on International Dolphin Conservation Program

APA Ad-Hoc Group on the Paris Agreement

APEC Asian-Pacific Economic Cooperation

AB Appellate Body

ACP Asian, Caribbean, Pacific Nation

BFA Banana Framework Agreement

BAPA Buenos Aires Plan of Action

CEC Commission for Environmental Cooperation

CSP Concentrated solar power

CDM Clean Development Mechanism

CFC Chlofluorocarbons

CMOB Common Market Organization for Banana

COP Conferences of the Parties

CMP Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol

CMA Conference of the Parties serving as the meeting of the Parties to the Paris Agreement

DPCIA Dolphin Protection Consumer Information Act

DSB Dispute Settlement Body

DSM Dispute Settlement Mechanism

EU European Union

ETP Eastern Tropical Pacific

EGA Environmental Goods Agreement

EGS Environmental Goods and Services

EC European Communities

EG Environmental goods

RE Renewable Energy

FTA Free Trade Agreement

FIT Feed-in-Tariff

FCCC Framework Convention on Climate Change

GATS General Agreement on Trade in Service

GATT General Agreement on Tariffs and Trade

G20 Group of Twenty

GW Gigwatts

GHG Green House Gas

GDP Gross Domestic Product

G.A General Assembly

GEF Global Environmental Facility

GATT General Agreement on Trade and Tariff

HS Harmonized System

HCFCs Hydrochlofluorocarbons

IEA International Energy Agency

IRENA International Renewable Energy Agency

IPCC Intergovernmental Panel on Climate Change

ICSU International Council of Scientific Unions

INC Intergovernmental Negotiating Committee

IATTC Inter-American Tropical Tuna Commission

JI Joint Implementation

LDC Least developed country

MAI Multilateral Agreement on Investment

MEAs Multilateral Environmental Agreements

MFN Most Favoured Nations

M/A Environmental monitoring, analysis and assessment equipment

NMFS National Marine Fishers Service

OECD Organization for Economic Co-operation and Development

PV Photovoltaic

P.M Prime Minister

PVA Polyvinyl Alcohol

PPMs Process and Production Methods

PGC Polyvinyl Alcohol fiber Cellulose and glass fibers

R & D Research and Development

SHW Solid and Hazardous Waste

SBI Subsidiary Body for Implementation

SBSTA Subsidiary Body for Scientific and Technological Advice

SPS Sanitary and Phytosanitary Measures

SDG Sustainable Development Goal

SIDS Small island developing state

SME Small and medium- sized enterprise

SWH Solar Water Heater

TBT Technical Barriers to Trade

TL Tariff line

UN United Nations

UNEP United Nations Environmental Program

UNCED United Nation Conservation on Environment and Development

UNFCCC United Nations Framework Convention on Climate Change

UNDP United Nations Development Program

WMO World Meteorological Organization

WTO World Trade Organization

WHO World Health Organization

WWM Waste-water management

CHAPTER I

1: INTRODUCTION

"...Environmentalist non-governmental organizations view free trade pure with suspicion."[1]

Role of WTO[2] in environmental protection presents a question as to how far the institutional arrangement of WTO works for the protection of environment. WTO is an organisation that puts emphasis on free trade and free flow of trade between member's states so that they can avail equal opportunities for trade i.e. import and export without discrimination between developing or developed countries[3]. Environmental issues have acquire increased significant in the past few decades and several Multilateral Environmental Agreements have come into existence which is forcing the WTO to consider environmental issues. The two regimes have therefore been in conflict and attempts have been made to harmonise trade and environmental policies. The pressure between trade and environmental policies has been create an open debate and one of the issues is whether it is possible to cumulatively liberalize trade and introduces a higher protection for the environment[4].Trade liberalization works in harmony with sustainable development and therefore the overlap between WTO rules and trade obligation have to be harmonised.

Sustainable development involves environmental aspect and always worked as a principle of trade liberalization. Recent development with an increasing number of MEAs (Multilateral

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[1] Frank Trentmann, "Free Trade Nation", Oxford University Press (2008) Pp. 23. *Available at https://rh19.revues.org/3890?lang=en.* Visited on 25.2.2017

[2] Hereinafter the acronym WTO shall be used for the World Trade Organization.

[3] Beckerman, W (1992), Economic Growth and the Environment: Whose Growth? Whose Environment? World Development 20 (4):481-96. Visited on 25.2.2017

[4] D. Brack and K. Gray, "Report: Multilateral Environmental Agreements and the WTO", Sustainable Development Program, The Royal Institute of International Affairs. Published by IISD (11 September, 2003) page 4. *Available at https*://www.iisd.org/pdf/2003/trade_meas_wto.pdf. *Visited on 25.2.2017*

Environment Agreement) has increase the amount of the debate concerning linkages between trade and non-economic issues and the relationship between WTO rules and specific trade obligations set out in MEAs.

STATEMENT OF PROBLEM

In the case of trade in renewable energy and renewable energy products, there is an overlap of rules with respect to trade rules and protection to environment regulatory discord is evident at the regulatory interface of WTO and International Environmental Treaties. Trade rules develop through the concept of free trade while environmental rules develop on the basis of government intervention. There is an emerging conflict between regulation of renewable energy through trade law and the rules under environmental law. Government around the world have prioritised renewable energies and development of new technologies with various angles. Most renewable energy technologies require some form of Government interventions especially for cost reduction, deployment etc incentives. Deployment of renewable energy technologies require some form of government support since these technologies are not cost effective as compared to traditional energy generation based on fossil fuel. Not being cost effective, renewable energy technologies require support in the form of subsidies there are chances of conflict with international (WTO) trade regime then predicated on satisfying the 'local or domestic content requirement' owing to political necessities as these subsidized are eventually resourced from tax payers money and are utilized for the development of 'global public goods' and not just domestic development. As renewable energy deployment increases, there are increasing incidences of conflict between environmental treaties and trade treaties (World Trade Organisation) owing to norms that underlie the treaties. There is a need for a better International system to deal with issues related to renewable energies

including subsidies, technology transfer, and trade in environmental goods and services. It is becoming clear that the policy and regulatory framework introduced so far has been appropriate only for accelerating the early growth of the sector from a small base and helping in mainstreaming renewable energy. A number of countries presently apply a various range of import tariff barriers to such products despite the clear prohibition of such under World Trade Organisation Agreement on TRIMS[5]. It is therefore necessary that the conflict between the provisions for regulation of international trade under WTO and the cause of sustainable growth as inherent in the MEA is analyzed with a view to understanding the nature of the conflict that has arisen between the two treaties.

The treaties that are proposed to be dealt with are GATT 1994 and Paris Convention on Climate Change.

REVIEW OF THE LITERATURE

- Joanna I. Lewis, in her article "The Rise of Renewable Energy Protectionism: Emerging Trade Conflicts and Implications for Low Carbon Development"[6]states that, Government around the world have prioritized the development of renewable energy technologies with various range of policies and incentives. Especially for the cost reductions, most renewable energy technologies require some form of Government support. While support these in the form of government subsidize there is a chances for conflicts with International trade rules. Author argues that there is a fundamental conflict between the political economy of domestic renewable energy

[5]Hereinafter the acronym TRIMS shall be used for the Trade Related Investment Measures.

[6]Lewis, Joanna I. "The rise of renewable energy protectionism: Emerging trade conflicts and implications for low carbon development." *Global Environmental Politics* (2014), *Available at*https://blogs.commons.georgetown.edu/.../Lewis.RE_.Intl_.Trade_.Draft_.11.2013.pd.visited on 25.02.2017.

support and the basic principles of global trade regimes. And this new era of renewable energy–focused trade disputes recalls earlier warnings about the challenge of addressing environmental concerns within the context of the broader dynamic of global competition, as well as the robust literature examining conflicts between trade and the environment. The renewable energy technology case differs in both the indirect nature of the environmental benefit and the range of WTO provisions potentially affecting the measures in question. The challenges in climatic changes and environment have been growing rapidly, and along with national energy security concern, have resulted in the increased use of policies to promote renewable energy. As renewable energy deployment expands, conflicts between renewable energy policies and trade policies are increasing. So there should be or need for a better International system to deal with issues relate to renewable energies including subsidies, technology transfer, and trade in environmental goods and services.

- Rohini Rangachari, in her article "Renewable Energy"[7]states that, with the hike in oil prices and climate change concerns, have led to government support for the driving increased renewable energy legislation, incentives and commercialization. And have further stated that in the year 2006 about 18% of global final energy consumption came from renewable and hydro electricity plant and Indian courts have noted that technologies to develop renewable sources of energy, such as wind, geothermal and especially solar, should receive particular attention [RCI Power Limited v. Union of India (AIR 2004 AP 60)][8].

[7]Rohini Rangachari, "Renewable Energy Manupatra. *Available at*www.manupatrafast.com. Visited on 25.02.2017.

[8]RCI Power Limited v. Union of India, AIR 2004 AP 60.

- Saira Bajwa, in his "The World Trade Organization and the Environment",[9]the author states that, over the past two decades there has been a tense relation between international trade and environmental protection regarding environment. Till now WTO have dealt with unilateral environmental rules, but WTO had never dealt with MEA (Multilateral Environmental Agreement) trade disputes. But it is predictable that MEAs specifically one with international free trade rules. Though there are lots of contentious issues in developing countries regarding environmental protection regarding their policies.
- Meisen Peter and Eleonore Quesneudec, in his article "Overview of Renewable Energy Potential of India",[10] the authors opined that, India is one of the leading countries after China in renewable energy, i.e. wind, solar, tidal etc. India has one of the largest deploying renewable energy products and systems. Since, India has only an exclusive ministry for non-conventional energy sources, and launched one of the most ambitious programs on renewable energy. Due to increasing population, there is a huge gap in demand and supply of electrification, especially in rural areas. Not only that, environmental is also one of the major concern.
- Veena Jha, in her report "Removing Trade barriers on selected renewable energy products: A modelling exercise".[11] The author provides her view on the environment and economic impacts of domestic energy and trade policies on sustainable energy diffusion and greenhouse gas emission reduction. Renewable energy sources like

[9]Saira Bajwa, "The World Trade Organization and the Environment", Journal of International Law, Gonzaga University. 25 January 2009. *Available at https://www.law.gonzaga.edu.* Visited on 27.02.2017.

[10]Global Energy Network Institute (GENI), Oct 2006. *Available at* www.geni.org/globalenergy. Visited on 27.02.2017.

[11]Veena Jha , "Removing Trade barriers on selected renewable energy products: A modelling exercise"Vol. 8, No (2014). A*vailable at*www.ictsd.org. Visited on 27.02.2017.

sunlight and wind are usually plentiful and free of cost but harassing is little bit expensive and technology deployment too. For this it needs upfront investments and investors, and not only that but the generation cost is also higher and lack of cost-effective storage. Due to these factors cost are coming down, domestic policies may either encourage or tilt the playing field against renewable. The author tried to highlight that there is no clear case to change WTO rules on LCRs (Local Content Resources) and FITs (Feed-in-tariff).

- Lewis, Joanna I. "Emerging conflicts in renewable energy policy and international trade law."[12]the author had examined the key emerging issues in trade law that have potentially significant implications for the existing policy frameworks in place to support renewable energy around the world and for trade in renewable energy technologies. And the author states that the Subsidy and industrial policies are used by various members' countries to build up renewable energy technologies industries which are likely prohibited under World Trade Organisation agreement. And for that there is a need for governments to consider the implications of using trade sanctions in the context of larger international goals i.e. environmental goals. However, as many country still try to invented their domestic programs to prop-up renewable energy in both the context i.e. international trade law and relations among industrial competitors.

[12]Lewis, Joanna I. "Emerging conflicts in renewable energy policy and international trade law." Published in the Proceedings of the World Renewable Energy Forum (2012). *Available at https://ases.conference-services.net/resources/.../pdf/SOLAR2012.* Visited on 28.02.201.

- Gerald Foley, "The Future of Renewable Energy in Developing Countries",[13] the author states that banner of renewable energy have been raising over the developing countries. In the Industrial nations, renewable have not yet proven themselves in the marketplace. The author discourse that basic energy needs must be met and these can be satisfied with traditional "renewable" sources like wood, charcoal, dung, and agricultural residues. No doubt still there are many rural areas where the sources of energy purely depends upon the old traditional way like cow dung, charcoal, firewood etc. Oil is one of the crucial elements in energy supply but the oil price is increasing has day by day and it creates a fragmentation between the inter-players i.e. major producers and consumers. Even the urban industrial sectors having the heaviest consumption of commercial energy in their sectors, is in the form of oil and electricity generated with oil. Under these circumstances developing world wants to adopt the renewable technologies, which are easily available and yet in the process of development over the past few years. They are inexhaustible, pollution free, easy to maintain etc. How these conventional source of energies can be replaced by the non-conventional source of energies because still in rural areas people completely relies on conventional source of energy such as charcoal, natural gas, fossil fuel etc for a long period of time is a must question.
- Yuka Fukunaga in his article "Renewable Energy Trade and Governance",[14] the author had tried to explain the fragmentation on energy authority and also tried to

[13]Gerald Foley, "The Future of Renewable Energy in Developing Countries", Vol.10, No. 5, (2017). *Available at*labs.jstor.org/sustainability/content/10.2307/4312683.pdf. Visited on 28.02.2017.

[14]Yuka Fukunaga, "Renewable Energy Trade and Governance" (2017). Published in the Proceeding of Annual Meeting- American Society of International Law. Vol. No- 106. A*vailable at* https://www.questia.com/library/journal/1G1.../renewable-energy-trade-and-governance. Visited on 29.02.2017.

show the potential overlap between the WTO disputes settlement and investment sectors. There is wide range of subsidy programs for WTO member's states to encourage and development off renewable energy, and some of them have provoked trade disputes. Disputes between Japan and Canada are one of such dispute concerning the renewable energy subsidy policy. The growing dispute suggested that the trade rules harm the renewable energy in the sense that the trade rules interfere with the development and use of renewable energy.

- Paolo Davide Farah & Elena Cima, "The WTO Renewable Energy Subsidies and the case of Feed-in-Tariffs: Time for Reform towards sustainable development"[15] the authors states the combating climate change requires an emphasis on renewable energy infrastructure and a supporting legal infrastructure. However, the legal infrastructure sustains subsidies that are not conducive to the development of renewable energy. Another drawback is that the WTO treats all types of subsidies similarly whereas it is required the renewable energy subsidies should not be brought within the subsidies regime of the WTO.
- Christina Voigt, in his "Conflicts and Convergence in Climate Change and Trade Law: The Role of the Principle of Sustainable Development",[16] the author states that, International Law has many pieces and consists of numerous fragmented and separated treaties, different customary norms and general principles. Due to numerous and fragmented treaties, difficulties arises and it's difficult to fit together due to

[15]Paolo Davide Farah & Elena Cima, "The WTO Renewable Energy Subsidies, and the case of Feed-in-Tariffs: Time for Reform towards sustainable development", 27 Geo. Envtl. L. Review, Vol.27, No.1, pp 31 (2015). *Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2704398.* Visited on 29.02.2017.

[16]Christina Voigt, "Conflicts and Convergence in Climate Change and Trade Law: The Role of the Principle of Sustainable Development" (2005) A*vailable at www.esil-sedi.eu/sites/default/files/Voigt_0.PDF*. Visited on 29.02.2017.

regulatory overlaps and gaps. According to Christina it is necessary to envisage International Law as a whole. The author gave the example of UNFCCC (United National Framework Convention on Climate Change) and Kyoto Protocol (KP) and the conflicts of norms between Free Trade and Environmental norms. Author opined that, UNFCCC and KP are mainly for the mitigation of climatic change and will go to the very heart of the human activity and life style. For these reasons a number of market-based or economic mechanisms (trade-related environmental measures, TRMs) have been introduced into the climate regime. These are the areas which are most prone to conflicts with other areas of multilateral regulation, especially WTO rules, because of their potential to distort free trade by being potentially discriminatory.

- Thomas J. Schoenbaum, in his article "Free International Trade and Protection of the Environment: Irreconcilable Conflicts",[17] the author states that, GATT is under pressure or under attack by environmentalist who charge that international free trade will foster the exploitation of natural resources. Environmentalist argues that free trade will destroy the environment and is short-sighted and wrong. There are several international controversies regarding trade and environmental norms. For example European Union Community enacted a ban on the importation of hormone-treated beef, provoking the US to impose $100 million in retaliatory measures against EU exports. Moreover, differing environmental standards frequently constitute non-tariff barriers to free international trade; they also may amount to disguised protectionism. Likewise, there are others trade restrictions which are increasingly used as a policy tool to enforcement environmental standards in international agreement. However, all

[17]Thomas J. Schoenbaum, in his article "Free International Trade and Protection of the Environment: Irreconcilable Conflicts", Vol. 86, No. 4 (Oct., 1992), pp. 700-704. Published in the American Society of International Law. Visited on 3.03.2017.

these trade restrictions are legitimate tool to preserve global environment, but the proliferation of such agreements raises several issues between trade and environmental norms. Another controversy of trade restriction for environmental purpose is with more stringent environmental controls. This concern is not only based on environmental consideration but also apprehension regarding the unfair competition from foreign companies that are not subject to strict pollution controls. This kind of trade restriction raises important concerns under international law.

- Annick Emmenegger Brunner, in her article "Conflicts between International Trade and Multilateral Environmental Agreement"[18] the author states that, GATT and WTO rules apply to provisions of multilateral environmental agreements; many of those provisions are likely to be found inconsistent with GATT. And lack of conformity reflects the different purposes of the agreements. There are many domestic environmental measures which are inconsistent with WTO, and even a large number of countries have agreed to the trade provisions of environmental agreement and even if the trade measures are often vital to the success of the agreement, WTO has not granted that a country's implementation of trade-related measures of multilateral environmental agreements should be specially favoured.
- Daniel C. Esty, "The Global Environment Institution, Law and Policy"[19] the author mentioned that, in recent decades, trade and environment have increasingly appeared to be linked, and sometimes it's often seemed to collide. Basically, author states that

[18]Annick Emmenegger Brunner, "Conflicts between International Trade and Multilateral Environmental Agreement", 4 Ann. Surv. Int'l & Comp. L. 74 (1997). A*vailable at*digitalcommons.law.ggu.edu/cgi/viewcontent.cgi?article=1031&context. Visited on 3.03.2-17.

[19]Daniel C. Esty, "The Global Environment Institution, Law and Policy". Published in the Sage Asia-Pacific Ptv. Ltd. Pp. 330. Visited on 27.02.2017.

free trade seems to be very dangerous and one of the reasons for increased pollution and resources depletion. Due to free trade, and lack of provisions or policies regarding trade and environment especially international trade, environment and free trade become one of the burning issues in International trade. The trade and environment policies agendas have been driven together a numbers of factors. As authors opined that, environment interest varies from nation to nation and particularly from industrialized to developing countries. Threat of global climate arise from a build up Green House gases in the atmosphere to ozone layer destructions and emission of CFCs (Chlorofluoro-Carbons) and other related chemicals to the depletion of fishes in most of the world's oceans. However, some success has been achieved in making trade and environment policies more mutually supportive. But environmentalist still worries that economic integration and more globalised market will make environmental protection harder to achieve. Because free trade expanded and it will cause environment harm by promoting economic growth that, without environmental safeguard it will result in increased pollution and the unsustainable consumption of natural resources. So the relationship between environmental issues and trade issues in the context of deepening economic integration is inescapable and multilayered.

HYPOTHESIS

'Norms Conflict' between the Multilateral Environmental Agreements and International Trade Lawn would require disciplines to regulate renewable energy.

LIMITATION OF THE STUDY

The study limits itself to the norms underlying the Agreement of the World Trade Organisation and the UNFCCC (United Nations Framework Convention on Climate Change). The study can of course take into account several other agreements, however since the

conflict is between the norms governing trade and environmental treaties and these two treaties come into conflict with each other in the present environment, therefore the scholar proposes to study the norms underlying these two treaties alone.

OBJECTIVE

- To analyse the disputes arising at the interface between trade agreements (WTO) and UNFCCC (Environmental Agreements).
- To find out the conflicts of norms between WTO regime and provisions set out in MEAs (Multilateral Environmental Agreements).

RESEARCH QUESTIONS

1. How much policy space do WTO members have under WTO rules to adopt trade-related environment measures?
2. How do the States seek to regulate trade in renewable energy under UNFCCC?
3. How does the conflict of norms between the WTO regime and UNFCCC regime affect trade in renewable energy goods and services?

RESEARCH METHODOLOGY

This researcher proposes doctrinal method to conduct this research. A comprehensive review of existing literature, journals, articles, reports, mixed with newspaper articles will be primarily relied in order to get a clear updated picture of the current position of international trade and its conflicts with several other multilateral environmental agreement along with renewable energy treaties.

CHAPTER: II

TRADE IN RENEABLE ENERGY: AN INTRODUCTION

2.1: WHAT IS RENEWABLE ENERGY

> "Energy is the golden thread that connects economic growth, increased social equity, and an environment that allows the world to thrive. Development is not possible without energy, and sustainable development is not possible without sustainable energy." – UN Secretary-General Ban Ki-moon.[20]

As economies slowly developed and became more advanced energy needs increased greatly. The supplies of firewood and other biomass energy proved inadequate to support growing economies around the world today. So people turned to alternative source of energy during the 19th century and then to oil and natural gas during the 20th century[21]. In the year 1950s nuclear energy was introduced into the energy too.[22] As economies developed and became more complex so each stages of economic development had been accompanied by a typical energy transition from one major conventional source to other alternative sources[23]. In this way, fossil fuels, such as fuel, oil and natural gas, are turning into one of the main energy forces in the industrial economy and the main activity of generating energy production in developing economies.[24] This transition was motivated by many factors like concern about environmental impacts, limits on fossil fuels supplies, prices and technological changes etc. Every year human activities dump roughly more tons of carbon into the atmosphere, half

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[20] Delivering Sustainable Energy in a Changing Climate- Strategy Note on SE, UNPD 2017-2021. *Available at www.un-expo.org/wp-content/uploads/.../UNDP-Energy-Strategy-2017-2021.pdf. Visited on 1.9.2017*

[21] David Timmons, Jonathan M. Harris, and Brian Roach, "*The economics of renewable energy", Global Development And Environment Institute, Tufts University* (2014): 52. *Available at www.ase.tufts.edu/gdae/education_materials/modules/RenewableEnergyEcon.pdf. Visited on 1.9.2017*

[22] Ibid 21

[23] Ibid 22

[24] Ibid 23

from the fossil fuels and half from deforestation. These sources caused visible damage to environment in various forms and created lots of environmental problems and damaged ecological cycle too[25]. In the earlier period the consumption of non-renewable sources of energy caused more environmental damage as compared to any other human activity. Electricity generated from fossil fuel such as coal and crude oil lead to high concentrations of dangerous gases in the atmosphere[26]. Therefore, non-conventional energy has become very important to combat this major problem in today's world. Non-conventional energy such as sun, wind, can never be exhausted and are called renewable source of energy. Thus they caused fewer emissions and are available locally and also known as non-conventional energy too[27]. The distinction between renewable and non-renewable energy is at one level artificial since all sources of energy are derive from nature and sun. The only benefits of renewable sources of energy are that they are not perishable[28]. In brief, renewable energy means a sources of energy that was naturally regenerated over a short time scale and directly derived from the sun like for example thermal, photochemical, photoelectric and indirectly from the sun such as wind, hydropower, photosynthetic energy stored in biomass or from other natural movements of the environment like geothermal and tidal energy.[29] The renewable source of energy are derived from either geo thermal or the sun for example biomass, wind, hydro

[25] Nada Kh. M. A Alrikabi, "Renewable Energy Types" V2.92 *JOCET* 61 (2014). *Available at jocet.org/papers/092-J30008.pdf.* visited on 1.9.2017

[26] What is renewable energy? EduGreen. *Available at edugreen.teri.res.in/explore/renew/what.htm. Visited on 1.9.2017*

[27] Ibid 26

[28] What are renewable sources? CFF Conserve Energy Future. *Available at* www.conserve-energy-future.com/various-renewable-energy-sources.php. Visited *on 1.9.2017*

[29] Definition of Renewable Energy- TREIA- Texas Renewable Energy. *Available at* www.treia.org/renewable-energy-defined*. Visited on 1.9.2017*

power, solar are all eventually derive from intergenerational equity[30]. Most renewable formed of energy other than geothermal and tidal power was from sun i.e. solar energy.[31] Likewise, the energy from biomass derives from plant material produced by photosynthesis using the power of the sun. Wind energy derived from winds which generates by the suns irregular heating of the atmosphere. And hydropower depended on rain which again depended on sunlight's power to evaporate water.[32] Renewable sources were considered sustainable because they could not run out as well in the sense that their environmental and social impacts were more favourable than those of fossil fuels.[33] These entire sources can be easily providing sustainable energy services because they can be naturally replenished[34]. Significantly they are able to meet the demand of people without compromising the demand for the future generation and stay till life and have low environmental impact and widely available and replenish naturally[35]. Renewable energy was an overall strategy of sustainable development because they help reduce dependence of energy and thereby ensured a sustainable supply. It provided more diversified, balanced and stable pool of energy sources.[36] Presently, renewable energy provided about 14% of global primary energy consumption mostly traditional source of energy, and about 20% of electricity large-scale

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[30] Definitions of renewable energy, Nordic Folkecenter for Renewable Energy. *Available at www.folkecenter.net/gb/overview/definitions/.* Visited on 3.9.2017

[31] Ibid 30

[32] Ibid 30

[33] Rohini Rangachari, "Renewable *Energy",* Manupatra Articles *Available at www.manupatrafast.com/articles/PopOpenArticle.aspx?ID=13854636-89e0. Visited on 3.9.2017*

[34] R.K. Behl, R.N. Chhibar, *et.al.* (eds.), *Renewable Energy Sources and their Applications,* Published by AGROBIOS (INTERNATIONAL) Jodhpur (2011). *Available at www.ifeed.org/pdf/.../BOOK_Renewable-Energy-Sources-and-their-Applications.pdf. Visited on 3.9.2017*

[35] What is sustainable energy? EE Conserve Energy Future *Available at* www.conserve-energy-future.com/isrenewableenergysustainable.php*. Visited on 3.9.2017*

[36] Supra 35

hydropower[37]. Additionally the 'new[38]' renewable sources contributed only 2% of the world's primary energy use because such sources were used indigenous resources that provided energy services with zero emission [39]of pollutions. There is various definition[40] of renewable energy likewise IEA[41] defines renewable energy as 'those resources derived from natural processes that are replenished regularly. It derives directly or indirectly from the sun, or from heat generated deep within the earth i.e. generated from the sun heat, wind, biomass, geothermal etc."[42] Thus renewable sources provided many benefits to both the global economy and individual countries, as the approximately share of renewable energy was nearly 20%[43] of global consumption. Further, the adoption of renewable technologies can help reduction the carbon intensity[44] of growth. Besides with the right policies and proper

[37] Thomas B Johansson, Kes Mccormick, *et.al*., 'The Potential of Renewable Energy', International Conference for Renewable Energies, Bonn (2004), International Institute of Minnesota · Utrecht University *Available at www.ren21.net/Portals/0/documents/irecs/renew2004.* Visited on 4.9.2017

[38] The term itself suggested that it mainly focused on modern and sustainable form of renewable energy specifically modern biomass, geothermal, electricity, low temperature solar heater, wind electricity, solar photovoltaic and thermal electricity and marine energy. See Thomas B Johansson, Kes Mccormick, *et.al*., 'The Potential of Renewable Energy', International Conference for Renewable Energies, Bonn (2004), International Institute of Minnesota · Utrecht University *Available at www.ren21.net/Portals/0/documents/irecs/renew2004.* Visited on 4.9.2017

[39] Supra 37

[40] Renewable Energy, Trends, Challenges and Opportunities, United Nation Environmental Programme (2013) *Available at http://web.unep.org/greeneconomy/sites/unep.org.greeneconomy/files/field/image/chapitre_6_renewable_energy.pdf*. Visited on 4.9.2017

[41] Hereinafter the acronym IEA shall be used for International Energy Agency

[42] Renewable Energy, IEA. *Available at https://www.iea.org/about/faqs/renewableenergy/pdf.*

[43] Supra 42 pg. 220

[44] R.E.H. Sims and N.Robert Schock (et.al.), Energy supply: In Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change in Metz, B., Davidson, O.R., Bosch, P.R., Dave, R., Meyer, L.A. (eds.). Cambridge University Press, Cambridge,

implementation and financial framework an extensive range of renewable technologies will become accessible to a large extent in market[45].

- BIOMASS

Biomass is widely use form of renewable energy basically utilize organic materials and converting them into other forms of energy that can be used. There are various forms of biomass which have been used for centuries such as burning wood, charcoal, residues etc. But the newer methods are more focus on methods that don't produced carbon dioxide[46]. Since, biomass is one of the original sources of energy and accounts 10% of world primary energy supply and was the world's largest[47] single renewable energy sources. There are various sources of energy derived from biomass plant matters. Likewise, chemical process can also turn biomass into fuels like methanol and ethanol and even for the use of crop yield vegetables oils because once biomass decompose methane gas is automatically generated.[48] Further biomass was classified as plant, animal manure or municipal solid waste. Like for example forestry plantations, natural forests, woodlands and forestry waste provided most woody biomass, whereas non-woody biomass and processed waste comes from agricultural residues and agro-industrial activities.[49]

No doubt biomass resources were ample in most parts of the world and various conversion technologies were available and could transform traditional[50] use of biomass to modern energy. Some advantages and drawbacks of biomass as a source of energy are like it's

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United Kingdom and New York, NY, USA. UNEP (2011). Available at: http://www.ipcc.ch/pdf/assessment-report/ar4/wg3/ar4-wg3-chapter4.pdf. Visited on 5.9.2017

[45] Supra 40

[46] Ibid 45

[47] Supra note 21

[48] Ibid 47

[49] Supra note 37, Pg. 5

[50] Ibid Pg. 5

abundant in nature, environmental friendly and doesn't add or release carbon dioxide in the atmosphere. Major advantage of using biomass was that it can be used to generate electricity. It will associated with the environmental impacts because the green plants from which biomass fuels are derived fix carbon dioxide as they grow so their use does not add to the levels of atmospheric carbon.[51] Besides the advantages of biomass and also some drawbacks to biomass energy use also like less energy than a similar volume of fossil fuels, even direct combustion of biomass can cause or release harmful effect to environment as burning biomass release carbon dioxide which was the main factor to the warming of the atmosphere and possible climatic change too. Biomass stills an expensive source of energy[52] in both terms like producing and converting too. No doubt biomass energy was one of the unique among non-hydro renewable power sources because of their extensive range of applicability to a diverse set of needs. Thus the emerging technologies of biomass as renewable sources promote a greener planet and also cut down on the need for fossil fuels which causes pollution.[53]

- SOLAR

The energy which is received from the sun is called solar energy and one of the easiest ways to solve serious problems regarding energy that was needed every day in and out in our life. Solar energy means capturing the rays of the sun and storing the energy and heat can be converted into energy. Furthermore solar energy was categorised into two[54] kinds i.e. thermal

[51] Sriram, Nisha, and Mohammad Shahidehpour, "*Renewable biomass energy." Power Engineering Society General Meeting,* IEEE, 2005. *Available at www.iitmicrogrid.net/microgrid/pdf/papers/renewables/biomassenergy.pdf. Visited on 7.9.2017*

[52] Ibid

[53] Supra note 54

[54] Solar Energy Advantages and Disadvantages, ICD Technologies (28, August 2017) *Available at* www.idc-online.com/control/Solar_Energy_Advantages_and_Disadvantages.php*. Visited on 7.9.2017*

and electrical. Thermal energy basically possessed by an object or system due to the movement of particles within the object or the system and it was one of various types of energy where energy can be defined as the 'ability to do work'[55]. Then we can easily find everywhere and is totally free of cost. While it also helps us doing daily house chores, like clothes, dries things, heats water and many other things.[56] Talking about the electrical energy, solar powered photovoltaic (PV) panels converted the sun's rays into electricity by exciting electrons in silicon cells using the photons of light from the sun.[57] As mentioned above solar energy was a clean and renewable energy and important for survival of life on earth and abundantly available. Solar energy was an environmental friendly and doesn't create pollution, help in reducing the electricity bills. Solar energy works independently without any connection and can be utilized and installed in remote areas too. It helps in decreasing the harmful gasses and doesn't contribute to environmental pollution and other natural calamities.[58] On the other hand it had a few drawbacks too like it wasn't reliable this means when there was no sun than there is no generation of energy.

- WIND ENERGY

Wind is also one of the easiest and convenient energy driven by atmospheric air and just another way of collecting energy. Sun also heats the atmosphere which produced wind and even works n cloudy days and rainy seasons too[59]. For hundreds of years people have used windmills to harness the wind's energy. Wind turbine blade is highly sophisticated that captured the wind's energy by means of blade. So wind energy has been the largest and

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[55] What is Thermal Energy? Definition and Examples, Study.com. *Available at http://study.com/academy/lesson/what-is-thermal-energy-definition-examples.html. Visited on 7.9.2017*

[56] Supra note 54

[57] How do solar system produce energy? NW Wind & Solar. *Available at* www.nwwindandsolar.com/solar-power-in.../how-do-solar-systems-produce-energy. *Visited on 7.9.2017*

[58] Supra note 54

[59] Supra note 25

fastest growing sources of energy in the world since 1990 and increasing at an average rate of over 25%.[60] The main advantages of wind energy was that it doesn't disrupt natural processes or harmful to the environment. It can easily generate electricity on a large scale too.[61] Not only that wind has tremendous potential to generate energy on large scale and like solar and hydropower they can used to provide reliable and stable supply of electricity. Despite their advantage wind energy has other drawbacks too like wind energy basically required extensive storage during maximum production time and sometimes unreliable source of energy as winds are unsure. Usually wind power set-up and situated away from the places and transmission from such places increases cost of electricity.[62]

The above mentioned alternative sources of energy have become one of the integral parts of the energy portfolio. So the main purpose of using renewable energy is to reduce the negative environmental effects associated with non-conventional sources.[63]

2.2 IMPORTANTANCE OF RENEWABLE ENERGY

Renewable energy sources are inexhaustible and provide green energy and are there for sustainable since they don't cause pollution[64]. There were several critical reasons for the importance of renewable energy for our society either for the survival of the human race,

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[60] Renewable Energy: An Overview, U.S. Department of Energy (DOE) by the National Renewable Energy Laboratory (NREL), DOE/GO-102001-1102 FS175 (March 2001) *Available at www.nrel.gov. Visited on 8.9.2017*

[61] Pena Sparrow, Wind Energy: Advantages and Disadvantages, I Answer 4 U. *Available at http://www.ianswer4u.com/2012/02/wind-energy-advantages-and.html. Visited on 8.9.2017*

[62] Ibid 61

[63] Umair Shahzad, "The Need for Renewable Energy Sources" *ITEE* Journal 18 (2015). *Available at www.iteejournal.org/Download_August15_pdf_4.pdf*. Visited on 8.9.2017

[64] Renewable energy, Agencia Internacional de la Energía, Revista National Geographic en su número especial del Cambio Climático ACCIONA (2015). Available at https://*www.acciona.com/renewable-energy/* Visited on 8.9.2017

planet, and globe as a whole. Renewable energies potentially hold the means too many of the issues.[65] The importance of renewable energy is to combat climatic changes which is the major factors faced by every nation and need to manage diminished fossil fuels reserves which was depleting slow and gradually.[66] Furthermore, an international treaty i.e. Kyoto Protocol[67] had been signed to reduced their emission of carbon dioxide and green house gases from the 19901 level too. Renewable energy was one of the options to mitigate climate change besides that for proper energy security, availability, affordability, and sustainability too. Furthermore it was one of the alternatives for economic development like green growth, innovation of industrial development and rural development too.

Expanding fossil fuel burning and use of various conventional sources of energy and land use changes have emitted and still continue to emit and increasing greenhouse gases quantities into the earth's atmosphere. Gases like methane, nitrogen caused a rise in the amount of heat from the sun withdrawn in the earth's atmosphere. These result in changing climate and led to the greenhouse effects.[68] Further it was clear from the Fourth Assessment Report of the IPCC[69] (2007) that the global warming was mostly due to man-made emission of greenhouse gases and over the last century atmospheric concentrations of carbon dioxide increased from a pre-industrial value of 278 parts per million to 379 parts per million in 2005.[70]

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[65] Advantages of Renewable Energy- All Recycling Facts. *Available at http://www.all-recycling-facts.com/advantage-of-renewable-energy.html.* Visited on 8.9.2017

[66] Why Renewable Energy is important, Hi energy Highlands and Island of Scotland

[67] International agreement linked to the United Framework Convention on Climate Change. It was adopted in Kyoto on 11 December 1997 and entered into force on 16 February 2005. See Kyoto Protocol UNFCCC Newsroom *Available at unfccc.int/Kyoto.protocol/items/2830.php*. Visited on 8.9.2017

[68] Climate Change: Impacts, Vulnerabilities and Adoption in Developing Country, UNFCCC (25 July, 2006). *Available at https://unfccc.int/resource/docs/publications/impacts.pdf. Visited on 10.9.2017*

[69] Hereinafter the acronym IPCC shall be used for the Intergovernmental Panel on Climate Change.

[70] Supra note 72

According to IPCC Report an increasing rate of warming has taken place over the last 25 years and it shows that global warming will continue and speed up.[71] To mitigate all those climatic problems renewable sources of energy had a probability to displace emissions[72] of greenhouse gases from the combustion of conventional sources of energy. It contributed to social and economic development and to energy accessed and sustainability energy supply and help in reduction of negative impacts of energy on the environment and human health but only if it was implemented properly.[73] Other various renewable sources of energies technologies had been used like biomass, solar, mini hydro, improved cooking stove, water mills etc, all these technologies contributed in reducing emission and good potential of carbon combating.[74] Like the biogas replaced firewood for cooking purpose. It avoided deforestation and also produced organic fertilizers as its by-products too. Improved cooking stoves leads to abridged GHG[75] emission and mini hydro help to replace and reduce the use of petroleum which is one of the major factors for the climatic change[76]. Till now there were limited studies which shows that the GHG mitigation potential by using renewable energy technology in most of the developing countries and help to combat climatic problems and harmful effects on environment too.[77] There were contributions made by renewable energy

[71] Ibid 70

[72] National Rural and Renewable Energy Programme (NRREP) Climate and Carbon Subcomponent, Report: Study on Role of Renewable Energy Technologies in Climate Change Mitigation and Adaptation Option in Nepal (2013). *Available at http://www.aepc.gov.np/docs/resource/subreport/20131112235402_Study%20on%20Role%20of%20Renewable%20Energy%20Technologies%20in%20Climate%20Change%20Mitigation%20and%20Adaptation%20Options%20in%.* Visited on 10.9.2017

[73] Ibid 72

[74] Ibid 73

[75] Hereinafter the acronym GHG shall be used for Greenhouse Gases

[76] Supra note 78

[77] Ibid 76

especially in the developing countries like electricity shortages identified as a key blockage[78] for sustaining economic growth rate. For an example India's per capital[79] consumption was one of the lowest in the world. As per the census 2001 in the year 2009-10 the national power shortage average 10.1%[80], while accessed to grid power remained low with an electrification rate of just 55% leaving almost 142 million people without electricity coverage[81]. Thus, to mitigate all those problems renewable energy is the only solution to every developing nation's energy shortage as they are distributed and have low marginal costs of generation. They also provide security by diversified supply and reduced import dependence and mitigate fuel price instability too.[82] Another economic key role of renewable source of energy was through the impact on GDP[83]. Furthermore when renewable energy was doubled global GDP increased but the scale of GDP impacts was varies across countries.[84] For an example large economies nations such as China, India, France, the UK and US benefitted from positive impacts through the proper and increased investment on renewable energy[85] which triggered positive effect throughout the economy.[86]

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[78] Gevorg Sargsyan and Mikul Bhatie, *et.al.* '*Unleashing the Potential of Renewable Energy in India'* (2010) *Available at https://www.esmap.org/file-download/25198/68205.* Visited on 10.9.2017

[79] According to World Bank survey (World Development Indicators, 2010). See ibid 62 (Gevorg Sargsyan and Mikul Bhatie, *et.al.* 'Unleashing the Potential of Renewable Energy in India' (2010) *Available at https://www.esmap.org/file-download/25198/68205.* Visited 11.9.2017

[80] Overview, Government of India, Ministry of Power (2009). *Available at http://powermin.nic.in/JSP_SERVLETS/internal.jsp. Visited on 12.9.2017*

[81] International Energy Agency, World Energy Outlook, China and India Insights WEO (2007). *Available at www.worldenergyoutlook.org/media/weowebsite/2008-1994/WEO_2007.pdf.* Visited on 12.9.2017

[82] Supra note 82 pg. 15

[83] Hereinafter the acronym GDP shall be used for Gross Domestic Product

[84] Rabia Ferroukhi and Alvaro Lopez-Peña, 'Renewable Energy Benefits: Measuring the Economics' IRENA, Abu Dhabi (2016) Pg 24. *Available at http://www.irena.org/DocumentDownloads/Publications/IRENA_Measuring-the-Economics_2016.pdf.* Visited 12.9.2017

[85] Ibid 84

[86] Ibid 85

Renewable energy also generated additional income and reduced expenses by preventing the building of polluting and perhaps outdated grid and plants. It may allow developing countries to leapfrog directly into clean energy scenario by avoiding existing grid, energy production which is gradually and progressively replaced over time.[87] Additionally the utilization of renewable energy allowed additional benefits besides supporting the universal and national goals for sustainable development. It also benefitted the social areas in which renewable energy can provide employment. Though it may be differ from countries and the way they invested in renewable energy but created twice times more job than invested in conventional energy. [88]Thus it was estimated about 3.5 million direct jobs in renewable energy industries and in 2009-10[89] about one million jobs were created by the renewable energy industries in developing countries. As well as it provided availability of energy for final use at all time and for this we required a sufficient supply of primary resources and uninterrupted function of the supply chain. Because no energy sources were protected from distraction so the key aspect of energy availability was diversity [90]of energy sources. Well diversified energy includes different energy sources as well as different supply pathways, for example conventional sources of energy and renewable sources of energy have different characteristics in terms of

[87] Renewable energy: potential and benefits for developing countries, Proceedings of a conference organised by the European Office of the Konrad-Adenauer-Stiftung and the East West Institute, Brussels (28 February, 2007) *Available at http://www.kas.de/wf/doc/kas_10993-1522-2-30.pdf?110504153814*. Visited on 12.9.2017

[88] Report of the Secretary-General: Promotion of new and renewable sources of energy, sixty-sixth sessions (15 August, 2011) *Available at http://www.un.org/esa/dsd/resources/res_pdfs/ga-66/SG%20report_Promotion_new_renewable_energy.pdf*. Visited on 13.9.2017

[89] "Renewable 2011: Global Status Report", Paris, REN21 Secretariat (2011). *Available at http://buddygo.crio.co.za/ren21_renewables_2012_global_status_report_webinar_focusing_on.pdf.* Visited on 13.9.2017

[90] Simon Müller, Adam Brown and SAmAnthA Ölz, 'Renewable Energy: Policy Considerations for Developing Renewable', IEA (November 2011) *Available at* https://www.iea.org/publications/freepublications/publication/Renew_Policies.pdf*. Visited on 13.9.2017*

the storages, extraction, etc. In term of conventional sources of energy it can be stored indefinitely in arbitrary quantities (fuels) but in renewable energy only few can stored (large hydro dams, biomass). Conventional source required extraction while renewable was freely available. Further for conventional sources key parts of the supply chain are localised (ports, pipelines, stations) on the other hand renewable energy large potential for decentralisation (rooftop, run-off-river hydro, bio energy plants).[91] Thus there were many good and beneficial reasons for placing high priority on renewable energy because they are naturally replenished and generated from natural sources. The main core of the renewable energy was especially in the development and the sustainable development.[92]

2.3 GROWTH IN TRADE OF RENWEWABLE ENERGY

Growth in renewable energy use and development increased due to emphasis on the same by several countries of the world[93]. In the 21st Century the world population grew four times and economies output 22 times and fossil fuel consumed 14 times.[94] Thus renewable energy and its technologies, infrastructure became one of the crucial for the economic growth and welfare of the nation and for sustained growth of the nation's economy. For example developing countries like India; electricity sector was one of the most diversified in the world and sources or power generation range from conventional to non-conventional sources. So to

[91] Ibid 89 pg. 11

[92] Glory Oruegbu, 'Green Energy: Economic Benefits of Clean and Renewable' Glow Initiative for Economic Empowerment. *Available at http://glowinitiative.org/green-energy-economic-benefits-of-clean-and-renewable-energy/.* Visited on 13.9.2017

[93] Chelsea Ellsworth, How Trading Renewable Energy Will Grow the Industry, Staff News & Analysis, *The Daily Belly*, Aug. 30. 2017. Available at: *http://www.thedailybell.com/news-analysis.* Visited on 13.9.2017

[94] Green Growth Studies: Energy-OECD. *Available at https://www.oecd.org/greengrowth/greening-energy/49157219.pdf.* Visited on 13.9.2017

meet the increasing demand for electricity in the developing country like India, massive installed generating capacity was required.[95] India power sector was gone through a major change that redefined the industry outlook. Not only that the Government of India focused on attaining power for all and moved up 73 spots to rank 26th in the World Bank's list of electricity accessibility in 2017.[96] The annual growth rate in renewable energy generation was estimated to be 27% and 18% for conventional energy.[97] Renewable energy was growing of the 300 GW[98] of new electricity generation capacity was added globally between 2008 and 2009 and about 140 GW came from renewable sources, such as wind, solar etc.[99] Today out of five to six units of energy delivered to consumers comes from renewable sources. It was the significant evident in the power sector where renewable were growing in conventional technologies. At 154 GW capacity from renewable energy represented 61% [100]of all new power generation capacity added worldwide in 2015 (IRENA, 2016b). Even IPCC[101] report clearly showed that renewable energy could meet the growing demand of developing countries, where over 1 to 2 billion[102] peoples lacked access to basic energy services at a faster rate than conventional energy sources. On the other hand, many forms of the

[95] Power Sector in India- Solar Energy, Renewable & Wind Energy Sector. India Brand Equity (July 2017) *Available at https://www.ibef.org/industry/power-sector-india.aspx. Visited* on 13.9.2017

[96] Ibid 95

[97] Ibid

[98] Hereinafter the acronym GW shall be used for Gigwatts

[99] Fiona Harvey, Renewable energy can power the world, says Landmark IPCC study, The Guardian News and Media Limited or its affiliated companies (9 May 2011) *Available at https://www.theguardian.com/environment/2011/may/09/ipcc-renewable-energy-power-world.* Visited on 14.9.2017

[100] IRENA, Rethinking Energy: Accelerating the global energy transformation (2017), International Renewable Energy Agency, Abu Dhabi. *Available at* www.irena.org/DocumentDownloads/.../IRENA_REthinking_Energy_2017.pdf. *Visited on 14.9.2017*

[101] Hereinafter the acronym IPCC shall be used for Intergovernmental Panel on Climate Change.

[102] Supra note 105

technology were still more expensive than fossil fuels and find that the production of renewable energy will have to increased by as much as 20 times[103] so as to avoid dangerous levels of global warming. Even 13%[104] of the world's energy comes from renewable sources in 2008 but the greatest source of renewable energy used globally at present was burning biomass, which was problematic because it cause deforestation and leads to air pollution that harms health. Global investment in renewable energy had grown from USD 50 billion in 2004 and in 2015 USD 345 billion. The developing courtiers attracted the majority of renewable energy for, example China alone accounted about 90%[105] (wind and solar panel) of the global investment in 2015.

Recent years have witnessed considerable growth in investment in the renewable energy sector in some of the developed countries too. In the U.S. renewable energy comprised approximately twelve percent[106] of the total energy capacity. Even the BRICS[107] groups have emerged as major consumer of energy resources. China is the leading installer of wind turbines and solar panel system in the world and one of the leading hydropower[108] producers too. Likewise, India was one of the first countries in the world to establish a Non-conventional Energy Resources and launched the Jawaharlal Nehru National Solar Mission[109]

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[103] Ibid 108

[104] Ibid 109

[105] Ibid 110

[106] James J. Nedumpara, Renewable Energy and the WTO: The Limits of Government Intervention, Vol. 9 (2013) Jindal Global Law School (JGLS). *Available at docs.manupatra.in/newsline/.../421E5D02-01ED-4A0C-89D7-96DA3B85C3D4.pdf.* Visited on 14.9.2017

[107] BRICS referred to the countries of Brazil, Russia, India and China, which deemed to be at a similar stage of newly advanced economic development.

[108] Renewable Energy Policy Network, Renewable 2011 Global Status Report, (September 2010). *Available at www.ren21.net/renewables-2010-global-status-report/*

[109] JNNSM was a major initiative of the government of India to promote ecologically sustainable growth while addressing India's energy security challenge and contribution to fight against the issues of climate change which was a big concern across the globe.

(JNNSM) in 2010, became key features of the National Action Plan on Climate Change.[110] Another BRIC country Brazil supported the Program of Incentives for Alternative Electricity Resources (PROFINA),[111] since 2002 and was one of the second largest producers of fuel ethanol and the largest export after the U.S. There are other countries like Germany who have installed massive programme for promoting renewable energy. Schemes like FIT[112] were introduced which provided a guaranteed tariff to electricity produced from renewable energy sources.[113] It was introduced in 1990, required utilities to provide renewable energy generators grid accessed and also purchased the energy produced. Besides many programmes launched by several developed and developing countries, the development of renewable energy programmes raised considerable concerns. The subsidies for renewable energy were about US $ 66 billion in 2010 alone and in 2035 renewable energy will reached US $250 billion.[114] On the other hand, technologies are gaining grip and recognition, but not yet practicable at a large utility scale level to play a significant role in a country's energy because

[110] Supra note 112

[111] PROFINA intended to increase the production of electric energy using renewable sources like biomass, small hydro, and wind plants. The main end of the program was to increase the share of electricity energy in the National Interconnected System, generated by enterprises based on wind and small hydro and biomass plants. *Available at https://www2.gwu.edu/~ibi/minerva/Fall2009/FinalPaper-Denise.pdf.* Visited on 14.9.2017

[112] Hereinafter the acronym FIT shall be used for Feed-in-Tariff

[113] A FIT was generally done by the government through electricity utilities on the direction of the government. In the case of FIT scheme run by the Ontario Power Authority, a body was created by provincial government statue in 2004. According to that it allowed both large scale and small scale private energy producers with qualifying renewable energy fuel sources to resell generated energy back onto the Ontario electricity grid at a fixed price for a twenty-year period. See supra 116 James J. Nedumpara, Renewable Energy and the WTO: The Limits of Government Intervention, Vol. 9 (2013) Jindal Global Law School (JGLS). *Available at docs.manupatra.in/newsline/.../421E5D02-01ED-4A0C-89D7-96DA3B85C3D4.pdf.) Visited on 14.9.2017*

[114] Supra note 116

the inability to internalize the cost of GHG emissions caused significant under-pricing of conventional forms of energy.[115]

In Asian countries the shares of different sources of electricity production i.e. 80% came from oil and coal other convectional sources in all ASEAN[116] countries. They produced electricity from hydroelectric sources for example in case of Philippines 13%[117] of its electricity came from renewable sources. Even though the recent fall in fossil fuel prices, investment in renewable energy has increased, establishing a record in 2015 with $329 billion invested globally. Furthermore the conclusion of Paris Agreement[118] on Climate Change mitigation has improved cost-competitiveness of renewable energy sources and laws enabled investment in renewable to keep growing at the expense of carbon-emitting sources.[119] In the year 2015 investment in renewable energy were nearly ten times more than it was in 2004, increasing from $19 billion to $179 billion.[120]

2.4 CHALLANGES IN GROWTH OF RENEWABLE ENERGY

Recently renewable energy technologies have experienced exceptional growth and the consciousness regarding renewable energy technological improvement, growing environmental issues, the economic climate and number of policies instruments have facilitated and continuous interest in these technologies. In as much as the cost of the

[115] Ibid 120

[116] Hereinafter the acronym ASEAN shall be used for The Association of Southeast Asian Nations

[117] Masato Abe and Candice Lea Marie Branchoux, *et.al*. "Renewable Energy Sector in Emerging Asia: Development and Policies", *TIID Working Paper No. 01/17,* United Nations ESCAP Trade, Investment and Innovation (Jan 17, 2016) Bangkok. *Available at* www.unescap.org/sites/default/files/TIIDWP-Renewable-Energy-Sector.pdf. Visited on 15.9.2017

[118] The Agreements within the United Nation Framework Convention on Climate Change (UNFCCC) dealt with GHG emission mitigation. Paris Agreement was negotiated between 195 countries at the 21st Conference of the Parties of the UNFCCC in Paris. It was opened for signature ratified by 117 countries.

[119] Supra note 123

[120] Ibid 125

renewable energy generator and technologies was still expensive[121] and also large scale development of renewable energy resources did not take place. Investment in clean energy was approximately $260 billion in 2011, accounting for nearly 50% of all new power sources[122] worldwide. On the other hand renewable energy continues to face economic, infrastructure and policy barriers. There were many challenges that must be overcome in order to increase the flow of renewable energy in the global energy system. Though many of these barriers may vary by energy sector and region depending on the size and maturity of a given energy market.[123] Solar energy is one of the alternative source of energy and experience a steadily growth in the past year, in year 2012 there were 76% more solar installation than there were the previous year.[124] In 2013 the solar industry possesses 8,500 GW of solar capacity. Although, the huge growth of the solar industry in many countries it couldn't replace the fossil fuel.[125]

The proportion of renewable energy in the energy mix is growing through and the energy mix is still dominated by coal[126]. On the other hand fossil fuel still continues to dominate the

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[121] Ashok Upadhyay and Arnab Chowdhury, "Solar Energy Fundamentals and Challenges in Indian restructured power sector", *International Journal of Scientific and Research Publications*, Vol 4, (10 October, 2014) *Available at* www.ijsrp.org/research-paper-1014/ijsrp-p34106.pdf. Visited on 15.9.2017

[122] Michael Liebriech, "Keynote Presentation" Presented by Bloomberg New Energy Finance Summit, New York, March 20, 2012. *Available at http://www.bnefsummit.com/Images/file-upload/BNEF_2012-03-20-ml_keyote.pdf.* Visited on 16.9.2017

[123] Molly A. Walton and Leigh E. Hendrix, The Promise of Renewable: Recent Success and the Challenge of Getting to Scale, CSIS Energy and National Security Program (June 2012). *Available at https://csis-prod.s3.amazonaws.com/s3fs-public/.../120605_Walton_Renewables.pdf* . Visited on 16.9.2017

[124] Brittany Williams, 3 Challenges Facing the Solar Energy Industry, Green Energy (30 December 2013) *Available at https://www.saveonenergy.com/green-energy/3-challenges-facing-the-solar-energy-industry/.* Visited on 18.9.2017

[125] Ibid 130

[126] Gustavo Sosa-Nunez and Ed Atkins (ed.), "Renewable Energy: Global Challenges, *Environment", Climate Change and International Relations* (27 May 2016) *Available at* www.e-ir.info/2016/05/27/renewable-energy-global-challenges. Visited on 18.9.2017

global primary energy consumption while coal still remains the major contributor to the world's energy. Approximately 1.3 billion people in the world especially in rural areas live without access to electricity and roughly 2.7 billion[127] without modern reliable energy services. The United Nations (UN) declared the year 2014-2024 the decade of sustainability energy for all.[128] Major renewable energy companies became very interested in Africa, Asia, and Latin America where new markets are emerging on and off grid.[129] Furthermore, investment patterns are also shifted away from traditional governmental and foreign donor sources to greater reliance on private and local firms and banks. Support for the adoption of renewable energy had grown among the governmental agencies, industries, non-governmental organizations so that they pursued energy, environment and development agendas at local regional and global levels too[130]. Despite all these, there are still many barriers in renewable energy sector though it varies by energy sector and depend on the size and energy market of different countries either developing or developed countries. Though the policies of manufacturer and finance for renewable was continued to expand across both the developed and developing world. According to IEA[131] by 2018, non-OECD countries were predicted to account for 58% of the total renewable generation up to 54% in 2012.[132] The number of developing countries with policies in place to support renewable energy

[127] Ibid 132

[128] United Nations Decade of Sustainable Energy for All: Report of the Secretary General, Sixty-ninth sessions, Items 20(a) of the provisional agenda (14 October, 2015). *Available at www.se4all.org/decade.*Visited *on 18.9.2017*

[129] Supra note 126

[130] E. Martinot and A. Chaurey, (*et.al.),* "*Renewable Energy Markets in Developing Countries Annual Review of Energy and Environment*", (2002) *Available at www.scirp.org/(S(vtj3fa45qm1ean45vvffcz55))/reference/ReferencesPapers.aspx. Visited on 20.9.2017*

[131] Hereinafter the acronym IEA shall be used for International Energy Agency

[132] Supra note 126

increased six fold since 2006, because of that one-fifth of the worlds power production presently came from renewable sources.[133]

Cost was one of the oft-cited reasons why renewable energy sources couldn't compete at large scale with conventional energy technologies and fuels. Cost comparison was based on levelized cost of energy the equivalent cost per unit of energy delivered.[134] Many times renewable sources were unfairly compared to existing energy options, which may be mostly depreciated and which make them considerably cheaper. When compared the cost of newly installed infrastructure, many renewable energy sources were still more expensive based on simple LCOE[135] comparison, than conventional energy sources.[136] The problem is that the rate of technology diffusion, the availability of finance and policy implementation was uneven within and across countries' national boundaries.[137] Furthermore, the natural characteristic of renewable energy sources made them more variable and therefore challenging to incorporate into existing electric supply systems. Solar and wind have variable characteristics that affect power supply operation.[138] While short term variability of solar and wind, were impact capacity planning, active power control and voltage power control[139] too. But each of these barriers could be addressed with proper planning and advanced forecasting operations and management, increased demand side management, and balancing areas

[133] Ibid 132

[134] Supra note 129

[135] Hereinafter the acronym LCOE shall be used for Levelized cost of energy

[136] Supra note 140

[137] Supra note 139

[138] Supra note 142

[139] Jayant Sathaye *et.al.,* "Renewable Energy in the Context of Sustainability Development." In renewable energy sources and climate change mitigation, ed. Ottoman Edenhofer et.al. New York: Cambridge University Press (2011) *Available at http://srren.ipcc-wg3.de/report/IPCC_SRREN_Ch09.pdf.* Visited on 18.9.2017

restructuring.[140] Many developing countries has a common characteristics that influence the acceptance, spread, sustainability of renewable energy approaches[141], like example desired for economic development and a constant trade-off between growth and environmental protection[142]. Most renewable energy policies enacted or revised and focus on the power sector, which is another challenge for the growth of the renewable energy industry and a competition from the heavily subsidised conventional energy. Another challenge faced by the renewable was the formation of policies in the context of economic development, where growth was the priority and old deep-rooted mechanism were difficult to part with.[143]

Another challenge is the creation of an enabling policy environment and targets that could encourage the private sectors to participant in financing of renewable resources' technologies and the development of renewable energy projects. Because most support for renewable energy policies and technologies came from the local government or from national donors, which undermined their sustainability as the funds fluctuate with changing priorities and crises especially in developing countries[144]. The another concerned challenge regarding the growth of renewable energy is whether many low-income developing countries was able to secure the diffusion of these technologies as well as create condition for the development of

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[140] Jaquelin Cochran *et.al.,* integrating variable Renewable Energy in Electric power Markets: Best Practices from International Experience (Golden, Co: National Renewable Energy Laboratory, April 2012. *Available at http://www.nrel.gov/docs/fy12osti/5373o.pdf.* Visited on 18.9.2017

[141] T. C Kandpal and P.Purohit *et.al., Study of Selected Issues Pertaining to the Economics of Renewable Energy Utilization in Developing Countries* (2003*)* Journal of the Solar Energy Society of India *13*(1-2), 57-82. Visited on 18.9.2017

[142]S. Mohiuddin, Microfinance: Expanding the Role of Microfinance in Promoting Renewable Energy Access in Developing Countries ((2006) *The Georgetown Public Policy Review, 11,* 119. Visited 18.9.2017

[143] Ibid 142

[144] Ibid 143

domestic renewable energy technologies.[145] Due to high upfront costs of most technologies, having access to finance was considered to be an important requirement for their adoption.[146] However, the more renewable energy developed and became more multifaceted with more challenges in some regions of the globe. Economic difficulties, policy uncertainties, reductions in incentives and strong and persistent competition from traditional energy sources played the key role in the renewable energy investment volume.[147]

Even though the adaptation of renewable energy sources was increased in many parts of the globe, extensive adaptation was constrains by a multitude of policies, regulatory, technological, social and financial barriers. Besides, need of supporting policy framework also stands as large barriers among the risk that will undermined renewable project feasibility, even in the conditions of plentiful resources and favourable technology development.[148]

[145] D. Ockwell and A. Mallet, *Low-Carbon Technology Transfer: From Rhetoric to Reality*. New York: Routledge (2012). *Available at https://www.routledge.com/Low-Carbon-Technology-Transfer-From-Rhetoric-to-Reality/Ockwell-Mallett/p/book/9781849712699.* Visited on 18.9.2017

[146] Supra note 147

[147] Supra note 151

[148] Ibid 154

CHAPTER: III

UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE

3.1 INTRODCUTION

Growing global linkages, both economic and environment increased the need for coherence and harmonization in trade and environmental policies, rules, and institutions. To achieve sustainable development objectives, international rules in both the trade and environmental fields increased in geographic and substantive scope, and promoted the compulsory functioning and implementation of these sets of rules[149]. MEAs formed the overreaching international legal basis for global efforts to address particular environmental issues[150]. Therefore, the main end of the MEAs is to achieve sustainable development[151].

On the other hand MEAs guided global, national and regional action on environmental issues and as a result of multilateral processes, which are the key elements of environmental, legal and governance regimes. Generally scholars and practitioners also refer to them as 'soft laws' to indicate the nature of the instruments and compliance issues related to them[152]. Additionally, as environmental challenges became more and more complex, MEAs

[149] Trade-related Measures and Multilateral Environmental Agreements, Economics and Trade Branch Division of Technology, Industry and Economics UNEP (2007) Available *at http://unep.ch/etb/areas/pdf/MEA%20Papers/TradeRelated_MeasuresPaper.pdf.* Visited on 21.09.2017

[150] Role of Multilateral Environmental Agreements (MEAs) in achieving the Sustainable Development Goals (SDGs) UNEP Division for Environmental Law and Conventions (April 2006) *Available at https://wedocs.unep.org/bitstream/handle/20.500.11822/9966/role-mea-synergies-sdgs.pdf?sequence=1&isAllowed=y.* Visited on 21.09.2017

[151] Balakrishna Pisupati, Biodiversity Governance: Lessons for International Environmental Governance, National Biodiversity Authority (2012) Chennai, Government of India. *Available at http://nbaindia.org/uploaded/docs/BD_and_Governance.pdf.* Visited on 21.09.2017

[152] Supra note 150

increasingly provide a broad approach to deal with those challenges. Most MEAs included provisions that look into issues such as, the need for broad stakeholder participation, the lack and inadequate of data and other information, different levels at which countries had contributed to problem and can contribute to the solution, and need for incentive etc[153]. Besides that many of the measures contained in MEAs also had positive economic impacts, while addressing environmental problems[154]. For example, the harmonization of standards and practices encouraged by many MEAs were designed to improve environmental protection, facilitate the technical and legal implementation of standard regulations etc[155]. Even though each MEA contained a framework designed to respond to environmental problems, MEAs share a number of common principles and characteristics. Thus, these commonalities arose[156] from diverse factors, like the tendency of States to use and build on their previous experience in developing MEAs.

The principle of common but differentiated responsibility was elaborated in Principle 7:-

> "States shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the earth's ecosystem. In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries acknowledge the responsibilities that they bear in the international pursuit of sustainable development in view of the pressure their societies place on the global environment and of the technologies and financial resources they command". Rio Declaration[157].

In the light of the above mentioned principle MEAs seeks to address environmental problems in a balance and sensible manner and acknowledge the different contribution of countries to the cause of environmental problems and their diverse capacities to resolve them[158]. MEAs

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[153] Supra note 150

[154] Supra note 150

[155] Candice Stevens, "Harmonization, trade and the environment," International Environmental Affairs 5 (1): 42-49 (1993). *Available at http://www.ciesin.org/docs/008-062/008-062.html. Visited on 21.09.2017.*

[156] Supra note 161

[157] Ibid 149

[158] Ibid 157

were voluntary commitments amongst sovereign nations that seek to address the effects and consequences of global and regional environmental degradation. MEAs address problems with transboundary effects, traditionally domestic environment issues that raised extra jurisdictional concern,[159] and environmental risks to the global commons.

The main foundation of MEAs was laid by the Stockholm Declaration[160] in the year 1972 and the main purpose was to give the U.N.[161] and the international community the opportunity to consider systematically the problems of the human environment[162]. Stockholm was the first significant collective environmental initiatives convened under the support of the U.N. in the year 1972 at Stockholm, the international community, presented with evidence of the Earth's degradation, to face the challenges and adopted a set of bold and complete measures to addressed the environmental declined.[163] However, the Stockholm declaration was not the first step in the International efforts in the protection of the Environment. The first or pre-Stockholm era extended to 1968, the year in which the UN General assembly adopted a

[159] Douglas Jake Caldwell, "Discussion Draft: Multilateral Environmental Agreements and the GATT/WTO", (Revised Version, April 1998) *Available at: http://www.iatp.org/files/Multilateral_Environmental_Agreements_and_the_.pdf.* Visited on 21.09.2017.

[160]Stockholm Declaration was considered the beginning of modern international environmental law, international cooperation on environment. See Patric Birnie and Alan Boyle, International Law and the Environment, 2nd Edition (2002). *Available at http://nla.gov.au/anbd.bib-an43616352.* Visited on 22.09.2017

[161] Hereinafter the acronym UN shall be used for United Nation

[162] Paolo Galizzi, From Stockholm to New York, via Rio and Johannesburg: Has the Environment Lost its Way on the Global Agnda? Vol 29, Issue 5, Fordham International Law Journal (2005). Available at http://ir.lawnet.fordham.edu/ilj/vol29/iss5/3/. Visited on 22.09.2017

[163] The Secretary General, Report of the Secretary-General on the Millennium Summit, We the Peoples: The Role of the United Nations in the 21st Century 259-60, U.N. Doc. A/54/2000 [hereinafter We the Peoples], Available at http://www.un.org/millennium/ sg/report/full.htm.

resolution to convene the Stockholm conference four years later. There were numerous other steps taken by the U.N. from time to time, i.e. prior to 1968.[164]

The year 1972 was historic because for the first time countries across the world came together to identified and addressed environmental problems. Since, it was the first international intergovernmental[165] conference to mainly focus on environmental problems. Hence, the main aim of the declaration that arose in the preparation for the Stockholm was the need to address the potential conflicts between economic development and environmental protection[166] too. Especially developing countries were concerned that an international effort to protect the environment would come at the expense of their own development. Thus, to develop a conceptual framework for reconciling environmental protection and economic development, a meeting was held between a group of experts from various governments, academic and intergovernmental organizations at Founex, Switzerland. The report (Founex Report)[167] recognized that environmental protection and economic development could proceed together.[168] Therefore, as a result of Stockholm Conference, countries established the first international intergovernmental organization focused on environmental protection i.e. the UNEP[169] in Nairobi, Kenya. By the end of the period there were about more than 1100

[164] Chapter III: Measures Under United Nation- Stockholm Conference- 1972 Available at http://shodhganga.inflibnet.ac.in/jspui/bitstream/10603/127077/10/10_chapter%203.pdf. Visited on 22.09.2017

[165] Brown Weiss, 'The Evolution of International Environmental Law', Vol 54, Georgetown University Law Center (2011). *Available at* scholarship.law.georgetown.edu/cgi/viewcontent.cgi?article=2684&context=facpub. *Accessed on 20.09.2017*

[166] Ibid 165

[167] Founex Report on Development and Environment (1971) *Available at http://www.stakeholderforum.org/fileadmin/files/Earth%20Summit%202012new/Publications%20and%20Reports/founex%20report%201972.pdf*. Visited on 22.09.2017

[168] Supra note 165

[169] Hereinafter the acronym UNEP shall be used for United Nations Environment Program

international legal instruments[170] that were either fully concerned with the environment or had important provisions relating to the environment, both included binding and non-binding instruments. After the 1972 Stockholm Conference, the leaders of our world realized the need to create an organization whose sole purpose was to raise awareness regarding sustainable development as with the rapid industrialization and growth, developing countries were desperate to use cheap methods with high environment impact and unethical labour practices[171] in their push to industrialization. Thus, U.N. saw a growing need for an organization to address these environment challenges which were entangled with economic and social conditions as well. In the year 1983, the Secretary General of the U.N., Javier Perez de Cuellar, asked the P.M.[172] of Norway, Gro Harlem Brundtland, to create an organization independent of the UN to focus on environmental and development problems and solutions[173] after an affirmation by the G.A[174] resolution in the fall of 1984. This new organization was known as the Brundtland Commission or more formally the World Commission on Environment and Development (WCED) and was headed by Gro Harlem Brundtland as Chairman and Mansour Khalid as Vice-Chairman[175].

The organization's main aim was to create a united international community with shared sustainability goals by recognizing sustainability problems worldwide, awareness about them, and suggest an implementation of solutions. In 1987, the Brundtland Commission published

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[170] Supra note 165

[171] Aishwarya Anand and Rahul Kumar, Importance of Brundtland Report in the Protection of Environment: A Legal Analysis, Vol 3, Issue 3, SAJMS. *Available at http://sajms.com/wp-content/uploads/2016/04/Sustainable-Development-Paper.pdf.* Visited on 22.09.2017

[172] Hereinafter the acronym P.M. shall be used for Prime Minister.

[173] Supra note 171

[174] Hereinafter the acronym G.A shall be used for General Assembly.

[175] Supra note 171

[175] Hereinafter the acronym G.A shall be used for General Assembly.

the first volume of 'Our Common Future Report[176]'. The organization's report strongly impressed[177] the Earth Summit in Rio de Jeneiro, Brazil in 1992 and the third UN Conference on Environment and Development in Johannesburg, South Africa in 2002. The Brundtland Commission argued against the pronouncement of the 1972 Stockholm Conference on the Human Environment and provided another viewpoint on sustainable development,[178] unique from that of the 1980 world Conservation Strategy of the International Union[179] for the Conservation of Nature. Furthermore, the Brundtland Commission pushed for the idea that 'environment' was previously recognised as a sphere separate from the human emotion or action, and while 'development'[180] was a term habitually used to describe political goal and economic progress. Therefore, the Commission mainly required[181] was to re-examine the critical issues of environment and development and to re-formulate innovation and action proposal to deals with them, reinforce international cooperation on environment and development and to assess and propose new forms of cooperation that simply influence policies[182] and events in the direction of needed change. Moreover they raised the level of

[176] "Our Common Future Report" mainly emphasised the three fundamental components of sustainable development i.e. environmental protection, economic growth and social equity. So the concept of sustainability development concentrated on finding approaches to promote economic and social advancement in ways that avoided environmental degradation, over-exploitation or pollution etc. See Sustainable Development 2015, Advocacy Toolkit Mini-Site. *Available at http://www.sustainabledevelopment2015.org/AdvocacyToolkit/index.php/earth-summit-history/historical-documents/92-our-common-future.* Visited on 22.09.2017

[177] Supra note 171

[178] Ibid 171

[179] Conservation: Historical Perspective, *World Conservation Strategy 1980- Cultural Ecology (20 November, 2007). Available at http://www.culturalecology.info/cons_hist/WorldConservationStrategy.1980. Visited on 22.09.2017.*

[180] Supra note 171

[181] World Commission on Environment and Development (1987) Our Common Future, Oxford: Oxford University Press. *Available at www.un-documents.net/our-common-future.pdf. Accessed on 22.09.2017*

[182] Ibid 181

understanding and commitment to action on the part of individuals, voluntary organizations, businesses etc. The Commission mostly focused on the areas of populations, food security, the loss of species and genetic resources, energy, industry, human settlements[183] etc, and realized that all of these were connected and could not be treated in separation from one another.[184]

After the Brundtland Commission, the UNCED[185] also known as the Rio Summit, Rio Conference, and Earth Summit, was a major United Nations conference held in Rio de Jeneiro in 1992. Basically the Earth Summit was moved and guided by the remarkable document of 1987, i.e. Brundtland Commission Report. It took the concept of Sustainable development ahead to an all new level[186] and introduced the following things in this summit. While in 1972, countries were examined whether environmental protection and economic development were compatible or contradictory to each other.[187] Since, there were comparatively very few international agreements concerning the environment. In 1972 every country adopted one or more piece of environmental legislation. Therefore, there were more than 870 legal instruments[188] in which at least some provisions were concerned with environmental issues. When countries met in Rio, the focuses were totally on sustainable development and the close link between environment and development was accepted. The Rio Conference sets important agendas for the next several decades, which included Agenda

[183] Ibid 182

[184] Ibid 183

[185] Hereinafter the acronym UNCED shall be used for United Nation Conservation on Environment and Development.

[186] Supra note 171

[187] Brown Weiss (ed.) '*United Nations Conference on Environment and Development',* Vol.31, No. 4. Published by American Society of International Law: Cambridge University Press (July 1992) *Available at http://www.jstor.org/stable/20693712.* Visited on 23.09.2017

[188] Ibid 187

21 was a complete document for actions that need to be taken in relevant sectors and Rio Declaration Conventions on Climate Change on Biological Diversity and a Statement of Principles on Forests.[189]

3.2 AGENDA 21

Agenda 21 mainly addresses the pressing problems of today and also aims at preparing the world for the challenges of the next century. It also reflected global harmony[190] and political commitment at the highest level on development and environment cooperation. Thus, the first and foremost responsibility implemented on governments and there on international cooperation for support and it supplements such national efforts. The developmental and environmental objectives of Agenda 21 requires a substantial flow of new and additional financial resources to developing countries, and for also strengthening the capacity of international institutions for the implementation of Agenda 21[191]. The programme area that constituted Agenda 21 was described terms of the basis for objectives, actions, activities and means of implementation. Agenda 21 was a dynamic programme it carried out by the various actors according to the different situations, capacities and priorities of countries and regions[192] in respect of all the principles contained in the Rio Declaration on Environment and Development. Agenda 21 included a set of priority actions and a means for accomplishing these priority actions too. The following priorities were grouped into various categories[193] they are; achieving sustainable growth through combined environment and

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[189] Ibid 188

[190] United Nations Sustainable Development, United Nations Conference on Environment and Development Rio de Jeneiro, Brazil, 3 to 14 June 1992- Agenda 21. *Available at https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf. Visited* on 23.09.2017.

[191] Ibid 190

[192] Ibid 191

[193] Supra note 187

development in decision-making, protecting global and regional resources included the atmosphere, oceans, sea, living marine resources. Managing nuclear wastes, chemicals and hazardous substances,[194] making the world fit for human habitation by addressing issues of urban water supply, solid waste management and urban pollution etc. Many of the action items in this agenda were very specific and advance significantly[195] beyond the actions now in place in many countries.

3.3 RIO DECLARATION

It was the conference's counterpart to the Stockholm Declaration on the Human Environment and Development. The Declaration was a set twenty-seven principles,[196] the second principles being was an updated version of the famous principle 21[197] of the Stockholm Declaration. The Declaration contained many elements,[198] included a precautionary approach, mainly reference to a right to development, affirmation of an obligation to undertake environmental impact assessments, supportive and open economic system, and a statement that each individual shall have appropriate access to information concerning the environment that was held by public authorities, like information on hazardous materials and activities in their communities, and the opportunity to participate[199] in decision-making processes. The

[194] Ibid 193

[195] Ibid 194

[196] Ibid 195

[197] Principle 21- Resources should be made available to preserve and improve the environment, taking into account the circumstances and particular requirements of developing countries and any costs which may emanate from their incorporating environmental safeguards into their development planning and the need for making available to them, upon their request, additional international technical and financial assistance for this purpose. See UN Documents, 'Gathering a body of global agreements', Report of the United Nations Conference on the Human Environment, Stockholm (June 1972). *Available at: http://www.un-documents.net/unchedec.htm*. Accessed on 22.09.2017

[198] Supra note 187

[199] Ibid 198

Declaration define the "rights of the people to be involved in the development of their economic and the responsibilities of human beings to safeguard[200] the common environment, and focused on basic ideas concerning the attitude of individuals and nations towards the development and environment" which was first identified at the United Nations Conference on the Human Environment (1972). A number of various principles were added during Rio Declaration[201]. However, the most significant principles laid down under this Declaration was 'inter generational equity i.e. principle 3'[202], 'precautionary principle i.e. principle 15'[203], and last but not the least the 'Polluter pays principles i.e. principle 16'[204], which throw light on the concept of sustainable development and was greatest important.[205] Thus, from the above we can be ascertaining that the primary objectives of declaration were to protect sustainable development. It also focused[206] on the essential needs of economic development along with environmental preservation.

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[200] The 1992 Rio Declaration on Environment and Development: impact on policies and judgements, Alexis Foundation Blog (6 January 2015) *Available at http://alexis.org.in/the-1992-rio-declaration-on-environment-and-development-impact-on-policies-and-judgements/.* Accessed on 28.09.2017

[201] Ibid 200

[202] Rio Declaration's Principle 3 :- The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations. *See 'United Nations General Assembly- Report on Environmental and Development'. A/CONF.151.26 (Vol. I) (12August 1992) Available at http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm. Accessed on 28.09.2017.*

[203] Rio Declaration's Principle 15- In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation. See *ibid 209*

[204] Rio Declaration's principle 16- National authorities should endeavour to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment. *See ibid 211*

[205] Supra note 200

[206] Ibid 205

3.4 UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE

The UNFCCC[207] is another framed legally binding agreement produced at the United Nation Conservation on Environment and Development (UNCED) or Earth Summit 1992. The main focus of UNFCCC or FCCC[208] was to alleviate[209] GHG[210] concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. However, it wasn't legally binding and does not set any mandatory limits[211] but rather it would set the end or targets and legally binding enforcements i.e. protocols. Thus the principle updates was the Kyoto Protocol, which became much better known than the UNFCCC itself.[212] The convention was negotiated under a free standing body, the Intergovernmental Negotiating Committee, which was established by the United Nations General Assembly. The most significant part of the Convention was that countries agreed to establish a process by which they could easily scrutinize and control greenhouse gas emission.[213] Even financial assistance under the Convention was to be channeled through the Global Environmental Facility of the World Bank, UNDP[214] and United Nation

[207] Hereinafter the acronym UNFCCC shall be used for the United Nations Framework Convention on Climate

[208] Hereinafter the acronym FCCC shall be used for the Framework Convention on Climate Change.

[209] General Knowledge Today- India's Daily E-Magazine of GK and Current Affairs. Published on May 23, 2011, Updated on 10, 2016. *Available at http://www.gktoday.in/united-nations-framework-convention-on-climate-change/.* Visited on 28.09.2017.

[210] Hereinafter the acronym GHG shall be used for the Greenhouse Gas.

[211] Supra note 209

[212] United Nations Framework Convention on Climate Change- Conferences of the Parties (COP): a short history. Minerva. UN Climate Conference. *Available at http://www.minerva.unito.it/E/Climate/ClimateConferenceHistory.htm.* Visited on 28.09.2017.

[213] Supra note 187

[214] Hereinafter the acronym UNDP shall be used for United Nations Development Program

Environmental Program during at least the interim phase[215] until the first conference of the Parties.

Under the Convention the parties provided national inventories of sources and sinks of greenhouse gases, and regular national reports on policies[216] and measures that limit emissions of these gases and enhance the sinks for them, since all these inventories and reports was subjected to international review by the parties. Even though, few countries didn't agree in the Convention to control GHG emission at any given level at a specific date in future,[217] despite articles 2 (a) and (b)[218] when taken together might be read as implied a tactic goal of returning to 1990 levels of GHG emissions by the end of the decades.[219] During the last past years there were twelve sessions of the COPs[220] and more than 300 decision[221] on various issues had been adopted by the COP. These included like, the adoption of Kyoto Protocol; technical ones, like these on guidelines for the national reports and national communications from the Parties on their emissions and actions to address climate change;

[215] Supra note 187

[216] Ibid 215

[217] Ibid 216

[218] UNFCCC's Article 2 (a) and (b) of UNFCCC- The ultimate objective of this Convention and any related legal instruments that the Conference of the Parties may adopt is to achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner. See United Nations Framework Convention on Climate Change 1992. *Available at https://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf.* Visited on 28.09.2017

[219] Supra note 187

[220] Hereinafter the acronym COP shall be used for Conference of the Parties.

[221] United Nations Framework Convention on Climate Change: Handbook. Bonn, Germany: Climate Change Secretariat. Produced by Intergovernmental and Legal Affairs, Climate Change Secretariat (2006). *Available at* https://www.passeidireto.com/arquivo/25964623/unfccc-kyoto. Visited on 28.09.2017

and political decisions on activities concerning technology transfer and capacity-building for development countries and countries with economies in transition.[222]

3.5 HISTORY AND DEVELOPEMNT OF THE CONVENTION

In the year 1978 the first World Climate Conference identified climate change as one of the urgent world problem and issued a declaration calling on governments to protect and guard against climate hazardous. The World Climate Program was directed by the WMO[223], UNEP[224], and ICSU[225] and followed by several intergovernmental conferences of climate change.[226] In the year 1988 the Toronto Conference on the Changing Atmosphere advanced public debate, where more than 340 participants from 46 countries[227] all recommended and developed a broad global framework convention to protect the atmosphere. Soon, after the Toronto Conference the WMO and UNEP established the IPCC[228], to attain the magnitude and timing of changes and their estimated their impacts and present strategy for how to respond.[229] The IPCC published the first assessment report on the State of the global climate in the year 1990. It became one of the main bases for negotiations[230] under the United Nations General Assembly on a Climate Change Convention, beginning in late 1990. On December 21 the United Nations General Assembly established by Resolution 45/212[231], the

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[222] Ibid 221

[223] Hereinafter the acronym WMO shall be used for the World Meteorological Organization

[224] Hereinafter the acronym UNEP shall be used for the United Nations Environmental Program

[225] Hereinafter the acronym ICSU shall be used for the International Council of Scientific Unions.

[226] Supra note 221

[227] Ibid 226

[228] Hereinafter the acronym IPCC shall be used for the Intergovernmental Panel on Climate Change

[229] Supra note 221

[230] Ibid 229

[231] UN Resolution25/212- "a special voluntary fund, administered by the head of the ad hoc secretary under the authority of the Secretary-General of the UN, to ensure that developing countries, in particular the least developed among them, as well as small island developing countries, are able to participate fully and

Intergovernmental Negotiating Committee for a Framework Convention on Climate Change (INC) as 'a single intergovernmental negotiating process under the auspices of the General Assembly.[232] Finally in the year 1992 the INC[233] finalized Convention and fully launched in June at the Rio de Janeiro Earth Summit, where 154 states[234] signed it. The intergovernmental Negotiation Committee for A Framework Convention on Climate Change complete work and fully prepared for the implementation of the Convention. Thus, the Conference of the Parties became the Convention's ultimate authority and held first session i.e. COP 1[235] in Berlin early in the year. In this way the IPCC finalized the second assessment report in Geneva.[236]

3.6 CONFERENCES OF THE PARTIES CHRONOLOGY WISE

3.6.1 COP 1- BERLIN 1995

COP 1 was one of the ground rules for the Kyoto Protocol since the UNFCCC started the Conferences of the Parties and was the first COP held in Berlin in the year 1995. In this Protocol the parties agreed that the industrialized parties could set GHG emission limits within specifies time-frames such as 2005, 2010, 2020 and be incorporated in a Protocol, and in this way the Kyoto was born. Basically they met to consider the capability of the commitments made in 1992 and to lay a foundation for the further implementation of the

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effectively in the negotiating process." *See United Nations General Assembly, Intergovernmental Negotiating Committee for a Framework Convention on Climate Change- second session, Geneva, Review of the extraordinary funds, (19 June 1991). Available at* unfccc.int/resource/docs/1991/a/eng/08.pdf. Visited on 28.09.2017.

[232] Protection of the global climate for present and future generation of mankind, United Nations General Assembly, 71st plenary meeting, 21 December 1990. A/RES/45/212. *Available at www.un.org/documents/ga/res/45/a45r212.htm.* Visited on 28.09.2017.

[233] Hereinafter the acronym INC shall be used for the Intergovernmental Negotiating Committee.

[234] Supra note 221

[235] Hereinafter the acronym COP shall be used for the Conferences of the Parties.

[236] Supra note 221

UNFCCC's objectives too.[237] The Berlin Conferences of the parties focused on commitments[238] on expanding emission reduction commitment in the future and was one of the negotiations that would contain tougher legally binding[239] reduction targets too. The first COP focused was to review[240] the agreement contained in the Convention was adequate to combat climate effectively or not. However, the review was negative instead of voluntary commitments under the Convention a legally binding protocol was needed with new national emissions reduction targets and clear timeframes[241]. The Parties to the Convention agreed that commitments contained in the Convention for industrialized countries were inadequate and launched the Berlin Mandate talks on additional commitments. As a result COP 1 established the Ad Hoc Group on the Berlin Mandate to conduct the negotiations.[242] Moreover, also decided that the SBI[243][244] established by Article 10 of the Convention and the SBSTA[245][246] established by Article 9 of the Convention.[247]

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[237] Marinn Carlson and Annie Petsonk, United Nations Framework Convention on Climate Change Conferences of the Parties: Decision Adopted by the First Session (Berlin), Published by: American Society of International Law. *Available at http://www.jstor.org/stable/20698515* Accessed on: 30-09-2017

[238] Decisions Adopted by the Conference of the Parties: Review of the adequacy of Article 4, paragraph 2 (a) and (b), of the Convention, including proposals related to a protocol and decisions on follow-up, Framework Convention on Climate Change Conference of the Parties, 1st Sess., pmbl., Decision 1/CP.l, UN Doc. FCCC/CP/1995/7/Add. 1 (June 6, 1995). *Available at unfccc.int/resource/docs/publications/cop_decisions.pdf.* Accessed on 30.09.2017.

[239] Shahruk Rafi Khan, "Trade and Environment: Difficulty Policy Choices at the Interface." (2002) Published by Zed Books Ltd, 7 Cynthia Street London N1. Visited on 30.9.2017

[240] Chronicle of climate change conference-BMUB, Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (18 May 2016). *Available at http://www.bmub.bund.de/P1302-1/.* Visited on 30.09.2017

[241] Ibid 240

[242] Ibid 241

[243] Hereinafter the acronym SBI shall be used for the Subsidiary Body for Implementation

[244] SBI is one of the two permanent subsidiary bodies to the Convention established by the COP. It mainly supports the work of the COP through the assessment and review of the effective implementation of the Convention and its Kyoto Protocol. It also advises the COP on budgetary and administrative matters. See

3.6.2 COP 2- GENEVA 1996

IPCC finalized the Second Assessment Report in time for COP 2 in Geneva. It concluded that on the balance of existing evidence there was indeed a noticeable human influence on global climate that produced hazards to human and economic development.[248] Further COP 2 recommended cost-effective steps consistent with sustainable development and designed to provide no regrets safeguards against such risks. Steps should also be compatible with food security, wealth of nation, social justice etc.[249]

3.6.3 COP 3- KYOTO PROTOCOL 1997

The Kyoto Protocol was considered a milestone in international climate policy which took place in Japan and adopted in the year 1997 in December set[250] individual legally binding targets for industrialized countries prepared to take positive steps to restrain emissions of carbon dioxide and other GHGs from sources within their responsibility. The main end of the Protocol was to prevent dangerous interference with the climate system by limiting the emission of GHGs into the atmosphere.[251] The Protocol once entered into force and imposed emission reduction commitment on developed country parties and undergone the process of

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Subsidiary Body for Implementation (SBI)- UNFCCC Newroom. Available at *unfccc.int › Bodies.* Visited on 2.10.2017.

[245] Hereinafter the acronym SBSTA shall be used for the Subsidiary Body for Scientific and Technological Advise

[246] SBSTA is one if the two permanent subsidiary bodies to the Convention established by the COP. It supports the work of COP through the provision of timely information and advice on scientific and technological matters as they relate to the Convention, its Kyoto Protocol and the Paris Agreement. *Sees Subsidiary Body for Scientific and Technological Advice- UNFCCC Newroom. Available at unfccc.int* › Bodies. Visited on 4.10.2017.

[247] Supra note 240

[248] Supra note 221

[249] Supra note 221

[250] Supra note 221

[251] Brendan P. McGivern, "Conference of the Parties to the Framework Convention on Climate Change: Kyoto Protocol", International Legal Materials, Vol. 37, No 1. Published by American Society of International Law (January 1998*) Available at http://www.jstor.org/stable/20698760*. Visited on 30.10.2017

transition to a market economy[252], mainly in Eastern Europe. Thus, these two sets of Parties were collectively referred to as the 'Annex I Parties'[253], and so their named for their listing under Annex I to the Climate Change Convention. Therefore, unlike the UNFCCC, the Kyoto Protocol established legally binding GHG emissions targets for developed Annex I country parties in the commitment period of 2008-2012. The targets were equal to an aggregate reduction of about 5.2%[254] below these parties 1990 emissions levels. Moreover, the Protocol contained new qualitative and quantitative commitments[255] for developed countries, included the establishment of national system for estimating GHG emissions and removals[256], reporting of GHG emissions[257] and rules for the Protocol's three market-based mechanisms, joint implementation (JI), the clean development mechanism (CDM) and international emissions [258]trading. However, the radical part of the Kyoto targets was not the level of the reduction figure. Rather it was the legally binding nature of the targets[259], which hopefully placed the international community on a path away from business as usual and towards eventually stabilized and reversed current emissions trends.

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[252] Ibid 251

[253] Annex I Parties- parties include the industrialized countries that were members of the Organization for Economic Co-operation and Development in 1992, plus countries with economies in transition, including the Russian Federation, the Baltic States, and several Central and Eastern European States. *See Parties and Observers- UNFCCC. Available at http://unfccc.int/parties_and_observers/items/2704.php. Visited on 30.10.2017.*

[254] Xueman Wang and Glenn Wiser, 'The Implementation and Compliance Regimes under the Climate Change Convention and its Kyoto Protocol', Vol 11, Issue 2, RECIEL (2002). *Available at onlinelibrary.wiley.com/doi/10.1111/1467-9388.00316/pdf* . Visited on 30.10.2017.

[255] Ibid 254

[256] The Kyoto Protocol Article 5 (1)

[257] The Kyoto Protocol Article 7 (1)

[258] The Kyoto Protocol Article 6, 12 and 17

[259] Supra note 254

COMMITMENTS

A: Emission Trading

The negotiations in Kyoto mainly collapsed over the issues of emissions trading. Many developing countries and economies in transition supported[260] of emissions trading in the Protocol. According to emission trading each country was assigned a certain amount of emission units and the volume of these units allocated to each country in such way that a country used up entire allocation[261] if it was precisely complied with their national Kyoto emission reduction target. If a country achieved a better reduction than called for in the Kyoto Protocol they sold surplus emission units in the form of licences to another country. The licences were sold internationally to the highest bidder in short market which determined the price[262]of emission. Part with an emission reduction commitment i.e. a Party in Annex B could buy part of the emissions budget of another Annex B Party where it would be more cost-effective. Even though, emission trading was strongly opposed by many Parties, mostly China and the Group of 77[263] developing countries.[264] After opposed by many countries a compromised text was added at the eleventh hours in the form of Article 16 bis. According to the provision[265] Parties included in Annex B may participated in emissions trading for the purposes of fulfilling their commitments under Article 3. The Principles, modalities, rules and guidelines for verification, reporting and accountability for emissions trading was

[260] Supra note 251

[261] Supra note 221

[262] Ibid 261

[263] Group " G-77" was the largest intergovernmental organization of developing counties in the United Nations, which provided the means for the countries to the South to articulate and promote their collective economic interests and enhance their joint negotiating capacity on all major international economic issues within the United Nations system and promoted South-South cooperation for development. See The Group of 77 at the United Nations- General Information. *Available at http://www.g77.org/doc/.* Visited on 30.09.2017

[264] Supra note 268

[265] Ibid 272

defined[266] by the Conference of the Parties likely at the Fourth COP in late 1998 in Buenos Aires.

JOINT IMPLEMENTATION (JI)

Article 6 embodied the concept of Joint Implementation[267] of the emission reduction obligation of the Protocol.[268] Joint implementation carried out by two developed countries committed to an emission reduction target under the Kyoto Protocol.[269] Any Annex I Party may transferred to, acquired from, any other Annex I Party[270] emission reduction units resulting from projects aimed at reducing anthropogenic emission by sources or enhanced removals by sinks of GHG in any sector of the economy. A Party cannot acquire reduction units if it wasn't in conformity with estimation and reporting obligations[271] under Article 5 and 7, and the acquisitions of emission reduction units was to be supplemented to domestic actions for the purpose of meeting commitment under Article 3. The COP further elaborated guidelines[272] for the implementation of Article 6. The system had advantages of flexibility and efficiency and often cheaper to carried out energy-efficiency work in the transition countries.[273]

[266] Ibid 273

[267] Hereinafter the acronym JI shall be used for the Joint Implementation

[268] Supra note 251

[269] Supra note 221

[270] Supra note 251

[271] Ibid 270

[272] Ibid 271

[273] Joint Implementation- UNFCCC. *Available at unfccc.int/kyoto_protocol/background/items/2882.php.* Visited on 30.09.2017

CLEAN DEVELOPMENT MECHANISM (CDM)

Article 12 provide a clean development mechanism principle and the main purpose of the CDM[274] was to assist non-Annex[275] I Parties to achieve [276] sustainable development and contributed to ultimate objectives of the Convention and to achieved compliance with their quantified emission limitation and reduction commitments under Article 3[277]. CDM work in a similar way to Joint Implementation but the CDM work in those developing countries where there was no reduction obligation. The emission that was achieved through CDM project was certified and these certified emission reduction credited to the developed country's account.[278] On the other hand developed country obtained access to these certified emission reduction either by directly participating in a CDM project or by purchasing them. CDM main end was to assist[279] developing countries through methods like technology transfer, achieve sustainable development etc. Thus, specific conditions[280] of the CDM were laid down in the Marrakesh Accords, according to which all CDM projects was reviewed and approved by a body in advance before they credited. Therefore, in order to use the Kyoto mechanism[281] countries must access to the Kyoto Protocol, must taken emission reduction targets, calculated a national emission budget and established a national data collection system for drawing up greenhouse gas inventories and for transactions involved emission units.

[274] Hereinafter the acronym CDM shall be used for the Clean Development Mechanism.

[275] Non-Annex I Party- parties to the UNFCCC not listed in Annex I of the Convention and mostly low-income developing countries.

[276] Supra note 251

[277] Ibid 276

[278] Supra note 221

[279] Ibid 278

[280] ibid 279

[281] Ibid 280

3.6.4 COP 4- BUENOS AIRES 1998

The third conference of the parties was held in Buenos Aires (Argentina) in 1998 soon after the Kyoto Protocol. Whatever issues remained or unresolved in Kyoto that would be finalised at this COP-4 meeting. However due to some difficulties and complexities these issues prove to be besieged and instead the parties adopted a 2-year "Plan of Action"[282] to advance effort and to devise mechanisms for implementing the Kyoto Protocol to be completed by 2000. COP 4 was characterized by informal discussion[283] whether developing countries could make some form of obligation to reduce their GHG emission or not.

3.6.5 COP 5- BONN 1999

The COP-5 held in Bonn, Poland made a crucial progress towards the program set forth in the Buenos Aires (COP-4). The parties clarified their complete work at Conference of the parties-6 regarding the forestry other forestry activities,[284] improvement in conservation and management of forest, agricultural soil grassland etc under Art 3.3 of the Protocol. Further, in COP-5 many developing countries were participating to combat global warming and also requested for insertion[285] into Annex I of the Convention. Therefore, the agenda of COP 5 was mostly based on COP 4 i.e. Buenos Aries. In such a way COP-5 was a first conference where nuclear energy[286] had been mentioned because producing electricity was one of the

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[282] United Nations Framework Convention on Climate Change. *Available at www.climatechangecell.org.bd/Documents/Summary%20of%20UNFCCC.pdf.* Visited on 30.10.2017

[283] Supra note 221

[284] White House Initiatives on Global Climate Change, The Bonn Climate Change Conference State Department Fact Sheet November 1999. *Available at https://clintonwhitehouse5.archives.gov/Initiatives/Climate/BonnClimate.html.* Visited on 3.10.2017.

[285] Ibid 284

[286] Ines-Ana Jurkovic and Danilo, et.al., *Climate Change and Nuclear Power* 558 (University of Zagreb Faculty of Electrical Engineering and Computing Unska 3, 10000 Zagreb, Croatia). *Available at www.iaea.org/inis/collection/NCLCollectionStore/_Public/31/051/31051408.pdf.* Visited on 3.10.2017.

major carbon dioxide sources and fossil fuels was the foremost source of energy in most countries. As a result, when it came to the development and execution of policies and other measures to cut global warming nuclear energy played a significant role to cut down the warming problem.[287]

3.6.6 COP-6 HAGUE 2000

The sixth COP assembled in Hague, Netherland in the year 2000 and discussion evolved[288] over the major political issues. While negotiating COP 6 major controversy took place. The controversy[289] included the US proposal to allow credit carbon "sinks"[290] satisfying a major proposition of the U.S mission reductions in this way. There were other issues which were negotiated like transfer of CDM to developing countries and other issues was the Kyoto's mechanism. Nevertheless, there were number of issues which remark unfolded or remain unanswered.[291] However, sixth COP could not resolve all the issues related to operational rules and the meeting was suspended.[292]

3.6.7 COP 6 (PART II) - BIS BONN 2001

The sixth conference of the Parties was held in Bonn, Germany and was the part-II of the sixth COP. The Parties gathered to resolve outstanding issues from the first part of COP-6 in

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[287] Ibid 286

[288] John R. Justus and Susan R. Fletcher, "Global climate change." Congressional Research Service, Library of Congress (2001). *Available at www.iwar.org.uk/news-archive/crs/7938.pdf*. Visited on 3.10.2017

[289] United Nations Framework Convention on Climate Change- Conference of the Parties (COP): a short history, COP 15 Copenhagen- UN Climate Change Conference 2009. *Available at www.minerva.unito.it/E/Climate/ClimateConferenceHistory.html*. Visited on 3.10.2017.

[290] It means certain human-induced activities in the land-use, land-use change and forestry sector that remove greenhouse gases from the atmosphere, namely a forestation, reforestation and tackling deforestation.

[291] Supra note 288

[292] Supra note 221

The Hague in November 2000. The negotiation would be based on the brackets texts[293] brought forward from The Hague. There are few agreement included[294] in the COP 6 (II), strongly favoured flexible mechanism i.e. emission trading, joint implementation (JI) Clean Development Mechanism (CDM) which allowed developing countries to grant emission reduction fund. Secondly, carbon sinks which means credit given for those activities that absorbed carbon from the atmosphere[295]. Thirdly, if any developing countries failed to working with protocol provision than industrialized countries had right to suspend[296] selling of credits to developing countries and further required compliance action for those who didn't meet their target. Detailed legal texts based on these decisions were on the negotiating table at COP 7 held in Marrakesh in late 2001. Therefore, COP 7 adopted the respective decision called Marrakesh Accords.[297]

3.6.8 COP 7- MARRAKESH PROTOCOL (2001)

The COP 7 held in Morocco, all governments met in Marrakesh for the 7th Conference to UNFCCC. The main purpose of COP 7 was to agree to the legal text. It covered technical aspect[298] of political agreements reached in Bis Bonn (COP 6-PARTII) and how to implement the Kyoto Protocol. Existing sources of funding to address adaptation within the

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[293] Earth Negotiation Bulletin, 'Summary of the resumed sixth session of the conference of the parties to the UN Framework Convention on Climate change', (30 July 2001) Published by the International Institute for Sustainable Development, Vol. No 12.76. *Available at http://www.iisd.ca/climate/cop6bis/*. Visited on 3.10.2017

[294] Supra note 289

[295] Ibid 394

[296] Supra note 289

[297] Supra note 221

[298] Anup Shah, "COP7- Marrakesh Climate Conference Global Issues Social, Political, Economic and Environmental Issues –That Effects Us All", (November 11, 2001). *Available atwww.globalissues.org › Issues › Articles.* Visited on 5.10.2017

climate regime included the GEF[299] trust fund[300] and new strategies priority on adaptation and three new funds established by decisions taken at the UNFCCC's 7th COP they were Special Climate Change Fund[301], Least Developed Countries Fund and Adaptation Fund.[302] COP 7 covered and dealt with[303] major areas like eligibility criteria to participate in the mechanism i.e. CDM and JI for international emission trading system. Urgent need a compliance regime that set consequences if any parties failed to meet an emission target criteria.[304] Need to create a new type of unit for sinks credits and decision to consider at COP 8 and how to proceed at COP 9 with a review[305] of commitments that couldn't frame discussion of future developing countries efforts. Thu an adoption of the Marrakesh Accords at COP7 smoothed the way for the Kyoto's entry into force. However, the Marrakesh Climate Change Conference failed to secure the entry of Kyoto Protocol into the World Summit on

[299] Hereinafter the acronym GEF shall be used for the Global Environmental Facility

[300] GEF Trust Fund was one of the three funds administered by the Global Environment Facility. The Global Environment Facility was established on 1991 as a pilot program in the World Bank to assist in the protection of the global environment and to promote environmental sustainable development. *See The Global Environment Facility (GEF) Trust Fund- unece, Available at https://www.unece.org/fileadmin/DAM/operact/documents/GEF_TrustFund.pdf. Visited on 5.10.2017.*

[301] Special Climate Change Fund was established in response to guidance from the COP 7 in 2001. The Special Climate Change Fund complements the Least Developed Countries Fund. It was open to all vulnerable developing countries and fund a wider range of activities related to climate change. *See Special Climate Change Fund- SCCF, Global Environmental Facility Investing in our planet. Available at https://www.thegef.org/topics/special-climate-change-fund-sccf*. visited on *5.10.2017*

[302] M.J. Mace, "Funding for Adaptation to Climate Change: UNFCCC and GEF Developments since COP-7", Foundation For International Environmental Law And Development (FIELD) Journal compilation © Blackwell Publishing Ltd, RECIEL 14 (3) 2005. *Available at www.researchgate.net/profile/Mj_Mace/publication/200043939_Funding_for_adaptation_to_climate_change_UNFCCC_and_GEF_developments_since_COP-7/links/5542724e0cf234bdb21a13ef.* Visited on 5.10.2017

[303] Conference of the Parties 7 (COP 7) Climate Talks in Marrakesh, Morocco, October 29- November 9, 2001. Center For Climate and Energy Solutions- Working together for environment and economy .*Available at www.c2es.org/international/negotiations/cop-7.* Visited on 5.10.2017

[304] Ibid 303

[305] Ibid 304

Sustainable Development in Johannesburg at the end of August 2002, since other industrial countries didn't[306] ratify the Protocol.

3.6.9 COP 8- NEW DELHI (2002)

The COP 8 was held in New Delhi, India from 23 October to 1 November 2002. It was the first session after the negotiations under the BAPA[307] had been completed. In the 8th Conference of the Parties, they pointed out and put emphasis on climate change and sustainable development which are interlinked and focus on poverty, land degradation, access to water and food and human health to effectively address to climate change concerns.[308] COP 8 marked a new phase of negotiations as the focal point shifted to implementation of the Marrakesh Accords and Convention issues. COP 8 adopted[309] the 'Delhi Ministerial Declaration on Climate Change and Sustainable Development' as well as the New Delhi work programme on education, training, and public awareness[310] etc.. Despite the fact, most of the issues were relatively inconsequential[311] as compared to that COP-6 (Part II) and COP-7 they made only a little bit progress. Therefore, many of the issues were delayed for further consideration at future meetings and among the outcomes of COP-8.

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[306] Supra note 221

[307] Hereinafter the acronym BAPA shall be used for Buenos Aires Plan of Action.

[308] Mohammad Mohnish, Outcome and Indian stance in COPs 1-21, Indian Council of World Affairs (26 June 2016). *Available at www.icwa.in*/pdfs/VP/2014/OutcomeandIndianstanceVP27062016.pdf. Visited on 5.10.2017.

[309] Supra note 221

[310] Ibid 309

[311] Conference of the Parties 8 (COP 8) Climate Talks in New Delhi, Central For Climate And Energy Solution. *Available at https://www.c2es.org/international/negotiations/cop-8*. Visited on 5.10.2017.

3.6.10 COP 9- MILAN (2003)

COP 9 held in Milan in December 2003 adopted decisions on afforestation and re-forestation activities under the CDM.[312] The 9th meeting of the COP under the UNFCCC were primarily affected by Russia's contradictory statements[313] on 'ratification of the Kyoto Protocol', the uncertainty regarding the date of the Protocol's entry into force and by the US going on the offensive in climate policy approach in the media and at the side events. Yet, COP 9 was able to make it clear that the Kyoto Protocol had the support of the besieged majority in the international community[314].

3.6.11 COP 10- BUENOS AIRES (2004)

At COP 10, held in Buenos Aires in December, the predominant issue[315] was adapting to climate change and one of the outcomes was the Buenos Aires programme of work on adaptation and response measures. COP 10 focused the issue of developing countries, especially the poorest of the poor[316] and the consequences of global climate change since they did not have adequate funds to cope with these impacts. Further, COP 10 also discussed the finances needed[317] to implement the FCCC in developing countries. For this reason, they continued informal discussion on the further climate and development policy. Hence, this conference marked[318] the 10th anniversary of the entry into force of the Framework Convention on Climate Change which was celebrated at the climate summit.

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[312] Supra note 221

[313] Supra note 221

[314] Ibid 313

[315] Supra note 312

[316] Supra note 221

[317] Ibid 316

[318] Ibid 317

3.6.12 COP 11- MONTREAL (2005)

The Kyoto Protocol came into force on 16 February, the first 'Conference of the Parties' served as the 'meeting of the Parties' to the Kyoto Protocol (COP/MOP), was held with COP 11 in Montreal in November and December. It resulted in the formation of Montreal Action Plan which provides for addressing for climate change through various activities. Additionally, following the Marrakesh accord the Kyoto Protocol was fully implemented and equipped with a robust review regime[319].

3.6.13 COP 12- NAIROBI (2006)

COP 12 brought in there adaptation fun and program t9o utilize the funds[320];

3.6.14 COP 13- BALI (2007)

COP 13 adopted the Bali Action Plan that had the mandate to negotiate commitments on emission trading among others[321].

3.6.15 COP 14- POZNAN (2008)

The COP 14 to the UNFCCC and the 4th session of the Conference of the Parties held in Poznan, Poland and was hosted by the Polish Government[322]. The meeting produced a number of useful results[323] like launching of the Adaptation Fund under the Kyoto Protocol. The Fund was to be filled by a 2% levied on projects under the CDM. Further a protocol

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[319] Supra note 221

[320] COP 12 and COP/MOP 2 Nairobi- United Nations Climate Change Conferences COP12 and COP/MOP 2, Center for Climate and Energy Solutions. *Available at https://www.c2es.org/international/negotiations/cop-12.* Visited on 5.10.2017.

[321] Ibid 221

[322] United Nations Framework Convention on Climate Change- Poznan Climate Change Conference- December 2008. *Available at http://unfccc.int/meetings/poznan_dec_2008/meeting/6314.php.* Visited on 5.10.2017.

[323] Ibid 322

identified that there was divergence of views on key issues related to increase the level of available fund for adaptation and improvement to the CDM.

3.6.16 COP 15- COPENHAGEN (2009)

COP 15 and COP/MOP 5 were held in Copenhagen, Denmark the '10th session of the Ad Hoc working group' on further commitments and for 'Annex I Parties' under the Kyoto Protocol (AWG-KP 10) and the '8th session of the Ad Hoc' working group on long-term cooperative action under the UNFCCC[324]. The COP 15 raised Climate Change policy to the highest political level[325] and was one of the largest gatherings of world leaders ever outside UN headquarters in New York too. Negotiations of the 15th COP in Copenhagen neither fulfilled the target[326] of the Bali Road Map[327], which called for the achievement of a binding global agreement on emissions reductions. The COP 15 / CMP 5 was an essential event[328] in the negotiating process because it significantly advanced the negotiations on the infrastructure needed for the effective global climate change cooperation, considerably progress was made in narrowing down option and clarifying choices needed to be made on key issues late on in the negotiations.

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[324] Summary of the Copenhagen Climate Change Conference, Earth Negotiations Bulletin- A Reporting Service for Environment and Development Negotiations, Vol. 12 No. 459, IISSD Reporting Service (December 22, 2009). *Available at http://enb.iisd.org/vol12/enb12459e.html.* Visited on 10.10.2017.

[325] United Nations Framework Convention on Climate Change- Copenhagen Climate Change Conference- December 2009. *Available at http://unfccc.int/meetings/copenhagen_dec_2009/meeting/6295.php.* Visited on 10.10.2017.

[326] Joshua Schneck, NI Summary of COP 15 Outcomes, Nicholas Institute for Environmental Policy Solutions, Duke University. *Available at https://nicholasinstitute.duke.edu/climate/nrpe/ni-summary-of-cop-15-outcomes.* Visited on 10.10.2017

[327] The Bali Road Map was adopted by COP 13 held in Indonesia.

[328] Supra note 325

3.6.17 COP 16- CANCUM 2010

COP 16 main agenda[329] was to mitigate pledges and operational elements such as a new Green Climate Fund for developing countries and a system of 'international consultations and analysis' to help verify countries' actions. However, the final outcomes let all options on the table and set no clear path towards a binding agreement.[330]

3.6.18 COP 17- DURBAN 2011

COP 17 took place in Durban, South Africa. And the main purpose of negotiation was to prepare an agreement to reduce GHS[331].

3.6.19 COP 18- DOHA 2012

The first time that UN Climate Change negotiation took place in Middle East and the conference drew approximately 9,000 participants, government officials, UN Bodies and agencies, intergovernmental organization and civil society's organization too[332]. The COP 18 took place from 26 November to 8 December 2012 and it included the eighteenth session of the conference of the Parties and 8th session of CMP. It also included meeting of five subsidiary bodies; the '37th session of the SBSTA and SBI', and second part of '17th session

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[329] Summary: Cancun Climate Change Conference- sixteenth session of the Conference of the Parties to the United Nations Framework Convention on Climate Change and Sixth Session of the Meeting of the Parties to the Kyoto Protocol. November 29- December 10, 2010. Center for Climate and Energy Solutions. *Available at https://www.c2es.org/international/negotiations/cop-16/summary.* Visited on 10.10.2017.

[330] Ibid 329

[331] Durban Climate Conference delivers breakthrough- COP 17/CMP 7 United Nations Climate Change Conference 2011 Durban, South Africa (June 13, 2014). *Available at http://www.un.org/climatechange/blog/2011/12/durban-climate-conference-delivers-breakthrough/.* Visited on 10.10.2017.

[332] Summary of the Doha Climate Change Conference Vol. 12 No. 567, Earth Negotiation Bulletin, IISD Reporting Services. *Available at http://enb.iisd.org/vol12/enb12567e.html*. Visited on 10.10.207.

of the Ad Hoc Working' Group on further Commitments for the Annex I Parties under the Kyoto Protocol and second part of fifteenth session of the 'Ad Hoc Working Group' on Long-term Cooperative Action under the UNFCCC[333]. The Conference's most noteworthy achievement[334] was adoption of an amendment to the Kyoto Protocol with beginning a second round of binding greenhouse emission targets for Europe, Australia and a handful of other developed countries. Furthermore, Parties also took final decisions under a parallel negotiating track launched in 2007 in Bali and produced new mechanism[335] on finance, review, adaptation and technology, as well as voluntary emission pledges from many countries too.

3.6.20 COP 19- WARSAW 2013

The Conference of the Parties held in Warsaw, Poland and formally known as nineteen session of the conference to the UNFCCC. While there was a host of unusual issues[336], like a central focus of the Conference was defining a clearer path for the final two years of the Durban Platform negotiations. In COP 19, the government took further vital decision to secure a universal climate change agreement in 2015. The objectives of the 2015 was of two

[333] Ibid 332

[334] Outcomes of the U.N. Climate Change Conference in Doha, Qatar- eighteenth session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP 18) and eighth session of the Meeting of the Parties to the Kyoto Protocol (CMP 8), Centre for Climate and Energy Solution. *Available at https://www.c2es.org/docUploads/c2es-cop-18-summary.pdf.* Visited on 10.10.2017.

[335] Ibid 334

[336] Outcome of the U.N: 'Climate Change Conference in Warsaw- nineteenth session of the Conference of the Parties to the UNFCCC' (COP 19) November 11-22, 2013. *Available at: https://www.c2es.org/international/negotiations/cop-19/summary.* Visited on 10.10.2017.

fold [337]firstly, to bind nations to reduce emission rapidly and took a long-term path out of the danger zone of climate change, secondly to stimulate faster and broader action.

3.6.21 COP 20- LIMA 2014

COP 20 provided that principle of 'common but differentiated' responsibilities should be applicable to climate change again[338]. The Lima Conference on Climate Change specified[339] that the principle of 'common but differentiated responsibilities', apply to new climate agreement and to be adopted at the Paris Conference on Climate Change in 2015. Moreover, other heavily debated items, included the intended nationally determined contributions were also made at Lima Conference[340]. The other major issues[341] were demands from developing countries for increased climate funds and new mechanism to help especially weak nations cope with inevitable loss and damage from climate change.

3.6.22 COP 21- PARIS 2015

As the global community debated over the climate change mitigation, carbon offsetting became an avenue of choice.[342] The Paris Agreement formally known as COP 21 held in Paris, France in the year 2015. The ultimate purpose was to reinforce the global response to

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[337] Warsaw Outcomes- United Nations Framework Convention on Climate Change Newsroom. *Available at http://unfccc.int/key_steps/warsaw_outcomes/items/8006.php.* Visited on 10.10.2017

[338] 5 Keys Outcomes of the Lima Climate Change Conference (COP 20), Sustainability for all, Acciona (June 24, 2015) *Available at http://www.activesustainability.com/opinion/5-key-outcomes-of-the-lima-climate-change-conference-cop20/.* Visited on 10.10.2017.

[339] Xue-Du Lu, Advance in Climate Change Research- Assessment of achievements of the Lima Climate Change Conference and Perspectives on the future, Vol. 5, Issues 4, (December 2014). *Available at www.sciencedirect.com/science/article/pii/S1674927815000167*. Visited on 10.10.207.

[340] Ibid 339

[341] Supra note 336

[342] Markus Gehring and Freedom-Kai Phillips, "*Intersections of the Paris Agreement and Carbon offsetting- Legal and Functional Considerations"*, CIGI Policy Brief No. 88 (September 2016). *Available at https://www.cigionline.org/sites/default/files/pb_no.88web.pdf*. Visited on 13.10.2017

climate change by creating an international network of government bodies to lowering carbon emissions[343]. On 12 December 2015, 196 Parties to the UNFCCC adopted the Paris Agreement, a new legally[344] binding framework for an internationally coordinated effort to tackle climate change. The Paris Agreement was adopted as part of a decision[345] of the conference of the Parties to the UNFCCC along with that Agreement also adopted a decision that guides pre-2020 action and sets out implemented details for the Paris Agreement before it entered into force. Thus, the overall goal[346] was to hold global temperature well below 2 degree Celsius above pre-industrial levels and efforts to limit the temperature increased to 1.5 degree Celsius (Article 2.1.(a)). The Agreement established the main framework for cooperation action on climate change beyond 2020 and replaced the Kyoto Protocol. Thus, the decision associated complementary[347] functions like it provided the framework under which the Parties Agreement was adopted, it contained guidance on pre-2020 climate action, regulated and organized action that need to be taken before the Paris Agreement entered into force but was relevant for the implementation of the Agreement. However, individual countries contribution felt short[348] of the overall aim and objective and the Paris Agreement remained a shell without adequate action and support, therefore unable to address the collective action problem of climate change.

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[343] Alexandra Simon-Lewis, what is the Paris Climate Agreement and why does it matter? Published by Weird (5June 2017). *Available at http://www.wired.co.uk/article/what-is-paris-agreement-on-climate-change*. Visited on 13.10.2017.

[344] The Paris Agreement Summary- Climate Focus Client Brief on the Parties Agreement III, Published by Climate Focus (28 December 2015), *Available at www.climatefocus.com/sites/.../20151228%20COP%2021%20briefing%20FIN.pdf*. Visited on 13.10.2017.

[345] Ibid 344

[346] Ibid 345

[347] Ibid 346

[348] Ibid 364

3.6.23 COP 22- MARRAKESH 2016

The COP 22 to the UNFCCC '12th session of COP of Parties to Kyoto Protocol (CMP 12)', and 'first session of COP of Parties to the Paris Agreement (CMP 1)' were held in Marrakesh, Morocco. Almost 200 nations attended the COP 22 to the UNFCCC adopted Marrakesh Action Proclamation for Our Climate and Sustainable Development[349]. Therefore, the main agenda or outcome was that every country gave themselves two years to agree to rules and procedures for the Agreement and agree five years work plan on Loss and Damage[350]. Furthermore, the key features of proclamation were, to respond global warming which was increasing at an alarming and unprecedented rate[351]. Moreover, increase in volume[352] i.e. flow and access to finance for climate projects, alongside improved capacity and technologies and urgent need for cooperation among countries to close the gap between current emission trajectories[353]. Negotiations in Marrakesh focused[354] on matters related to the entry into force and the implementation under the COP, CMP[355], CMA[356], APA[357], SBI and SBSTA. Parties adopted 35 decisions, 25 under the COP, eight under the CMP and two

[349] COP 22 adopts Marrakesh Action Proclamation, Published by General Knowledge Today- India's Daily E-Magazine of GK and Current Affairs (November 19, 2016). *Available at http://www.gktoday.in/united-nations-framework-convention-on-climate-change/.* Visited on 13.10.2017.

[350] COP-22 highlights and outcomes, Published by IPIECA News (23 November 2016) Available at http://www.ipieca.org/news/cop-22-highlights-and-outcomes/. Visited on 13.10.2017

[351] Supra note 349

[352] Ibid 351

[353] Ibid 352

[354] Summary of the Marrakesh Climate Change Conference, Vol 12 No 689 Earth Negotiations Bulletin (ENB), IISD Reporting Service (21 November 2016). *Available at enb.iisd.org/vol12/enb12688e.html.* Visited on 13.10.2017

[355] Hereinafter the acronym CMP shall be used for the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol.

[356] Hereinafter the acronym CMA shall be used for the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement.

[357] Hereinafter the acronym APA shall be used for the Ad Hoc Group on the Paris Agreement.

under the CMA and provided guidance on the completion of the work program under the Paris Agreement, advanced preparation for the entry into force of the Paris Agreement and CMA, enhanced climate technology development and transfer through the Technology Mechanism[358] too. Therefore, the adaption of Marrakesh Agreement Proclamation sent out to be a strong signal[359] to the world on climate action and shift towards a new era of implementation and action on climate and sustainable development.

3.7 ENVIRONMENTAL GOODS AGREEMENTS (EGA)

Protection and preservation of the environment and sustainable development were fundamental goals of the WTO.[360] They are manifest in the Marrakesh Agreement, which established the WTO, and harmonize the WTO's objective to reduced trade barriers and eliminated discriminatory treatment in international trade relations[361]. Since there was no specific agreement dealing with the environment, under WTO rules members can adopt trade-related measures aimed at protecting the environment provided a number of conditions to avoid the misuse of such measures for protectionist ends were fulfilled[362].

In order to understand the Agreement it was necessary to go back to 2010, when 21 countries in the APEC[363] agreed to boost environmental goals and services, reduced trade and investment barriers and enhanced their capacities to develop these sectors[364]. APEC one of

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[358] Supra note 354

[359] Supra note 349

[360] Hereinafter the acronym WTO shall be used for the World Trade Organization

[361] Trade and environment- World Trade Organization. *Available at https://www.wto.org/english/tratop_e/envir_e/ega_e.htm .* Visited on 13.10.2017.

[362] Ibid 361

[363] Hereinafter the acronym APEC shall be used for the Asia-Pacific Economic Cooperation.

[364] Monica Araya, *The Relevance of the Environmental Goods Agreement in Advancing the Paris Agreement Goals and SDGs, A focus on Clean Energy and Costa Rica's Experience,* Published by International Centre for Trade and Sustainable Development (ICTSD) (2016). *Available at*

the world's largest producers and consumers of energy and APEC committed to double the measures, share of renewable energy in the region within 15 years and to lower their energy intensity by 45% by 2035[365]. Furthermore, APEC set the model when it agreed to reduce applied tariff rates to 5% or less on environmental goods contained within a list of 45 products. Thus the list was agreed in 2012 and the products[366] covered like solar panels, parts of biomass boilers, renewable bamboo-based products, industrial air pollution control plants, and crushing machine used for waste treatment recycling etc. In the year 2014 this list became the initial basis[367] of the EGA negotiations at the WTO. At the first stage the talk mainly focused on removing tariffs on broad list of environment goods. The negotiators built on a list of 54 products[368] on which the member countries of APEC had agreed to reduce their tariff to 5% or less by 2015. EGA's[369] main aim was to eliminate or remove barriers to trade in products that were crucial for environment protection and climate change mitigation because it helped to boost trade in green goods[370] and the developing countries and their partners to protect environment and meet their climate and energy target. Moreover, each participant of the negotiations had provided a list of products which it considers to belong to this green category. For example[371] the EU one of the member of APEC eliminated duties on

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https://www.ictsd.org/sites/default/files/research/the_relevance_of_the_environmental_goods_agreement_in_advancing_the_paris_agreement_goals_and_the_sdgs_0.pdf. Visited on 13.10.2017.

[365] Ibid 364

[366] Ibid 365

[367] Ibid 366

[368] The Environmental Goods Agreement (EGA): Liberalizing trade in environmental goods and services, European Commission Directorate-General for Trade. News archive (8 September 2015) Brussels. *Available at trade.ec.europa.eu/doclib/press/index.cfm?id=1116.* Visited on 13.10.2017

[369] Hereinafter the acronym EGA shall be used for the Environmental Goods Agreement.

[370] Environmental Goods Agreement: Promoting EU Environmental objectives through trade, Sustainable development, News archive (22, Janvier 2016) Brussels. Available at *trade.ec.europa.eu/doclib/press/index.cfm?id=1438.* Visited at 13.10.2017.

[371] Ibid 370

products used for control air pollution, generation of renewable energy, management of solid and hazardous waste, environmental remediation and clean up, resource and energy efficiency etc.

Whatever products they would like to eliminated duties was included in the EGA and was not on the basis of production methods rather on the basis of their end use.[372] Thus, to maximize the optimistic contribution of trade to environment protection, developing countries selected products that comprised main elements[373] of more complex environmental systems. Such as[374], in case of waste management they range from waste containers and machinery for sorting waste to shredding or baling machines. Before selection of the products they consulted a range of experts, even relevant international organization, national environmental agencies etc[375]. In practice there was no collective accepted definition of 'environmental goods', though OECD[376] defined as environmental goods[377] those that ''measures, prevent, limit , minimize, or correct environmental damage to water, air soil as well as problems related to waste, noise and ecosystem'' as well. Because of this some criticized the EGA negotiations[378] and inclusion of goods with questionable benefits included those with dual use, which show a possible weak environmental impact. For example, from the 650 environmental goods on the initial list[379], the Brussels-based organization transport and environment had identified around 120 trade tariffs which could not be justified on

[372] Ibid 371

[373] Ibid 372

[374] Ibid 373

[375] Ibid 374

[376] Hereinafter the acronym OECD shall be used for the Organization for Economic Co-operation and Development

[377] Annual Report 45th Anniversary- Organization for Economic Co-operation and Development (2005) *Available at https://www.oecd.org/newsroom/34711139.pdf. Visited on 13.12.2017.*

[378] Supra note 364

[379] Ibid 378

environmental grounds such as[380], that products containing asbestos, aviation engines, biodiesel and equipment to burn this fuel etc. Most goods on the EGA list help to provide an environmental service such as reduced air and water pollution but lack[381] inbuilt environmental attributes themselves.

The United States one of the leading member and advocate for liberalization of trade in environmental goods and services[382] like wind turbines, solar water heater, water treatment filters etc. argue in favor of such goods by cutting tariffs on such environmental goods, improved access to the technologies that the United States and other countries needed to protect environment.[383] Global trade in environmental goods was estimated at nearly $1 trillion annually. United States tariffs on environmental goods were already low, on the other hand other countries charged tariffs as high as 50%[384] on these goods. While negotiation on environmental goods did not move forward in the WTO due to differences among members on what goods to liberalize and how to do so, like several members argued against a list approach in the first place[385]. Moreover, multiple uses of products which had both environmental as well as non-environmental purpose and was difficult to deal with, mostly in the context of the WTO negotiations[386]. Thus, there may be a certain compromise[387] on a

[380] Ibid 379

[381] Ibid 380

[382] Environmental Goods Agreement, Office of the United States Trade Representative- Executive Office of the President. *Available at https://ustr.gov/trade-agreements/other-initiatives/environmental-goods-agreement.* Visited on 13/10/2017

[383] Ibid 382

[384] Ibid 402

[385] Rene Vossenaar, The APEC List of Environmental Goods: An analysis of the Outcome and Expected Impact, Published by ICTSD, Issues Paper 18 (June 2013). *Available at https://www.ictsd.org/downloads/2013/06/the-apec-list-of-environmental-goods.pdf.* Visited on 20.10.2017

[386] Ibid 404

[387] Gaelle Balineau and Jaime de Melo, *Stalemate at the Negotiations on Environmental Goods and Services at the Doha Round,* Working Paper Development Policies, Published by Fondation Pour Les Etudes ET Recherches

various range of products included like, certain climate-related environmental goods, one reason the number of sub-headings submitted by individuals WTO members had grown so much was due to a large range of products with little overlap among them. For example the WTO members like Australia, China, Colombia, Hong-Kong, Norway and Singapore, proposed a core list of 26 environmental products to help start negotiations but this approach wasn't further explored[388]. There were many differences among the APEC and the WTO[389] processes, WTO negotiations on environmental goods aim at reduced bound tariff rates in a manner that was legally binding upon members, while APEC was concerned with the only MFN[390]-applied tariff rates of APEC economies.

The overlap between the WTO and the Environmental Goods Agreement is occurring with regards to the goods and services.gas turbines can be used for generate from renewable sources as well as non renewable sources of energy[391]. There were other challenges namely the meaning of the maintaining of 'living list'. Second is the new scientific information's provide change its own interpretation of events and things[392]. In 2016 16th round of Environmental Goods Agreement negotiation took place in Geneva[393] in which they welcomed and reaffirmed their plan to redouble effort to fill the gaps, further eliminated tariff on a broad range of environmental goods by the end of 2016 in an effective way and to

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SUR LE Developpement International (28 October 2011) *Available at www.ferdi.fr/sites/www.ferdi.fr/files/publication/.../P28_Balineau_deMelo_WEB.pdf*. Visited on 20.10.2017.

[388] Supra note 405

[389] Ibid 407

[390] Hereinafter the acronym MFN shall be used for the Most Favoured Nation (Article 1- WTO).

[391] Aaron Cosbey, *The Environmental Goods Agreement and its Regional Impact,* International Institute for Sustainable Development, IDB. Available at *www19.iadb.org/intal/icom/en/notas/39-12/.* Visited on 20.10.2017.

[392] Ibid 391

[393] Environmental Goods Agreement: Report from the 16th round of negotiations, Published by European Commission. *Available at http://trade.ec.europa.eu/doclib/html/154996.htm.* Visited on 20.10.2017

address the core concern of participants[394]. The 16th round meeting also discussed on legal text draft agreement included[395] on the schedule for its implementation, periodic revision mechanism, and future participation of other WTO members in the EGA, possible work program on service and non-tariff issues. Therefore, further analysis was needed on trade flow[396], among other reasons to assist APEC to take informed decisions on possible tariff reductions, for example for certain goods that had both environmental and non-environmental applications etc. Some conceptual and practical issues therefore still need to be worked out[397].

[394] Ibid 393

[395] Ibid 494

[396] Supra note 391

[397] Ibid 391

CHAPTER: IV

INTERFACE BETWEEN INTERNATIONAL TRADE AND ENVIRONMENTAL LAW

4.1 INTRODUCTION

"The Earth is one, but the world is not"[398], still perfectly depicts the status of environmental protection in the global today. The need to respond to environmental concern on a global level has been increasingly significant in recent year. It's difficult to find a global when some other interests besides environmental protections come into play.[399] The WTO has been criticised for pursuing trade liberalization while sacrificing the environment and has even been refereed as to the 'GATT-zilla[400] trade monster". These two i.e. Trade and Environment can often be found in so called 'green trade barriers',[401] it means in most of the cases another country adopts or impose a high standard environmental measures which means certain products should meet and then makes conformity with those standards a condition for foreign products to access its markets, in that case the environmental standards of the regulating country are thus also apply outside its territory, in the exporting country. Hence, these types of standards are basically imposed by powerful and wealthy countries for their own benefits which are basically too high for the developing nations[402]. This creates a phenomenon of

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[398] World Commission on Environment and Development, Our Common Future (OUP 1987) 27.

[399] Vnda Jakir, "The New WTO Tuna dolphin decision: Reconciling trade and environment?" Croatian Yearbook of European Law and Policy (2013) 9.9, 143-176. *Available at www.cyelp.com › Home › Vol 9 (2013)*. Visited on 24.10.2017

[400] Used in, e.g., JH Jackson, 'World Trade Rules and Environmental Policies: Congruence of Conflict?" (1992) 49 Washington & Lee Law Review 1235. Available at *scholarlycommons.law.wlu.edu/cgi/viewcontent.cgi?article=1901&context=wlulr.* Visited on 24.10.2017.

[401] Supra note 399

[402] Ibid 401

'eco-imperialism'[403], and less developed countries out of trade relations and thus decreases their chances of prosperity economically, as well as further perpetuates their inability to bear the costs of higher environmental protection[404].

Even though significantly debated over the past decade, the relationship between International Environmental rules and the International Trading system have not been clarified yet.[405] The absence of an unfavourable ruling by the WTO[406] on a MEA[407] trade measure seems to reveal that these regimes do not conflict in practice. Additionally a number of issues gave rise to the assumption that the relationship between MEAs and international trading rules were primarily characterised by mutual recognition or even supportiveness[408]. Several documents from the World Trade Organization's Committee on Trade and Environment (CTE)[409] and the Rio Declaration confirm[410] this statement. Further trade and environment rules evolved separately with different aims.[411] Trade fundamentally aimed to eliminate protectionism and promote free and globalised trade,[412] while the principles of

[403] Term coined by Paul Driessen to refer to the forceful imposition of Western environmentalist views on developing countries. The degree to which this occurs is a topic of debate, as is whether such imposition would be ethically justifiable.

[404] Supra note 399

[405] Report: Trade and Multilateral Environmental Agreements June 2005. *Available at http://ecologic.eu/sites/files/publication/2015/3_1800_cate_trade-meas.pdf.* Visited on 24.10.2017

[406] Hereinafter the acronym WTO shall be used for World Trade Organization

[407] Hereinafter the acronym MEA shall be used for Multilateral Environmental Agreement

[408] Supra note 405

[409] Hereinafter the acronym CTE shall be used for Committee on Trade and Environment

[410] Report of the WTO Committee on Trade and Environment, WT/CTE/1, 12 November 1996. *Available at https://www.wto.org/english/thewto_e/minist_e/min96_e/environ.htm.* Visited on 24.10.2017

[411] G. Hufbauer and M. Fickling, *Trade and the Environment*, in M. Daunton and A. Narlikar and R.M. Stern (ed.) Oxford Handbook on the World Trade Organization, Oxford: Oxford Press (2012). *Available at Available at https://www.researchgate.net/publication/288127248_Trade_And_The_Environment.* Visited on 24.10.2017

[412] A. Kiss, *International Environment Law* 776 Kluwer, 3rd edition (2004). *Available at https://books.google.com › Law › Environmental.* Visited on 24.10.2017

MEAs was to protect the natural world, the ecosystem, the biosphere etc and was little effected as possible by human activity.

Therefore the former was in conflict with environment in many aspects because latter asserted that the free trade was eliminated or limit protectionism of the environment and drastic effect on environment, on the other hand former argued that environmental measures[413] were mainly like to close the market. The 1946 GATT agreement did not mention environment. On top of that trade policies makers didn't recognise that their policies intersect with the environmental field.[414] Even when the GATT was drafted in the year 1947 environmental protection was not the major global concern for the drafters.[415] This ongoing interaction between trade and environment started from the beginning of the 70s, and a large number of developed countries began to demonstrate concern over the environmental degradation that was affecting the globe.[416] In the late 80s interest in environmental issues intensified as environmental problems acquired much greater proportions and problems emerged such as the depletion of ozone layer and climate change etc. At the beginning of 90s, the concept of sustainable development emerged that included the environmental concern but in a much broader sense. In this context the relationship between trade and environment became obvious. At the same time, environmental programme and measures often affect trade as sometimes they became entwined as a function of ecological realities.[417] Thus the number of environment challenges have extended[418] from the depleted fisheries in many of

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[413] Ibid 442

[414] Gary P. Sampson (ed.), *The World and Global Governance* Pp.no. 116, published by United Nation University Press, Tokyo Japan (2008) Visited on 26.10.207

[415] Daniel C. Esty, "Greening the GATT: Trade, Environment and the Future" Institute for International Economic (1994) Visited on 26.10.207

[416] Paula Cordero, Sergio Sepulveda and Adrian Rodriguez, Trade and Environmental Issues, 25 Technical Handbook, IICA (July, 2004). Visited on 26.10.2017

[417] Supra note 414

[418] Ibid 417

the world's ocean, to the need to protect the ozone layer, to the build-up of greenhouse gas emission that may produced climate problems.

Some of the traders argued that the failure to address environmental harms that fall across national boundaries represent an externality and if left unaddressed than it will lead to market failure, reduced gains from trade etc[419]. Thus, all nations that benefit from the international trade must bear a fair share of the burden of providing global public goods including environmental protection[420]. While establishing the policies and instruments leadership must also came from environmental authorities, the trading system must support and not hinder these efforts.[421] In the same way, where environmental authorities failed to initiate comprehensive rules and measures, trade officials must support. Indeed where environmental rules were lacking and any kind of harms continued, the trading system is likely to call to fill the gap[422]. If the trade instruments were improperly structured or insufficient then environmental rules and regulation became barriers to open market[423]. Because sometimes protectionism tried to promote trade barriers in the aspect of pollution control measures or any other environmental protections plans.[424] The relation between the WTO and MEAs is undeniable that development could not take place without the environment being affected[425] and to some extent international trade did effect environment. The CTE tried to look into the

[419] Ibid 418

[420] Ibid 419

[421] Supra note 415

[422] Supra note 414 Pp.117

[423] Ibid 422

[424] Ibid 423

[425] Nidhi Singh, "Trade Related Environment Measures in Multilateral Environmental Agreement and the WTO: Irreconcilable Differences?" Vol.1 (3), American Journal of Economics and Business Administration, 249-250 (2009). *Available at* https://www.peacepalacelibrary.nl/.../AJEBA_Singh_Trade-related-Environmental.pdf. *Visited on 26.2017*

provision of the WTO but these issues seemed to be more complex[426]. In 2000 to balance the relationship between trade and MEAs the Protocol i.e. Cartagena Protocol[427] on Biosafety was adopted and called the first trade and environment treaty.[428] Over 200 MEAs are in existent till now with membership varying from small country to over 180 countries.[429] Their main purpose of the MEAs is to protect the atmosphere for example '1979 UN Economic Commission for European (UNECE)'[430], 1985 Vienna Convention'[431] for the protection of the Ozone layer, and '1987 the Montreal Protocol'[432] on the Substance that Deplete the Ozone Layers etc. Furthermore, it regulated the use of chemicals, including the Rottredan Convention[433] on the Prior Informed Consent Procedure for the Certain Hazardous Chemicals and Pesticides in International Trade and the 2001 Stockholm Declaration. Nearly thirty of

[426] Ibid 425

[427] Protocol on Biological Diversity an international agreement adopted on 29 January 2000 which aims to ensure the safe handling transport and use of living modified organism (LMOs) resulting from modern biotechnology that may have adverse effects on biological diversity, taking also into account risk to human health.

[428] Supra note 425

[429] Duncan Brack and Kevin Gray, Report: Multilateral Environmental Agreements and the WTO, The Royal Institute of International Affairs, IISD (2003). *Available at https://www.iisd.org/pdf/2003/trade_meas_wto.pdf. Visited on 26.10.2017*

[430] UNECE one of the five regional commissions of the UN main aim was to promote pan-European economic integration. *Available at https://www.unece.org/.* Visited on 26.10.2017

[431] Vienne Convention was the first Convention to achieve universal ratification. And the main end was to promote cooperation by means of systematic observation, research and exchange of information on the effect of human activities on the Ozone Layers and to adopted legislative and administrative measures. *Available at ozone.unep.org/en/treaties-and-decisions/vienna-convention-protection-ozone-layer.*

[432] The Montreal Protocol finalized in 1987 was a global agreement to protect the stratospheric ozone layer by phasing out the production and consumption of ozone-depleting substances (ODS). *Available at* https://www.state.gov/e/oes/eqt/chemicalpollution/83007.htm. Visited on 26.10.2017

[433] Rotterdam Convention was a multilateral treaty to promote shared responsibilities in relation to import of hazardous chemicals. Signatory nations decided whether to allow or ban the importation of hazardous chemicals listed in the treaty. *Available at www.drishtiias.com/upsc-exam-gs-resources-Rotterdam-Convention*. Visited on 26.10.2017

MEAs included trade measures, restraining the trade in particular substances or products, either between parties to the treaties or between non-parties too.[434] No doubt the WTO agreement itself contained[435] measures to allow for environmental considerations. The Agreement itself established that trade should be conducted ‘‘while allowing for the optimal use of the world’s resources in accordance with the objective of sustainable development, seeking both to protect and preserve the environment and to enhance the means for doing so’’.[436]

4.2 ENVIRONMENT AND TRADE LINKAGES

While both trade and environment was not detached, they were fundamentally related with each others. No doubt much environmental disturbance was due to the increased scale of global economic activities or human activities too. Due to increase in global economic, globalization develop and the global nature of many environmental problems became more obvious[437]. Therefore, the links between trade and the environment were numerous, multifarious and significant. Thus, trade liberalization was or itself neither essentially good nor bad for the environment. Its effect on the environment in fact depended on the extent to which environment and trade goals could be made complimentary and mutually[438] supportive.

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[434] Supra note 429

[435] Ibid 434

[436] Marrakesh Agreement establishing the World Trade Organization, Preamble, Para 2. *Available at https://www.wto.org/english/res_e/booksp_e/analytic...e/wto_agree_01_e.htm*. Visited on 28.10.2017.

[437] Environment and Trade: A Handbook: United Nations Environment Programme Division of Technology, Industry and Economics and Trade Branch. Published by IISD (2002). *Available at www.iisd.org/pdf/2005/envirotrade_handbook_2005.pdf*. Visited on 28.10.2017

[438] Ibid 437

At another level, trade and environment represent two diverse[439] bodies of international law. Like trade was personified in such designed structures as the WTO and regional trade agreements. On the other hand environmental law was personified in the various multilateral environmental agreements, the regional agreements and as national and sub national regulations[440]. Hence, environmental law identified that how countries would structure their economic activities (UNFCCC, for example restructure their economies to cut greenhouse gas emission), further international trade law described how countries would make their domestic laws and policies in areas such as IPR[441], investment policy and environmental protections.[442] Production and trade sometimes affect the environment, and just as apparently some of these impacts were negative. Additionally, trade also lead to beneficial impacts[443] on the environmental goods and services to be shared more extensively. But the real question was whether the situation would be better or worse under a more liberal trade regime[444]. Open market improved resource allocation, so that goods were produced where it was most environmentally as well as resourcefully[445], even when shipped to distance markets. Thus, consumed locally produced good wasn't always more environmental friendly than buying imports[446].

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[439] Hakan Nordstrom and Scott Vaughan, WTO Special Studies 4: Trade and Environment, Published by WTO Centre William Rappard (1999) *Available at https://www.wto.org/english/res_e/booksp_e/special_study_4_e.pdf.* Visited on 28.10.2017.

[440] Ibid 439

[441] Hereinafter the acronym IPR shall be used for the Intellectual Property Rights.

[442] Ibid 439

[443] Trade and Environment: Is Trade good or bad for the environment? Published by OECD (2017) Better Policies for Better Life. *Available at http://www.oecd.org/trade/tradeandenvironment.htm.* Visited on 28.10.2017.

[444] Ibid 443

[445] Ibid 444

[446] Ibid 446

Moreover, increased trade supports economic growth, development and social welfare in that way contributed[447] to a greater capacity to manage the environment more efficiently. And recently, a number of developing countries adopted strong pollution control. Like innovative ways to address pollution[448], the use of pollution taxes or charges, greater intelligibility, successful in reduced pollution too. From the international trade aspect, the component of environment impact depends of the amount and frequency of transaction conditioned by the degree of trade liberalization[449]. On the other hand, environmentalist believe that[450], at least in the short term, trade liberalization could generate violent effects which involve environmental degradation. Like for example, strengthening of international specialization in serious polluting products that are limited natural resources (forestry, fisheries etc), trade in hazardous substances, transport with carbon growth effects[451] etc.

Additionally, in most of these debates participants challenged the environmentalist point of view,[452] and argue that the environmental impact of international trade is positive. They believe that trade barriers reduction generate wealth include the movement of environmental technologies, management techniques and information between countries[453]. In short, there were many positive environmental impact of international trade like[454]; environmental resources and their efficient allocation that determined the production structure for goods less intensive in natural resources, lower degree of pollution and consumption. Another impact

[447] Ibid 447

[448] Ibid 448

[449] Margareta Timbur and Spiridon Pralea, *"International Trade- Environment" Relationship in the context of Sustainable Development*, CES Working Paper. *Available at http://www.ceswp.uaic.ro/articles/CESWP2013_V2_TIM.pdf.* Visited on 28.10.2017.

[450] Ibid 449

[451] Ibid 450

[452] Ibid 451

[453] Ibid 452

[454] Ibid 453

was transfer of environmental and less polluting technologies, and abandoned old, inefficient, polluting power plants in favoured of the modern one which encourage the use of alternative source like wind, solar and tidal[455].

4.3 DIFFERENT PERSPECTIVE[456]

There were various or different assumption regarding trade and environment. The trade perspective was[457]; trade created wealth that could be used to increased human well-being. But most of national governments directly or indirectly tried to preserve domestic markets keeping foreign competitors aside. Because of that domestic products became inefficient, domestic consumer's paid higher price, and more efficient foreign firms were shut down[458]. Thus, the best protection was a strong system of rules against such practices[459].The environmental perspective was;[460] seriously hazard the earth's ecosystem and most national governments tried to protect them against costly environmental demand. Again there would be a strong system of rules and clearly mentioned that how the environment be protected at the both national and international level[461]. Hence, governments and industry tried to discard such practices. Therefore, trade rules forbidden[462] certain types of environmental regulations may be one way to discard such practices.

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[455] Ibid 454

[456]Gonzales Aimée and David Stone. Towards sustainable trade: For people and the environment. Gland: WWF International (1999). *Available at www.panda.org/resources/publications/sustainability/wto-papers/build.html.* Visited on 28.10.2017.

[457] Ibid 456

[458] Ibid 457

[459] International Institute for Sustainable Development. Trade and sustainable development principles. Winnipeg: IISD (1994). *Available at iisd.ca/trade/princip2.htm.* Visited on 28.10.2017.

[460] Ibid 459

[461] Ibid 460

[462] Ibid 461

4.4 THE BASICS OF THE WTO

The basis of the international trade regime date back to 1947, when the GATT was completed. This Agreement, restored from an ungratified larger agreement called the International Trade Organisation, was one of the pieces of the so-called Bretton-woods[463] system, designed in the post- WW[464] II environment to promote and manage global economic development.[465] The GATT created two crucial directions for the trade rule[466] to lower and eliminated tariffs, and created an obligation to prevent or eliminate other types of obstructions or barriers to trade. The main target of the WTO was set in the preamble to the 'Marrakesh Agreement' established the WTO and included the following principles:[467] "raised standard of living, ensured full employment, ensured large and steadily growth real income and demand for goods and services and expand the production of and trade in goods and services"[468].

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[463] Bretton wood was one of the landmarked systems for monetary and exchange rate management established in 1944. It remained one of the important part of world financial history. The creation of the International Monetary Fund (IMF) and valuation of gold and foreign exchange rates remained important to this day. The agreement also made currencies convertible for trade and other current account transactions. *See Investopedia, Bretton Woods Agreement (July 1 to 22, 1944) Available at www.investopedia.com/terms/b/brettonwoodsagreement.asp*. Visited on 29.10.2017.

[464] Hereinafter the acronym WW shall be used for the World War.

[465] Supra note 437

[466] Ibid 465

[467] Trade and Green Economy: A Handbook UNEP (3rd Edition, 2014), IISD. Published by the International Institute for Sustainable Development, Geneva, Switzerland. *Available at www.iisd.org/sites/default/files/.../trade-green-economy-handbook-third-edition-en.pdf*. Visited on 29.10.2017.

[468] Marrakesh Agreement established the World Trade Organization, commonly known as 'Marrakesh Agreement', was signed in Marrakesh, Morocco on April 15, 1994, at the conclusion of the Uruguay Round of Multilateral Trade Negotiations. The Agreement defined the scope, functions, and structure of the World Trade Organization. *See Enforcement and Compliance: WTO- TAC Program- Making Trade Agreements Work*

Basically WTO members were grouped as 'developed or developing members, as claimed by their level of development[469]. There is lack of clear definition of 'developed' or 'developing' members in the WTO. It was up to each member to decide whether to be considered 'developing members' or 'developed members'. However, the distinction between[470] these two members' countries was important because the developing countries were granted special rights in the WTO. Some developing countries were considered least developed countries (LDCs). The WTO essentially contracts legally binding member governments to keep their policies within agreed limits[471]. Moreover, the WTO Agreement document that, in certain situation, Members may need to apply trade restrictions[472] to meet certain policies objectives, such as the protection of human health or the environment. WTO came into force on January 1995 after replacing the previous GATT. The WTO included following bodies[473] they are ministerial Conference, General Council, Trade Policy Review Body, Dispute Settlement Body, Council on Trade in Goods and Services, Secretariat and Director General of the WTO and Committee on Trade Development and Committee on Trade and Environment[474].

4.4.1 COMITTEE ON TRADE AND ENVIRONMENT (CTE)

The 1994 Ministerial Decision on Trade and Environment Created the WTO's Committees on Trade and Environment (CTE), which is open for the entire WTO membership, with some international organizations as observers. The Committee had contributed to identify and

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for You! Available at tcc.export.gov/Trade_Agreements/All...Agreements/WTO_Marrakesh_guide.asp. Visited on 29.10.2017.

[469] World Trade Organization, General Knowledge Today: India's Daily E-Magazine of GK and Current Affairs (March 9, 2016) *Available at https://www.gktoday.in/world-trade-organization/.* Visited on 29.10.2017.

[470] Ibid 469

[471] Ibid 470

[472] Ibid 473

[473] Supra note 437

[474] Ibid 473

understand the relationship between trade and the environment in order to promote sustainable development[475].

The terms of reference given to the CTE in Marrakesh were in part the following: "to identify the relationship between trade measures and environment measures in order to promote sustainable development; to make appropriate recommendation on whether any modification of the provisions of the multilateral trading system are required, compatible with the open, equitable and non-discriminatory nature of the system[476]".

The Committee narrowed down this broad mandate in 10-items agenda for work, and made this agenda as framework for discussion until its role was fundamentally expanded by the 2001 Doha Declaration[477] the following items were listed:

- "The relationship between trade rules and trade measures used for environment purposes included those in MEAs.
- The relationship between trade rules and environment politics with trade impacts.
- The relationship between trade rules and environmental charges and taxes. The relationship between trade rules and environmental requirements for products included packaging, labelling and recycling standards and regulations.
- Trade rules on the transparency, trade measures used for environmental purposes, and of environmental policies with trade impacts.
- The relationship between dispute mechanism of the WTO and MEAs.

[475] Committee on Trade and Environment ('regular' CTE'): World Trade Organization. Available at https://www.wto.org/english/tratop_e/envir_e/wrk_committee_e.htm. Visited on 29.10.2017.

[476] Supra note 437

[477] Supra note 467

- The potential for environmental measures to impede access to markets for developing country exports, and the potential environmental benefits of removing trade restrictions and distortions.
- The issue of the export o domestically prohibited goods.
- The relationship between the environment and the TRIPS[478] Agreement.
- The relationship between the environment and trade in services.
- WTO's relations with other organizations, both non-governmental and inter-governmental".

4.4.2 DOHA MANDATE ON TRADE AND ENVIRONMENT

In Doha Round of negotiations by the WTO members for the first time openly included 'Trade and Environment' as a part of the agenda. Doha Round emphasised and was supported largely by the European Union and Switzerland, Norway and Japan[479]. Furthermore, developing countries including India agreed to enclosure of environment in the negotiating agenda of the WTO framework. At present, the negotiations are taking place through the Committee on Trade and Environment Special Session. Additionally, the Doha Declaration included two references to sustainable development in the preamble the powerful statement:

"We strongly reaffirm our commitment to the objective of sustainable development."[480]

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[478] Hereinafter the acronym TRIPS shall be used for the Agreement on Trade-Related Aspects of Intellectual Property.

[479] Simi T. B., Doha Round of Negotiations on Trade and Environment: The State of Play. Published by CUTS Centre for International Trade, Economics and Environment (CUTS-CITEE). *Available at www.cuts-citee.org/pdf/VP0208.pdf.* Visited on 30.10.2017

[480] Paragraph 6 of the Doha Declaration.

Besides, it also incorporated[481] a number of clear references to environmental items as part of the broader negotiations. The Doha Declaration also command special attention to environmental products of export interest to developing countries and the special need and concerned of developing and least developed countries (LDCs) in this regard[482]. The negotiation issued under Paragraph 31[483] of the Doha Ministerial Declaration were primarily those advocated by developed countries, the relationship between WTO rules and specific trade obligations in MEAs, and observe status of MEAs secretariats and the liberalization of trade in environmental goods and services[484]. Paragraphs 32, 33, and 51 make up Doha's 'non-negotiating' trade and environment mandate. While Paragraph 32[485] focused the work of

[481] Supra note 478

[482] Ibid 478

[483] Paragraph 31 of Doha Mandate: - With a view to enhancing the mutual supportiveness of trade and environment, we agree to negotiations, without prejudging their outcome, on (i) the relationship between existing WTO rules and specific trade obligations set out in multilateral environmental agreements (MEAs). The negotiations shall be limited in scope to the applicability of such existing WTO rules as among parties to the MEA in question. The negotiations shall not prejudice the WTO rights of any Member that is not a party to the MEA in question; (ii) procedures for regular information exchange between MEAs Secretariats and the relevant WTO Committees, and the criteria for the granting of observer status; (iii) the reduction or, as appropriate, elimination of tariff and non-tariff barriers to environmental goods and services. *See Vicentr Palol B.Yu III, Trade and Environment in the Doha Ministerial Declaration: Looking at Paragraph 6 and 31 to 33 of the Doha Ministerial Declaration (3 December, 2001) Available at www.iatp.org/files/Trade_and_Environment_in_the_Doha_Ministerial_.htm.* Visited on 30.10.2017.

[484] Hugo Cameron, 'A Research Book: The Evolution of the Trade and Environment Debate at the WTO', International Institute for Sustainable Development, ICTSD. Available at www.iisd.org/pdf/2007/trade_and_env_02.pdf. Visited on 30.10.2017.

[485] Paragraph 32 of the Doha Mandate: We instruct the Committee on Trade and Environment, in pursuing work on all items on its agenda within its current terms of reference, to give particular attention to:

(i) the effect of environmental measures on market access, especially in relation to developing countries, in particular the least-developed among them, and those situations in which the elimination or reduction of trade restrictions and distortions would benefit trade, the environment and development;

the CTE on three areas, they were; the effect of environmental measures on market access, the relevant provisions of the Agreement on TRIPS, and eco-labelling[486]. Paragraph 33[487] summarize the importance of capacity building and encourages environmental impact assessment. Paragraph 51[488] instructed the CTE and the "Committee on Trade and Development" to act as forum to identify and debate developmental and environmental aspects of the negotiations in order to help achieve the objectives of the sustainable

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(ii) the relevant provisions of the Agreement on Trade-Related Aspects of Intellectual Property Rights; and

(iii) Labelling requirements for environmental purposes.

Work on these issues should include the identification of any need to clarify relevant WTO rules. The Committee shall report to the Fifth Session of the Ministerial Conference, and make recommendations, where appropriate, with respect to future action, including the desirability of negotiations. The outcome of this work as well as the negotiations carried out under paragraph 31(i) and (ii) shall be compatible with the open and non-discriminatory nature of the multilateral trading system, shall not add to or diminish the rights and obligations of members under existing WTO agreements, in particular the Agreement on the Application of Sanitary and Phytosanitary Measures, nor alter the balance of these rights and obligations, and will take into account the needs of developing and least-developed countries. *See WTO: Items of focus: CTE's Doha assignment. Available at https://www.wto.org/english/tratop_e/envir_e/cte_doha_e.htm.* Visited on 30.10.2017

[486] Supra note 484

[487] Paragraph 33 of the Doha Mandate: We recognize the importance of technical assistance and capacity building in the field of trade and environment to developing countries, in particular the least-developed among them. We also encourage that expertise and experience be shared with members wishing to perform environmental reviews at the national level. A report shall be prepared on these activities for the Fifth Session. *See Ibid 517. Available at https://www.wto.org/english/tratop_e/envir_e/cte_doha_e.htm. Visited on 30.10.2017*

[488] Paragraph 51 of the Doha Mandate: The Committee on Trade and Development and the Committee on Trade and Environment shall, within their respective mandates, each act as a forum to identify and debate developmental and environmental aspects of the negotiations, in order to help achieve the objective of having sustainable development appropriately reflected. *See ibid 516 WTO: Items of focus: CTE's Doha assignment. Available at https://www.wto.org/english/tratop_e/envir_e/cte_doha_e.htm. Visited on 30.10.2017*

development[489]. The Doha Declaration also makes the linkages in other key areas, like for example; agriculture, the Declaration highlights 'need to protect the environment' as one of the non-trade concerned that would be taken into account in the negotiations[490]. Further, on IPR[491], the Doha Declaration instructed the TRIPS Council to examine the relationship between the TRIPS Agreement and the CBD[492], the protection of traditional knowledge and folklore. In the year 2002 World Summit of Sustainable Development (WSSD)[493] sent a clear message to WTO negotiators to step up their efforts to incorporate sustainable development purpose into the trade round.

4.5 MULTILATERAL ENVIRONMENTAL AGREEMENTS AND TARDE

MEAs used as a concrete mutual solution to potential trade and environment conflicts. For instance, as trade in hazardous substances may affect environment, to avoid these, both importers and exports came together to negotiate how such trade may be handled[494]. Like what measures may be taken at the national level for environmental protection, what measures would be taken by exporters to help in those efforts, and so on. The Basle Convention on the Control of Transboundary Movements on Hazardous substances was a multilateral solution to a multilateral problem and avoids unilateral approaches that might be unbalanced in the interest of either trade or environmental concern[495]. To carry out these goals, trade measures in MEAs used a varieties of helpful incentives that promoted

[489] Supra note 484

[490] Ibid 489

[491] Hereinafter the acronym IPR shall be used for the Intellectual Property Rights.

[492] Hereinafter the acronym CBD shall be used for the Convention on Biological Diversity.

[493] World Summit on Sustainable Development (WSSD), Johannesburg Summit. *Available at https://sustainabledevelopment.un.org/milesstones/wssd.* Visited on 30.10.2017

[494] Supra note 467

[495] Ibid 494

participation in the MEAs,[496] discouraged free riders, and was specifically directed at a particular products associated with the environmental harm being addressed.

Therefore, MEAs are voluntary commitments among sovereign nations that try to find to address the effects and consequences of global and regional environmental degradation. They address environmental problems with transboundary effects, traditionally domestic environmental issues that raised extra jurisdictional concern[497]. The use of trade measures in MEAs was usually recognized to be in potential conflict with the GATT/WTO regime[498]. Specifically, trade measures that are particularly directed towards non-parties of MEAs may be in violation of GATT/WTO[499] Most Favoured Nation (MFN), national treatment (NT) and prohibition on quantitative restriction obligations. The applicability of Article XX (b) and XX (g) to the MEA trade measures was uncertain and set the contradictory explanation[500] of such Article XX term as "arbitrary and unjustified", "disguised restriction on international trade", "necessary", "relating to the conservation of exhaustible natural resources", and the extra jurisdictional significance of Article XX (b) and (g)[501].

[496] Ibid 495

[497] Steve Charnovitz, *Exploring the Environmental Exceptions in GATT Article XX*, Vol 25, Issues 5 (1991) Journal of World Trade. *Available at https://www.kluwerlawonline.com/abstract.php?area=Journals&id=TRAD1991028.* Visited on 31.10.2017.

[498] Supra note 467

[499] Ibid 531

[500] Ibid 532

[501] Ibid 533

4.6 NORM CONFLICTS (TRADE AND ENVIRONMENT-CASES)

Aristotle.

"Even when laws have been written down, they ought not always to remain unaltered. As in other sciences, so in politics, it is impossible that all things should be precisely set down in writing; for enactments must be universal, but actions are concerned with particulars".[502]

The Trade and Environment debate became important around 1990[503] and gain more attention over the year. Various famous disputes regarding environment and trade mobilized peoples and different NGOs around the world. But the particular problem existed where MEAs and trade's norms came into conflict with the GATT/WTO.[504] Once again attention was drawn towards the trade-related environmental issues at the end of the Uruguay Round.[505] Though, in the Preamble to the Marrakesh Agreement which establishes the WTO clearly mention the importance of working towards sustainable development. WTO members acknowledged [506]that:-

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[502] Part III- Rules, Norms and enforcement. WTO. Available at https://www.wto.org/english/res_e/booksp_e/historywto_06_e.pdf . Visited on 6.11.2017

[503] Howard Mann and Stephen Porter, 'The State of Trade and Environment Law: Implication for Doha and beyond' (2003) Winnipeg, Manitoba: Institute for Sustainable Development. Available at *www.iisd.org/pdf/2003/trade_enviro_law_2003.pdf.* Visited at 6.11.2017.

[504] Benjamin Miethling,*Trade Related Environmental Measures in Multilateral Environmental Agreements*, advanced seminar paper, University of Copenhagen (2005) *Available at http://www.grin.com/en/e-book/109698/trade-related-environmental-measures-in-multilateral-environmental-agreements.* Visited on 6.11.2017.

[505] The Uruguay Round was the 8th round of Multilateral Trade Negotiations conducted within the framework of the GATT. The negotiation ended with the signing of the Final Act of the Marrakesh Agreement in 1994 at Marrakesh, Morocco. The round led to the creation of the WTO. See Uruguay Round, E-encyclopedia of banking, stock exchange and finance: Bankpedia. *Available at http://www.bankpedia.org/index.php/en/130-english/u/23844-uruguay-round.* Visited on 7.11.2017.

[506] Trade and Environment at the WTO: World Trade Organization (2004). *Available at https://www.wto.org/english/tratop_e/envir_e/envir_wto2004_e.pdf*. Visited at 7.11.2017.

"their relations in the field of trade and economic endeavour should be conducted with a view to raising standards of living ...while allowing for the optimal use of the world's resources in accordance with the objectives of sustainable development, seeking both to protect and preserve the environment and to enhance the means for doing so in a manner consistent with their respective needs and concerns at different levels of economic development"[507].

The MEAs first and foremost aim was to provide an extensive framework for the protection of the global environment. There are almost thirty[508] of these MEAs integrate trade measures, administer or restrain the trade in particular substances or products, either between parties and non-parties. Thus, the term i.e. trade measures are often used as restriction on trade in the form of bans or embargoes. In fact there was a variety of policies and measures included in MEAs that may impact international trade.[509] Moreover, dissimilarity may be made between specific and non-specific[510] trade measures of MEAs, the former openly described in the MEAs or in successive decisions of parties and mandatory obligation that must be applied by all the parties. But in some cases, a specific trade measures form a part of a series of options available to the parties to satisfy MEAs requirement[511]. On the other hand, non-specific not explicitly described, but may be applied by parties, as means of complying with their obligations or fulfilling MEA objectives. Therefore, different measures may be applied by different countries.[512] For instance, the Montreal Protocol contained specific trade measures in the form of requirements for a ban on trade with non-parties, and for a system of export

[507] Ibid 506

[508] The WTO Secretariat lists 31 MEAs containing potential trade measures, though some of these are regional rather than global agreements, and protocols are included along with their parent conventions under single headings though for most purposes it makes more sense to treat them as different agreements. *See Matrix on Trade Measures Pursuant to Selected Multilateral Environmental Agreements: Committee on Trade and Environment Committee on Trade and Environment Special Session, WT/CTE/W/160/Rev.2 TN/TE/S/5 (25 April 2003). Available at* web.wtocenter.org.tw/WTO%5C4122%5CtnteS5.doc. Visited on 7.11.2017

[509] Supra note 429

[510] Ibid 509

[511] Ibid 510

[512] Ibid 511

and import licences. Thus, many parties that had applied non-specific trade measures included[513] labelling requirements, excise taxes and import bans, in order to meet their obligations for phasing out consumption of ozone-depleting substances. Additionally, a measure imposed through a MEA may seek to discourage "free-riders" of the MEA as those non-members cause several different problems for the members of the agreement.[514] The WTO recognized that trade could be conducted "while allowing for the optimal use of the world's resources in accordance with the objective of sustainable development, seeking both to protect and preserve the environment and to enhance the means for doing so.."[515] These were announced in Doha Declaration in 2001 which clearly stated that:-

> "We strongly reaffirm our commitment to the objective of sustainable development, as stated in the Preamble to the Marrakesh Agreement. We are convinced that the aims of upholding and safeguarding an open and non-discriminatory multilateral trading system, and acting for the protection of the environment and the promotion of sustainable development can and must be mutually supportive[516]."

Conflicts of norm arise when there is a conflict between the provisions of two treaties. The provision of MEA's challenge the norms of the WTO, MFN and NT clash and therefore contrary to the WTO provisions[517]. Since, the constitution of international environmental regime is reflected in the structure of the problem being addressed. A regime that protect biodiversity needs to use various tools, drawn on different areas and have different institutional arrangements that protects from pollution or manage international trade in

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[513] Ibid 512

[514] Ibid 513

[515] Marrakesh Agreement Establishing the World Trade Organization, preamble, Para 2.

[516] WTO Doha Ministerial Declaration, 14 November 2001, Para 6. *Available at* https://www.wto.org/english/tratop_e/dda_e/texts_contents_e.htm. Visited on 7.11.2017

[517] Karin Wisenius, *Conflicts of Norms and Jurisdictions between the WTO and MEAs*: Including Case-Studies of CITES and the Kyoto Protocol, University of Gothenburg, School of Business, Economics and Law. (2009). Available at https://gupea.ub.gu.se/bitstream/2077/21070/1/gupea_2077_21070_1.pdf . Visited on 8.11.2017.

endangered species.[518] Rio Declaration on Environment and Development further laid out several fundamental principles and approaches,[519] like the principle of prevention. For example prohibiting transboundary harm, widely known as the no-harm principle of the Stockholm Declaration 1972, included in the Rio Declaration.[520] Another principle was common but differentiated responsibility establishes that 'all states are responsible for addressing global environmental destruction yet not equally responsible'. The main aim was that every state should take responsibility for global environmental problems on the other hand they should recognize the wide differences in levels of economic development between states.[521] Many environmental regimes require the participation of various countries both rich and poor. Not every countries carry equal responsibility for past environmental damage. For that reason, parties to regimes all acknowledge common responsibility for environment and also work to develop differentiated responsibilities for addressing environmental problems.[522] Another principle was polluter- pays which was forwarded by the OECD in 1972[523]. The "polluter-pays" principle practice that those who produced pollution should bear the costs of managing it to prevent damage to human health or the environment. For example a factory that produces poisonous substances as by-products of its activities is usually held responsible for its safe disposal.[524]

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[518] Supra note 467

[519] Ibid 518

[520] Ibid 519

[521] Charlotte Epstein, *Common but differentiated responsibilities (CBDR):* International Environmental Law. Encyclopedia Britannica. *Available at https://www.britannica.com/topic/common-but-differentiated-responsibilities*. Visited on 8.11.2017.

[522] Supra note 467

[523] Ibid 522

[524] Bob Ward and Naomi Hicks, *What is the polluter pays principle?,* The London School of Economics and Political Science. Grantham Research Institute on Climate Change and the Environment (17 February, 2014). Available at *www.lse.ac.uk/GranthamInstitute/faqs/what-is-the-polluter-pays-principle/*. Visited on 8.11.2017.

Eventually, there was a conflict between these two regimes regarding their different norms and principles which are already mentioned above. Since, all member nations of the WTO regime were not the parties to the MEA. Non-parties to the MEAs regime mostly represent the potential challenges to the trade measures of the MEAs[525]. This was due to the improbability of a country that has voluntarily joined the MEAs and approved to the trade measures to the agreement, afterwards challenged in the GATT/WTO regime forum.[526] Here are some of the potential incompatibilities between the trade measures of the MEAs and the GATT/WTO regime.

In order to understand these conflicts between trade and environmental norms, it is helpful to begin by briefly describing the core obligations of the WTO regime. While the trade agreements that comprised the WTO are now various and complex, but the essential fundamentals trade agendas can be found in three core GATT articles i.e. most favoured nation[527], national treatment[528], and quantitative restrictions.[529] Firstly, there was a conflict regarding one of the core principles of the GATT/WTO regime i.e. MFN[530] and Non-parties.[531] Since the import and export restrictions against non-parties of the MEAs are vulnerable to challenge by a GATT/WTO member, likewise non-parties to the MEAs as a violation of the MFN principle of the GATT/WTO regime. For example, in the context of Montreal Protocol a non-party may affirm that it's like products are being discriminated against because they were not a member of the MEA. The MFN principle grants all GATT/WTO members to equal treatment of their like products. Therefore, members content

[525] Supra note 429

[526] Ibid 525

[527] Article I of the GATT

[528] Article III of the GATT

[529] Article IX of the GATT

[530] Hereinafter the acronym MFN shall be used for the Most Favored Nation.

[531] Supra note 429

that they were not receiving equal MFN treatment when their products were subjected to the trade restrictions of the MEAs[532]. Another incompatible principle between WTO and the MEA regime was National Treatment (NT)[533]. Since, National Treatment plays a crucial role in determining the basis upon which country may discriminate against imports, thus two products are not alike then they treated differently[534]. The principle required that imported like products should not discriminated against in favour of domestic like products. For example, in U.S- Tax on Automobiles[535] case (un-adopted panel report 1994), recognized "that two individual products never be exactly the same in all aspects and that regulatory distinctions by different national governments may be required in certain circumstances.[536] A regulatory measure should be closely related to the end product instead of process and production methods, by which the product was manufactured"[537]. For instance, The Montreal Protocol used trade measure to 'distinguish products based on either they contained ozone depleting substances and plan to distinguish products based on whether or not they were made with ozone depleting substances'.[538] Another core principle of the GATT/WTO was Article XI Quantitative restriction, was applicable to the measure prohibiting or restricting importation, exportation and sale for export of products other than taxes, duties or other charges. For instance, export quotas, tariff values, license requirements were all measures

[532] Ibid 531

[533] Hereinafter the acronym NT shall be used for the National Treatment

[534] Bradly J Condon, *Trade, Environment and Sovereignty: Developing Coherence between WTO Law, International Environmental Law and General International (2004)* (Ph.D. Thesis, Bond University). *Available at epublications.bond.edu.au/cgi/viewcontent.cgi?article=1018&context=thesis.* Visited on 9.11.2017

[535] WT/DS487/R.

[536] Auto Taxes Panel Report (Un-adopted by GATT Council) (29 September, 1994) WT/DS487/R. Para. 5.6, 5.8.

[537] Ibid 536

[538] Article 4 (4) of the Montreal Protocol

covered by Article XI of the GATT/WTO.[539] The import restrictions that don't satisfy national treatment and MFN and the export restrictions of the MEAs that take the form of bans, embargoes, and prohibitions of trade were potentially vulnerable to challenge as quantitative restrictions under Article XI of GATT.[540]

Besides, all these principles the most important provisions as far as environmental issues were concerned are Article XX of the GATT/WTO. Article XX specified what activities were exempted from GATT rules. These exemptions give members very wide scope to control trade to protect the environment[541]. Article XX (b)[542] and (g)[543] were most frequently cited in trade dispute that involved the environment and natural resources. However, Article XX (b) and (g) do not apply all measures taken to protect the environment[544]. Before, such exceptions may apply under Article XX two keys requirements must be met. Firstly, the measures should not be an "arbitrary or unjustifiable discrimination between countries where the same conditions prevail". Secondly, "the measures must not be a disguised restriction on international trade[545]." Therefore, Article XX (b) measure was necessary only if a 'country has no reasonable available alternative measure consistent with GATT provisions and the

[539] Tarun Bhati, *Quantitative Restrictions- An Overview,* Published by Lakshmikumaran and Sridharan (13 December,2013). *Available at https://www.lakshmisri.com/News.../Articles/.../Quantitative-Restrictions-An-Overview.* Visited at 9.11.2017

[540] Supra note 429

[541] Bhargav Mansatta and Anupam Pareek, WTO and Environmental Issues, Gujarat National Law University. *Available at https://www.scribd.com/document/92086224/Bhargav-Manasatta. Visited on 9.11.2017*

[542] GATT Article XX (b): "necessary for the protection of human, animal or plant life or health".

[543] GATT Article XX (g): "relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption".

[544] Supra note 541

[545] D. Brack and K. Gray, "Report: Multilateral Environmental Agreements and the WTO", Sustainable Development Program, The Royal Institute of International Affairs. Published by IISD (11 September, 2003) page 4. *Available at https*://www.iisd.org/pdf/2003/trade_meas_wto.pdf.

measure taken was the least trade- restrictive.'[546] Article XX (g) allow parties to adopt measures inconsistent with the obligations of the GATT that related to the conservation of exhaustible natural resources, if such measures were made effective in combination with restrictions on domestic production or consumption.[547] In the Reformulated Gasoline Decision the Appellate Body agreed that a measure must be 'primarily aimed at' the conservation of a natural resource rather than merely relating to the conservation of an exhaustible resources.[548]

A country that wants to use the environmental exception in Article XX has two obstacles to clear. First, they must show or establish the provisional justification for using Article XX by showing that sub-paragraph (a) and (b) applies. Second, it must show that or establish final justification by showing the measure in questions does not breach the important paragraph (Article XX (b) and (g).[549] In paragraph (b) the state has to show that the measure is "necessary" to protect environment. A country must show or "demonstrate the necessity to protect own environment, need to use a trade-impacting measures to do and if trade measures is needed than least trade restrictive measure available to attain the objectives."[550] Besides that, another part of necessity is to reduce the trade impacts from environmental measures, and to prevent environmental measures from being used as a "disguised restriction" or "disguised barriers" to trade.[551] The first part of the measures had been applied to rule out environmental laws that protected the environment outside the enacting country's

[546] See also WTO Panel in United States- Standards for Reformulated and Conventional Gasoline (WT/DS2/AB/R, DSR 1996).

[547] Supra note 545

[548] Ibid 547

[549] Supra note 467

[550] South Centre. The WTO multilateral trade agenda and the South. Geneva: South Centre, (1998). *Available at http://www.southcentre.org/publications/wto/multilateral_.pdf.* Visited 11.11.2017

[551] Supra note 467

borders. It is a WTO's Appellate Body's rule in Shrimp-Turtle case was one of the cases that protect the environment outside their borders.[552] Sub-paragraph i.e. Article XX (g) first demonstrate that its laws relates to the conservation of exhaustible natural resources.[553] In Shrimp-Turtle case the appellate body made progress that while defining exhaustible natural resources generally, it include living and non-living resources and renewable and non-renewable resources. Secondly, the law must have accompanied by domestic level restriction on management, production or consumption of the resources to be conserved.[554] Finally, the law must show the primarily aim i.e. 'the conservation objectives', it must show "a close relationship between means and ends."[555] Furthermore, the Appellate Body defined a number of criteria in (Shrimp-Turtle Case) for not meeting the above mentioned test including:- before applying any measures to any other country, regulating countries must take into account differences in conditions existing in other countries.[556] States cannot require another state to adopt specific environmental technologies or measures- different technologies or measures that have the same final effect should be allowed.[557] And country should attempt to negotiate with exporting state(s) before enacting any trade measures. There should be a due process, transparency, suitable appeal procedures and procedural process safeguard must be available to foreign states or procedures to review the application of the measures.[558]

[552] Ibid 551

[553] Ibid 552

[554] Supra note 550

[555] Supra note 647

[556] Ibid 555

[557] Ibid 556

[558] Ibid 557

4.7 CASES

This section deals with the cases that have been discussed under the WTO. The section discusses the following four disputes.....The disputes have been selected on the basis of their significance for trade between developing and developed countries. The reason why the trade between developed and developing countries is taken because the developed countries generally have a very high standard of environmental protection which is generally lacking in the case of developing countries.

- TUNA/DOLPHIN CASE-I
- Shrimp - Turtle
- EC - Asbestos
- EC – Bananas

A: Tuna-Dolphin Case – I

The core of GATT agreement is formed of two non-discrimination principles – the first one is the 'Most Favoured Nation' Principle and the second is the 'National Treatment' principle. Article I of GATT 1947[559] requires each party to 'not to discriminate between like products from different trading parties or, to treat products from every other party the same way it

[559] GATT Article I:- With respect to customs duties and charges of any kind imposed on or in connection with importation or exportation or imposed on the international transfer of payments for imports or exports, and with respect to the method of levying such duties and charges, and with respect to all rules and formalities in connection with importation and exportation, and with respect to all matters referred to in paragraphs 2 and 4 of Article III,* any advantage, favour, privilege or immunity granted by any contracting party to any product originating in or destined for any other country shall be accorded immediately and unconditionally to the like product originating in or destined for the territories of all other contracting parties.

treats products from the most favoured trading partners'[560], while Article III[561] that incorporates the 'national treatment' principle requires each party to treat products from other parties at least as favourably as it treats its own products. (Moreover, they constitute another provision, Article XI[562], which prohibits the parties from establishing or maintaining "prohibitions or restrictions" other than duties or other charges relating to the import of any product imported from the territory of any other Contracting Party"[563]. Tuna-dolphin I (1991) TACs (United States - Tuna imports restriction) was the first to test the legitimacy of using environmentally unfavourable foreign process and production methods as justification for trade restrictions.) (The dolphin tuna (1991) turned around a US primary embargo on Mexican tuna captured with the caners who accidentally captured a large number of dolphins,

[560] Article I: 1:- "requiring that each party must accord virtually "any advantages, favour, privilege or immunity" it grants to any product originating in or destined for any other country "immediately and unconditionally to the like product originating in or destined for the territories of all other contracting parties".

[561] GATT Article-III: - "The contracting parties recognize that internal taxes and other internal charges, and laws, regulations and requirements affecting the internal sale, offering for sale, purchase, transportation, distribution or use of products, and internal quantitative regulations requiring the mixture, processing or use of products in specified amounts or proportions, should not be applied to imported or domestic products so as to afford protection to domestic production".

[562] GATT Article XI- General Elimination of Quantitative Restriction: - "No prohibitions or restrictions other than duties, taxes or other charges, whether made effective through quotas, import or export licences or other measures, shall be instituted or maintained by any contracting party on the importation of any product of the territory of any other contracting party or on the exportation or sale for export of any product destined for the territory of any other contracting party".

[563] John H. Knox, "The judicial resolution of conflicts between trade and the environment", (2004) Harv. Envtl. L. Rev., 28, 1. *Available at* www.law.harvard.edu/students/orgs/elr/vol28_1/knox.pdf. Visited on *15.11.2017*

while the tuna-dolphin II (1994) revolved around the embargo on the countries that re-exported tuna under the US primary embargo[564]).

FACTS OF THE CASE (TUNA-DOLPHIN CASE I)[565]

The United States- Restriction on Imports of Tuna (Tuna- Dolphin I) was the first case that tested the environmental legislations in the context of trade. USA had enacted US Marine Mammal Protection Act (MMPA) that required that tuna be caught without harming dolphins in the process. Yellowfin tuna imports have been restricted by the use of a method that affects Dolphins.[566] In the case of tuna-dolphin, the United States has imposed a ban on tuna imports from countries which do not have a specific program for the protection of dolphins in tuna fisheries. Dolphins circulate around the tuna and are caught in tuna catching net. The nets are dragged out of water which results large number of deaths of Dolphins.[567] Especially in eastern tropical Pacific Ocean the fishermen went underwater to catch tuna and encircling them with nets to catch tuna underneath but consequently dolphins were encircled with purse-seine nets and resulted incidental taking of dolphins.[568] (When tuna was harvested with net bags, dolphins were often trapped in nets and died if they were not released. Therefore, such a high level of dolphin mortality was one of the foundations for the introduction of the US Marine Mammal Protection Act in 1972. In addition, the MMPA contributed to reducing the

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[564] International Centre for Trade and Sustainable Development, GATTs Tuna-Dolphin Case*, Available at* www.ictsd.org/gatts-tuna-dolphin-case*.* Visited on 15.11.2017

[565] Citation- *United States- Restrictions on Import of Tuna I* DS21/R-39S/155

[566] Josephine Cutfield, *Exception Measures: The Pursuit of Non-Trade Objectives in Light of the EC- Seal Products Dispute (2015),* University of Otago, New Zealand Pp 12. *Available at www.otago.ac.nz/law/research/journals/otago451220.pdf*. Visited on 15.11.2017

[567] The Tuna –Dolphin Case (2016), Globalization101 The Levin Institute, The state University of New York. *Available at www.globalization101.org › Issues in Depth › Environment.* Visited on 15.11.2017

[568] United States, *Report of the GATT on- Restrictions on Imports of Tuna* (DS21/R- 39S/155), 3 September 1991. *Available at www.worldtradelaw.net/reports/gattpanels/tunadolphinI.pdf.download*. Visited on 15.11.2017

amount of dolphin by-catches and even strict mortality limitations of dolphins.) The year 1990 the concept of dolphin safe tuna was popularized, which had a major effect on purchases and exports of tuna worldwide.[569] In order to further promote dolphin safety, the U.S. also enacted the Dolphin Protection Consumer Information Act[570] (DPCIA). Under the Act, the safe dolphin label will be used on all tuna products marketed in the United States or exported from the United States that have been caught in the dolphin sage methods.[571]

The MMPA provides a general prohibition, i.e. prevent of the dolphins, harassment, hunting, capture, killing or attempted[572] importation in the United States, and its primary objective was to reduce accidental killing or serious injury to marine mammals. Additionally the Act also contained special provisions relevant to the tuna fishers in the ETP[573] defined as the area of Pacific Ocean. So according to these provisions the Act governed the taking of marine mammals incidental to harvesting of yellow fin tuna and its products in the ETP and besides prohibiting the importation of yellow fin tuna and products harvested in ETP.[574] On the other hand, the Act Section 101(a) (2)[575] also authorised limits a incidental taking of

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[569] Paul Robbins (ed.), "*Encyclopaedia of Environment and Society* 1780, Published by SAGE, California, Vol 5 (2007). *Available at* www.worldcat.org/title/encyclopedia-of-environment-and-society/oclc/228071686. visited on 15.11.2017

[570] Section 901, Public Law 101-627, 104 Stat. 4465-67, enacted 28 November 1990, codified in part at 16 U.S.C. 1685. *See Allison Areias, "The GATT: Tuna, Dolphins, Diapers and You" Vol 16, No 2, Environs: Envtl. L. & Pol'y J. (1992).* Available at https://environs.law.ucdavis.edu/volumes/16/2/articles/areias.pd. Visited on 15.11.2017

[571] Ibid 570

[572] Revised MMPA P.L. 92-522, 86 Stat. 1027 (1972), as amended, notably by P.L. 100-711, 102 Stat. 4755 (1988) and most recently by P.L. 101-627 at 104 Stat. 4467 (1990); codified in part at 16 U.S.C. 1361ff. See Supra note 568

[573] Hereinafter the acronym ETP shall be used for the Eastern Tropical Pacific.

[574] Supra note 568

[575] Sec. 101 (a)- Impositions; exceptions- there shall be a moratorium on the taking and importation of marine mammals and marine mammal products, commencing on the effective date of this chapter, during which time no permit may be issued for the taking of any marine mammal and no marine mammal or marine mammal

marine mammals by the U.S fishermen but only in pursuant to a permit by NMFS[576] and governed by certain criteria in Section 103 and 104 and implemented regulations. Hence, the MMPA and implemented regulations and extensive provisions regarding commercial tuna fish especially in ETP,[577] and above all the use of purse-seine nets to encircled dolphins in turn to catch tuna beneath. Thus, these provisions were applied to all persons subject to the U.S jurisdiction and vessels, on the high sea and its territory. The MMPA provisions provided for penalty of cargo for violation of its regulation of harvesting of tuna.[578] In the year 1991 Mexico claimed to the GATT[579] dispute settlement body, argued that the MMPA imposed an illegal non-tariff restriction contrary to GATT Art- XI[580] and violate the national treatment principle in Art-III.[581] However, the U.S disagreed with the complainant party and

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products may be imported into the US except in the following cases:- (2)- marine mammals taken incidentally and permit may be issued therefore under Section 1374 of this title subject to regulations prescribed by the Secretary in accordance with Section 1373. Such authorization granted under sub chapter IV of this chapter with respect to purse seine fishing for yellow fin tuna in the ETP Ocean. In any event it shall be the immediate goal that the incidental kill or incidental serious injury of marine mammals permitted in the course of commercial fishing operations be reduced to insignificant levels approaching a zero mortality and serious injury rate. The secretary of the Treasury shall ban the importation of commercial fish or products from fish which have been caught with commercial fishing technology which results in the incidental kill or incidental serious injury of ocean mammals in excess of United States standards. *See Title I- Conservation and Protection of Marine Mammals, The Marine Mammals Protection Act of 1972 as Amended. Available at www.nmfs.noaa.gov*/pr/pdfs/laws/mmpa101.pdf. visited on 16.11.2017

[576] Hereinafter the acronym NMFS shall be used for the National Marine Fishers Service.

[577] Supra note 568

[578] Ibid 577

[579] Hereinafter the acronym GATT shall be used for the General Agreement on Tariff and Trade.

[580] Supra note 562

[581] Supra note 561

argued that the MMPA could be justified by invoking the exception under[582] Article XX (b) (d) and (g)[583].

DECISION OF THE PANEL AND REASONING OF THE DECISION

Mexico filed a formal complaint with the GATT stating that the MPA regulations were in conflict with the main provisions of the GATT and Mexico required consultation with the United States.[584] Unfortunately, these talks did not succeed and subsequently Mexico asked the contracting parties[585] to set up a panel to address the issue as soon as possible.[586] The Panel found that Act was restrictive in trade and discriminatory, prohibiting the use of quantitative restrictions, such as quotas and measures other than duties and violations of Articles III and XI.[587] Therefore, the Panel tested issues in the light of the GATT obligations and issues were prohibition of imports of certain yellow fin tuna and products from Mexico by the United States and extension of these import prohibitions to all fish products from

[582] Supra note 566

[583] "Mexico etc versus US: 'Tuna - dolphin'" (2014) World Trade Organisation. *Available at www.wto.org. Visited on 16.11.2017.*

[584] Carol J. Beyers, "The U.S/ Mexico Tuna Embargo Dispute : A Case Study of the GATT and Environmental Progress" 16 Md. J. Int'lL. 229 (1992) Pp 236. *Available at http://digitalcommons.law.umaryland.edu/mjil/vol16/iss2/3. Visited on 16.11.2017.*

[585] Contracting parties means those countries who involved in exporting and importing of tuna and its products. They are Mexico, European Union, Netherland, Argentina, Australia, Brazil, Bolivarian Republic of Venezuela, Canada, China, Ecuador, Guatemala, Japan, Korea, New Zealand, Separate customs Territory of Taiwan, Penghu, Kinmen and Matsu, Thailand and Turkey.

[586] Supra 584

[587] Robert F. Housman and Durwood J. Zaelke, The Collision of the Environment and Trade: The GATT Tuna/ Dolphin Decision", 22 ELR 10268 (1992). *Available at www.ciel.org/wp-content/uploads/2015/07/GATT_TunaDolphin_1991.pdf. Visited on 18.11.2017*

Mexico under MMPA[588] and prohibition of import of yellow fin tuna and products from intermediary nations[589] too.

The Panel first addressed the embargo against Mexico and Mexico took the position that the embargo violated Article XI of the GATT by prohibiting quantitative restrictions on imports and Article III: 1 and 4, preventing discrimination against foreign goods.[590] Further, U.S. asserted that measures were subject to Art III (National Treatment) rather than Art XI (quantitative restrictions). Furthermore, U.S. argued that the embargo treated foreign caught tuna were no less favourable than domestic-caught tuna so it fulfilled the obligation of national treatment (Art-III) of the GATT. Therefore, it was a valid reason to enforced internal measures at the time of importation in accordance with the Art III[591] of the GATT.

The Panel determined that in order to applicable of Art III and XI the embargo would have applied to the products but couldn't be based on the process by which the products were produced. The Panel held that the MMPA's direct embargo provisions did not applied directly to the tuna as a products or regulated the sale of tuna as a products. Even the import regulation couldn't comprise internal regulations applied at the point of importation allowable under the [592]GATT Art III: (4). The panel further argued that Art III applied to measures affecting products only but the MMPA did not regulate tuna products but instead prescribed certain fishing techniques to protect dolphins only.

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[588] Supra note 584

[589] Intermediary nations are those nations that export yellow fin tuna and tuna products to the U.S. and that receives imports, in its country, of yellow fin tuna or products that are subject to the primary nation embargo outlined in Sec 101 (a) (2) (B) of the Marine Mammal Protection Act.

[590] Rebecca DeWinter, 'Issues of Fairness in the Tuna- Dolphin Cases', (1998) *Available at internationalecon.com/fairtrade/fairpapers/rdewinter.htm.* Visited on 18.11.2017

[591] Ad Art. III. The "Ad" articles are the interpretive notes that accompany the GATT articles, and are found in the appendix of any reproduction of the GATT. *See 637*

[592] Supra note 587

MMPA did not regulate the sale of tuna and tuna products but only regulates the domestic harvesting of yellow fin tuna and the Panel's expert group argued that these rules were not applicable to the products. The Panel therefore considered that the import ban was not an internal regulation governed by Article III and Article III: 4 required that Mexican tuna be less favourable than U.S tuna.[593] Mexico also stated that Article III referred to "different taxes and charges" and "all laws, regulations or requirements" that apply to products, but not producers. Likewise, Note III referred to "any internal tax or internal charges or any law, regulation or requirement applicable to imported products and similar ". This means that you cannot impose import tax on products and regulations on producers' products.[594] It means tax could not be levied on those imported products and internal regulations on producers could not be imposed. In addition they could not impose a certain internal regulation on production when such regulations were incompatible with the General Agreement. Thus, both the tuna i.e. domestic tuna and tuna products were 'like products' with respect to those tune which were imported in U.S. Therefore, the MMPA was inconsistent with the like products requirement in Art III. Further, Mexico stated that those measures regulating a product could not legally discriminate between domestic and foreign products based solely on the production process.[595] The United State further propounded that these regulations were enforced affecting a product of national origin with the meaning of Art III: since the yellow fin tuna could not harvest lawfully in the ETP except in accordance with the regulations. For example MMPA provided a general condition to authorize and govern the taking of marine mammals' by using purse seine fishing[596]. Due to these general condition and regulation regulated the production of yellowfin tuna and products, thus it were effected the products i.e.

[593] Supra note 584 pp. 238

[594] Supra note 568

[595] Ibid 594

[596] Ibid 595 see MMPA Section 104 (h) (2) (A)

yellowfin tuna. The U.S. also noted that regulations of the MMPA are clearly PPM because they were intended to protect dolphin by regulating the production of tuna.[597] The United State argued that, if the MMPA was inconsistent with the GATT provision than they were authorized under Art XX (general exception), not all measures described by Art XX were inconsistent [598]with the other provision of the GATT. The Panel rejected the U.S. argument and found that the MMPA provision amounted to restriction which was illegal under the GATT, so they were treated the Mexican tuna and tuna product less favourable as compared to domestic tuna and tuna products. In addition the Panel stated that the GATT rules were not allow such standards to be imposed outside of a nation's jurisdiction even though each contracting parties are free to set their environmental standards within their territory.[599] Again the U.S responded that the MMPA was necessary to protect the life and health of dolphin because no other alternative were available or had been proposed that could achieved the objective of protecting the lives and heath of dolphin. So in turn to avoid these unnecessary deaths the U.S established requirement for tuna production, which means yellowfin tuna harvested in ETP should be harvested by using purse-seine net only and imported into the U.S. and must been produced under the regulation program. Thus, these measures were implemented to prevent dolphin deaths or severe injury, so it was clear that the measures of the United States were necessary to protect animal life or health though directly or openly.[600] As mentioned above, the MMPA regulation were solely for the protection and prevention of dolphin or animal life and health (Art XX (b)) and in this instance, the U.S. maintained the MMPA's and its end was to protect the health and safety of

[597] Supra note 568

[598] Ibid 597

[599] Allison Areias, "The GATT: Tuna, Dolphins, Diapers and You" Vol 16, No 2, *Environs: Envtl. L. & Pol'y J* (1992) Available at https://environs.law.ucdavis.edu/volumes/16/2/articles/areias.pd. Visited on 18.11.2017

[600] Supra note 568

the dolphins' population. Because Mexico continued to be use harvesting practices and thereby endangering dolphin population, therefore, the only option were left to the U.S. was to put into force the Act and enforced the embargo against Mexico.[601] In addition, Mexico added that the law will apply to protect the dolphin, as the regulation would have to protect all dolphins, regardless of the type of fishery, type fishery of dolphin species, fishing techniques or the method used which was not the case with the MMPA and the embargo. In fact, the special provisions of the MMPA applied only to the situation where a very special combination existed, like yellowfin tuna, associated with certain species dolphins, fished with purse-seine nets, [602]and caught in the ETP. Thus, the Panel reply was clear-cut that Art XX (b) and (g) exception were not available to preserve animals' life and health or natural resources outside the jurisdiction of the country. Furthermore, to support their argument the Panel referred the meaning of 'necessary' as laid down in the Thai Cigarettes[603] according to which a measure is only necessary if another available GATT measures could not be applied properly. For that reason the Panel conclude that the U.S. measure were unpredictable because Mexico could not have been aware of the average killing rate of dolphin.[604]After going through all the arguments the GATT Panel held that the MMPA violated the national treatment and discriminate against Mexico's' tuna and tuna products. Therefore, the Panel decided that the U.S. couldn't justify the MMPA ban on Mexico tuna and tuna products for several reasons they are follows:-

[601] Supra note 584 Pp 239

[602] Supra note 568

[603] GATT Panel Report, Thailand – Restrictions on Importation of and Internal Taxes on Cigarettes (7 November 1990) 37S/200, DS10/R BISD 29th Supp 200 (1991). *Available at www.worldtradelaw.net/databases/gattpanels.php*. Visited on 18.11.2017.

[604] Supra note 399

"Firstly, the Panel opined that narrowly interpretation of Art XX exceptions so that any one country can't undermine the multilateral trade rules. Secondly, the U.S. had not proved that the tuna ban was necessary it means it was the least-trade restrictive way to protect dolphins. Thirdly, the U.S. couldn't use the Art XX exceptions to regulate natural resources outside its borders".[605]

A. I: TUNA- DOLPHIN CASE II[606]

The second U.S. Tuna-Dolphin Panel report on Tuna-Dolphin II involved the same U.S. measures as U.S-Tuna/Dolphin I, but different plaintiffs i.e. the European Economic Community and the Netherland. The U.S. imposed embargo on intermediary nations[607] and fully banned on tuna and tuna product and also imposed a labelling standards to exporter nations. Therefore, this led to the Tuna/Dolphin II dispute in the year 1994 brought against the United States by the European Communities and the Netherland in the year 1992.[608] While the fact of the case i.e. Tuna/Dolphin II involved a United States 'green trade barriers'[609] in order to aim at protecting the dolphin population by initiating certain requirements that any tuna products either domestic or foreign have to meet with regard to safety to dolphins. Thus, the second case basically involved the same set of facts as the first one with the exception of the complainants which were in this case was nations both under the intermediary nation embargo. In the previous case both the nation i.e. U.S and Mexico signed the 'La Jolla Agreement'[610], aimed at steadily reducing dolphin mortality in the ETP.

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[605] The Tuna Dolphin Case, The Levin Institute (2006) The State University of New York. *Available at www.globalization101.org.* Visited on 18.11.2017

[606] Citation- *United States- Restrictions on Imports of Tuna II* DS29/R

[607] Those nation that export yellowfin tuna and tuna product to U.S. and that receives imports in its country that are subject to the primary nation embargo outline in Section 101 (a) (2) (B) of the MMPA.

[608] Cutfield Josephine, *'Exception Measures: The Pursuit of Non-Trade Objectives in the light of the EC-Seal Products Disputes (2015)'*, Bachelor of Law (Honors) Otago University, New Zealand.

[609] Supra note 399

[610] La Jolla Agreement for the Reduction of Dolphin Mortality in the Eastern Pacific Ocean (21 April 1992, La Jolla, California)

Since both were the members of the IATTC[611] however, the ECC and the Netherland was not the member of the commission.[612]

The 'United States- Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products' case concerned whether United State 'dolphin- safe' labelling measures were comply with the 'TBT[613] Agreement' of the WTO.[614] In addition, the dolphin-safe tuna label's standards were set in the DPCIA[615] which mandated that sellers use the label only if their products were caught by prescribed fishing methods. The complainant parties argued that labelling standard violated the TBT because it would affect international trade, since the majority of producers of the U.S. had already achieved compliance but then the majority of the intermediary producers engaged in methods that disqualify them from using the dolphin-safe labels.

FACTS OF THE CASE-II

The demand for dolphin-safe emerged from concerned about dolphin mortality resulting from by-catch in the ETP. In that region, fishermen used purse-seine net to catch tuna but sometimes dolphin were caught as by-catch they can be released manually but this takes time and effort, and even sometimes not successful.[616] So the U.S. first tried to alter tuna-fishing

[611] Hereinafter the acronym IATTC shall be used for the Inter-American Tropical Tuna Commission

[612] Supra note 399 pp 148

[613] Hereinafter the acronym TBTA shall be used for the Agreement on Technical Barriers to Trade.

[614]Panel Report, United States- Measures Concerning the importation, Marketing and sales of Tuna and Tuna Products, WT/DS381/R (Sept. 15, 2011) (Panel Report) and Appellate Body Report, United States-Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products, WT/DS381/AB/R (May 16, 2012) (AB Report). *Available at https://www.wto.org/english/tratop_e/dispu_e/381abrw_e.pdf*. Visited on 18.11.2017

[615] Hereinafter the acronym DPCIA shall be used for the Dolphin Protection Consumer Information Act.

[616] Lauren Sullivan, '*The Epic Struggle for Dolphin-Safe Tuna: To Be Continued- A Case for Accommodating Non-protectionist Eco-Labels in the WTO*' 47 VAND. J. TRANSNAT'L L. 861 (2014) Pp 866. *Available at https://www.vanderbilt.edu*. Visited on 18.11.207

methods in the form of ban upon any tuna products which didn't comply with domestic standard. Therefore, the MMPA[617] were enforced by the U.S on the public's demand for dolphin-safe tuna.[618] But then the legislation was challenged by the Mexico under the GATT and the panel found that the regulation to be an invalid restriction on interstate trade. In the year 1990, Congress enacted the DPCIA for the dolphin-safe labels. According to which any imported tuna would be eligible for dolphin-safe labels, but only after the producers certified that they did not set on dolphins. It also placed an additional obligation to the producers of tuna from ETP. And producers of that ETP region must also certified that no dolphin were killed or injured in the nets in which the tuna were caught.[619] Consequently, the DPCIA's strict requirement caused U.S and other trade partners including Mexico to protest legislation. Later on, Mexico requested WTO consultation with the U.S. to challenge the DPCIA, its related regulation and violation of TBT. Specifically, they challenged the DPCIA's differentiation between tuna caught in the ETP and all other regions.[620]

THE DECISION OF THE APPELLATE BODY AND REASONING

The complainant parties made substantive claims under the TBT Agreement as well as under the GATT. It also claimed that the U.S. labelling measures provided less favourable treatment to other parties' tuna and its products under TBT Agreement Art 2.1, and created unnecessary obstacles to international trade under TBT Art 2.4.[621] Because the DPCIA prescribed a set of

[617] See Marine Mammal Protection Act and Litigation Highlights, U.S. DEP'T OF JUSTICE, Available at http://www.justice.gov/enrd/4680.htm.

[618] Supra note 616

[619] Ibid 616 Pp 868

[620] Supra note 616

[621] Gregory Shaffer, "*The Wto Tuna-Dolphin II Case: United States—measures concerning the importation, marketing and sale of tuna and tuna products* ", American Journal of International Law, Issue 1, 2013. *Available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2176863*. Visited on 18.11.2017

rules that have to be followed by every fisherman in order to carry the dolphin-safe label. So the certain criteria were established under the DPCIA they were the location of the fishing either outside or outside the ETP, the fishing gear used i.e. purse-seine nets or other equipment or method used, as well as level of dolphin causalities and injuries too. In other words, the DPCIA required a written statement of vessels' captain and independent observers that no dolphin were killed or injured during the harvest and they were not supposed to use purse-seine nets to encircle dolphins in the course of harvesting. So, in the above mentioned grounds the complainant challenged the DPCIA and the way it was implemented is nonetheless a direct discriminatory measures.[622]

Before reviewing the definition of 'technical regulation' the A.B[623] stated that technical regulation may prescribed in the Annex 1.1- 'product characteristics or their related processes and production methods'. Annex 1.1[624] further stated that regulation may also deal exclusively with terminology, packaging, symbols, labelling as they apply to a product process and productions method[625]. Moreover, the AB noted that the word 'requirement' meant a condition which must be compiled with. Thus, the meaning of the concept of 'labelling requirement' referred to provisions that set criteria or conditions to be fulfilled in order to use a particular label.[626] The AB then turned to the second substantive measures i.e. Annex 1.2 deals with standard, and noted that the Annex 2 of the TBT Agreement found to

[622] Supra note 568

[623] Hereinafter the acronym of AB shall be used for Appellate Body

[624] Annex 1.1 deals with technical regulation and one of the substantive measure found in Annex 1 of Technical Barrier to Trade.

[625] Report of the Appellate Body, United States- Measures Concerning the Importation, Marketing and sale of Tuna and Tuna Products, circulated on 16 May 2012. Centre for WTO Studies Indian Instituted of Foreign Trade New Delhi (2012). *Available at wtocentre.iift.ac.in/DisputeAnalysis/Dispute%20Analysis_US-Tuna%20(AB).pdf.* Visited on 18.11.2017

[626] Ibid 625

be that identical with Annex 1 and hence the subject matter of a particular measures were therefore not properly mentioned whether a measure constituted a technical regulation or a standard. Rather the AB noted that 'terminology, packaging, symbols, marking and labelling requirement was the subject matter of either technical regulations or standards. [627] The U.S. contented that labelling requirement was mandatory within the meaning of Annex 1.1, but according to AB it was not a compulsory situation to impose labelling requirement since the producers retained the option of not using the label but nonetheless they were able to sell the product on the market. [628] The Appellate Body rejected the US argument and held that: article 1.1:- "To us, the mere fact that there is no requirement to use a particular label in order to place a product for sale on the market does not preclude a finding that a measure constitutes a "technical regulation" within the meaning of Annex 1.1. Instead, in the context of the present case, we attach significance to the fact that, while it is possible to sell tuna products without a "dolphin-safe" label in the United States, any "producer, importer, exporter, distributor or seller" of tuna products must comply with the measure at issue in order to make any "dolphin-safe" claim."[629] The AB concluded: - "the US measure prescribes in a broad and exhaustive manner the conditions that apply for making any assertion on a tuna product as to its "dolphin-safety", regardless of the manner in which that statement is made. As a consequence, the US measure covers the entire field of what "dolphin-safe" means in relation to tuna products. For these reasons, we find that the Panel did not err in characterizing the measure at issue as a "technical regulation" within the meaning of Annex 1.1 to the TBT Agreement".[630]

[627] Ibid 626

[628] Ibid 627

[629] Ibid 628

[630] Ibid 629

However, in the second disputed provision of Art. Article 2.1 of the TBT Agreement, the Appellate Body stated that the measure at issue modified the conditions of competition in the US market at the expense of Mexican tuna products and the United States did not show that the "legitimate regulators". "The Appellate Body, therefore found that the US "'dolphin-safe" labelling measure was inconsistent with Art. 2.1. The Appellate Body noted that Article 2.1 of the TBT Agreement consisted of three elements that must be demonstrated in order to establish an inconsistency with the provisions, namely:

(i) "that the measure was inconsistent with the "technical regulation" within the meaning of Annex 1.1;

(ii) that the imported products must be like the domestic product and the products of other origins; and

(iii) Imported products must be less favourable than that accorded to like domestic products and like products from other countries"[631].

While Article 2.1 of the TBT Agreement provides that every ''members shall ensure that in respect of technical regulations products imported from the any member shall be accorded same treatment no less favourable than that of the national origin product and like products originating in any country".[632] The complainant parties also highlighted that Art 2.1 of the TBT Agreement was different from the non-discriminatory obligations in the GATT 1994, because it was discriminatory in nature (less favourable) under the technical regulation of the TBT Agreement. But the U.S. stated that its provision were not discriminatory in nature under Art 2.1 in fact they are origin-neutral, it means they were equally apply to tuna caught by U.S. and foreign fleets. On the other side the complainant parties noted that U.S. tuna fleet

[631] Report of the Appellate Body: United States – Measures Concerning the Importation, Marketing and Sale of Tuna Products, (2012) Centre for WTO Studies Indian Institute of Foreign Trade, New Delhi. Available at *wtocentre.iift.ac.in/DisputeAnalysis/Dispute%20Analysis_US-Tuna%20(AB).pdf*. Visited on 18.11.2017

[632] Supra note 621

fished almost outside the ETP and thus was not subject to the more restrictive dolphin-safe labelling provisions, and giving rise to the discrimination.[633] The AB again rejected the United States interpretation of the measures and held that less favourable treatment occurred when regulation modified the conditions of competition that have a detrimental impact upon Mexican products[634]. The AB contented that even most of the Mexican produced tuna would not qualify for dolphin-safe labels under the DPCIA and they were unable to produce dolphin-safe tuna under the DPCIA. In fact, the U.S. consumers preferred dolphin-safe tuna in compared to that the Mexican fleet's inability to use the label and was detrimental to Mexican tuna producers' ability to compete with the U.S[635]. The AB held that the DPCIA violated Art 2.1 of the TBT Agreement, which requires that technical regulations ensure that all imports from the contracting 'states shall be accorded treatment no less favourable than that give to like products of any other origin' and ruled that the detrimental impact on Mexican tuna 'reflected discrimination.[636]

However, in respect of Art 2.2[637] the AB stated the United States measures were more trade restrictive in nature than necessary to achieve the legitimate objectives of ensuring that consumers were not mislead and protecting the dolphin population too.[638] The AB noted that the Art 2.2 of the TBT Agreement required that every 'WTO member shall ensure that

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[633] Ibid 632

[634] Most of the Mexican vessels didn't comply with the regulation. *See Lauren Sullivan, 'The Epic Struggle for Dolphin-Safe Tuna: To Be Continued- A Case for Accommodating Non-protectionist Eco-Labels in the WTO' 47 VAND. J. TRANSNAT'L L. 861 (2014). Available at https://www.vanderbilt.edu*. Visited on 18.11.2017

[635] Supra note 616

[636] Ibid 635 Pp872

[637] Article 2.2:- Preparation, Adoption and Application of Technical Regulations by Central Government Bodies. See TBT Agreement - World Trade Organization
Available at https://www.wto.org/english/docs_e/legal_e/17-tbt_e.htm

[638] Supra note 568 Pp151

technical regulations were not prepared adopted or applied in order to create unnecessary obstacles to international trade'. And for this purpose technical regulation shall not be more trade restrictive than necessary to fulfil a legitimate objectives[639]. Thus, the AB disagreed with the U.S. measures and held that it was more trade-restrictive than necessary to fulfil U.S. legitimate objectives and concluded that the United States measures has not demonstrated the difference in labelling conditions for tuna products containing tuna caught by setting on dolphins in the ETP area and on the other hand tuna products containing tuna caught by other fishing methods outside the ETP, and the risk arising from different fishing methods in different areas of the ocean. Additionally, the U.S were failed to demonstrate the detrimental effect of the U.S. measures exclusively stemmed from a legitimate regulatory distinction. Therefore, the AB found that the U.S. 'dolphin-safe' labelling provisions violated Art 2.1 of the TBT Agreement.[640]

As a final issue regarding Art 2.4[641] of the TBT Agreement, the AB considered the U.S. measures as one of the requirement of the TBT Agreement. On the other hand the complainant parties contented that the U.S measures failed to comply with International Standards under Art 2.4 of the TBT Agreement. Further they claimed that the AIDCP[642] standard for 'dolphin-safe' labelling was an international standard that is an effective and

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[639] Supra note 631

[640] WTO Appellate Body Report: United States- Tuna II (2012) , Global USA. *Available at https://www.whitecase.com/publications. Visited* on 19.11.2017

[641] Article 2.4:- deals with 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 fulfilment of the legitimate objectives pursued, for instance because of fundamental climatic or geographical factors or fundamental technological problems. *See World Trade Organization- Agreement on Technical Barriers to Trade. Available at* https://www.wto.org/english/res_e/booksp_e/analytic_index_e/tbt_01_e.htm*. Visited on 19.11.2017*

[642] Hereinafter the acronym AIDCP shall be used for the International Dolphin Conservation Program

appropriate means to meet the U.S. legitimate objectives.[643] But the U.S asserted that the AIDCP meets none of international standard criteria which were mentioned under Annex 1.5 of the TBT Agreement that defines the International standard. Since it was not 'international' within the meaning of the TBT Agreement because membership was not open for all WTO Members and it doesn't have any 'recognized activities in standardization and the parties of the AIDCP are parties to an international agreement but not a body or organisation.[644] The AB found that in order to created an international standard, it must be adopted by an international standardizing body and that the AIDCP did not established one because it was not open for all WTO members to join. So in order to support its argument the AB mentioned Annex 1.5 to the TBT Agreement that defines an ''International Body'' as one whose membership is open to the relevant bodies of at least all members.[645] Additionally, the AB pointed out a 2000 TBT Committee[646] and observed and found that it constituted a subsequent agreement of the parties within the meaning of Art 31 (3) (a) of the "Vienna Convention on the Law of treaties". Thus, according to the Committee decision maintains that memberships of an international standardizing body should be open to a non-discriminatory. The AB then asserted that the AIDCP was not a body open to all WTO members because members must be invited to join it.[647] The AB ruled that the AIDCP did not constitute a relevant international standard within the meaning of Art 2.4, since the AIDCP

[643] Supra note 621

[644] Report of the Appellate Body, 'United States- Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products' (2012) *Available at https://www.wto.org/english/tratop_e/dispu_e/381abr_e.pdf*. Visited on 19.11.2017

[645] Supra note 621

[646] TBT Committee 2000 especially designed to set out the principles and procedures those international standardizing bodies.

[647] Supra note 621

was not open to WTO members thus not an international standardizing body for the purpose of the TBT Agreement and it was not a mere violation of Art 2.4 of the TBT Agreement.

B. SHRIMP-TURTLE CASE[648]

FACTS OF THE CASE

In 1998 the members of WTO lodged a complaint against United State Import Prohibition Law under section 609[649] of the Public Law 101-162 on the importation of shrimps and shrimps' products.[650] The shrimp-turtle case began when the U.S. imposed a trade embargo on the importation of shrimp and shrimp products from contracting parties, that didn't certified those shrimp and shrimp products which were caught by using turtle-excluder devices in the trawling vessels and here the use of TED[651] was not comparable and effectiveness to those required in U.S. programmes.[652] Since 1987 the USA required

[648] US- Shrimp/Turtle. United States- Import Prohibition of Certain Shrimp Products. WT/DS/58/R.

[649] Section 609 of the Public Law provided that shrimp harvested with technology that may adversely affect certain species of sea turtles may not be imported into the United States. This import prohibition does not apply if the Department of the States certifies to Congress that the harvesting nations has a regulatory program and an incidental take rate comparable to that of the U.S., or, alternatively, that that the fishing environment in the harvesting nation does not pose a threat of the incidental taking of sea turtles.

[650] Lisa Tan, 'Shrimp-*Turtle Case, World Trade Organization Summary of proceedings'* (2012) Available at *bawp.org.au/wp-content/.../07/BAWP-Case-Note-on-WTO-Shrimp-Turtle-Case1.pdf.* Visited on 20.11.2017

[651] Hereinafter the acronym TED shall be used Turtle-Excluder Device

[652] Jayati Srivastava and Rajeev Ahuja, (2002) 'Shrimp-Turtle Decision in WTO: Economic and Systemic Implication for Developing Countries' Economic and Political Weekly, Vol. 37, No. 33. *Available at http://www.jstor.org/stable/4412492.* Visited on 20.11.2017

fishermen to employ special equipment known as the TED in order to protect the endangered species[653] of the seas.

After two years later USA enacted Section 609 of Public Law 101-162[654]. So according to Section 609 the Secretary of State should initiate negotiations for the protection of sea turtles with the government of other shrimps harvesting countries.[655] Furthermore, the law restricted imports of shrimp harvested which may result in incidental sea turtle mortality unless the President annually certifies to the Congress that the harvesting country has a regulatory program comparable to that the USA.[656] However to implement the Section 609 the USA department of state issued a guidelines in the year 1991. It was basically related with the shrimp export and harvested of shrimps and use of TED in all shrimp trawling vessels and program to reduced mortality of turtle.[657] According to the Section 609 under the 1991 guidelines was limited to Gulf of Mexico, Caribbean and Western Atlantic region[658] and these countries were given a three year period to adopt the new US regulation[659]. In the year 1993, the guidelines were revised and relatively became more stringent and called for a mandatory commitment to use TED and eliminated the alternative[660] means of protecting the sea turtles. Further, the NGO California-based environmental organization 'Earth Island

[653] In September 1996, the United States and a number of countries of that region concluded the Inter-American Convention for the Protection and Conservation of Sea Turtles.

[654] TED is a trap-door that is inserted into a shrimp trawling net. A completely installed TED costs between 75 and 500 US-Dollars, and is estimated to reduce turtle mortality by up to 97%.

[655] Ranne Omar, 'More leeway for the unilateral trade measures? The report of the appellate body in the shrimp- turtle case' Inter economics, Vol. 34, Iss. 2. *Available at http://hdl.handle.net/10419/40731. Visited on 20.11.2017*

[656] Ibid 655

[657] Supra note 652

[658] Mexico, Belize, Guatemala, Honduras, Nicaragua, Costa Rica, Panama, Colombia, Venezuela, Trinidad and Tobago, Guyana, Surinam, French Guyana.

[659] Supra note 652

[660] Ibid 569

Institute' challenged the guidelines and in the year 1995 the US CIT concluded they limited the geographical scope of the law[661] directed the US government to extend the geographical scope, to prohibit the importation of shrimp or product of shrimp, harvested with technology that adversely affects sea turtles.[662] To comply with the CIT ruling, the USA law prohibit the importation of shrimp products wherever harvested without turtle-safe technologies and in the year 1996 the Department of State published revised guidelines that extended[663] the scope of Section 609 to all shrimp harvested in all countries. According to 1996 guidelines that all countries must take measures to get certified as making use of TED with documentary proofs and if they failed to comply with the USA regulation than the US imposed an embargo on shrimp and shrimp products.[664]

DECISION OF THE PANEL/APPELLATE BODY AND REASONING

While on the day of the CIT ruling were rendered India, Malaysia, the Philippine, Pakistan and Thailand took the matter to dispute settlement at the WTO. Their main argument was that the shrimp embargo was a violation of Art XI[665] of the GATT, which prohibits non-tariff or restrictions on imports and exports. On the other hand USA based its defence and justified it under Art XX (b) and (g) of the GATT.[666] Additionally, the complainant parties challenged the Section 609 of the USA Public Law 102-106 and its implementing measures, and asserted that these measures were violating the principles of most-favoured nation treatment, general elimination and non-discriminatory administration of quantitative restrictions. And also they

[661] Supra note 655

[662] Supra note 652

[663] Supra note 655

[664] Supra note 652

[665] GATT Article XI:- General Elimination of Quantitative Restriction

[666] Robert Howse, 'The Appellate Body Ruling in the Shrimp/Turtle Case: A new Legal Baseline for the Trade and Environment Debate' Vol. 27:2 , *CJEL 495* (2002). *Available at www.law.nyu.edu/sites/default/files/ECM_PRO_060046.pdf.* Visited on 20.11.2017

claimed that it was not covered within the scope of exception under Art XX (b)[667] and (g)[668] of GATTA 1994.[669] The Panel were established on 25 February 1997 with a request made by the complainant parties and the report delivered and was circulated to the members of the WTO on the 15 May 1998.[670] The Panel ruled that the USA action amounted to prohibition or restriction because it imposed embargo on import of shrimp and products from the countries not meeting certain policy conditions i.e. use of TED and certification requirement. Further the Panel propounded that the US action could not justified under Art XX because it caused discrimination between countries where the same conditions prevailed.[671] Therefore the Panel found that the United States ban on shrimp importation was inconsistent with GATT Article XI.1, and could not be justified as within the scope of permissible measures under GATT Article XX.[672] Thus, in the year 1998 the Panel reached the following conclusion:-

> "In the light of the findings above, we conclude that the import ban on shrimp and shrimp products as applied by the United States on the basis of Section 609 of Public Law 101 162 is not consistent with Article XI: 1 of GATT 1994, and cannot be justified under Article XX of GATT 1994".[673] And made this recommendation: - The Panel recommends that the Dispute Settlement Body request the United States to bring this measure into conformity with its obligation under the WTO Agreement".[674]

[667] Article XX (b):- General Exception- necessary to protect human, animal or plant life or health.

[668] Article XX (g):- General Exception- relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption.

[669] Supra note 652 pp 3451

[670] Nancy L. Perkins, 'World trade Organization: United States- Import Prohibition on Certain Shrimp and Shrimp products' Vol. 38, No. 1. Published by American Society of International Law: Cambridge University Press (1999) *Available at http://www.jstor.org/stable/20698873.* Visited on *20.11.2017*

[671] Supra note 652 Pp 3452

[672] Supra note 650

[673] Supra note 670 pp 125

[674] Ibid 673

The AB criticized the Panel report for failing to examine 'the ordinary meaning of the words of Art XX[675] 'and turning to the question of whether Section 609 is a measures 'relating to' conservation within the meaning of Art XX (g). In Shrimp/Turtle case Appellate Body found the 'general design and structure' of Section 609 to be 'reasonably related' to a 'legitimate policy' of conservation.[676] The Appellate Body noted that section 609 was not excessively wide in its scope and reach in relation to the policy objective of protection and conservation of sea turtle species.[677] The requirement that "a country adopts a regulatory program requiring the use of TEDs," according to the Appellate Body, "is directly connected with the policy of conservation of sea turtles". Thus, the Appellate Body concluded that section 609 is a measure ''relating to the conservation of an exhaustible natural resource within the meaning of Article XX (g)"[678]. The Appellate Body ultimately held that Section 609 constituted arbitrary and unjustifiable discrimination between WTO Members. First, the Appellate Body found that measures to protect and conserve species of sea turtles fell within the exception stated in paragraph (g) of Article XX that provided for the "conservation of exhaustible natural resources.[679] This exception covered not only 'mineral' or 'non-living' resources but extended to living species and living species though capable of reproduction and are in certain circumstances just as susceptible of depletion, exhaustion and extinction particularly

[675] Howard F Chang, "*Environmental trade measures, the shrimp-turtle rulings, and the ordinary meaning of the text of the GATT." Chap. L. Rev.* 8 (2005): 25. *Available at scholarship.law.upenn.edu/cgi/viewcontent.cgi?article=1966&context=faculty.* Visited on 20.11.2017

[676] Report of the Appellate Body, United States—Import Prohibition of Certain Shrimp and Shrimp Products, WT/DS58/AB/R (Oct. 12, 1998), 38 I.L.M. 118 (1999. *Available at https://www.wto.org/english/tratop_e/dispu_e/58abr.pdf*. Visited on 20.11.2017

[677] Ibid 676

[678] Ibid 677

[679] Supra note 650 pg 3

as a result of human activities. So therefore, sea turtle in this instance constituted 'exhaustible natural resources'[680].

The AB contented that Section 609 permits some flexibility in determining whether an exporting country's' regulatory program is comparable to the U.S. program and not only that officials were looked at whether the country's policies were essentially the same as U.S. policies.[681] While they did not take into account other's countries policies and measures that the country may have adopted, nor did they considered different conditions that may exist in that other country. Because this rigid approach to certification could result in a ban on imports from a country with a different yet comparable program, the Appellate Body held that this inflexibility amounted to "arbitrary discrimination" among countries with comparable programs, in violation of the of Article XX. Not only that, the U.S. failed to negotiate with all effected countries before imposing ban. [682] Though in the year 1996, the U.S. did negotiate with some countries to produce the Inter-American Convention for the Protection and Conservation of Sea Turtles but not with other countries (complainant parties) so the result was 'unjustifiable and discrimination'.[683] Furthermore the U.S. gave fourteen countries a three-year phase-in period from the year 1991- 1994 but U.S. didn't impose ban on others until 1996, when it did so with only four months notice. Due to these shorter phase period was not only more burdensome but also accompanied by less effort by the U.S. to transfer TED technology to the exporting countries.[684] Finally, the AB complained that the U.S. certification process was not "transparent": there is "no formal opportunity for an

[680] Ibid 679 pg 4

[681] Chang, Howard F. "Toward a Greener GATT: Environmental Trade Measures and the Shrimp-Turtle Case." *S. Cal. L. Rev.* 74 (2000): 31. *Available at scholarship.law.upenn.edu/cgi/viewcontent.cgi?article=2210&context=facult.* Visited on *20.11.2017*

[682] Ibid 681

[683] Supra note 681

[684] Ibid 683

applicant country to be heard, or to respond to any arguments made against it," "no formal written, reasoned decision" with reasons for a denial of certification, and "no procedure for review of, or appeal from, a denial." Thus, the United States denied certification without a process to ensure that the statute was "applied in a fair and just manner." The Appellate Body concluded that denials under this procedure amounted to "arbitrary discrimination.[685]

C. ASBESTOS CASE[686]

FACT OF THE CASE

The case was first brought by Canada against European Union acting on behalf of France. In this case Canada challenged a French Decree that came into effect in the year 1997 and that banned the importation of products containing chrysotile[687] asbestos. So the prohibitions in the French decree were grounded in the carcinogenic characteristics of chrysotile asbestos. Therefore these prohibitions applied to asbestos products of domestic and foreign origin and did not single out products originating in Canada.[688] Once the Decree passed and unilateral banned in nine other European Countries they are Iceland 1983, Norway 1984, Denmark 1986, and Sweden 1986, Australia 1990, Netherland 1991, Finland 1992, Italy 1992, and

[685] Ibid 684

[686] EC- Asbestos European Communities – Measures Effecting Asbestos and Products Containing Asbestos. WT/DS/135/R.

[687] Decree No. 96-1133 of Dec. 24, 1996, J.O., Dec. 26, 1996, p. 19126; JCP 1997, 111, 68259 [hereinafter French decree].

[688] Sydney .M Cone III, "The asbestos case and dispute settlement in the world trade organization: The uneasy relationship between panels and the appellate body." *Mich. J. Int'l L.* 23 (2001): 103. *Available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=310002*. Available at 20.11.2017

Germany 1993.[689] For the protection of human health, especially the health of workers, the French government adopted a decree. The decree provided that for the purpose of protecting workers, the manufactures, sale, import, placing on the domestic markets and transfer under any title whatsoever of all varieties of asbestos fibres shall be prohibited, whether these substances have been incorporated into materials,[690] products and devices. Not only that the decree provided some limited exception for the protection of consumers, the manufactures, import, domestic marketing, exporters and any title whatsoever of any products containing asbestos fibre shall be prohibited.[691] While Art 1 and 2 of the Decree set forth prohibition on asbestos and on products containing asbestos fibres, followed by certain limited and temporary exceptions from those prohibitions they are as follows[692]:-

Article 1 provides for a ban on asbestos in the following terms:-[693]

- "For the purpose of protecting workers, and pursuant to Article L. 231-7 of the Labour Code, the manufacture, processing, sale, import, placing on the domestic market and transfer under any title whatsoever of all varieties of asbestos fibres shall be prohibited, regardless of whether these substances have been incorporated into materials, products or devices.

[689] Lonias Ndlovu, 'The EC- Asbestos dispute and its implication for a transforming SADC: Is the dust refusing to settle?" 21 (2006) SAPR/PL. Pp 247-248. *Available at https://www.researchgate.net/...EC-Asbestos.../The-EC-Asbestos-dispute-and-its-implication.pdf.* Visited on 20.11.2017

[690] Ibid 689

[691] Ibid 7690

[692] World Trade Organization, Report of Appellate Body: *European Communities- Measures Effecting Asbestos and Asbestos –Containing Products,* Sources: International Legal Society Materials, Vol 40, No 5 (2001) Published by American Society of International Law. *Available at http://www.jstor.org/stable/20694172. Visited on 20.11.2017*

[693] Ibid 692

- For the purpose of protecting consumers, and pursuant to Article L. 221.3 of the Consumer Code, the manufacture, import, domestic marketing, exportation, possession for sale, offer, sale and transfer under any title whatsoever of all varieties of asbestos fibres or any product containing asbestos fibres shall be prohibited.
- The bans instituted under Articles I and II shall not prevent fulfilment of the obligations arising from legislation on the elimination of wastes".

Article 2 of the Decree allows some exceptions to the ban in Article 1:-[694]

- "On an exceptional and temporary basis, the bans instituted under Article 1 shall not apply to certain existing materials, products or devices containing chrysotile fibre when, to perform an equivalent function, no substitute for that fibre is available which: On the one hand, in the present state of scientific knowledge, poses a lesser occupational health risk than chrysotile fibre to workers handling those materials, products or devices; - on the other, provides all technical guarantees of safety corresponding to the ultimate purpose of the use thereof.
- The scope of application of paragraph I of this Article shall cover only the materials, products or devices falling within the categories shown in an exhaustive list decreed by the Ministers for Labour, Consumption, the Environment, Industry, Agriculture and Transport. To ascertain the jurisdiction for maintaining these exceptions, the list shall be re-examined on an annual basis, after which the Senior Council for the Prevention of Occupational Hazards and the National Commission for the Occupational Hazards and the National Commission Health and Safety in Agricultural shall be consulted".

The above exceptions allowed are the subject of an exhaustive list prescribed by the French authorities and any exceptions under Art 2 must be the subject of a declaration by the head of

[694] Ibid 693

the business established. The main purpose of the declaration was to be able to determine that the activities to which it refers meets the criteria[695] set out in the first paragraph of the Article.

DECISION OF THE PANEL/APPELLATE BODY AND REASONING FOR THE DECISION

The issues raised by the case concerned the national treatment of imported products and non-tariff barriers to imported products, the protection of public health, and technical barriers [696]to trade.[697] In the year 1998 the Canadian Government wanted consultation with EC[698] on the French Decree. But the talks failed and EC refused to accept the Canadian government's arguments. The Canada asked WTO's disputes settlement body to form an official panel. Further Canada claimed that France Decree has violated the most favoured nation's provisions[699] and ban was against the provision to use the least restrictive trade measures for meeting health or other objectives. On the other hand EU contented that ban was valid and relied on the exception of Art XX of the GATT.[700]

France asserted that, Asbestos has been known to be a deadly carcinogen and France's ban of the substance applied without discrimination to both domestically produced and imported asbestos. Yet Canada further argued that the asbestos it exports is a 'like' product to

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[695] World Trade Organization, Report of the Panel: *European Communities- Measures Affecting Asbestos and Asbestos- Containing Products,* 18 September 2000. Available at https://www.wto.org/english/tratop_e/dispu_e/135abr_e.pdf. Visited on 20.11.20171

[696] The claims made under Articles III: 4 and XI and Art XX (b) and the claim under the TBT Agreement. See Panel Report 2000.

[697] Supra note 695

[698] Hereinafter the acronym EC shall be used for the European Communities.

[699] K. Ravi Srinivas, "WTO and Asbestos: Dispute Settlement at Work." *Economic and Political Weekly 2 (2001) Available at https://www.jstor.org/stable/4411084.* Visited on 20.11.2017

[700] Ibid 699

substituted products used in construction[701], therefore deserving no less favourable treatment under Art III: 4[702]. Canada also claimed that France violated the obligation under the TBT Agreement to ensure that their regulation was the least restrictive of trade necessary to attain the legitimate regulatory objectives in question, like protection of human life and health under Article 2.2 of the TBT[703] Agreement[704].

The Panel in its verdict upheld the France argument and considered the Asbestos case was a clear violation of Art III: 4 and found it unnecessary to consider the Art XI[705], and the proceeded to considered Art XX (b)[706]. It ruled that even though the violation of Art III: 4, the France decree was authorized by Art XX (b). In short, Canada lost and France won on the ground that the France decree was a measures necessary to protect human life or health[707] from the carcinogenic threat of chrysotile asbestos products.

In the Panel Proceeding the EC made the extraordinary argument because the France measures as an outright ban and it was not a technical regulation within the meaning of the TBT Agreement, and therefore the Agreement did not applied.[708] While the definition of a 'technical regulation' is more or less a document which lays down product characteristics or their related processes and production methods including the applicable administrative provisions with which compliance is mandatory. It also exclusively deals with terminology, symbols, packaging, marking or labelling requirements as they apply to a products, process or

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[701] Robert Howse and Elisabeth Tuerk, *"The WTO impact on internal regulations-a case study of the Canada-EC asbestos dispute." The EU and the WTO: Legal and constitutional issues* 287 (2001). *Available at assets.wwfindia.org.*

[702] GATT Article III: 4:- Like Products

[703] Hereinafter the acronym TBT shall be used for Technical Barriers to Trade

[704] Supra 701

[705] GATT Article XI- General Elimination of Quantitative Restriction.

[706] GATT Article XX (b)- General Exception - necessary to protect human, animal or plant life or health.

[707] Supra note 688 Pg 108

[708] Supra note 701 Pg 306

production[709] method. Further EC argued that measures banning products cannot be considered with measures that specifies the product's characteristics. Hence, the Panel agreed with the EC's reasoning and held that the TBT Agreement did not apply[710] to the measures in questions.

In the Panel report, circulated to WTO Members on 18 September 2000, the Panel concluded that[711]:

(a) "Prohibition" part of the Decree does not fall within the scope of the TBT Agreement. The part of the Decree relating to "exceptions" does fall within the scope of the TBT Agreement. However, as Canada has not made any claim concerning the compatibility with the TBT Agreement of the part of the Decree relating to exceptions, the Panel refrains from reaching any conclusion with regard to the latter.

(b) Chrysotile asbestos fibres as such and fibres that can be substituted for them as such are like products within the meaning of Article III: 4 of the GATT 1994. Similarly, the Panel concludes that the asbestos-cement products and the fibro-cement products for which sufficient information has been submitted to the Panel are like products within the meaning of Article 111:4 of the GATT 1994.

(c) With respect to the products found to be like, the Panel concludes that the Decree violates Article 111:4 of the GATT 1994.

(d) However, the Decree, insofar as it introduces a treatment of these products that is discriminatory under Article 111:4, is justified as such and in its implementation by the provisions of paragraph (b) and the introductory clause of Article XX of the GATT 1994.

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[709] Annex 1:1 of the TBT Agreement

[710] Supra note 701 Pg 307

[711] Supra note 695

On appeal by the Canada, the AB reversed the Panel's findings of a violation of Art III: 4 because Canada's like products claimed under Art III: 4 provision, while the France decree forbade the sale of chrysotile asbestos in France it did not forbid the sale in France of other. The EU requested the AB to repeal the Panel's findings that chrysotile asbestos fibres are 'like' PVA[712], cellulose and glass fibres, and that chrysotile cement products are 'like' fibres-cement products,[713] as well as the Panel's consequent finding that, with respect to the products found to be 'like', the Decree violates Art III: 4 of the GATT. Further EU contented that the Panel ignore the basis for the regulatory treatment set forth in the Decree it compared the wrong products in its analysis of 'likenesses'. The decree prohibits all carcinogenic asbestos fibres and it denied competitive opportunities to all such fibres[714] equally. The prohibited carcinogenic asbestos was not 'like' the three substitutes fibres because the application of the regulatory distinction does not alter the competitive opportunities of those substitutes' fibres.[715] The EU challenged the Panel's conclusion, in view of the relationship between Art III and Art XX (b) of the GATT, it was not an appropriate to take risk criterion into account either when examining the properties, nature and quality of the product, or when examining other criteria of 'likeness'[716]. The Panel found that the health, safety or other concerns that lead regulatory to applied different treatment to products may only be taken into account in the analysis under Art XX not under Art III:4 of the GATT. The Panel approach misunderstood the relation between Art III: 4 and Art XXX

[712] Hereinafter the acronym of PVA shall be used for the Polyvinyl Alcohol

[713] World Trade Organization, Report of the Appellate Body, AB-2000-11, page 11. Available at *https://www.wto.org/english/tratop_e/dispu_e/135abr_e.pdf.)*

[714] Ibid 713 pg 12

[715] Ibid 714

[716] Ibid 715

of the GATT [717]and required the likeness of two different products to be determined solely on the basis of commercial factors.

Moreover to determine the 'likeness' of chrysotile asbestos and other substituted products containing PCG[718] fibres the AB relied upon the three criteria to determined the likeness for example properties, nature and quality of the products, the end-use of the products and consumers' tastes and habits and customs classification. Thus, these entire characteristic provide a framework[719] for analyzing likeness or particular products, but they were not treated mandatory either constituted a closed list of criteria that will determined the legal characterization of products.

Canada requested the AB to dismiss the EU appeal regarding Art III: 4 because Canada was argued that EU confused the concept of likeness under Art III: 4 of the GATT with likeness under Art III: 2[720]. However, likeness under III: 4 were different from and broader than Art III: 2 and the Panel's approached properly reflect this distinction because panel stated that while assessing the likeness of products we should recognized the criteria of properties and end-use and should be independent and analyzed[721] them accordingly.

The AB contented that the Panel's view regarding asbestos and substitutes asbestos products should be taken into account in determining whether they are 'like products' for the purpose of Art III: 4.[722] Thus, the Appellate Body had to deal with several issues like to determined improperly intrudes on the intended purpose for which Art XX (b) was included in the GATT and the scope of 'like' products in Art III: 4 etc. Further the Appellate Body said that Art III:

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[717] Ibid 716

[718] Hereinafter the acronym PCG shall b used for the polyvinyl alcohol fiber, cellulose and glass fibers

[719] WTO Appellate Body, Report of the Appellate Body: EC — Asbestos, WTO Doc WT/DS135/AB/R (12 March 2001) [102]. Available at http://www.wto.org.

[720] Ibid 719

[721] Ibid 720 Pg 14

[722] Ibid 721 pg 114

4 should not be restricted because Art XX (b) exists and may be available to justified measures inconsistent with Art III: 4. Thus, according to the Appellate Body, [723]the fact that using Article 111:4 "implies a less frequent recourse to Article XX(b)" and does not deprived the latter of its utility.

In the second issue the AB upheld the Panel's finding that the measures banned chrysotile asbestos products in the Decree was aimed to protecting human life and health within the meaning of Art XX (b) of the GATT. The AB further contented that WTO members have the right to determine the level of protection of health that they consider appropriate in a given[724] situation. In reaction to the Canadian argument the AB stated that the PGC fibres might also posed a health risk, and that perfectly 'legitimate for a member to seek to halt the spread of a highly risky product while allowing the use of a less risky product in its place[725]'. While addressing the Canadian argument the AB made it clear that, as in the case of the SPS Agreement[726] and its application in Beef Hormones[727], there was no requirement under this article to evaluate the risk to human life or health, rather a risk may be evaluated[728] in either quantitative or qualitative terms. Therefore, both the Panel and the AB determined that the French decree was a measure necessary to protect human life or health and came under the

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[723] Ibid 722 pg 115

[724] WTO Appellate Body, Report of the Appellate Body: EC — Asbestos, WTO Doc WT/DS135/AB/R (12 March 2001) [168] *available at http://:www.wto.org.com.*

[725] Ibid 724

[726] Hereinafter the acronym SPS shall be use for Sanitary and Phytosanitary Measures.

[727] EC- Beef Hormones, European Communities- Measures Concerning Meat and Meat Products (Hormones), WT/DS/48/RCAN, WT/DS26/AB/R. Panel Report on 18 August 1997. WT/DS/48/AB/R, WT/DS/26/AB/R. Appellate Body Report on 16 January 1998. Available at http://:www.wto.org *See also Goh. G and Ziegler, A, 'A real world where people live and work and die: Australian SPS measures after the WTO Appellate Body's decision in the Hormones Case' (1998) 32 (5) JWT 271.*

[728] WTO Appellate Body, Report of the Appellate Body: EC — Asbestos, WTO Doc WT/DS135/AB/R (12 March 2001) [167] available at http://:www.wto.org. *See also WTO Appellate Body, Report of the Appellate Body: Beef Hormones, WTO Doc WT/DS26/AB/R and WTO Doc WT/DS48/AB/R (16 January 1998) [186].*

ambit of Art XX (b). [729]The AB asserted that the main end of the measure was the preservation of human life and health through the elimination or reduction of the well-known and life-threatening health risks posed by asbestos fibres.[730]

In the third issues the complainant asserted that the Panel made a mistake in examining Canada's allegation under the TBT Agreement. The Panel incorrectly split the Decree into two and considered prohibitions and exceptions in the Decree to be separated measures[731] for the purposes of determining whether the Decree was a technical regulation within the meaning of the TBT Agreement or not. Canada further argued that the Panel erred the definition of technical regulation in Annex 1 to the TBT Agreement because there were two criteria that must be satisfied before a measure can be a 'technical regulation' the measure must concerned with identifiable products and the measure must identify the technical characteristics that products must have to be marketed in the territory of the Member taking the measure[732]. Canada challenged the Panel's finding that the TBT Agreement does not apply to a general prohibition like the one in the Decree[733]. Thus, Canada propounded the Decree was inconsistent with TBT Agreement. After all the principles of national treatment in Art 2.1 was a specific, particular expression of the Art III: 4 of the GATT, the interpretation of the words 'like product' in Art 2.1 must be identical to the interpretation of the same words in Art III: 4 of the GATT and Art 2.1 of the TBT Agreement had the same object and purpose, namely to avoided protectionism and provide equal competitive condition

[729] WTO Appellate Body, Report of the Appellate Body: EC — Asbestos, WTO Doc WT/DS135/AB/R (12 March 2001) [172]. *Available at http://:wto.org.com.*

[730] Ibid 729

[731] Supra note 728 Pg 1197

[732] Ibid 731

[733] Ibid 732

for imported products in relation to domestic product[734]. However, the Panel dismissed the Canadian argument on the ground that the relevant portion of the French decree was not a technical regulation but a general prohibition of asbestos products[735]. On the other hand the AB reversed the Panel findings and observed that another portion of the decree contained exceptions to the general prohibition, so the AB ruled that decree taken as a whole does constituted a technical regulation for the purpose of the TBT Agreement.[736] The AB rejected the Panel's approach of separating the measure into the ban and the exceptions, reversed the Panel and concluded that the ban as an "integrated whole" was a "technical regulation" as defined in Annex 1.1 and thus covered by the TBT Agreement, as the products subject to the ban were identifiable (i.e. any products containing asbestos), the measure was a whole laid down product characteristics; and compliance with the measure was mandatory. However, the Appellate Body did not complete the legal analysis of Canada's TBT claims as it did not have an "adequate basis" upon which to examine them.[737]

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[734] Appellate Body Report, WT/DS58/AB/R, adopted 6 November 1998, para. 124 available at http://:www.wto.org.

[735] Report of the Panel, European Communities-Measures Affecting Asbestos and Asbestos-Containing Products, WT/DS135/R, Pg 64-76 (Sept. 18, 2000). *Available at http://www.wto.org.*

[736] Report of the Appellate Body, European Communities-Measures Affecting Asbestos and Asbestos-Containing Products, WT/DS135/AB/R, Pg. Page 8.72-73 (March. 12, 2001), *Available at http://www.wto.org*. The seven-member Appellate Body acted in this case through a three-member Division composed of Messrs. Feliciano, Bacchus, and Ehlermann (the "AB Division")

[737] WTO Dispute Settlement One-Page Case Summaries (1995-2011) Published by the World Trade Organization. 2012 Edition. Available at http://:www.wto.org.

D. EC-BANANA CASE[738]

FACTS OF THE CASE

The banana dispute also known as banana war and had been an issue in international trade for many decades. And the banana war revealed that bananas have played an important role in the European Community since its creation. So to better understand the banana war or banana trade, an assessment of the EC[739] and the development of the banana trade are necessary.[740] The main issue revolves around the EU's regulatory measure for imported bananas commonly known as CMOB[741] enacted in the year 1993. According to the regime each EU's member states had its own banana import regime. Thus, the CMOB gave a special entry to banana from the overseas territories and former colonies of EU member countries,[742] but restricted entry from other countries, including Latin America. The Protocol was the result of the Federal Republic of Germany's refusal to sign the EEC Treaty[743] until Germany was given the right to import an adjustable amount of Latin bananas duty free.[744] A tariff regime was introduced to provide special treatment to bananas from the ACP[745] nations in 1993 and the United Kingdom joined the Community, the Commonwealth countries along with former French colonies joined to form the ACP group. Later on the ACP nations negotiated with the

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[738] WT/DS27/AB/R

[739] Hereinafter the acronym EC shall be used to European Communities

[740] Jack J. Chen, *Going Bananas: How the WTO Can Heal the Split in the Global Banana Trade Dispute*, 63 FordhamL. Rev. 1283 (1995). *Available at: http://ir.lawnet.fordham.edu/flr/vol63/iss4/12.*

[741] Hereinafter the acronym CMOB shall be used for Common Market Organization for Bananas.

[742] Supra note 479

[743] The Treaty of Rome, officially the Treaty establishing the European Economic Community (TEEC), is an international agreement that brought about the creation of the European Economic Community (EEC), the best-known of the European Communities (EC).

[744] Treaty Establishing the European Economic Community [EEC Treaty] Protocol on Bananas (as in effect in 1958)

[745] Hereinafter the acronym ACP shall be used for Africa, Caribbean, Pacific nations

Community for a special trade agreement[746] known as Lome I Convention. [747]. This regime brought banana under a unified tariff structure [748]and aid relations between members of EU and ACP states. Beside that Art 1 of the regime clearly mentioned that 'no ACP exporters will be treated less favourably in its traditional European market than it has used to be in past'.[749]

The Banana disputes basically concerned discrimination, specifically, discrimination against Latin American Bananas in favour of African, Caribbean and Pacific (former European Colonies) Bananas. While in particularly, the claim was that the allocation of the quota by the EC to Costa Rica and Columbia, under the Banana Framework Agreement[750] (BFA),

[746]Supra note 740 Pg 1295

[747] Douglas E. Matthews, Lom6 IV and ACP/EEC *Relations: Surviving the Lost Decade*, 22 Cal. W. Int'l LJ. 1, 26 (1991) European Commission stated that: The Lor6 Convention, which links 70 countries in Africa, the Caribbean and the Pacific to the 12 European Union Member States, remains the largest collective cooperation agreement in the history of relations between the countries of the North and those of the South: its foundation was laid in the Treaty of Rome itself (March 25, 1957) whose signatories confirmed the solidarity which links Europe and overseas countries. Then after the 1960's independences, there followed the two Yaound6 Conventions of 1963 and 1969 between the EC and 18 African States.

First Lome Convention (Lome, the capital of Togo, was where the signing ceremony took place) signed in the year 1975, with a group of 46 independent states. 57 States signed the Lome II Convention (1980-1985), 65 the Lome III Convention (1985-1990) and 69 ACP countries the fourth Lor6 Convention (1990-2000) in 1989. The Lom6 Convention very soon became a model of cooperation for development and the amount of aid provided has continued to grow. As far as trade is concerned, the ACP countries benefit from a very generous regime, since almost all their exports have free access to the European market without the condition of a reciprocal arrangement.

[748] Adriana Chacón-Cascante and John M. Crespi, *'Historical Overview of the European Union Banana Import Policy',* Agronomía Costarricense 30.2. 2006. *Available at www.mag.go.cr/rev_agr/v30n02_111.pdf.*

[749] Robert Read, "The Anatomy of the EU-US WTO Banana Trade Dispute", Vol 2 No 2, The Estey Central Journal of Int'L and Trade Policy 259 (2001).

[750] The Banana Framework Agreement (BFA) outlines regulations on the treatment, sharing, and production of bananas and other various banana related activities. It was concluded in 1993 between the European Union and Costa Rica, Colombia, Nicaragua and Venezuela, following a dispute in the framework of the General Agreement on Tariffs and Trade (GATT) on the EU's banana import regime.

amounted to discriminatory application of quotas and export licences[751] in contravention of the GATT and GATS too. So, the first legal challenge was brought by the five Latin-American banana- producing countries (Colombia, Costa Rica, Guatemala, Nicaragua, and Venezuela). Further they initiated GATT dispute settlement proceedings in June 1993 and later the Panel ruled in January 1994 that the EU regime was inconsistence with GATT and found an illegal[752]. Afterward, EU negotiated[753] a so-called 'Framework Agreement' with all of the complainant parties except Guatemala that increased and guaranteed the value of their export quotas, in return of their agreement to withdraw the GATT complaint and cease from further GATT challenges until December 31, 2002.

DECISION OF THE PANEL/AB AND RESONING FOR THE DECISION

After the complaint had been lodged by the five Latin-American banana producing countries, the Panel was established on 1996 to look after the matter against the EC regarding the sale and distribution of banana established by Council Regulation (ECC) No 404/93 of 1993[754]. In this case the tariff regime under the regulation[755] discriminate banana from Latin in favour of ACP producers. Since, the both parties were the contracting parties and member of the GATT, in short contracting parties were not allowed to discriminate between the GATT and in this case EC and Latin America were the contracting parties. Henceforth, the regime itself was incompatible with the GATT general agreement and the Community itself may also

[751] Keisha Thompson, '*The "Banana Saga' and the WTO's Dispute Settlement System"* (2011) Stellenbosch: Tralac . *Available at www.tralac.org/wp-content/blogs.dir/12/.../Thompson2_Final_20110627_edu.pdf .*

[752] Eliza Patterson, ' *The US-EU Banana Dispute'* Vol 6, Issue 4, *ASIL* (2001). *Available at https://www.asil.org/insights/volume/6/issue/4/us-eu-banana-dispute.*

[753] Ibid 752

[754] World Trade Organization, "Report: *European Communities-Regime for the Importation, Sale and Distribution of Banana,"* Organization 97 *(1997) 3. Available at https://www.wto.org/english/tratop_e/dispu_e/27abr.pdf.*

[755] Council Regulation No. 404/93 of 1993

violate the General Agreement[756] because all the founding members were GATT contracting parties, it was necessary that EC Treaty should be compatible with GATT.[757]

The most important features of the complex banana regime were as follows: basically, there were three types of bananas which were identifies in the EC import regime. First, bananas originated in the EC enjoyed free movement within the EC and also applied to bananas shipped from the overseas[758] departments of the EC Member States. Secondly, the EC also granted duty free entry within an overall annual quota of 857,000 tonnes for bananas originated in 12 ACP [759]countries which had traditionally supplied the EC with this fruits. Thus, within this quota, the EC has allocated specific shares for each of these 12 countries. They were named traditional ACP exporters; bananas imported from these countries within this quota were defined as 'traditional bananas' [760]in the EC's import regime. 'Non-traditional bananas' therefore were bananas stemming from other ACP countries, as well as bananas shipped from the said 12 traditional ACP countries to the extent that such shipments exceeded these countries' specific shares. Thirdly, there was a second quota of roughly 2.5 million tonnes and the second import regime was open for imports both from ACP countries as the third countries[761]. Further under this quota there was a distinction between non-traditional and traditional and other third countries bananas on the other hand, whereas no

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[756] Jack J. Chen, *Going Bananas: How the WTO Can Heal the Split in the Global Banana Trade Dispute*, 63 FordhamL. Rev. 1283 (1995). *Available at: http://ir.lawnet.fordham.edu/flr/vol63/iss4/12.))*

[757] GATT Panel first banana panel issued its report on 31 June 1993 [381 Panel on "EEC - Member States' Import Regimes for Bananas", DS32/R (not adopted).] Neither panel report was adopted by the GATT Contracting parties.

[758] Overseas Territories, Australia, France, Netherlands, New Zealand, United Kingdom, United States of America

[759] Stefan Griller and Erich Vranes, "EC-Bananas Case" MPEPIL 3 (2013). *Available at opil.ouplaw.com/view/10.1093/law:epil/.../law-9780199231690-e1689*.

[760] Ibid 759

[761] Ibid 760

duty charges was imposed under this quota on such non-traditional bananas on the other hand duty were imposed on every tonne of third countries.[762] It was clear from the abovementioned regime that much distinction made within this regime and raised the question whether it conformed to the relevant WTO non-discrimination and market access requirement or not.

Therefore, the complainant parties consider the regime and related measures were inconsistent[763] with the following Agreements and provisions among others they are as follows: Art I[764], II[765], III[766], X[767], XI[768] and XIII[769] of the GATT 1994, Art 1[770] and 3[771] of the Agreement on Import Licensing Procedures (Licensing Agreement), Art II[772], XVI[773] and XVII[774] of the General Agreement on Trade in Services (GATS), Art 2[775] of the Agreement on Trade-Related Investment Measures (TRIMs Agreement). In Addition they contended that the measures also formed bias which abolished or impaired benefits accruing to Ecuador, Guatemala, Honduras, Mexico and the U.S, directly and indirectly, under the indicated

[762] Ibid 761

[763] Report of the Panel- Complaint by the United State- European Communities-Regime for the Importation, Sale and Distribution of Bananas WT/DS27/R/USA (22 May,1997)

[764] GATT Article I: General Most-Favoured-Nation Treatment

[765] GATT Article II: Schedules of Concessions

[766] GATT Article III: National Treatment on Internal Taxation and Regulation

[767] GATT Article X: Publication and Administration of Trade Regulations

[768] GATT Article XI : General Elimination of Quantitative Restrictions

[769] GATT Article XIII : Non-discriminatory Administration of Quantitative Restrictions

[770] Licensing Agreement Article 1: General Provisions

[771] Licensing Agreement Article 3 : Non-Automatic Import Licensing

[772] GATS Article II: Most Favoured-Nation Treatment

[773] GATS Article XVI: Market Access

[774] GATS Article XVII: National Treatment

[775] TRIMs Article 2: National Treatment and Quantitative Restrictions

Agreement and the measures hampered the objectives of the GATT and the other indicated Agreements.[776]

The EC's Banana import regime was analyzed by a WTO Panel and the Appellate body in 1997.[777] While both the panel and AB found that Art XIII GATT which calls for non-discriminatory application of quantitative restrictions was violated [778]by the EC regime. Since in particular some import shares were allocated by agreement to some members but not to others. Additionally, the AB found that violation of Art XIII GATT was not justified by the GATT Waiver. AB held that the EC regime violated Art I of the GATT due to the preference quota for traditional bananas[779]. This violation was held to be justified under the GATT Waiver. Furthermore, the EC import regime was found to violate Art III of the GATT (national treatment). The Panel contented that the EC licensing scheme amounted to an unlawful incentive[780] to but bananas from the EC resources since category A operators tried to increase their market share were required to purchased EC bananas during relevant reference periods so as to qualify as 'category B operators' in the future and be allocated additional import[781] licence.

Likewise, the EC import regime was also tested under Art II and XVII of the GATS[782]. The EC had listed the sector of wholesale trade services without any limitations as regards the mode of supply through commercial presence. Since the WTO members bound by Art XVII GATS only when they have undertaken specific commitment in their individual schedules.[783]

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[776]Supra note 763

[777] WTO EC – Regime for The Importation, Sale and Distribution of Bananas – AB-1997-3 – Report of the Appellate Body 'Bananas III Appellate.

[778] Supra 753 pg 3

[779] Ibid 778

[780] Ibid 779

[781] Ibid 780

[782] Hereinafter the acronym GATS shall be used for General Agreement on Trade in Services.

[783] Supra note 768

The Appellate Body report and the Panel report as modified by Appellate Body, was adopted by the WTO on September 25, 1997. Then the WTO set the reasonable period for the changes to be made in the EU import regime[784] until 1999. The complainant parties conferred their claims under the tariff issues, allocation issues, and import licensing issues.[785] They further propounded that tariff quotas and tariff structure was challengeable because it imposed differential rates as between third-country bananas as compare to non-traditional ACP bananas on the other hand. On the other hand the EC has allocated shares among its supplying countries in manner inconsistent [786]with GATT Art XIII. While they provided specific allocation to ACP or BFA signatories on the other hand they were not provided with similar level of trade. Further they argued that the EC regime imposed on import from Latin America a licensing scheme was highly complex, within the import licensing system the complaining parties argued that the core of the import licensing system was discriminatory under Art I and III of GATT and also in conflict with the TRIMs[787]. The EC asserted that the Panel made a mistake in finding the licensing regime was an internal measures subject to Art III: 4 of the GATT and not a border measures[788], and that the Panel misunderstood the notion of internal measures. The EC stated that a licence was a document which was a prior condition for applying the reduced duty-rate bound under the EC tariff quota to imported bananas.[789] In the case of the EC licensing system that domestic bananas were not subject to an import licence, since they do not crossed the border and do not clear customs, do not pay

[784] Supra note 479 pg 3

[785] World Trade Organization-Report of the Panel- (22 May, 1997) Pg 31 Wt/ds27/R/USA

[786] Ibid 785

[787] Ibid 786

[788] World Trade Organization- Report of the Appellate Body (9 September, 1997) Pg 15. *Available at http://:www.wto.org.*

[789] Ibid 788

duty and was not included in any tariff quota. Therefore, the very application to an import licence of the notion of border adjustment[790] in Article III was legally wrong.

In the year 1998 the EC announced a modified banana regime[791] that it claimed was WTO compatible. Thus, the main essentials of the new regime were, maintenance of the current Latin American banana tariff-rate quota from 2.2 million metric tons at duty of ECU75/ton above quota duty at 765/ton, establishment of a new autonomous Latin American tariff-quota of 353,000 tins at duty rate of ECU 75/ton to account for EU enlargement[792]. Allocation of a percentage of the tariff rate quota to exporting countries with a substantial interest in the market for bananas even elimination of the previous licensing system replacing it with a system distributing licences to actual importers on the basis of the volume[793] of imports handled during the 1994-96 period. Later on the year December 2009 the formal agreement had been made between the EU and Latin American [794]countries and gradually reduced the tariff rate on Latina American bananas from 166 euros per tonne to 114 euros per tonne within eight years.

[790] Ibid 789 Pg 16

[791] Supra note 753

[792] Ibid 791

[793] Ibid 792

[794] "Bananas war ends after 20 years" BBC World, 8 August 2012. *Available at* www.bbc.com*/news/business-20263308.*

CHAPTER 7

CONCLUSION AND RECOMMENDATIONS

The main purpose of this chapter II is to explore the significance of renewable energy sources an efficiency of renewable energy their roles on reducing energy dependency, to alleviate climate change and encouraging energy security too.[795] An ever growing population means an ever growing requirement for energy and is essential in every walk of life. As we all familiar with non-renewable sources that will sooner or later deplete, so the importance of renewable sources cannot be underestimated.[796] It is very essential to choose which sources of energy must be used and why because majority of causes such as cleanliness, stability, efficiency, cost and environmental effects must be taken into account. And renewable energy is the energy which derived from limitless sources.[797] The most noteworthy feature of renewable energy is that it is plentiful and infinite in nature. Renewable energy is one of the hygienic sources of energy that have very lesser negative impact in environment rather than conventional fossil energy technologies. Since conventional source of energy is the key factor for this global warming and playing its negative part in increasing the temperature of the planet and endangering the lives of the species on it.[798] There are many countries (Middle East Countries) that have infinite reserves of coal, oil, natural gas and many other countries

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[795] Ilhan Ozturk, "Energy Dependency and Energy Security: The Role of Energy Efficiency and Renewable Energy Sources, Working Paper, IGC, (2014). *Available at https://www.theigc.org/wp-content/uploads/2014/.../Ozturk-2014-Working-Paper.pdf*. Visited on 19.11.2017.

[796] Umar Shahzad, 'The Need For Renewable Energy Sources', Department of Electrical Engineering, Riphah International University, Faisalabad, Pakistan. Published by: International Journal of Information Technology and Electrical Engineering (ITEE) (2015). *Available at www.iteejournal.org/Download_August15_pdf_4.pdf.* Visited on 19.11.2017

[797] Ibid 796

[798] "Fossil Fuels" Conserve Energy Future, *Available at http://www.conserve-energyfuture.com/disadvantages_fossilfuels.php.* Visited on 19.11.2017.

dependent on them for regular supply of these fuels. According to the EIA[799], these are the responsible for about 40 to 50 percent of the world's total oil production. And this monopoly result in extreme worldwide price hike in fossil fuels.[800] Despite the bountiful, renewable energy generation capacity constitutes a small share in the worldwide energy. Since the past decade, there has been an improved interest in many countries on renewable energy as an alternative source of energy.[801] Furthermore, many governments have also interested and involved to support renewable energy and investment as an alternative source.[802] For example, in several developed countries, renewable policies interferences are driven by policy objectives such as greenhouse gas emission mitigation, incorporation of environmental expansion and energy security.[803] Therefore, the integration of increased renewable source of energy could be held back due to several factors, like[804] technical, lack of well equipped machines, regulatory framework etc seems to be inadequate to provide support and incentives to distributed renewable energy sources generations. The transition to renewable energy are challenging due to many factors like one of the factor is intermittency[805]. Because electricity generates power only when the sun is shining or the wind is blowing. Besides, there are other ways of storing energy too like pumping water up to reservoir using surplus electricity and letting it run down through a turbine when needed. But these methods greatly difficult as

[799] Hereinafter the acronym EIA shall be used for the Energy Information Administration

[800] Supra note 798

[801] Romeo Pacudan, 'The Challenges of Renewable Energies Integration in Energy Distribution System', Science Forum (2004*). Available at www.fvee.de/fileadmin/publikationen/Themenhefte/sf2004/sf2004_04_03.pdf.* Visited on 19.11.2017

[802] Ibid 801

[803] Ibid 802

[804] Ibid 803

[805] Additional Challenges Facing Renewable Energy, Published by: One in a Billion. *Available at https://oneinabillionblog.com/...2/.../additional-challenges-facing-renewable-energy/*. Visited on 19.11.2017

compare to conventional methods.[806] As mentioned above, there are a number of technological options existed and highly divergent views on their economic, social and environmental implications.[807] However, there will be high expectations that technological innovation will play a crucial role and shifting from conventional to low carbon and the growing importance of renewable technologies in future energy.[808] According to IPCC[809], reduction in greenhouse gas emission can only be achieved by increasing the use of renewable sources and by increasing the deployment of renewable generation technologies.[810] On the other, it is usually agreed that these measures could not be adequate to achieve required long-term greenhouse gas reductions. Since, the deployment of technologies i.e. technologies and infrastructure is quite expensive. Therefore, developed countries grant financial aid, infrastructural aid, deployment of technologies and subsidies to developing countries.[811] Renewable energy has a potential possibility to reduce emissions of greenhouse gases from the combustion of fossil fuels and to alleviate climate change.[812] If it's implemented properly than it can contribute[813] to social and economic growth, safe and sustainable energy supply and to reduce the negative impacts of energy on the environment and human health too. Therefore, in order to make the move from conventional to non-conventional society it is important to shift to a more sustainable energy system with less

[806] Ibid 805

[807] Michael Toman, 'The Global Energy Challenge' Let's Talk Development. Published by: The World Bank (IBRD-IDA) (28 July, 2011). Available at *blogs.worldbank.org/developmenttalk/the-global-energy-challenge.* Visited on 19.11.2017.

[808] Ibid 807

[809] Hereinafter the acronym IPCC shall be used for the Intergovernmental Panel on Climate Change.

[810] Supra note 807

[811] Ibid 810

[812] Supra note 795

[813] Ibid 812

dependence on fossil fuels based energy sources.[814] The past decade has viewed an incomparable surge in investment in renewable energy supported by policies in favour of green energy in order to growing concern on climate change and greenhouse gases (GHGs) reduction.[815] Yet, the cost for generating power from the sustainable energy sources is still higher than conventional fossil fuel energy due to lack of pricing mechanism to internalize the environmental externalities, and governments' subsidies provided to fossil fuels.[816] Hence, any policies or measures aim at reducing the cost of sustainable energy, thus making it cost- competitive to conventional resources, will benefit the development of the renewable and the low-carbon goals.[817] Renewable energy posses a tremendous potential in bridging every nation's energy demand-supply gap in the future. Yet, there are various others challenges, like lowering cost of production, increasing research and development, consumer awareness and financing infrastructure. Therefore, it is important to overcome these challenges for fast growth and mass adoption of the technology.[818]

And with further continuations chapter 3 deals with UNFCCC and other conferences along with Rio Declaration and most importantly the Multilateral Environmental Agreements. Due to global linkages environment and economic issues became crucial and need for coherence and harmonisations in both i.e. trade and environment. And for better functioning and carrying out smoothly, and to achieve sustainable development objectives, promoted the sets

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[814] ICTSD, Fostering low Carbon growth: The case for a sustainable energy trade agreement. ICTSD Global Platform on Climate Change, Trade and Sustainable Energy (2011). *Available at* www20.iadb.org/intal/catalogo/PE/2011/09304.pdf. Visited on 20.11.2017

[815] Ibid 814

[816] Ibid 815

[817] Ibid 816

[818] Ganesh N. Prabhu and Sreejith Narayanan (et.al.), 'Evaluating the future of Indian solar industry', Tejas@iimb, An IIMB Management Review Initiative. *Available at tejas.iimb.ac.in/articles/75.php.* Visited on 20.11.2017.

of rules i.e. Multilateral Environment Agreement.[819] MEA[820] guide an international, national and regional action on environment issues which are the key elements for the protection of environment from trade and its harmful effects in the form of trade barriers, bans, embargoes and other charges etc.[821] Furthermore, each MEAs contained a framework especially designed to respond to problems and protections of environment and share number of common principles and characteristics. Thus all these features of common principles and characteristics arise from divers' factors. The Principle of common but differentiates responsibility was established and elaborated in Principle 7 of the Rio Declaration[822]:

> "States shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the earth's ecosystem. In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries acknowledge the responsibilities that they bear in the international pursuit of sustainable development in view of the pressure their societies place on the global environment and of the technologies and financial resources they command".

Stockholm Declaration laid the main foundation of MEAs in the year 1972 and its core function was to look after the problems of the human environment. Declaration's goals were to face the challenges and adopted the measures to fight and address the environmental problem.[823] Thus, Stockholm Declaration was the first International Intergovernmental Conference whose sole focus was to protection environment. It established the first

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[819] Trade-related Measures and Multilateral Environmental Agreements, Economics and Trade Branch Division of Technology, Industry and Economics UNEP (2007) Available *at http://unep.ch/etb/areas/pdf/MEA%20Papers/TradeRelated_MeasuresPaper.pdf.* Visited on 20.11.2017

[820] Hereinafter the acronym MEAs shall be used for the Multilateral Environmental Agreement.

[821] Role of Multilateral Environmental Agreements (MEAs) in achieving the Sustainable Development Goals (SDGs) UNEP Division for Environmental Law and Conventions (April 2006) *Available at* https://wedocs.unep.org/bitstream/handle. Visited on 20.11.2017)

[822] Supra note 819

[823] Paolo Galizzi, From Stockholm to New York, via Rio and Johannesburg: Has the Environment Lost its Way on the Global Agenda? Vol 29, Issue 5, Fordham International Law Journal (2005). *Available at http://ir.lwnet.fordham.edu/ilj/vol29/iss5/3/.* Visited on 20.11.2017.

International Intergovernmental Organization i.e. United Nations Environmental Program. After the implementation of UNEP[824] again United Nation saw a growing concern and environmental challenges between economic and social condition. In the year 1983, creation of new organization known as Brundtland Commission or officially known as World Commission on Environment and Development (WCED)[825]. There sole purpose or goals was to create a joint international community with share sustainability goals by recognizing sustainability problems worldwide, as well as awareness and implementation of right solution. Eventually in the year 1992 another conference on Environment and Development took place in Rio de Jeneiro, Brazil, officially known as The Earth Summit.[826] While the Earth Summit take the sustainable development to a new level and close link between environment and development. One more significant thing was included i.e. Agenda 21, a complete sets of documents for actions that needs to be taken for the protection of environment. Besides, Agenda there are other important principles i.e. inter generational equity[827] , precautionary[828]and polluter pays principle[829] which basically focused on the concept of sustainable development[830]. Soon after the Rio Summit another United Nation Conference was negotiated and open for signature at United Nation Conference on Environment and Development (UNCED). The first meeting of the Conferences of the Parties (COP) to the Framework Convention on Climate Change (FCCC) took place in

[824] Hereinafter the acronym UNEP shall be used for the United Nations Environmental Program.

[825] Brown Weiss (ed.), United Nations Conference on Environment and Development, Vol 31, No 4. Published by American Society of International Law: Cambridge University Press (July 1992) *Available at http://www.jstor.org/stable/20693712.* Visited on 21.11.2017

[826] Ibid 825

[827] Principle 3 of Rio Declaration

[828] Principle 15 of the Rio Declaration

[829] Principle 16 of the Rio Declaration

[830] Supra note 823

Berlin.[831] The main objective of the treaty is to 'alleviate greenhouse gases (GHG) concentration in atmosphere at a level that would prevent hazardous anthropogenic interference with the climate system'. Though, the treaty itself has not mandatory limits on GHG[832] emissions for individual countries and contains no enforcement method. In that case the treaty is considered legally not binding, instead treaty only provides updates and formally known as Protocols, that would only set mandatory emission limits. Thus one of the principle update is the Kyoto Protocol.[833] The Kyoto Protocol considered a milestone in international climate policy and imposed emission reduction commitment on developed and developing countries. Apart from the Kyoto Protocol there are other Conferences which were held in different countries. Each conference has its own way of behaving and own way of policy making.[834] According to Article 7.2[835], the COP is an accountable for reviewing the implementation of conventions, other legal instruments and makes decision necessary to promote the effective implementation of the Conventions. Besides, the Conference of the Parties also examine the parties Commitments, support and facilitate the exchange of information, facilitate the coordination of measures, promote and guide the development, considered and adopt reports, make recommendations etc are some of the roles of the Conferences of the Parties.[836] As I mentioned previously, the COP examines, promote or facilitate the coordination to cope with environmental problems and protections. But to implements these goals they face multiple obstacles in the form of other conflicting

[831] United Nations Framework Convention on Climate Change: Handbook. Bonn, Germany: Climate Change Secretariat. Published by Intergovernmental and Legal Affairs, Climate Change Secretariat (2006). *Available at http://www.passeidireto.com/arquivo/25964623/unfccc-kyoto-.* Visited on 21.11.2017

[832] Hereinafter the acronym GHG shall be used in the Green house Gases

[833] Ibid 832

[834] Supra note 823

[835] Principal 7.2 of the Rio Summit.

[836] Supra note 823

international regimes. One such example is the International trade regime under the World Trade Organization (WTO). Though, it has been already simplified by the trade specialist that the main aim of the WTO[837], is to govern trade only. However, this doesn't mean that WTO is completely ignorant of global environment issues. WTO formed the Committee for Trade and Environment (CTE) under the guidance of the WTO. And further major development took place in the form of negotiations to reduce tariffs on Environmental goods and services known as Environmental Goods Agreement (EGA).[838] Their main focus is to remove tariffs on broad list of environment goods, basically to eliminate barriers in products that are crucial for environment protection and climate change mitigation. Since, it helps to increase trade in green goods and the developing countries and their partners to protected environment and meet their climate and energy target.[839] Whatever products they would like to eliminate duties or other barriers are included in EGA[840] and it's not on the basis of production methods instead on the basis of their end use. Some criticized EGA negotiation because first of all there are no collective definition of 'environmental goods' and due to that they face other problems like, dual use of goods that may be environmental but also use in ways that wasn't particularly environmental in nature. In short, multiple uses of products i.e. environmental as well as non-environmental purpose and difficult to deal. In spite of that another challenging issues is to maintaining the list of goods as a "living list" i.e. goods that would be covered under the scope of the agreement. Like Solar panel, wind turbines and other products that can help attain environmental and climate protection goals, such as generating clean and renewable energy, improving energy, control air pollution, waste management etc. On the

[837] Hereinafter the acronym WTO shall be used for the World Trade Organisation.

[838] Environmental Goods Agreements (EGA), World Trade Organization. *Available at http://www.wto.org/english/tratop_e/envir_e.html.* Visited on 21.11.2017

[839] Ibid 838

[840] Hereinafter the acronym EGA shall be used for the Environmental Goods Agreement

other hand, the question is whether the goods included those goods used for monitoring impacts of climate change on environment or goods facilitating use of alternative sources of energy or goods that are more environmental friendly as compare to their counterparts and so on. In December 2016, 16th round of EGA negotiation took place in Geneva, basically to fill the gap and loopholes and to eliminate the tariff on a broad range of environmental goods and effective way to address the solution. Hence, EGA is crucial for the environmental protection and it will help in liberalization of trade by making access to environmental goods and technologies available at a cheaper cost and benefit for the environment by making high quality environmental products available to all countries. Due to trade globalization and liberalization environmental issues have gain legitimacy. Not long ago many environmental activist and trade players believe that trade and environmental protections are incompatible or in conflict with each other. A general conflict does not exist unless one treaty requires a particular course of action that is either prohibited in the other instrument, or the latter instrument requires the opposite course of action.[841] The incompatibility emerges where a party to both treaties cannot comply with the obligations under both treaties simultaneously[842]. However, the exceptions for the protection of animals, human and public health (Article XX (b)), and the conservation of exhaustible natural resources (Article XX (g)) may be given as an general exceptions; some of these exceptions have been used in various environment-related cases at the WTO, though to date none of these have involved measures taken under MEAs.[843]To fill the gap between the trade and environment the WTO have decided to create the committee on Trade and Environment, the very first effort of the

[841] G. Hufbauer and M. Fickling, *Trade and the Environment*, in M. Daunton and A. Narlikar and R.M. Stern (ed.) Oxford Handbook on the World Trade Organization, Oxford: Oxford Press (2012). *Available at Available at https://www.researchgate.net/publication/288127248_Trade_And_The_Environment*. Visited on 21.11.2017

[842]W Jenks, 'The Conflict of Law-Making Treaties' (1953), 30 British Yearbook of International Law 401, p. 426. *Available at heinonline.org/HOL/LandingPage?handle=hein.journals/byrint30&div=15.* Visited on 21.11.2017

[843] Ibid 842

WTO to tackle environmental issues. Several proposals were made for the reconciling MEAs[844] with the World Trade Organization but they failed and unsuccessful. Yet, there are number of significant international environment agreements advance environmental objectives through regulation of trade. For example, The Montreal Protocol on substances that deplete the ozone layers phases out production and trade in Ozone depleting substances.[845] But most of these agreements govern trade among parties they are unlikely to cause a conflicts between trade and environmental law. For instance, if two GATT parties later became parties to an environment agreement, they have, in effect, changed the rules that apply between them.[846] The Montreal Protocol allows trade with non-parties only if the non-parties are in full compliance with the Protocol's control measures. Hence, in this case these provisions are in conflict with the GATT. If state 'A' is a party to GATT and environment agreement too, and state 'B' is a party to GATT but not a party to environment agreement, state 'A' can find that the environment agreement prohibits its trade with state 'B', while the GATT requires it to trade with state 'B'. Likewise, state 'B' contented that state 'A' simply violate the GATT provision by refusing to trade with them. The conflict between these non-party trade provisions and GATT arises as a consequence[847] of three basic GATT norms i.e. Most-favoured-nation (MFN) treatment[848], national treatment[849], and the prohibition on quantitative restrictions[850]. For instance, in Tuna-Dolphin case[851] the Panel applied theses

[844] Hereinafter the acronym MEAs shall be used for the Multilateral Environmental Agreements

[845] Ibid 844

[846] Supra note 841

[847] Gary P. Sampson (ed.), '*The World and Global Governance',* Pp.116, published by United Nation University Press, Tokyo Japan (2008). *Available at http://i.unu.edu/media/publication/000/002/416/wto_and_global_governance_web.pdf.* Visited on 21.11.2017

[848] Article I of the GATT

[849] Article III of the GATT

[850] Article XI of the GATT

principles to U.S. law that banned the import of certain Mexican tuna caught in a manner that kills dolphins. The panel rejected the U.S. argument that the law was simply an internal measure enforced at the border because there was no U.S. internal law regulating a product. Instead, the panel assumed that the embargo violated the GATTs prohibition[852] on quantitative restrictions[853]. Further, panel contented that the exception under Article XX (b)[854] and (g)[855] didn't apply because the exception only apply in a manner not constituting "arbitrary or unjustifiable discrimination" or a "disguised" prohibition on trade.[856] Since, the U.S. internal measures were outside the jurisdiction and the exception has not extraterritorial effect and was not "necessary" or "related to the conservation of natural resources". Soon after the panel report raises serious questions about the GATT- consistency of the non- party trade provisions of international environment agreements. Likewise there are other cases which show the conflicts of norms between trade and environmental law[857]. In January 1995, (Reformulated Gasoline Case)[858] Venezuela, Brazil criticized the United State discrimination in import of gasoline under the U.S's Gasoline Rule.[859] The complainant contented that the US restriction was contradictory with GATT Article III[860] and not covered by the GATT

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[851] DS21/R-39S/155

[852] Supra note 847

[853] Article XI of the GATT

[854] Article XX (b):- "necessary to protect human, animal or plant life or health".

[855] Article XX (g):- "relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption".

[856] Supra note 847

[857] Ibid 856

[858] WT/DS2/AB/R

[859] Aparna Sawhney, WTO-Related Matters in Trade and Environment: Relationship between WTO Rules and MEAs, Working Paper No. 133, Indian Council for Research On International Economic Relations (May 2004). *Available at www.icrier.res.in.* Visited on 21.11.2017

[860] Article III: National Treatment

Article XX exceptions. The US Gasoline Rule (1990 Amendment of the Clean Air Act)[861] effective 1995, permitted only gasoline of a specified cleanliness (reformulated gasoline) to be sold to consumers in the most polluted areas of the country, while in the rest of the US, gasoline no dirtier than that sold in the base year of 1990 (conventional gasoline) could be sold.[862] Therefore the Panel held that the US Rule was inconsistence with Article XX because imported and domestic gasoline should be considered as "like products" further the US argument was not justified under the GATT Article XX (b) and (g).[863] Therefore, the Panel contented that the US Rules constituted "unjustifiable discrimination" and a "disguised restriction on international trade and the violation of GATT Article III by distinguished and discriminate between domestic and imported gasoline.[864] Again the similar dispute was brought to the WTO against the US in 1996 (Shrimp- Turtle Case)[865]. The US implemented domestic law i.e. Public Law 101-162 Section 609, according to the domestic law the US banned shrimp imports from those countries where shrimps was harvested without Turtle Excluder Devices.[866] Hence, the complainant parties complained that the import prohibits was contradictory under Article I (Most Favoured Nation), Article XI (Elimination of Quantitative Restriction). Further the Panel ruled in favour of the complainants and contented that the import ban in shrimp and shrimp products was inconsistent and unjustifiable under

[861] The 1990 US Clean Air Act Amendment established certain compositional and performance specifications for reformulated gasoline, in order to reduce the emissions of volatile organic compounds and toxic air pollutants. The Rule established baselines (1990) for domestic refiners, and related baselines for blenders and importers of gasoline.

[862] Supra note 859

[863] Ibid 862

[864] Ibid 863

[865] WT/DS58/RW

[866] Supra note 859

Article XX of GATT. Because US domestic laws fail to meet the requirement of Article XX since the measures was itself discriminatory and not justified under the Article XX.[867]

Hence, the above mentioned cases show that the incorporation of environmental provisions in trade agreements is controversial and discrimination in nature. Since, some argue that the two issues should not be combined, while others think the issues are inseparable. Yet, trade and environment are interrelated and affecting each other and inseparable.[868] Thus, it's impossible to treat them separately. Though, sometimes the interrelations will lead unavoidable conflicts as a result settlement process under GATT/WTO provisions will automatically assure that free trade will triumph and that, subsequently, the environment will suffer, as in the tuna-dolphin case. Further, many nations do not approve MEAs so it will tend to be weak and unenforceable. Moreover, environmental regulations sometimes hinder or forbid trade and tend to be non-tariff barriers, which are not justified under GATT/WTO regime. However, trade promotes economic development and raise incomes which are essential for implementing programs to improve the environment.[869] On the other hand MEAs tend to be effective means for improving the environment and there have been conflicts between the MEAs environmental measures and GATT/WTO core principle especially conflicts has been arisen due to domestic policies that conflicts with GATT.[870] Thus, international environmental concerns continue to be addressed by the several multilateral environmental agreements that have been negotiated and implemented by the international community. These, however, lack the coordination that the GATT/WTO has provided to trade issues.

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[867] Report of the Appellate Body, "US- Import Prohibition of Certain Shrimp and Shrimp Products" (AB1998-4), WT/DS58/AB/R, dated 12 October 1998: pages 75-76. Visited on 21.11.2017

[868] Dale Colyer, 'Environmental Provisions in Trade Agreements', West Virginia University (2004). *Available at https://ageconsearch.umn.edu/bitstream/19103/1/cp04co02.pdf*. Visited on 21.11.2017

[869] Ibid 867

[870] Ibid 869

Many nations, including the U.S., do not belong to and have not ratified many of the MEAs.[871] Thus, environmental organizations and other environmental protagonists are concerned that increased trade will harm the environment or that trade issues will win in trade disputes that involve environmental issues and either oppose further efforts to liberalize trade or try to assure that the environment gets protection through its inclusion in future trade agreements.[872]

FINDING OF THE STUDY

1. World Trade Organizations' members have not offered much space for other policies like trade related measures i.e. Environmental Agreements, because WTO members they have their own principles under which they control and manage trade throughout the world. Other policies like Environmental Agreements is purely based on trade measures in the form of extra charges, embargoes etc which is in violation of a core principle of the GATT/WTO. However, on the other hand it cannot be ignored that other policies apart from trade agreement, also play a pivotal role for the protection of environment by imposing policies like Multilateral Environmental Agreements.
2. On the basis of the case study the states either it's a parties to environmental agreement or not they regulate trade in energy through imposed their own domestic laws and by negotiating with another states. However, on the other hand developed states have more responsibilities as compare to developing states like in one of the UNFCCC's Conferences i.e. Kyoto Protocol, which clearly highlighted that developed states should facilitate developing nations in the form of financial assistance through the Global Environmental Facility of the World Bank, facilitate in deployment of new energy technologies to mitigate dangerous anthropogenic

[871] Ibid 870

[872] Ibid 871

interference with the climate system. Likewise, Framework Convention on Climate Change negotiated many Conferences between parties to regulate trade in energy.

3. World trade organizations deals with the global rules of trade between nations and ensured that trade flows smoothly, predictably and freely as possible. On the other hand, Environmental Agreements (United Nation Framework Convention on Climate Change) enable countries to work together to address vital environmental issues that are transboundary or global in nature. Moreover, there are several ways in which affect trade in renewable goods and services like, Environmental Good Agreement which clearly emphasise to boost environment goods and services by reducing tariffs and barriers to protect environment. But there was not a clear difference between renewable or green goods and services, sometimes the lack of proper and collective definition of 'energy or green goods and services' difficult to deal mostly in the context of the WTO negotiations. Besides, numerous use of same products as environment as well as non-environment purposes. Another perpetual problem is the dual use of goods that may be environmental but use as in several ways that wasn't particularly environmental in nature. Therefore, due to above mentioned factors between trade and environmental regime and their core principles; it creates a hindrance and affects trade in energy goods and services.

Therefore, the major conclusion of this thesis is that while environmental policies may encourage innovation that will lead to cleaner technologies but innovation doesn't give us a great deal of confidence that environmental policies alone will be sufficient to bring about major environmental innovation. To have a significant impact it will be necessary to pursue both environmental and technology policies.

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