

**WTO FRAMEWORK AND CLIMATE CHANGE  
MITIGATION MEASURES- LEGAL IMPACT ON INDIAN  
SEAFOOD EXPORTS**

*A Dissertation submitted to the National University of Advanced Legal  
Studies, Kochi in partial fulfilment of the requirements for the award of LL.M  
Degree in International Trade Law*



**THE NATIONAL UNIVERSITY OF ADVANCED LEGAL STUDIES**

**Kalamassery, Kochi- 683 503, India**

**2020- 2021**

**Submitted by:**

**A SHRUTHI**

**(Register Number: LMO220011)**

**Under the Guidance and Supervision of:**

**DR. ANIL R. NAIR, Associate Professor, NUALS**

**Director, Centre for Parliamentary Studies & Law Reforms, NUALS**

**OCTOBER 2021**

**NUALS, Kochi**

## **CERTIFICATE**

This is to certify that Ms. A. SHRUTHI, REG NO: LM0220011 has submitted her Dissertation titled, “WTO Framework And Climate Change Mitigation Measures- Legal Impact On Indian Seafood Exports” in partial fulfilment of the requirement for the award of Degree of Masters of Laws in International Trade Law to the National University of Advanced Legal Studies, Kochi under my guidance and supervision. It is also affirmed that the dissertation submitted by her is original, bona fide and genuine.

Date: 11.10.2021

Place: Ernakulam

DR. ANIL. R. NAIR  
ASSOCIATE PROFESSOR  
GUIDE AND SUPERVISOR  
NUALS, KOCHI

## DECLARATION

I declare that this dissertation titled, “WTO FRAMEWORK AND CLIMATE CHANGE MITIGATION MEASURES- LEGAL IMPACT ON INDIAN SEAFOOD EXPORTS” researched and submitted by me to the National University of Advanced Legal Studies in partial fulfilment of the requirement for the award of Degree of Master of Laws in International Trade Law, under the guidance and supervision of Prof (Dr). Anil R. Nair, is an original, bonafide, and legitimate work, and it has been pursued an academic interest. This work or any type thereof has not been submitted by me or anyone else for the award of another degree of either this University or any other University.

Date: 11-10-2021

Place: Ernakulam



A SHRUTHI

Reg. No: LMO220011

International Trade Law,

NUALS, Kochi

## ACKNOWLEDGEMENT

I take this opportunity to express my profound respect and deep sense of gratitude to **Prof. (Dr.) Anil R. Nair** for his support, guidance, and encouragement throughout the course of the research work acting in her capacity as the supervisor and research guide and well as the Director of the Centre for Parliamentary Studies & Law Reforms.

I would like to extend my gratitude to the Vice-Chancellor **Prof. (Dr.) K.C. Sunny** for his constant encouragement and support. I would also extend my heart filled gratitude to all faculties of NUALS for their constant encouragement.

I convey my thanks to **Mrs. Jeeja V**, Assistant Librarian, **Mr. Anil Kumar C**, **Ms. Neenu**, **Mr. Unnikrishnan K.K**, Library Assistants for their timely assistance to carry out the work. Words fall short of expressing love, appreciation and gratitude to my loving parents, my siblings, my friends and all my well-wishers for their constant support, encouragement and motivation.

With genuine humility, I am thankful to the One and Only Almighty for all his uncountable bounties and blessings.

A Shruthi

## ABBREVIATIONS

1.	ACCTS	Agreement on Climate Change Trade and Sustainability
2.	APEC	Asia-Pacific Economic Co-operation
3.	CBAM	Carbon Border Adjustment Mechanism
4.	CBD	Convention on Biological Diversity
5.	CBDR-RC	Common But Differentiated Responsibilities and Respective Capabilities
6.	CCSAMN	Climate Change and Sustainable Agriculture Monitoring, Modelling and Networking
7.	CDM	Clean Development Mechanism
8.	CITES	Convention on International Trade in Endangered Species
9.	CMFRI	Central Marine Fisheries Research Institute
10.	COP	Conference of Parties
11.	CRS	Congressional Research Service
12.	CTE	Committee on Trade and Environment
13.	CTESS	Committee on Trade and Environment Special Session
14.	DDA	Doha Development Agenda
15.	DSB	Dispute Settlement Body
16.	DST	Department of Science and Technology
17.	DSU	Dispute Settlement Understanding
18.	EEFP	Energy Efficiency Financing Platform
19.	EGA	Environmental Goods Agreement
20.	EGS	Environmental Goods and Services

21.	EIA	Environment Impact Assessment
22.	ETS	Emissions Trading System
23.	EU	European Union
24.	FAO	Food and Agricultural Organization
25.	FEEED	Framework for Energy Efficient Economic Development
26.	FSIS	Food Safety and Inspection Service
27.	FTA	Foreign Trade Agreements
28.	GATS	General Agreement on Trade in Services
29.	GATT	General Agreement on Tariff and Trade
30.	GCF	Green Climate Fund
31.	GDP	Gross Domestic Product
32.	GEF	Global Environmental Facility
33.	GHG	Green House Gases
34.	GIM	Green India Mission
35.	GTWG	Global Technology Watch Group
36.	HACCP	Hazard Analysis Critical Control Point
37.	IATP	Institute for Agriculture and Trade Policy
38.	ICAO	International Civil Aviation Organization
39.	ICTSD	International Centre for Trade and Sustainable Development
40.	IISD	International Institute for Sustainable Development
41.	IPCC	Inter-governmental Panel on Climate Change
42.	IUU	Illegal Unreported Unregulated

43.	LDC	Least Developed Countries
44.	LDCF	Least Developed Countries Fund
45.	MEA	Multilateral Environmental Agreements
46.	MFN	Most Favoured Nation
47.	MOEF	Ministry of Environment and Forest
48.	MPEDA	Marine Products Export Development Authority
49.	MTEE	Market Transformation for Energy Efficiency
50.	NAMA	Non-Agricultural Market Access
51.	NAPCC	National Action Plan on Climate Change
52.	NDC	Nationally Determined Contributions
53.	NIO	National Institute of Oceanology
54.	NMEEE	National Mission for Enhanced Energy Efficiency
55.	NMFS	National Marine Fisheries Service
56.	NMSA	National Mission for Sustainable Agriculture
57.	NMSHE	National Mission for Sustaining the Himalayan Ecosystem
58.	NOAA	National Oceanic and Atmospheric Administration
59.	NRDC	National Research Development Corporation
60.	NTB	Non-Tariff Barriers
61.	OECD	Organization for Economic Co-operation and Development
62.	PAT	Perform Achieve and Trade
63.	PPM	Process and Production Methods
64.	SBI	Subsidiary Body for Implementation

65.	SBSTA	Subsidiary Body for Scientific and Technological Advice
66.	SCCF	Special Climate Change Fund
67.	SCM	Subsidies and Countervailing Measures
68.	SDG	Sustainable Development Goals
69.	SDT	Special and Differential Treatment
70.	SIMP	Seafood Import Monitoring Program
71.	SPS	Sanitary and Phyto Sanitary
72.	TBT	Technical Barriers to Trade
73.	TED	Turtle Excluder Device
74.	TRIPS	Trade Related Aspects of Intellectual Property Rights
75.	UK	United Kingdom
76.	UN	United Nations
77.	UNCHE	United Nations Conference on Human Environment
78.	UNCTAD	United Nations Conference on Trade and Development
79.	UNDP	United Nations Development Program
80.	UNFCCC	United Nations Framework Convention on Climate Change
81.	USA	United States of America
82.	USFDA	United States Food and Drug Administration
83.	WEF	World Economic Forum
84.	WMO	World Meteorological Organization
85.	WTO	World Trade Organization



## TABLE OF CASES

1. Appellate Body Report, United States – Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products, WT/DS381/AB/R, adopted on 16 May 2012
2. Appellate Body Report, United States – Import Prohibition of Certain Shrimp and Shrimp Products, WT/DS58/AB/R, adopted 6 November 1998, DSR 1998:VII, 2755 WT/DS58/23
3. Appellate Body Report, European Communities — Measures Affecting Asbestos and Asbestos-Containing Products WT/DS135/AB/R, (adopted March 12, 2001)
4. Organization of American States [OAS] Panel Report, Japan — Customs Duties, Taxes and Labeling Practices on Imported Wines and Alcoholic Beverages, L/6216–34S/83 (adopted on Oct. 13, 1987)
5. Appellate Body Report, United States–Import Prohibition of Certain Shrimp and Shrimp Products: Recourse to Article 21.5 of the DSU by Malaysia, AB-2001-4, WT/DS58/AB/R, 63, 80-81
6. Appellate Body Report, United States–Standards for Reformulated and Conventional Gasoline, WT/DS2/AB/R, 36

## **TABLE OF CONTENTS**

<b>CHAPTERS</b>	<b>CONTENTS</b>	<b>PAGE NO:</b>
<b>1.</b>	<b>INTRODUCTION</b>	<b>13-21</b>
1.1	SCOPE OF STUDY	13
1.2	RESEARCH QUESTIONS	15
1.3	RESEARCH OBJECTIVES	15
1.4	HYPOTHESIS	16
1.5	RESEARCH METHODOLOGY	16
1.6	CHAPTERIZATION	16
1.7	LITERATURE REVIEW	17
<b>2.</b>	<b>INTERNATIONAL AND INDIAN LEGAL INSTRUMENTS AND INITIATIVES ON CLIMATE CHANGE</b>	<b>22-41</b>
2.1	INTRODUCTION	22
2.2	INTERNATIONAL INSTRUMENTS AND INITIATIVES	24
2.2.1	INTER-GOVERNMENTAL PANEL ON CLIMATE CHANGE	24
2.2.2	UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE	27
2.2.3	KYOTO PROTOCOL	30
2.2.4	PARIS AGREEMENT	32
2.3	INDIAN REGULATIONS AND INITIATIVES	35

<b>3.</b>	<b>DEVELOPMENTS IN WTO NEGOTIATIONS AND COMMITTEES ON CLIMATE CHANGE</b>	<b>42-59</b>
3.1	INTRODUCTION	42
3.2	DOHA DEVELOPMENT AGENDA	44
3.3	NEGOTIATIONS ON ENVIRONMENTAL GOODS AGREEMENT	47
3.4	NEGOTIATIONS ON MULTILATERAL ENVIRONMENTAL AFGREEMENTS	50
3.5	COMMITTEE ON TECHNICAL BARRIERS TO TRADE	53
3.6	COMMITTEE ON TRADE AND ENVIRNMENT	56
<b>4.</b>	<b>PROTECTION OF INDIAN SEA FOOD EXPORTS AFFECTED BY CLIMATE CHANGE MEASURES</b>	<b>60-77</b>
4.1	INTRODUCTION	60
4.2	PROTECTION OF INDAIN SEA FOOD TRADE UNDER WTO	63
4.2.1	THE NON-DISCRIMINATION PRINCIPLE	63
4.2.2	GATT EXCEPTIONS	64
4.2.3	TBT AND SPS AGREEMENTS	66
4.2.4	SUBSIDIES	68
4.3	EFFECT OF CLIMATE CHANGE MEASURES OF OTHER COUNTRIES ON INDIAN SEA FOOD EXPORTS	70

4.3.1	MEASURES ADOPTED BY USA	71
4.3.2	MEASURES ADOPTED BY EU	74
<b>5.</b>	<b>CONCLUSION AND RECOMMENDATIONS</b>	<b>78-85</b>
5.1	CONCLUSION	78
5.2	RECOMMENDATIONS	81
-	<b>BIBLIOGRAPHY</b>	<b>86</b>
-	<b>PLAGIARISM CERTIFICATE</b>	<b>95</b>

## Chapter-1

### INTRODUCTION

Man being a social animal, can just exist but cannot live without the services provided by other human beings. To raise the standard of living, there must be an increase in job opportunities, technology transfer, and competition, which can be attained through trade in the foreign market<sup>1</sup>. Therefore, international trade is the platform where new markets open up and countries through exports and imports enjoy wide exposure to goods and services unavailable or scarce in their domestic economies<sup>2</sup>. World Trade Organization, the body that governs the functioning of international trade, ensures that trade flows smoothly, breaking the barriers between different trading economies, i.e., the trade policies of different countries are circumscribed by the principles of WTO trading system<sup>3</sup>.

Every industry of a nation contributes to its economic growth; for instance, fisheries and aquaculture contribute mainly to food, nutrition, and livelihood security in many countries, including India, the second biggest aquaculture and fish producer<sup>4</sup>. India's Foreign Trade Policy 2015-2020 provided a framework to increase exports of goods and services and promote India's export basket diversification by aiding various sectors of the Indian economy to gain global competitiveness<sup>5</sup>. India is abundant in natural resources and wide coastal areas and hence plays a vital role in exporting seafood compared to other Asian countries<sup>6</sup>. The seafood industry of India is a substantial foreign exchange earner with exports over US Dollar 7 Billion annually and the country is the fourth

---

<sup>1</sup>Rashmi G, "*The role of International Trade in the Global Economy & Its Effects On Economic Growth*" IJSET - International Journal of Innovative Science, Engineering & Technology, Vol. 2 Issue 7, July 2015, pg 460

<sup>2</sup>*Id.*

<sup>3</sup>Irshad, Muhammad Saqib and Ors, "*The Role of Charismatic World Trade Organization and the expansion of Free International Trade*", International Journal of Management Science and Business Administration, Vol 2, February 2016, pg 20.

<sup>4</sup>Christophe Bene and Hannah Norbury, "*Contribution of Fisheries and Aquaculture to Food Security and Poverty Reduction: Assessing the Current Evidence*" World Development Journal, Vol. 79, pp. 181, 2016.

<sup>5</sup>PrathibaGiri, "*Implications Of Foreign Trade Policy (2015-2020) In Boosting India's Exports: A Boost To Make In India Initiative*" International Journal of Science, Technology and Management, Vol 6, issue 6, pg 323, June 2017.

<sup>6</sup>*Id.*

biggest seafood exporter in the world which currently exports to over 115 countries<sup>7</sup>. The seafood exports during the year 2019-2020 were “0.16% higher than the previous year in terms of rupee, but in case of quantity and dollar value, it declined by 7.39% and 0.74% respectively”<sup>8</sup>.

Climate change is one of today’s most critical global challenges, and trade will be directly and indirectly affected by climate change since its flow and pattern of trade will be affected by a reduction in the production and supply of various goods and services, difficulty of transport and distribution chains owing to irregular and extreme weather conditions<sup>9</sup>. The rising sea level is due to the warming of icebergs, resulting in new trade routes.

Climate change severely affects the “modulation of physiology, behavior, distribution and migration pattern, reproductive capacity and mortality in marine and inland fisheries and aquaculture”<sup>10</sup>. Concerning Indian seafood exports, the Indian Ocean is warming up and fishes migrate from warm waters to cool waters and that has resulted in lower marine catches in various parts of India and thus, its exports have lowered in value and volume<sup>11</sup>. Indian consignments are getting rejected by other nations due to non-compliance with their standards and quality<sup>12</sup>.

To curb this global challenge, many governmental and intergovernmental climate change measures have been adopted. The multilateral trading system has a significant role in achieving the world’s climate goals and it is the developing countries' exports that are usually affected because the sanitary and phyto-sanitary measures are often developed in

---

<sup>7</sup> Laura Wood, “The Assessment of India’s seafood sector, 2021”, Business Wire, Research and Markets, March 26, 2021.

<sup>8</sup> PTI, “Indian seafood exports pegged at 12, 89,651 MT in 2019-2020”, The Economic Times, Foreign Trade, August 17, 2020.

<sup>9</sup> Rob Dellink and Hyunjeong Hwang, “International Trade Consequences of Climate Change”, OECD Trade and Environment working papers, pg 23 2017, <https://dx.doi.org/10.1787/9f446180-en>.

<sup>10</sup> Ned W Pankhurst and Philip L Munday, “*Effect of climate change on fish reproduction and early life history stages*”, Marine and Freshwater Research, Vol 62, January 2011.

<sup>11</sup> Goyal, Tanu Mukherjee and Ors, “India's exports of food products: Food safety related issues and way forward”, Working Paper, No. 345, pg 11, Indian Council for Research on International Economic Relations, 2017.

<sup>12</sup> *Id.*

a non-transparent manner and they do not get adequate opportunities to respond to the proposed measures<sup>13</sup>.

In these circumstances, it is imperative to examine the WTO members' rights and obligations established through various trade agreements as these climate change measures adopted by other countries have a potential impact on international trade and may act as barriers. It is necessary to analyze how far the UN Framework convention on climate change, the Kyoto Protocol, the Paris Agreement, the National action plan for climate change and other national and international measures have protected the Indian seafood export industry.

### **1.1 SCOPE OF STUDY**

The study analyses the difficulties and challenges posed by climate change measures, especially with respect to the Indian seafood exporters in some key markets and covers the broad trends and patterns in India's export of seafood as well as the data and information on various barriers raised by the major importers of seafood from India. An analysis of the gaps in the domestic laws and WTO policy framework that creates obstacles to exporters in the global seafood markets would also form a part of the study.

### **1.2 RESEARCH QUESTION**

1. What is the significance of seafood exports for the Indian economy?
2. What are the emerging trade issues faced by Indian seafood exporters due to climate change?
3. What are the current legal requirements of India's major seafood importers in the context of climate change mitigation measures?
4. What are the opportunities and threats under various WTO Agreements on different dimensions of Indian seafood exports?

---

<sup>13</sup>Kasturi Das, "The Impact of Sanitary and Phytosanitary Measures on India's Exports and the Challenges /Opportunities of the SPS Agreement", Research handbook on environment health and WTO, May 2013.

### **1.3 RESEARCH OBJECTIVES**

1. To identify and study the different measures adopted by countries to mitigate climate change.
2. To examine whether such measures facilitate free trade or are protectionist.
3. To identify the challenges faced by Indian seafood exports concerning Technical and non-technical barriers to trade, subsidies, SPS measures, domestic trade and free trade agreements.

### **1.4 HYPOTHESIS**

The WTO framework provides the necessary legal support for the trade issues and challenges faced by Indian seafood export industry affected by climate change.

### **1.5 RESEARCH METHODOLOGY**

The methodology proposed to be employed is purely doctrinal. For the successful completion of this research work, the researcher will do an extensive and thorough study with the help of primary sources like international and Indian statutes and agreements. The researcher will also use secondary data of documents, reports, books, research papers, etc. available in online journals and on the official websites of organizations. Research materials available in electronic databases as well as other general websites will also be used. To have a proper and systematic review of these materials and to analyze its applicability on Indian seafood exports, which is a specific matter, the research has to be doctrinal.

### **1.6 CHAPTERIZATION**

1. **INTRODUCTION**- this chapter contains a brief introduction to the area of study, its relevance, significance and also a brief overview of various crucial points which are taken into account while dealing with the exports of the country. The research question and literature review conducted concerning the research are also included.



**2. INDIAN AND INTERNATIONAL LEGAL INSTRUMENTS AND INITIATIVES ON CLIMATE CHANGE-** a detailed analysis of the existing legal documents and measures relating to climate change in both national and international level is necessary to understand the level of protection derived from it in all situations.

**3. DEVELOPMENTS IN WTO NEGOTIATIONS AND COMMITTEES ON CLIMATE CHANGE-** a general idea about the WTO and the Doha Development Agenda is discussed in this chapter along with the efforts taken by the authorities through various negotiations like the negotiations on Environmental Goods Agreement, on Multilateral Environmental Agreements and the discussions held by the Committee On Technical Barriers to Trade and the Committee On Trade And Environment.

**4. PROTECTION OF INDIAN SEAFOOD EXPORTS AFFECTED BY CLIMATE CHANGE MEASURES-** this chapter identifies the trade issues created by the climate change mitigation measures adopted by different countries and the opportunities and threats it create for the Indian seafood exports. This chapter also analyze how far the Indian seafood exporters are legally protected from the harmful effects of climate change and to find whether there are sufficient provisions in the legal documents that comply with international standards and regulations to ensure that the export industry do not face a crisis.

**5. CONCLUSIONS AND SUGGESTIONS-** the summary, conclusions and recommendations are provided in this final chapter. It focuses on review of chapters and suggestions to the policy makers.

### **1.7 LITERATURE REVIEW**

A significant amount of literature has been written on the negative impact of climate change in Indian and international scenario. Articles on the relation between trade law and climate change, trade barriers affecting exports, like the following articles, research papers and reports are reviewed:

P.U. Zacharia, T.M. Najmudeen and Livi Wilson, “Climate Change Impacts on Indian Marine Fisheries and adaptation strategies,” Training Manual on Advances in Marine Fisheries in India, Central Marine Fisheries Research Institute, 2019. The report shows the increase in greenhouse gas production during the years which is one of the main factors responsible for climate change. It explains how fisheries and aquaculture play a critical role in terms of food supply, food security and employment opportunities in India. It also provides specific adaptation strategies to reduce the impact of climate change along the Indian coast.

Sandu Joseph and Shyam S Slaim, “Indian Seafood Trade: implications, issues and policy imperatives” Seafood exports journal, Central Marine Fisheries Research Institute, vol 11, pg 36- 42, November 2012. This article highlights the contribution of the marine export industry to international trade and discusses how tariff, non -tariff barriers and subsidies affect the Indian seafood trade. The impact the policies laid down by India’s major seafood traders have on the proper functioning of the seafood export industry is also looked into. The article points out that small producers and exporters' livelihood and fishing rights should be of prime importance while framing policies.

The Economist Intelligence Unit, “Climate Change and Trade Agreements: Friends or Foes”, International chamber of commerce, 2019. This report points out the need for strong trade and environmental policies with more climate-friendly measures to be adopted by countries to meet the goals set by the Paris agreement and shows that the legal provisions of a new generation of Foreign Trade Agreements are inadequate to support the opportunities to promote climate change goals. The report suggests the adoption of a WTO climate waiver to confront the clash between climate goals and trade rules.

Rob Dellink, Hyunjeong Hwang, Elisa Lanzi and Jean Chateau, “International Trade Consequences of climate change” OECD- Trade and Environment working paper, 2017. This report analyses how the adversities of climate change affect international trade considering the direct effect on infrastructure and transport routes and the indirect economic impacts and how international trade policies aid in limiting the costs of climate change. It also highlights the need to focus on domestic climate impacts as well as the relative severity of these impacts compared to the major trading partners. The report

studies the effects of climate change on regional and sectoral economic activities and competitiveness.

Kasturi Das, “The Impact of Sanitary and Phytosanitary Measures on India’s Exports and the Challenges/Opportunities of the SPS Agreement”, Research handbook on environment health and WTO, May 2013. This research paper has stated about SPS measures, the requirements which are need to be fulfilled in order to provide fundamental structure and organization of trade. The analysis of certain key provisions of SPS agreement, in light of trade with EU and USA, has also been dealt with.

Dr S Rajmohan and Joel Jebaduraj, “Opportunities and Challenges of Seafood Industry in India,”vol 4, Indian Journal of Applied Research, October 2011. This research paper analyses the food safety legislations of EU and the anti-dumping policies of USA. It also shows how over catching and depletion of resources affect the export organizations.

FELIX AND POPYRAKIS, “AN INTRODUCTION TO CLIMATE CHANGE ECONOMICS AND POLICY”, 2<sup>nd</sup>ed, Routedledge textbooks in agricultural and environmental economics, 2016. The book has covered the basics of economics and policy of climate change with a special focus on food, farming and the urgent need to assess and review guidelines to prevent catastrophic climate change. The authors believe that the economists and policy makers underestimate the emerging threat to future civilization. They point out that the direct and indirect costs of fossil fuels exceed the investment required for the transition to an almost zero-carbon economy in few decades using the available technologies.

UbairNisar, Ranjan Kumar, “A competitive analysis of Indian fish export to USA: Growth, performance, comparative advantages and instability”, Indian Journal of Geo-Marine Sciences, Vol 49, May 2020. This article analyses the export performance and competitiveness of Indian fish export to the USA based on (2000-2017) statistical data. The anti-dumping duties imposed on India reduced the number of exporters. Later after its relaxation, there was a boom for exports. Proper sanitary and post-harvest measures are needed to export high-quality fishso that the export performance is sustained.

Evans Osabuohien, Uchenna R. Efobi “Free trade, protectionism and the balance of trade: New empirical insights”, Beggar-Thy-Poor-Neighbour: Crisis-Era Protectionism and Developing Countries, Centre for Economic Policy Research, July 2014. This chapter of the book points out the extent of protectionist measures adopted by various countries that are signatories to WTO and various regional trade agreements. There are more protectionist measures than trade liberalizing measures and thus, it has adversely impacted the developing countries.

R. Asha, K. Umadevi, “Trade in Marine Fisheries in India,”Research Trends in Multidisciplinary Research, Vol 13, August 2020. This chapter highlights the difficulties faced by sea food exporters like tariff barriers, labeling and other marketing problems. It also suggests that measures such as Introduction of Exotic Species, Sustainability Standards, Publicity, etc.may enhance the export performance of marine products. The barriers of exports from EU and USA are also mentioned.

Andrew Green,“Climate Change, Regulatory Policy and the WTO: How Constraining are Trade Rules?” Journal of International Economic Law, Vol 8, February 2005. The article points out that to a certain extent, the WTO rules constrain the domestic measures and policies of countries in addressing climate change issues. The regulatory standards may at times conflict with GATT and TBT Agreement. Though the WTO rules allow the member countries to formulate measures on climate change, it is limited to an extent.

Manasvi M. Kamat and ManojSubhashKamat“Implications of the WTO on Indian Marine Industry, Issues and Policy Perspectives” Munich Personal Archive, MPRA Paper No. 6151, June 2007. The effect of WTO and GATS on the marine industry of developing countries, especially India, is discussed in this article. It points out that the reduction of tariffs as negotiated in NAMA will not create a bigger market for developing countries, and the prohibition of subsidies would make it difficult for the governments to aid small-scale fishers and ensure the food security of coastal communities.

M. Anders, Julie A. Caswell, “Standards As Barriers Versus Standards As Catalysts: Assessing The Impact Of HACCP Implementation On U.S. Seafood Imports.” American Journal of agricultural economics, vol 91, 2009. The introduction of Hazard Analysis Critical Control Points (HACCP) food safety standards for seafood in 1997 had adversely affected the major importers, mainly the developing countries. The small-scale traders were affected severely.

Henk Harmsen, “Effectiveness of UNFCCC in addressing climate change”, March 2018. The author has pointed out that UNFCCC has been effective only to a limited extent in addressing climate change. Since the Kyoto Protocol set out quantitative targets, nations had much more precise and specific goals to attain.

Charles E. Di and Leva Xiaoxin Shi, “The Paris Agreement and the International Trade Regime: Considerations for Harmonization”, sustainable development law and policy, vol 17, issue 1. The article highlights the importance of the Paris Agreement and states that trade agreements are equally important. However, it is established through few cases that the regulatory actions taken to reduce GHG emissions are subject to general trade principles.

Monica Araya, “The Relevance of the Environmental Goods Agreement in Advancing the Paris Agreement Goals and SDGs,” December 2016. The article conveys that non-tariff barriers might stand in the way of energy-efficient technologies and that EGA has high potential to support the clean energy objectives under Paris Agreement, like boosting environmental goods by reducing the cost and increasing its supply. But the exclusion of non-tariff barriers and environmental services limits its impact.

Food and Agriculture Organization, United Nations, “Export of fish and fish products from India; Non-tariff measures” Globefish Insight, 2021. This report analyses the standards relating to the quality and safety of fish and fish products laid down by the largest seafood importing countries such as the U.S.A and the U.K. It states that certain export barriers requires adjustments with respect to the domestic rules and regulations and the processes in order to comply with the market requirements of importing countries.

**CHAPTER 2**  
**INTERNATIONAL AND INDIAN LEGAL INSTRUMENTS AND INITIATIVES**  
**ON CLIMATE CHANGE**

**2.1 INTRODUCTION**

As a reckless consequence of human activity, the Earth is warming rapidly, bringing about climate change. Being an environmental concern, climate change has resulted in bleaching of coral reefs, low sea ice volume in the Arctic and many natural disasters such as wildfires, droughts, floods and the mass migration of species, destroying and affecting the lives of millions<sup>14</sup>. More than just an environmental issue, climate change has become a global developmental challenge which has the ability to wipe out human civilization and these unprecedented threats, if left uncared, destroys the ecosystems on this planet in no time<sup>15</sup>.

The Greenhouse gases are a significant cause of climate change and, most of them exist naturally in our atmosphere and the effect of such harmful gases is gradual, like a disease with a long incubation period<sup>16</sup>. The most notable increases are in carbon dioxide and methane since the emissions from the burning of fossil fuels, harmful effects of deforestation and other changes in the land has triggered carbon dioxide and methane emissions resulting in extreme weather events, which is the new normal<sup>17</sup>. The ecosystems, agriculture and water supplies are already under stress and it is the rich nations that contribute most to these damages while the poor suffer the most, though in the long run, all are equally under threat<sup>18</sup>.

---

<sup>14</sup>Sunita Narain, Prodipto Ghosh and Ors, "Climate Change Perspectives From India", UNDP India, 2009, pg 4.

<sup>15</sup>*Id.*

<sup>16</sup>FELIX R FITZROY AND ELISAIOS POPYRAKIS, "AN INTRODUCTION TO CLIMATE CHANGE ECONOMICS AND POLICY", Routledge, 2<sup>nd</sup>ed, 2016, pg 11.

<sup>17</sup>*Id.*

<sup>18</sup>S. Nazrul Islam and John Winkel, "Climate Change and Social Inequality", Department of Economic & Social Affairs, DSEA working paper No 152, pg 4, October 2017, [https://www.un.org/esa/desa/papers/2017/wp152\\_2017.pdf](https://www.un.org/esa/desa/papers/2017/wp152_2017.pdf), accessed on July 10, 2021.

In such a scenario, the need for policies, regulations and mitigation measures arose and how the GHG emissions affected the world's climate system became the heated debate topic in scientific, economic, social and political realms and gradually when case laws accumulated and legislative developments took place, an international regulation that dealt with a distinctive body of legal rules and principles identified as 'climate change law' emerged<sup>19</sup>.

The existing governance and regulatory frameworks might undergo radical changes when legal solutions are sought for combating climate change<sup>20</sup>. The first scientific article that brought forward the idea that "burning of fossil fuels can pump carbon dioxide significantly and can cause global warming"<sup>21</sup> was published in 1896 but did not gain much attention<sup>22</sup>. Investigation of climate change in a scientific and economic background, its popularization among the public and the sociopolitical advancements of the methods to curb this issue have laid a strong base for the emergence of a new law to address the problem<sup>23</sup>.

The broad term climate change law covers international treaties and new national and international legislations along with the already existing environmental legal framework, all of which contribute significantly to mitigating climate change and address greenhouse pollution and its impacts<sup>24</sup>. The climate change initiatives have to set a particular standard and must be socially acceptable and accountable and when there are varying interests and actors in the field of climate change policy, it is these legislations (domestic and

---

<sup>19</sup>Jacquiline Peel, "Climate Change Law: The Emergence of a New Legal Discipline", *Melbourne University law review*, Vol 32, Issue 3, pg 925, March 2012.

<sup>20</sup>*Id.* at 927

<sup>21</sup> S. Arrhenius, "On the influence of carbonic acid in the air upon the temperature of the ground", *The London, Edinburgh and Dublin Philosophical Magazine and Journal of Science*, Vol 41, 1896, pg 237. Svante Arrhenius, a scientist, was the first to claim that fossil fuel combustion may eventually result in enhanced global warming.

<sup>22</sup> Henning Rodhe, Robert Charlson and Elisabeth Crawford, "Svante Arrhenius and the Greenhouse Effect" *Ambio*, Vol. 26, No. 1, February 1997, pg 2, Springer (Royal Swedish Academy of Sciences) <http://www.jstor.org/stable/4314542>, accessed on 21 September 2021.

<sup>23</sup>*Supranote* 18.

<sup>24</sup> D E Fisher, "The Statutory Relevance of Greenhouse Gas Emissions in Environmental Regulation", *Environmental and Planning Law Journal*, Vol 24, May 2007, pg 210.

international) that govern the appropriate action to be taken through lawful mechanisms like judicial review, dispute resolution, etc.<sup>25</sup>

As an outcome of the debates and discussions among scientists, politicians and after considering the public opinion, the United Nations, in December 1988, established an Inter-Governmental Panel on Climate Change (IPCC) as a measure to have the most up-to-date information on all matters relating to climate change<sup>26</sup>. United Nations Framework Convention on Climate Change (UNFCCC), an international legal framework dealing with climate change, was signed and ratified by 197 parties in June 1992 to acknowledge the threat of climate change and stabilize GHG concentrations at a safe level<sup>27</sup>.

## **2.2 INTERNATIONAL INSTRUMENTS AND INITIATIVES**

### **2.2.1 INTER-GOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC)**

The Panel, comprising an organization of governments, is the leading international body for the assessment of climate change since the UN General Assembly endorsed it and it was established in 1988 under the United Nations Environment Program (UNEP) and the World Meteorological Organization (WMO) with the objective of providing scientific information relating to present status of climate change<sup>28</sup>. It is the fundamental source of scientific data and information for governments at all levels to develop climate policies and acts as the technical guide to the United Nations Framework Convention on Climate Change (UNFCCC), the Kyoto Protocol and Paris Agreement<sup>29</sup>.

Rather than undertaking new research, IPCC focuses on preparing Assessment Reports by synthesizing published and peer-reviewed literature on climate change, its causes, effects

---

<sup>25</sup>*Id.*

<sup>26</sup>K.F. Kuh, "Climate Change", Encyclopedia of the Anthropocene, Vol 2, 2018, pg 507.

<sup>27</sup>*Id.*

<sup>28</sup>IPCC Secretariat, "Understanding Climate Change, 22 years of IPCC Assessment", November 2010, pg 3, [https://www.ipcc.ch/site/assets/uploads/2018/04/ipcc-brochure\\_understanding.pdf](https://www.ipcc.ch/site/assets/uploads/2018/04/ipcc-brochure_understanding.pdf), accessed on August 12, 2021.

<sup>29</sup>*Id. at 5*



and response options to have a comprehensive assessment of scientific understanding<sup>30</sup>. The reports are a transparent analysis of all the current information authored and edited by experts in the scientific, technical and socio-economic fields and contain a “summary for the policy makers” which is subject to line-by-line approval from the delegates of the participating Governments<sup>31</sup>. IPCC assessment reports result from the efforts of three working groups that ascertain all current knowledge on climate on the physical science basis, impacts, adaptation and vulnerability basis, and based on mitigation of climate change<sup>32</sup>.

The international climate regime evolved on the basis of the contributions made by the scientific assessments of IPCC, for instance, it was after taking into account the findings of the First Assessment Report of IPCC in 1990, the UN General Assembly decided to initiate negotiations for a convention on climate change with a proper framework<sup>33</sup>. Also, the 2015 Paris Agreement goals, including the global temperature increase targets, were not scientific but merely political goals that the IPCC’s Fifth Assessment Report highly influenced in 2014, which affirmed the involvement of humans and the impact of human activities on climate change.<sup>34</sup>

IPCC is more like an inquiry commission consisting of the fact-finding stage where all information relating to the causes of a particular problem or phenomenon is collected and the lesson drawing stage where possible solutions, suggestions, or recommendations to the policymakers are made based on actual evidence<sup>35</sup>. Like the expert evidence given by international courts and tribunals, IPCC reports are adopted in the UNFCCC process for international decision making<sup>36</sup>. Two special reports, Special report on climate change

---

<sup>30</sup> Bert Bolin, “IPCC”, Climate Change, Human Systems And Policy, Encyclopedia of Life support systems Publications, Vol 1, 2009, pg 2

<sup>31</sup> *Id.*

<sup>32</sup> ERIC PAGLIA AND CHARLES PARKER, “GUARDIANS OF PUBLIC VLAUE”, The Intergovernmental Panel on Climate Change: Guardian of Climate Science, Palgrave Macmillan and Cham Publishers, November 2020, pg 301, [https://link.springer.com/content/pdf/10.1007%2F978-3-030-51701-4\\_12.pdf](https://link.springer.com/content/pdf/10.1007%2F978-3-030-51701-4_12.pdf), Accessed on 27 September 2021

<sup>33</sup> *Id.*

<sup>34</sup> *Id.*

<sup>35</sup> N. S. Ghaleigh, “Science and Climate Change Law: the role of the IPCC in international decision-making”, The Oxford Handbook of International Climate Change Law, 2016, pg 55, Oxford University Press.

<sup>36</sup> *Id.*

and land and special report on Ocean and Cryosphere in a changing climate were delivered by the panel in the year 2019<sup>37</sup>.

Few findings from the special report on Ocean and Cryosphere in a changing climate can be highlighted as:

1. “The oceans have absorbed more than 90% of the excess heat in the climate system, and marine heat waves have doubled since 1982. Oceans have taken up 20-30% of the human-induced carbon dioxide emissions.
2. Carbon contained in permafrost is double the volume than already present in the atmosphere.
3. The retreat of high mountain glaciers affects the availability and quality of water.
4. Ocean warming has reduced the supply of oxygen and nutrients to marine life and increased carbon dioxide levels, increasing surface acidification, making it difficult for the calcifying organisms to build shells and skeletons.
5. The changes have affected the distribution and abundance of marine life in coastal areas and open ocean”<sup>38</sup>.

Since international trade has wide impact on climate change, its risks and policy, IPCC in its reports have always studied and appraised trade and its ever-increasing significance and after many debates on its assessment, the objectives of IPCC has shifted from standard reporting to solution-oriented reporting and has thus contributed to analyzing the effect of climate change on world economic trade, particularly adaptation strategies centered on safeguarding major supply chains<sup>39</sup>.

The latest Intergovernmental Panel on Climate Change (IPCC) report has indicated that temperatures might reach or exceed 1.5°C of warming compared to the pre-industrial levels by 2050, but the assessment did not give much regard to its consequential effects

---

<sup>37</sup> Melanie Austen, Jonathan Gregory, “Ocean, Cryosphere and Climate Change: Opportunities and challenges for the UK”, The Royal Society, pg 2, October 2019, <https://royalsociety.org/-/media/policy/projects/climate-change/IPCC-special-report-briefing-ocean-cryosphere.pdf>, accessed on June 21, 2021

<sup>38</sup> *Id.*

<sup>39</sup> Jackie Dawson and Jean E. Holloway, “*Treatment of International Economic Trade in Intergovernmental Panel on Climate Change (IPCC) Reports*”, Springer, Current Climate Change Reports vol6, no: 11 December 2020.

on International trade.<sup>40</sup> Only the terms ‘infrastructure’ and ‘transport’ appeared here and there. The economy grows when trade is liberalized, but it results in the emission of carbon dioxide, and non-coverage of the contribution of something this significant in the assessment report is a big concern<sup>41</sup>.

### **2.2.2 UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE**

The negotiations that took place at the United Nations Conference on Environment and Development in 1992 resulted in the establishment of The United Nations Framework Convention on Climate Change (‘UNFCCC’), which serves as the institutional machinery for the effective continuance of the ongoing climate change adaptation measures and for laying down the guiding principles to regulate climate change internationally<sup>42</sup>. The UNFCCC's principal goal is to prevent hazardous anthropogenic interference with the climate system, which serves as the basis for international climate talks and policy<sup>43</sup>.

The most detailed of the UNFCCC's guiding principles is that the parties shall safeguard the climate system in line with their common but differentiated responsibilities and distinct capacities<sup>44</sup>. It is thus the developed country parties, listed in Annex I of the Convention with an emission reduction target that are entrusted with the arduous task of undertaking the majority of the actions in combating climate change and its adverse effects compared to the non-Annex I parties<sup>45</sup>. Though this principle has remained a

---

<sup>40</sup>Deepesh Patel, “What does the IPCC climate change report mean for trade?”, World Economic Forum, August 12, 2021, <https://www.weforum.org/agenda/2021/08/ipcc-climate-change-trade-report/>, accessed on September 23, 2021

<sup>41</sup>*Id.*

<sup>42</sup>Henk Harmsen, “Effectiveness of UNFCCC in addressing climate change”, Technical Report, Wangari Maathai Institute for Peace and Environmental Studies, pg 6, March 2018, [https://www.researchgate.net/publication/323906120\\_Effectiveness\\_of\\_UNFCCC\\_in\\_addressing\\_climate\\_change](https://www.researchgate.net/publication/323906120_Effectiveness_of_UNFCCC_in_addressing_climate_change), accessed on July 12, 2021

<sup>43</sup>UNFCCC, Article 2

<sup>44</sup> UNFCCC, Article 3.1

<sup>45</sup> UN Climate Change, “What is UNFCCC”, <https://unfccc.int/process-and-meetings/the-convention/what-is-the-united-nations-framework-convention-on-climate-change>, accessed on September 10, 2021

controversial part of international climate change regulation, the 197 ratifications received backed the reasoning behind such a division<sup>46</sup>.

The most important body of the Convention is its Conference of the Parties (COP) since the Subsidiary Body for Implementation (SBI) under COP reviews the implementation status of the Convention and adopts necessary decisions for developing new rules and commitments and the Subsidiary Body for Scientific and Technological Advice (SBSTA) advises the COP on matters related to science and technology.<sup>47</sup>

The Convention established a financial system through which wealthy nations with abundant resources support vulnerable parties with limited means<sup>48</sup>. This financial assistance facilitates the developing country parties in implementing the convention<sup>49</sup>. The Global Environment Facility (GEF) and the Green Climate Fund (GCF) are the two international organizations now in charge of implementing the Convention's Financial Mechanism.<sup>50</sup> The actions and operations of Financial Mechanism will be assessed by the Conference of Parties (COP), which takes decisions with respect to the climate change policies, program priorities and the eligibility criteria for funding<sup>51</sup>. The Special Climate Change Fund (SCCF) and the Least Developed Countries Fund (LDCF), both managed by GEF and GCF was also established by the parties<sup>52</sup>.

Since international aviation and maritime transport also contribute equally and increasingly to global emissions, the International Civil Aviation Organization and the International Maritime Organization, as well as cooperation between these two

---

<sup>46</sup>*Id.*

<sup>47</sup>UNFCCC, “Uniting on Climate, A guide to the Climate Change Convention and the Kyoto Protocol”, [https://unfccc.int/files/essential\\_background/background\\_publications\\_htmlpdf/application/pdf/pub\\_07\\_uniting\\_on\\_climate\\_en.pdf](https://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/pub_07_uniting_on_climate_en.pdf), accessed on September 21, 2021

<sup>48</sup> UNFCCC Article 4.3

<sup>49</sup>*Supranote* 42

<sup>50</sup> UNFCCC, Article 11

<sup>51</sup> Matthew Stilwell, “Operationalizing the UNFCCC Finance Mechanism”, South Centre, Research Paper 39, May 2011, pg 35.

<sup>52</sup>*Id.*

organizations and the UNFCCC, seek to address this emission issue<sup>53</sup>. The Convention requires its members to adopt policies and mitigation measures at the national level to fight against the threats posed by climate change; however, the Convention cannot be resorted to as the perfect legal framework because it does not mandate the firm commitment by countries to reduce GHG emissions<sup>54</sup>.

UNFCCC, by encouraging its member countries, has established a reporting framework that provides information on greenhouse gases emissions and this has facilitated the work of climate scientists in assessing climate change and in predicting whether the speed of change in climate acts as a threat to the life of humans or the stability of the environment<sup>55</sup>. With the help of such a framework, policy makers and environmentalists could identify the level of success and emerging challenges<sup>56</sup>.

The Convention has taken into account the fact that trade and climate policy intersect at several levels and states that climate change mitigation measures, particularly unilateral ones, shall not be used as a weapon for capricious or unreasonable discrimination or a covert restriction on international trade<sup>57</sup>. This provision eliminates the fear that WTO rules will stand in the way of implementing reasonable and justifiable climate change measures such as subsidies, technical regulations, or bans on certain products<sup>58</sup>. Hence, when measures, sometimes trade-restrictive, are taken for environmental purposes, UNFCCC and WTO acknowledge its legitimacy; however, everything depends on the terms and conditions as set forth in the treaties and trade agreements<sup>59</sup>.

---

<sup>53</sup>UN Climate Change, “Introduction to Mitigation”, <https://unfccc.int/topics/mitigation/the-big-picture/introduction-to-mitigation>, Accessed on July 12, 2021

<sup>54</sup>Jonathan Kuyper, “*Evolution of the UNFCCC*”, Annual review of the Environment and the Resources, Annual Reviews, Vol 43, October 2018, pg 345.

<sup>55</sup> UK NAEI - National Atmospheric Emissions Inventory, “UNFCCC”, June 8 2021, <https://naei.beis.gov.uk/about/why-we-estimate?view=unfccc>, accessed on September 21, 2021

<sup>56</sup>*Id.*

<sup>57</sup> UNFCCC, Article 3.5

<sup>58</sup> Adrian Henry, “How trade policies can support global efforts to curb climate change”, The Conversation, July 28, 2017, <https://theconversation.com/how-trade-policies-can-support-global-efforts-to-curb-climate-change-81029>, Accessed on September 21 2021

<sup>59</sup>*Id.*

### 2.2.3 KYOTO PROTOCOL

The UNFCCC had many loopholes and the targets were not that hard, so there was a need for a more stringent international agreement which could make the commitments of parties binding<sup>60</sup>. Negotiations on this ended with the creation of the Kyoto Protocol in 1997 as an extension to the UNFCCC, but due to complexities in the ratification process, the treaty was accepted only in the year 2005<sup>61</sup>. Targets were set to reduce GHG emissions from developed countries and industrial economies based on the universally accepted principle of “common but differentiated responsibilities and respective capabilities”<sup>62</sup>.

During COP7, in November 2001, the UNFCCC adopted the Marrakesh Accords, which comprised the detailed rules for implementation of the Kyoto Protocol and thus paved the way for its enforcement<sup>63</sup>. The Doha Amendment to the Kyoto Protocol was adopted in December 2012 with additional commitments of parties, revised and updated articles of the protocol and a few new GHGs to be added to the original list<sup>64</sup>. Other than the national measures, Kyoto Protocol also established flexible market mechanisms to facilitate the reduction of emissions by the developed countries at low costs; they are

- “Joint Implementation which allowed one of the protocol's committed countries to carry out an emission reduction project in another party in exchange for reduction units.
- The Clean Development Mechanism allowed a committed country to implement emission reduction projects in developing countries in order to earn saleable certified emission reduction credits while

---

<sup>60</sup> Jane A Legget, “The United Nations Framework Convention on Climate Change, the Kyoto Protocol, and the Paris Agreement: A Summary”, Congressional Research Service Report, January 29, 2020, pg 2

<sup>61</sup> *Id.*

<sup>62</sup> UNFCCC, Article 3.

<sup>63</sup> Emily Boyd, Lisa Schipper, “*The Marrakech Accord—At the Crossroad to Ratification*”, Journal of Environment and Development, vol 11, June 2002, pg 184.

<sup>64</sup> Louise Fornier, “*Compliance mechanism under the Kyoto Protocol*”, Research Gate, pg 3, May 2017, [https://www.researchgate.net/publication/316635610\\_Compliance\\_Mechanisms\\_under\\_the\\_Kyoto\\_Protocol\\_Lessons\\_for\\_Paris](https://www.researchgate.net/publication/316635610_Compliance_Mechanisms_under_the_Kyoto_Protocol_Lessons_for_Paris), accessed on May 24, 2021.

- International Emissions Trading, which established a carbon market in which a country's excess or unused emission units could be sold to another country that had already met its target<sup>65</sup>.”

Parties to the Kyoto Protocol are required to implement policies and actions in such a way that adverse consequences, including impacts on international trade, are minimized<sup>66</sup>. Since the stringent monitoring and compliance system of the protocol is for the common benefit, the developed nations must pay the huge adjustment expenses incurred for maintaining a consistent record of trades and verification mechanisms so that emissions are transparent and parties can be made accountable.<sup>67</sup> But when member countries withdraw and unrestricted trade emissions happen, the climate policy is brought down to a mere business strategy<sup>68</sup>. For instance, when Australia stood out from the Kyoto protocol, Europe thought of resorting to a trade-restrictive measure like taxing Australian products that are produced with high GHG emission rates so as to influence it to become a low-carbon economy.<sup>69</sup>

The Kyoto Protocol gives countries a lot of leeway in designing domestic climate change policies and measures so as to meet their targets through measures such as “energy efficiency standards, sustainable agriculture promotion, new and renewable energy sources, modern and efficient technology and sectoral reforms, and discontinue tax and duty exemptions and other subsidies that run counter to the goals of the Kyoto Protocol.”<sup>70</sup> Domestic policies and actions adopted by parties during the implementation of the Kyoto Protocol are an important aspect of each Party's attempt to achieve its commitments.<sup>71</sup>

---

<sup>65</sup>*Id. at* 8

<sup>66</sup>Kyoto Protocol, Article 2(3)

<sup>67</sup>Christoph Bohringer and Carsten Vogt, “*Economic and Environmental Impacts of the Kyoto Protocol*” The Canadian Journal of Economics Vol. 36, No. 2 (May, 2003), pg 475

<sup>68</sup>*Id.*

<sup>69</sup> John Hontelez, “Time to Tax the Carbon Dodgers” BBC News, 5 April 2007 <http://news.bbc.co.uk/1/hi/sci/tech/6524331.stm>, Accessed on July 15, 2021

<sup>70</sup> Andrew Green, “*Climate Change, Regulatory Policy and the WTO: How Constraining Are Trade Rules*” Journal of International Economic Law, Vol 8 pg 143, 2005.

<sup>71</sup>*Id.*

The UNFCCC and its Kyoto Protocol if properly implemented with the help of market-based mechanisms has the potential to move the global market from a fossil-based economy to a low-carbon economy and can pave the way for significant changes in the “bases of production and consumption, transport, investment, and sources of energy”<sup>72</sup>. When trade measures are incorporated into climate treaties formulated on the basis of the compliance mechanism of the Kyoto Protocol, the parties must ensure that such measures are not inconsistent with the WTO rules, and at the same time, WTO rules should be made more responsive to the new situation of trade-related climate change policies.<sup>73</sup>

#### **2.2.4 PARIS AGREEMENT**

The Paris agreement, which works on a five-year cycle, was adopted in December 2015 during the Conference of Parties (COP) 21 as an extension to the enforcement of UNFCCC and to respond much stronger to the impacts of climate change<sup>74</sup>. In order to meet the Paris Agreement's targets, nations must communicate the steps of their plan to decrease GHG emissions and create resilience to adapt to increasing temperatures<sup>75</sup>. Unlike the Kyoto Protocol, the Paris agreement has established a framework for providing financial, technical, and capacity-building assistance to developing nations and mandates both developed and developing countries to report their national plans, known as the Nationally Determined Contributions (NDC)<sup>76</sup>.

The preamble of the Paris Agreement acknowledges climate change and the threats it poses to humans and the ecosystem, and after years of debates, discussions, and scientific analysis of IPCC, it is this Agreement that stresses the urgency to act effectively and respond progressively as compared to the Preambles of the Convention and the Kyoto

---

<sup>72</sup>Supranote 67

<sup>73</sup>Anita M. Halvorsen, “UNFCCC, the Kyoto Protocol, and the WTO - Brewing Conflicts or Are They Mutually Supportive?”, *Denver Journal of International Law & Policy*, Vol 36 Issue 3, pg 377 Summer/Fall – 2007.

<sup>74</sup>Melissa Denchuck, “Paris Climate agreement”, NRDC, <https://www.nrdc.org/stories/paris-climate-agreement-everything-you-need-know>, February 2021

<sup>75</sup>*Id.*

<sup>76</sup>Paris Agreement, Article 3, [https://unfccc.int/sites/default/files/english\\_paris\\_agreement.pdf](https://unfccc.int/sites/default/files/english_paris_agreement.pdf)



Protocol<sup>77</sup>. Though trade issues are not directly dealt with in the Paris Agreement, Article 4.15 of the Agreement requires the parties to take into consideration the concern of those parties, especially developing countries, whose economies have been highly affected by the impacts of response measures<sup>78</sup>. While framing climate change mitigation measures, the concerns of developing countries must be given equal weightage as that of the interests of developed countries; otherwise, the impact may be something unintended and which negatively affects the social, economic, or environmental factors of nations hindering their sustainable development<sup>79</sup>.

In most of the NDCs submitted, the countries have included plans to provide more financial assistance to substitute the use of fossil fuels by using renewable energy and to upgrade the industrial processes and impose a carbon tax to conform to the emission standards<sup>80</sup>. But such measures, including labeling standards and import restrictions on products that are not energy efficient, will have direct and indirect impacts on international trade and might thereby create conflicts between trade and the environment<sup>81</sup>.

The Paris Agreement thus focuses on national programs that are determined by the countries' government, businesses, and society to adapt to climate change impacts and to mitigate it using measures like clean energy technology to reduce the consumption of fossil fuel and emissions<sup>82</sup>. Since this Agreement works on a five-year cycle, the countries are expected to report accurately and transparently by 2024 the measures taken and actually implemented so far to prepare the next set of pioneering targets after

---

<sup>77</sup>Geert Van Calster and Leonie Reins, "The Paris Agreement on Climate Change: A Commentary", Elgar Commentaries series, Elgar Online, March 2021, pg 11, [https://www.elgaronline.com/view/edcoll/9781788979184/08\\_preamble.xhtml](https://www.elgaronline.com/view/edcoll/9781788979184/08_preamble.xhtml), accessed on September 25, 2021

<sup>78</sup>*Id.* at 18

<sup>79</sup> Andrei Marcu and Wijnand Stoefs, "The Role of Response Measures in Ensuring the Sustainable Transition to a Low-GHG Economy", International Centre for Trade and Sustainable Development, January 2017, pg 10.

<sup>80</sup> Charles E. Di and Leva Xiaoxin Shi, "The Paris Agreement and the International Trade Regime: Considerations for Harmonization", Sustainable Development Law & Policy, Vol 17, issue 1, Article 4, 2017

<sup>81</sup>*Id.*

<sup>82</sup> Araya and Monica, "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", International Centre for Trade and Sustainable Development (ICTSD), December 2016

assessing the level of progress made in adaptation and mitigation in the current cycle<sup>83</sup>. The Paris agreement, through its three main aims, shows the global strategy:

1. “To control the global warming temperature rise below two degrees Celsius above preindustrial levels and to continue efforts to pull down this rise to 1.5°C.
2. Improve the ability to adjust to the negative effects of climate change and promote climate-resilient and minimal GHG development without jeopardizing food production.
3. To make financial flows consistent with a pathway toward low greenhouse gas emissions and climate-resilient development”<sup>84</sup>.

Each country has got different legal system suiting its environment, culture, and various other factors, and hence they may incorporate into their existing legal framework provisions to reduce GHG emissions or may formulate new legislation to exclusively deal with climate change objectives<sup>85</sup>. For example, South Africa has stated in its NDC that it will develop separate policies for GHG emission control while the U.S economy seeks to reach its GHG emission target by examining opportunities under its already existing regulations and thus it can be seen that the Paris agreement does not force a nation to act beyond its UNFCCC obligations.<sup>86</sup>

The goals of the Paris Agreement are long-term, and since it considers transparency, legitimacy and political and economic certainty as to its driving force, nations strongly believe that its objectives can be met with the growing trust among nations<sup>87</sup>. The Agreement encourages a nation to reduce emissions by providing guidance in achieving its immediate and medium-term objectives through strong and decisive actions by the

---

<sup>83</sup> UN climate Change,” The Paris Agreement”, <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>, Accessed on September 25, 2021

<sup>84</sup>*Id.*

<sup>85</sup>*Supranote 80*

<sup>86</sup>*Id.*

<sup>87</sup> Patricia Espinosa, “The Paris Agreement, a Strategy for the Longer Term”, World Resource Institute, Long term climate strategies, <https://www.wri.org/climate/expert-perspective/paris-agreement-strategy-longer-term>, Accessed on September 23, 2021

major economic actors without jeopardizing the nation's development and poverty eradication goals.<sup>88</sup>

The Kyoto Protocol made legally binding commitments while the Paris Agreement aimed at completely self-determined and voluntary measures and the countries all over the world that ratified all these, including the Convention, have acknowledged the seriousness of the issue and have taken appropriate mitigation measures to reach up to the level of commitments made<sup>89</sup>. However, a feeling that there is no global collective action to fight climate change emerged since the Paris Agreement has left the mitigation and adaptation processes to the will of the countries and the costs and negative consequences of climate impacts too have become the countries' headache and the UNFCCC merely operates as an information provider.<sup>90</sup>

### **2.3 INDIAN REGULATIONS AND INITIATIVES**

India has ratified the UNFCCC and the Kyoto Protocol and under the Paris Agreement, India has proposed in its NDC to reduce the level of GHG emissions, especially carbon dioxide emission by 2.5 to 3 billion tons through forest and tree cover<sup>91</sup>. India is an active participant of the Clean Development Mechanism (CDM) established by the Kyoto Protocol and has already achieved emission reduction of 28% over 2005 levels and is rising up to the target of 35% by 2030 as it pledged in its NDC.<sup>92</sup> The Nationally Determined Contribution, according to the government of India in 2015 contains the following main elements:

---

<sup>88</sup>*Id.*

<sup>89</sup> Chandra Bhushan “After 25 years of failure, we should abandon the UNFCCC”, Climate Home News, March 2019, <https://www.climatechangenews.com/2019/03/27/25-years-failure-abandon-unfccc/>, Accessed on August 22, 2021

<sup>90</sup>*Id.*

<sup>91</sup> Terry Townshend, “India’s climate change laws”, Climate Home News, February 2013, <https://www.climatechangenews.com/2013/02/19/in-focus-indias-climate-change-laws/>, Accessed on July 10, 2021

<sup>92</sup> The Energy and Resources Institute, “India’s NDC, Key Messages”, Discussion paper, November 2018, <https://www.teriin.org/sites/default/files/2018-12/India%27s%20NDCs%20Key%20Messages.pdf>, Accessed on July 20, 2021

- “To reduce the emissions intensity of GDP by 33–35 percent below 2005 levels by 2030.
- To increase by 2030, non-fossil-based energy resources to 40% of installed electric power capacity, created by technological transfer and low-cost international financing, notably from the Green Climate Fund (GCF).
- To create by 2030, extra carbons sink of 2.5–3 billion tons of Carbon dioxide through increased forest and tree cover.”<sup>93</sup>

Environment and its protection have always been considered by India as an integral part and already have several laws for the prevention and regulation of any activity that may cause climate change<sup>94</sup>, including:

- The Indian Penal Code, 1860
- The Fisheries Act, 1897
- The Factories Act, 1948
- National Environment Policy, 2006
- Water (Prevention and Control of Pollution) Act, 1974
- Air (Prevention and Control of Pollution) Act, 1981
- Environment (Protection) Act, 1986
- Public Liability Insurance Act, 1991
- Environment Impact Assessment (EIA) Notifications, etc.

Despite all these legislations, there was a need for a specific strategy to guide and regulate India's climate change concerns and to mitigate them and to adapt to those challenges<sup>95</sup>. This was the framework laid out in the National Action Plan on Climate

---

<sup>93</sup>*Id.*

<sup>94</sup>Arundathi Pandey, “What India can teach the world about sustainability”, World Economic Forum, 2 October 2017, <https://www.weforum.org/agenda/2017/10/what-india-can-teach-the-world-about-sustainability/>, accessed on September 21, 2021

<sup>95</sup>Vijay K. Sondhi, Faisal Sherwani and Achal Gupta, “Climate Change: Indian law and Judiciary” Mondaq, June 2020, <https://www.mondaq.com/india/clean-air-pollution/945304/climate-change--indian-law-and-judiciary>, accessed on July 12, 2021.

Change (NAPCC) announced by the Indian Government in June 2008<sup>96</sup>. It has eight subsidiary Missions:

### **1. National Solar Mission**

As the name states, this Mission aims to promote the use of solar energy in India, conduct extensive research on it to improve its efficiency, and make the system and its storage affordable so that it can be used as a substitute for fossil fuels<sup>97</sup>. To achieve this, the Central and State Governments are providing financial incentives like “capital and interest subsidies, generation-based incentives, financing solar rooftop systems as part of home loans, the preferential tariff for power generation from renewable sources,” etc.<sup>98</sup> However, when India acts in furtherance of its commitments under the Protocol by giving such preferences and subsidies for its domestic production, the foreign producers should not be discriminated against by such localization or protectionist trade measures<sup>99</sup>. In February 2016, when the U.S put forward such a claim before the WTO Panel, it ruled that, though India’s solar program was a part of fulfilling its mission under the UNFCCC commitments, it is bound by the existing trade rules, i.e., it should not formulate discriminatory trade policies in the name of climate change mitigation<sup>100</sup>.

### **2. National Mission for Enhanced Energy Efficiency (NMEEE)**

Through novel business strategies and enabling policies, the Mission aims to meet the energy demands and improve the energy efficiency of the domestic, commercial, and industrial sectors in India by reducing GHG emissions by 98.55 million tons per year<sup>101</sup>. To achieve its goals, NMEEE has formulated four initiatives- “Perform, Achieve and Trade (PAT), Market Transformation for Energy Efficiency (MTEE), Energy Efficiency Financing Platform (EEFP) and Framework for Energy Efficient Economic Development

---

<sup>96</sup>*Id.*

<sup>97</sup>Vijeta Rattani, “Coping with Climate Change: An Analysis of India’s National Action Plan on Climate Change”, Centre for Science and Environment, Vol 1, 2018

<sup>98</sup>*Id.*

<sup>99</sup> Ben Lilliston, “The Climate Cost of Free Trade, How the TPP and trade deals undermine the Paris climate agreement”, Institute for Agriculture and Trade Policy (IATP), pg 3, September 2016

<sup>100</sup>*Id.*

<sup>101</sup> Ministry of Environment and Finance, “National Mission on Enhanced Energy Efficiency”, <http://www.moef.nic.in/downloads/others/Mission-SAPCC-NMEEE.pdf>, Accessed on 12 September 2021

(FEEED)”<sup>102</sup>. Like investment and technology, the energy-supplying and energy-consuming sectors must be closely and carefully linked to fulfilling the goals of this mission and energy-efficient instruments that use the latest technology help in capturing future energy savings<sup>103</sup>.

### **3. National Mission for Sustainable Habitat**

To make cities sustainable, the urban planning process has to be integrated with mitigation and adaptation measures, i.e., through proper research and infrastructural developments, sectors such as buildings, waste management, water resources and transportation can be made sustainable<sup>104</sup>. The emissions from road transport contribute to almost 90% of the total emissions from the transport sector and therefore this Mission aims to make a shift from private vehicles to public transport and to improve the energy efficiency of buildings, properly manage water resources and waste management<sup>105</sup>.

### **4. National Water Mission**

Conserving water by minimizing wastage, increasing water-use efficiency and ensuring equal distribution of water resources throughout India through integrated water resource management is National Water Mission in a nutshell<sup>106</sup>. The Mission aims at giving due regard to overexploited areas and encouraging citizens and demanding State action for water conservation, preservation and creating a comprehensive water database in the public domain and study and analyze the impact of climate change on water resources<sup>107</sup>. Some important features of the Mission are that it reviews the National Water Policy,

---

<sup>102</sup>*Id.*

<sup>103</sup>NitiAyog , Draft National Energy Policy,2017,

[https://www.niti.gov.in/writereaddata/files/document\\_publication/NEP-ID\\_27.06.2017.pdf](https://www.niti.gov.in/writereaddata/files/document_publication/NEP-ID_27.06.2017.pdf), Accessed on 13 September 2021.

<sup>104</sup>*Supranote 97*

<sup>105</sup> Centre for Science and Environment, “National Mission on Sustainable Habitat”,

<https://www.cseindia.org/national-mission-on-sustainable-habitat-1977>, accessed on September 20 2021

<sup>106</sup> National Water Mission, “Objective of National Water Mission”, <http://nwm.gov.in/?q=objective-national-water-mission>, accessed on September 20 2021

<sup>107</sup> Ministry of Water Resources, “National Water Mission under National Action Plan on Climate Change”, 2010, <http://www.nicra-icar.in/nicrarevised/images/Mission%20Documents/WATER%20MISSION.pdf>, accessed on September 21, 2021

conducts research on the impact of climate change on water resources and analyzes the extent to which it affects the quality of water resources<sup>108</sup>.

### **5. National Mission for Strategic Knowledge on Climate Change**

Through actions based on research and communications, this Mission aims at creating a comprehensive infrastructure and strategic knowledge platform that fills all gaps to provide data and information necessary to support climate change action in India and invests in partners' current and available knowledge capacities<sup>109</sup>. The mission seeks to fulfill this target with the help of trained climate research professionals, technical reports, disseminating knowledge to the public, region-based climate models, knowledge networks with different themes, the partnership between public and private entities, collaborations with other countries<sup>110</sup>.

Coal, renewable energy, agriculture, water, energy efficiency, forestry, etc. are the factors that can be manipulated to cause climate change as well as be heavily impacted; therefore, Global Technology Watch Group (GTWG) is an initiative under this mission that keeps track of these factors and assesses the technology, risk factor and also deals with prioritization<sup>111</sup>. Other major research and development projects launched under the mission are Ocean Acidification and Sea-level Rise under the National Institute of Oceanology (NIO), Regional Climate Modeling and Storm Surges, but, for lack of inter-ministerial coordination and establishment of nodal agencies at the State level, these initiatives cannot be claimed as a total success<sup>112</sup>.

### **6. National Mission for Sustainable Agriculture (NMSA)**

For the agriculture sector to become ecologically sustainable, it must progressively adapt to climate change and for that transformation, the NMSA centrally focuses on four

---

<sup>108</sup>*Id.*

<sup>109</sup> India Science, Technology and Innovation, "National Mission for Strategic Knowledge on Climate Change", July 30, 2021, <https://www.indiascienceandtechnology.gov.in/st-visions/national-mission/national-mission-strategic-knowledge-climate-change-nmskcc>, accessed on September 20, 2021

<sup>110</sup>*Id.*

<sup>111</sup> DrNishaMendiratta, "Global Technology Watch Groups : DST's Initiatives", Ministry of Environment and Forest, COP24, 2018, <http://indiaatcop24.org/images/presentation/3dec-Session2/3dec-3-global-technology-watch-groups-dst%E2%80%99s-initiatives.pdf>, accessed on September 20, 2021

<sup>112</sup>*Id.*

crucial areas, i.e., “rain-fed agriculture, risk management, access to information & biotechnology”<sup>113</sup>. Through research, capacity building, proper mitigation and adaptation strategy, integration of traditional knowledge and practices, and institutional interventions in the Indian agricultural sector, the Mission aims at improving sustainability and economic stability, ensuring food security, increasing productivity and raising the standard of living<sup>114</sup>. With adequate financial and human resources, all climate change-related information and knowledge provided by the Climate Change and Sustainable Agriculture Monitoring, Modeling and Networking (CCSAMMN) will effectively reach even the small and marginal farmers so that they can adapt to climate change<sup>115</sup>.

### **7. National Mission for Green India**

The Green India Mission, which is more like a plantation scheme, intends to enhance the ecosystem and respond to climate change by adaptation and using mitigation measures such as increasing the forest cover, improving and restoring the quality of already existing forest cover and improving other services which balance the ecosystem like biodiversity, wetlands and mangroves<sup>116</sup>. This Mission demands local community participation and aims to identify landscapes, assess vulnerable areas increase the income of households that entirely depend on forest products, and “enhance carbon sequestration services, hydrological services and provisioning services like fuel, fodder, and timber and non-timber forest products”<sup>117</sup>.

### **8. National Mission for Sustaining the Himalayan Ecosystem (NMSHE)**

The aim of this Mission is to study and understand in depth the impact of climate change in the Himalayan ecosystem and to establish a monitoring system to assess the adaptation measures required so that policymakers can evolve adequate conservation measures for

---

<sup>113</sup> Dr. Amrit Patel, “Climate Change & Agriculture In India- Effective Implementation Of National Mission For Sustainable Agriculture” International Journal of Research - Granthaalayah, Vol. 4, No. 11, 2016, pg 63

<sup>114</sup> *Id.*

<sup>115</sup> *Supranote 97*

<sup>116</sup> R. R. Rashmi and Ravi Prasad, “Green India Mission (GIM) Overview & National Perspective”, Ministry of Environment and Forest, <http://moef.gov.in/wp-content/uploads/2018/03/Green-India-Mission.pdf>, accessed on October 6, 2021

<sup>117</sup> *Id.*



safeguarding the glaciers and mountains<sup>118</sup>. For this Mission to fulfill its aim, proper financial and technical support, human resources and coordination between different research and scientific institutions are necessary<sup>119</sup>.

Considering the fact that it is the legal system of a nation that the citizens would look upon when the country faces an adverse situation that affects the individual lives of all, the developed countries have enacted proper parliamentary legislations on climate change when compared to the least developed countries, where actions are mainly in the nature of the executive policy<sup>120</sup>. There is no climate-specific legislation in India but just the executive action of NAPCC, and by formulating a low carbon development path for India to promote sustainable development, NAPCC lays the foundation for meeting the country's Paris Agreement targets by encouraging all sectors to work on climate change mitigation and adaptation.<sup>121</sup>

India, being a developing country, is highly vulnerable to climate change, and it is facing unprecedented challenges, but the Indian Government is trying all means to reach up to the standards set out in international climate agreements; however, the progress is slow since executive actions are not equally accountable as stringent legislation.<sup>122</sup> The present policies and regulations must be revisited and updated to meet the international targets to combat the threats posed by global warming, and such measures should not negatively affect the poor and marginalized sections but instead should benefit them<sup>123</sup>.

---

<sup>118</sup>RuchiBadola, Syed AinulHussain and Ors, "Assessing the effectiveness of policies in sustaining and promoting ecosystem services in the Indian Himalayas", International Journal of Biodiversity Science, Ecosystem Services & Management, Vol 11, Issue 3, 2015, pg 218

<sup>119</sup>*Id.*

<sup>120</sup>Parul Kumar and AbhayarajNaik, "India's domestic climate policy is fragmented and lacks clarity", Economic and Political Weekly, Vol. 54, Issue No. 7, 16 February 2019

<sup>121</sup>M. Joshi, Han Chen, "The Road From Paris: India's Progress Towards Its Climate Pledge", National Research and Development Corporation, September 2020, pg 3, //www.nrdc.org/sites/default/files/road-from-paris-202009.pdf, accessed on May 15, 2021

<sup>122</sup>*Id.*

<sup>123</sup>ShahabShabbir, "Challenges of climate change and India's policy options", Indian Journal of Global Legal Studies, Vol 4, July 2015, pg 123

## CHAPTER 3

### DEVELOPMENTS IN WTO NEGOTIATIONS AND COMMITTEES ON CLIMATE CHANGE

#### 3.1 INTRODUCTION

The Bretton Woods Conference, which set the groundwork for the post-World War II financial system, advocated the formation of the International Trade Organization<sup>124</sup>. However, other global negotiations were being held at the same time for proportional reductions in tariff barriers and that resulted in GATT, the first multilateral free trade agreement which reduced tariffs and boosted international trade<sup>125</sup>. The GATT Committee on Trade and Development was a platform for developing nations to debate their concerns but not to make formal obligations in their interests, as many developing countries were not members of the GATT or engaged in its deliberations only to a limited level<sup>126</sup>.

Because the United States and other signatories did not approve the foundation treaty, the International Trade Organization never came into existence; therefore, GATT gradually became a de facto international organization<sup>127</sup>. Over time, parties came to the conclusion that the GATT system was unable to meet the demands of a growing globalized world<sup>128</sup>. As a reaction to the concerns identified in the 1982 Ministerial Declaration, the eighth GATT round, known as the Uruguay Round, was held in September 1986 at Punta del Este, Uruguay<sup>129</sup>.

---

<sup>124</sup> Craig VanGrasstek, "The History and Future of the World Trade Organization", WTO Publications, pg 43, 2013

<sup>125</sup> S P Shukla, "From GATT to WTO" World Institute for Development Economics Research, pg 1

<sup>126</sup> *Id.*

<sup>127</sup> Ian F Fergusson, "WTO Background and issues", CRS Report for congress, The World Trade Organization: Background and Issues (nationalaglawcenter.org), May 7, 2009

<sup>128</sup> WTO, "The Uruguay Round", Understanding the WTO - The Uruguay Round

<sup>129</sup> *Id.*

During the ministerial meeting at Marrakesh, the Marrakesh Agreement was signed on April 15, 1994, officially establishing the WTO<sup>130</sup>. After lengthy discussions and complex negotiations, WTO came into force, and it became effective from January 1, 1995. WTO is an inter-governmental organization in charge of negotiating and implementing new trade agreements and has the authority to oversee that the majority of the world's major trading countries abide by the trade agreements they have signed<sup>131</sup>.

While the specifics of the WTO's trade rules are still being worked out in discussions, the organization is founded on a few core ideas out of which the most fundamental is a commitment to openness, which means lowering tariffs and restricting quotas, subsidies, and other trade barriers<sup>132</sup>. Non-discrimination is another important tenet under which WTO members must handle trade with all other WTO members equally.

The WTO also strives for openness and predictability in trade-related legislation, as well as the promotion of international standards, in order to provide citizens, businesses, and investors with a sense of security<sup>133</sup>. Furthermore, the organization is committed to providing greater flexibility and accommodations to developing countries in principle.

The Ministerial Conference is the apex body of WTO which takes all the primary and vital decisions<sup>134</sup>. It comprises the representatives of all the member states. Since it meets only once in two years, the emergency matters are dealt by the General Council, which comprises all the representatives<sup>135</sup>. It oversees WTO's agreements and the ministerial decisions regularly. General Council acts in the capacity of the Dispute Settlement Body and Trade Policy Review Body.

The trade policy review body supervises the trade policy review reports of WTO members<sup>136</sup>. The members are bound to report on national measures and policies adopted to conform to the WTO regime. Three other councils, namely, Council for Trade in Goods, Council for Trade in Services and Council for Trade Related Aspects of

---

<sup>130</sup> WTO, "Marakkesh agreement establishing WTO", WTO legal texts - Marrakesh agreement

<sup>131</sup> *Id.*

<sup>132</sup> James McBride, Andrew Chatzky, and Anshu Siripurapu, "What's next for the WTO", Council on Foreign Relations, June 14, 2021

<sup>133</sup> *Id.*

<sup>134</sup> Christoph Schwew, "The WTO and Recent Developments in World Trade", *Acta Societatis Martensius*, Vol 3, 2018, pg 191.

<sup>135</sup> *Supranote* 124

<sup>136</sup> *Supranote* 134

Intellectual Property Rights (TRIPS), assist the General council in the monitoring and implementation process<sup>137</sup>. A negotiation is “the deliberation, discussion, or conference upon the terms of a proposed agreement”<sup>138</sup>. WTO is the forum for member nations to negotiate agreements. “The WTO was born out of negotiations, and everything the WTO does is the result of negotiations. Such negotiated agreements form the basis of WTO. These legal rules are dynamic. They can be subject to renegotiations and new agreements may be added as a result”<sup>139</sup>.

Specialized committees that deal with individual issues such as trade, its development, the environment, bilateral and regional trade agreements which report to the General Council aims at strengthening the transparency of trade rules and monitoring the trade activities of its members. “International trade rules and climate change measures intersect at some points”<sup>140</sup>.

Though climate change is of prime concern now, there is no specific rule to regulate climate change policies under the WTO<sup>141</sup>. Uniform guidelines are difficult to implement due to the diverse climatic conditions in different parts of the world. However, flexibilities are available in the existing WTO rules if the members genuinely intend to implement climate measures rather than protectionist views<sup>142</sup>.

### **3.2 DOHA DEVELOPMENT AGENDA**

This trade negotiation round or agenda which is under the supervision of the Trade Negotiations Committee, commenced on November 2001 with the main objective of reducing trade barriers in the whole world so that there will be an increase in trade among the countries without any obstruction<sup>143</sup>. The members of WTO formed a consensus on

---

<sup>137</sup> *Supranote* 130

<sup>138</sup> Definition by Black Law Dictionary

<sup>139</sup> WTO Annual Report 2011, pg 4

<sup>140</sup> Nathalie Bernasconi, Osterwalder and Johannes Norpoth, “ Is World Trade Law a barrier to saving our climate”, Friends of the Earth Europe and the Center for International Environmental Law, September 2009, [https://www.ciel.org/Publications/ClimateTradeReport\\_foee-ciel\\_sep09.pdf](https://www.ciel.org/Publications/ClimateTradeReport_foee-ciel_sep09.pdf), Accessed on August 11 2021

<sup>141</sup> *Id.*

<sup>142</sup> *Id.*

<sup>143</sup> World Trade Organization, “ The Doha Round”, [https://www.wto.org/english/tratop\\_e/dda\\_e/dda\\_e.htm](https://www.wto.org/english/tratop_e/dda_e/dda_e.htm), Accessed on July 25, 2021

the Doha Development Agenda (DDA), where guiding negotiations and boosting global trade formed its backbone<sup>144</sup>.

The main focus of the agenda was to give priority to the development of less developed countries. They were very assertive and pushed for reduced subsidies in agriculture and other barriers they faced in trade with advanced capitalist countries and therefore, the special and differential treatment for them formed a major part of the discussion<sup>145</sup>.

Fish and fish products have been recommended as a sector for expedited liberalization in the Doha Round by the USA, Canada, New Zealand, Norway, Singapore, and others<sup>146</sup>. This will cause significant problems for developing countries, while non-tariff barriers in developed nations (such as health and environmental standards) may counteract the benefits of potentially wider market access<sup>147</sup>.

The developed countries showed the least interest when it came to trade concessions for the developing countries or the rising economies<sup>148</sup>. There was no effort from their side as they continued their usual business by subsidizing their agricultural sectors and setting the market conditions that fit their needs.

In 2012, as a result of the UN Climate Change Conference in Doha, governments integrated the achievements of international climate change negotiations in the past few years and paved the way to have higher ambitions and actions at every level<sup>149</sup>. The need for a 'universal climate change agreement' by the end of 2015 was stressed and should come into operation by 2020<sup>150</sup>. Aiding vulnerable countries and fostering the need to reduce GHG was also emphasized. The establishment of financial and technological

---

<sup>144</sup>DIANA TUSSIE AND CINTIAQUILICONI, "INTERNATIONAL DEVELOPMENT", The WTO and Development, Chapter 48, Oxford Publications, pg 18, February 2014

<sup>145</sup>*Id. at 22*

<sup>146</sup>Joy Kategekwa, "Empty promises. What happened to 'development' in the WTO's Doha Round?" Oxfam Briefing Paper, pg 23, 16 July 2009

<sup>147</sup>*Id.*

<sup>148</sup>*Id.*

<sup>149</sup>UN Climate Change, "The Doha Climate Gateway", <https://unfccc.int/process/conferences/the-big-picture/milestones/the-doha-climate-gateway>, accessed on August 11, 2021

<sup>150</sup>The UNFCCC adopted the Paris Agreement on December 2015 which marked a historic event for global climate action, as 195 nations came to a consensus to combat climate change and adapt to its impacts.

support, as well as new institutions, to enable clean energy investments and sustainable growth in poor nations has to progress.

The Doha Ministerial Declaration also required the members of the World Trade Organization to negotiate the reduction or elimination of trade barriers in environmental goods and services (EGS)<sup>151</sup>. This, in fact has shown that the multilateral trading system can help serve the aims of the trading system, the environment and development<sup>152</sup>. This can be linked to climate change because it is a priority environmental issue. Various aspects of the Doha round intend to widen the trade market, which has got a direct effect on sustainable development. Therefore, the successful implementation of the agreements concluded after negotiations in the Doha round would definitely add to the efforts taken to combat climate change.

Because WTO rulings are based on consensus and there were disagreements between developed and poor nations, the Doha round ended as a failure<sup>153</sup>. From the beginning, there was a conflict between the interests of industrialized and developing countries<sup>154</sup>. Essentially, the discussion was over whether market access round or a development round should be held. Developed countries desired market access round that increased liberalization in developing country markets, while developing nations refused to participate in a new round of trade talks unless it included a major development component<sup>155</sup>.

What the Doha round aimed at was the opening of markets of the developed countries for exports from developing countries, especially by removing non-tariff barriers and improving rules of origin, but the proposals of the round could only remove many

---

<sup>151</sup> Aaron Cosbey, Soledad Aguilar, Melanie Ashton and Stefano Ponte, "Environmental Goods and Services Negotiations at the WTO: Lessons from multilateral environmental agreements and eco-labels for breaking the impasse", IISD, Trade, Investment and Climate change series, pg 1, March 2010

<sup>152</sup> *Id.*

<sup>153</sup> Kimberly Amadeo, "Doha Round of Trade Talks: The Real Reason Why It Failed", The Balance, December 25, 2020, <https://www.thebalance.com/what-is-the-doha-round-of-trade-talks-3306365>, Accessed on July 25, 2021

<sup>154</sup> *Id.*

<sup>155</sup> *Supranote* 149

tariffs<sup>156</sup>. There was no discussion on non-tariff barriers such as SPS, TBT and rules of origin, thereby leaving behind all crucial barriers. The development can only be considered as poor<sup>157</sup>.

### **3.3 NEGOTIATIONS ON ENVIRONMENTAL GOODS AGREEMENT**

An efficient climate regime for combating climate change and environmental preservation necessitates an open global trading system in which activities that benefit the environment are promoted and those that harm it are prohibited<sup>158</sup>. A free trading system is critical for trade-dependent economies, which are typically small countries with a fragile environment. Environmental goods and services have contributed a major share in the international trade market. Environmental goods are those products that cause lesser harm to the environment through their use and environmental services are those human activities that address particular environmental problems<sup>159</sup>.

Countries are well aware of the fact that the removal of tariffs and non-tariff barriers on these environmental goods could make a tremendous input to the global environmental agenda, including climate change<sup>160</sup>. For instance, if the low-carbon energy transition could be increased by lowering or eliminating tariffs, then it is a step towards achieving the goals of the Paris Agreement. While WTO aims at reducing trade barriers and externalizing costs, the environmental negotiations aim at controlling the harmful effects of human activities by internalizing the environmental costs<sup>161</sup>.

---

<sup>156</sup> Sofia Balino, "As WTO Members Prepare to Name a New Chief, We Must Remember the Lessons of Years Past", IISD, <https://sdg.iisd.org/commentary/policy-briefs/as-wto-members-prepare-to-name-a-new-chief-we-must-remember-the-lessons-of-years-past/>, August 2020, accessed on August 12, 2021

<sup>157</sup> *Id.*

<sup>158</sup> Jaime De Melo, "Negotiations For An Agreement On Climate Change, Trade And Sustainability (ACCTS): An Opportunity For Collective Action", International Economics Ltd, Trade Economics, April 10, 2020 <https://www.tradeeconomics.com/wp-content/uploads/2020/04/JDM-ACCTS-2.pdf>, accessed on August 12, 2021

<sup>159</sup> In reality there is no globally accepted definition of "environmental goods" and therefore grey areas have come up. The OECD has defined environmental goods as those that "measure, prevent, limit, minimize, or correct environmental damage to water, air and soil, as well as problems related to waste, noise and ecosystems" (OECD 2005, 22).

<sup>160</sup> Iturregui, Patricia and Ors "Liberalization of Environmental Goods & Services and Climate Change", ECONSTER, HWWA Discussion Paper, No. 335, pg 1, Hamburg Institute of International Economics (HWWA), Hamburg 2005.

<sup>161</sup> *Id.*

If the rise in GHG is a result of any trade, then the chances are likely that cross-border trade and transport might be reduced. These conflicting interests have coined the term ‘mutual supportiveness of trade and environment’<sup>162</sup>. It implies that both trade and environment benefit from the elimination of tariffs on environmental goods and services in the form of increased trade and wider access to technologies that counter the environmental threats<sup>163</sup>. “Environment, trade and development will flourish when there is enhanced energy efficiency, reduced GHG emissions, and preservation of natural resources and protection of the quality of air, water and soil”<sup>164</sup>.

In 2010, 21 members of the Asia-Pacific Economic Cooperation (APEC) committed to enhancing environmental goods and services by lowering trade and investment obstacles and strengthening their capacity to expand these sectors<sup>165</sup>. In 2011, the pursuit of a cooperative agreement to lower tariffs on environmental goods began (APEC 2011), and in 2012, APEC agreed “to reduce applied tariff rates for a list of 54 environmental products including solar panels, renewable bamboo-based products, parts for biomass boilers, industrial air pollution control plants and crushing machines used for waste treatment or recycling”<sup>166</sup>.

In 2014, 14 WTO member countries which held the major share in the market were willing to negotiate a plurilateral agreement with respect to world free trade in environmental goods. A WTO plurilateral agreement can be entered into between few member countries that intend to negotiate fresh and new commitments to liberalize trade<sup>167</sup>. Reduction of trade barriers in environmental goods in these countries would be of massive advantage to all WTO members in confronting the threats posed by climate

---

<sup>162</sup>Perrez, Franz Xaver, “*The Mutual Supportiveness of Trade and Environment.*” Proceedings of the Annual Meeting (American Society of International Law), vol 100, 2006, pg 27, JSTOR, [www.jstor.org/stable/25660052](http://www.jstor.org/stable/25660052), accessed on 13 August 2021.

<sup>163</sup>*Id.*

<sup>164</sup> World Trade Organization, “Activities of the WTO and the challenge of climate change”, [https://www.wto.org/english/tratop\\_e/envir\\_e/climate\\_challenge\\_e.htm](https://www.wto.org/english/tratop_e/envir_e/climate_challenge_e.htm), accessed on July 25 2021.

<sup>165</sup>*Supranote 82*

<sup>166</sup>*Id.*

<sup>167</sup> Jaime De Melo, “Implications Of Negotiation Failures On Environmental Goods And Services At The Doha Round For Global Trade Governance”, WTO Public Forum, September 26, 2020, [https://www.wto.org/english/forums\\_e/public\\_forum12\\_e/session41demelofordi\\_e.pdf](https://www.wto.org/english/forums_e/public_forum12_e/session41demelofordi_e.pdf), accessed on July 26, 2021



change. Breaking down the negotiations at regional levels or as plurilateral than multilateral would be effective for governing global trade<sup>168</sup>.

The negotiations for an Environmental Goods Agreement (EGA) began in July 2014 under the backing of the World Trade Organization (WTO).<sup>169</sup> The APEC's list of products served as the foundation for the World Trade Organization's EGA negotiations. The EGA covers a wide range of product types that can aid in the achievement of climate and environmental protection goals, such as producing clean and renewable energy, ameliorating energy and resource efficiency, managing air pollution, controlling the waste, treating waste water and checking the environmental quality<sup>170</sup>.

“Progress on the EGA is a barometer for climate change negotiations.”<sup>171</sup> The purpose of EGA is to back the multilateral trading system and encourage its aim of liberalizing trade, as well as contributing significantly to the international environmental protection agenda, including the joint efforts in the UNFCCC negotiations to address the threats of climate change and transformation to a green economy<sup>172</sup>. EGA is just one portion of the broader climate change mitigation, and adaptation puzzle and hence the negotiations have often helped the trade policy framers to integrate emissions reductions and climate change mitigation efforts.

The EGA negotiations that were meant to conclude an agreement by 2017 collapsed by the end of December 2016 when the negotiators could not reach a consensus with respect to a common ground on which products would be covered in the intended agreement<sup>173</sup>. Countries submitted only those goods over which they had a comparative advantage and avoided those with high tariffs. Therefore, the problem in identifying what constituted an environmental good was one of the reasons for the failure of the negotiations.

---

<sup>168</sup>*Id.*

<sup>169</sup>*Supranote 167*

<sup>170</sup> World Trade Organization, “Environmental Goods Agreement”, [https://www.wto.org/english/tratop\\_e/envir\\_e/ega\\_e.htm](https://www.wto.org/english/tratop_e/envir_e/ega_e.htm).

<sup>171</sup> Patricia M. Goff, “The Environmental Goods Agreement A Piece Of The Puzzle”, CIGI Papers, No. 72 June 2015

<sup>172</sup>*Id.*

<sup>173</sup> James Bacchus and InuManak, “Free Trade in Environmental Goods Will Increase Access to Green Tech”, CATO Institute, Free Trade Bulletin No. 80, June 8, 2021

The developing countries showed no participation in these negotiations as they were unsatisfied with the Technology Mechanism that aimed at technology transfer from developed countries to developing countries and they did not expect much market access for their products even if the list of environmental goods were to be expanded to the WTO list<sup>174</sup>. The EGA negotiations covered only tariffs and excluded non-tariff barriers and barriers to trade in environmental services<sup>175</sup>. The unacceptable demands by China and the lack of interest to reduce tariffs by the US were two among the various instances which showed that there was no point in continuing the negotiations<sup>176</sup>.

### **3.4 NEGOTIATIONS ON MULTILATERAL ENVIRONMENT AGREEMENTS**

A Multilateral Environmental Agreement (MEA) is a legally binding agreement entered into between two or more countries that address certain environmental issues<sup>177</sup>. But more than that, it is an important part of the larger system of environmental laws and conventions. Multilateral environmental agreements supplements national legislation and bilateral or regional agreements in providing an overall international legal framework for worldwide initiatives to resolve specific environmental challenges<sup>178</sup>.

Even though the history of environmental treaties can be traced back to the late 1800s, most of the MEAs have been signed since the United Nations Conference on the Human Environment (UNCHE) in 1972. Various international agreements and organizations exist to handle, regulate, and control human interactions and the effects on the ocean, as well as climate change<sup>179</sup>. The multilateral agreements relevant to the climate

---

<sup>174</sup>*Id.*

<sup>175</sup> Jaime de Melo and Jean-Marc Solleder, "The role of an Environmental Goods Agreement in the quest to improve the regime complex for climate change", Foundation for studies and Research on International Development (FERDI), Working Paper on Developmental Policies, pg 4, September 2019

<sup>176</sup>*Id.*

<sup>177</sup> Priyankari Alexander, "What are MEAs", South Asia Cooperative Environment Program (SACEP), <http://www.sacep.org/pdf/News-Letter/Top-Stories/2016/June/2016-06-15/Multilateral-environmental-agreements.pdf>, June 2016

<sup>178</sup>*Id.*

<sup>179</sup> International Union for Conservation of Nature, "Addressing Ocean and Climate Issues Across Relevant Multilateral Environmental Agreements", policy briefs, [https://www.iucn.org/sites/dev/files/content/documents/policybrief\\_climatechangeandmultilateralagreements.pdf](https://www.iucn.org/sites/dev/files/content/documents/policybrief_climatechangeandmultilateralagreements.pdf), 2020, accessed on August 13, 2021

discussion include the Paris Agreement, the UN Framework Convention on Climate Change (UNFCCC), the Convention on Biological Diversity (CBD) and the Sustainable Development Goals (SDGs)<sup>180</sup>.

UNFCCC mandates the reduction of GHGs and through stabilization of atmospheric carbon dioxide, restoration and maintenance of vegetated coastal ecosystems such as mangroves and salt marshes; it serves as an effective tool for carbon sequestration and storage as blue carbon<sup>181</sup>. Coastal carbon management can have a bigger impact on the national level as it has several additional advantages such as easy adaptation, protection of coastal areas, improved water quality and adequate food security<sup>182</sup>.

WTO rules are structured in such a way that they allow for adequate policy space to include necessary trade measures to protect and preserve the environment in certain situations; however, members must work hard to maintain a harmonious relationship between the WTO's various rules and particular trade responsibilities through several international agreements aimed at environmental protection.<sup>183</sup> Through the MEA negotiations, the international community renders its support for multilateralism and recognizes the need for collective action to tackle climate change so that both trade and environment go hand in hand, harmoniously. Success in these negotiations implies a strong link between the two legal regimes<sup>184</sup>.

Climate change mitigation measures should not entail unreasonable or unjustifiable discrimination to any of the members, nor should it constitute a disguised limitation on international trade, i.e., its implementation should only minimize the detrimental effect on international trade and social, environmental, and economic impacts on other

---

<sup>180</sup>*Id.*

<sup>181</sup> Eric Sundquist and Robert Burruss, "Carbon Sequestration to Mitigate Climate Change", USGS Science for a changing world, <https://pubs.usgs.gov/fs/2008/3097/pdf/CarbonFS.pdf>, accessed on August 14 2021 Carbon sequestration can be natural or deliberate. CO<sub>2</sub> is removed from the atmosphere or other emission sources and stored in oceans, soil, vegetation etc.

<sup>182</sup>*Id.*

<sup>183</sup>*Supranote* 164

<sup>184</sup>*Id.*

Parties<sup>185</sup>. This shows that the trading system and environment system do not work in isolation.

In the negotiations of MEAs, the parties believe and expect the measures to be compatible with the trade rules, or at least they are the least trade-restrictive choice<sup>186</sup>. Whenever a dispute is brought before the WTO, it must be shown that the environmental measures that restrict trade are compatible with the fundamental WTO legal standards or else it has to have a place in the WTO's environmental exemptions, which are rigorously construed in ways that maximize their compliance with trade norms<sup>187</sup>.

After showing that the measure falls under its exceptions, it is again mandatory to demonstrate that such a measure is indispensable to protect the environment, which it is the least trade-restrictive measure compared to any alternatives, and that the measure does not unreasonably discriminate against any WTO member or form a disguised means of protection for domestic industries<sup>188</sup>. The new generation MEAs features a wide variety of differential treatment rules in favor of developing nations.

The climate change regime stands out for the kind and scope of differential treatment it contains in favor of developing nations<sup>189</sup>. The level of differential treatment under the climate regime where certain States are subject to greenhouse gas (GHG) reduction targets and timelines while others are not, has been a source of heated debate over the years<sup>190</sup>. On analyzing the COP decisions (2007), Bali Action Plan, 2009 Copenhagen Accord, 2010 Cancun Agreements and 2011 Durban Platform shows that there has been a prominent "shift from differential treatment in favor of developing countries towards symmetry in legal requirements placed on countries"<sup>191</sup>.

---

<sup>185</sup> UNFCCC, Article 3.5 and Kyoto Protocol, Article 2.3

<sup>186</sup> *Supranote* 181

<sup>187</sup> Robyn Eckersley, "The Big Chill: The WTO and Multilateral Environmental Agreements", *Global Environmental Politics*, pg 25, May 2004

<sup>188</sup> *Id.*

<sup>189</sup> Duncan French and LavanyaRajamani, "*Climate Change and International Environmental Law: Musings on a Journey to Somewhere*", *Journal of Environmental Law*, Vol. 25, No. 3, 2013, pg 440 Oxford University Press <https://www.jstor.org/stable/10.2307/26168494>

<sup>190</sup> *Id.*

<sup>191</sup> LavanyaRajamani, "*The changing fortunes of differential treatment in the evolution of international environmental law*", *Royal Institute of International Affairs* 1944, Vol. 88, No. 3, May 2012, pg 617, Oxford University Press, <https://www.jstor.org/stable/23255553>, accessed on August 14 2021

The MEA negotiations have led to the incorporation of climate-friendly trade-restrictive measures in the MEA. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which governs the export and import of specified endangered species through a permit system, has banned the commercial trade of the most endangered species<sup>192</sup>.

The trade measures are sometimes treated as sanctions to enforce compliance with an MEA, like when the United States banned imports from Thailand as a punishment for violating facets of CITES<sup>193</sup>. WTO members enact trade-restrictive measures for a variety of reasons like protection of human, animal, or plant life or health, and for the conservation of non-renewable natural resources, if such measures are accompanied by restrictions on production and consumption domestically<sup>194</sup>.

### **3.5 COMMITTEE ON TECHNICAL BARRIERS TO TRADE**

Technical barriers to trade (TBT) are the divergent non-tariff barriers that use domestic regulatory measures as a means of preserving their environment and protecting domestic industries<sup>195</sup>. The TBT Agreement seeks basically ensures that ‘mandatory product regulations, voluntary product standards, and conformity assessment procedures’ do not unnecessarily obstruct international trade<sup>196</sup>. It also seeks to prevent protectionism without overstepping the autonomy of a Member to enact sufficient product regulations for approved domestic policy purposes<sup>197</sup>.

Through the non-discrimination concept, the TBT Agreement explicitly urges members to build their measures on transparent rules and international norms in order to establish a

---

<sup>192</sup> Jenny Bates, “Multilateral Environmental Agreements and the World Trade Organization”, Backgrounder,

<https://www.tcd.ie/Economics/staff/amthhews/FoodCourse/LectureTopics/FoodSafety/MEAs%20and%20the%20WTO.htm>, October 1999

<sup>193</sup> *Id.* (Such treatment of trade measures as sanctions pave way for protectionism)

<sup>194</sup> Article XX of the General Agreement on Tariffs and Trade (GATT) deals with the general exceptions to WTO rules, circumstances in which trade restrictions are exempted from legal challenge.

<sup>195</sup> United Nations, “International Classification of Non-Tariff Measures”, UNCTAD, 2015, pg 15, [https://unctad.org/system/files/official-document/ditctab20122\\_en.pdf](https://unctad.org/system/files/official-document/ditctab20122_en.pdf)

<sup>196</sup> Arthur E. Appleton, “Technical barriers to Trade”, UNCTAD, pg 3

[https://unctad.org/system/files/official-document/edmmisc232add22\\_en.pdf](https://unctad.org/system/files/official-document/edmmisc232add22_en.pdf), 2003

<sup>197</sup> *Id.*

fair and predictable trade environment<sup>198</sup>. The TBT committee plays a vital role in serving the WTO members by discussing technical assistance activities and related disputes and simultaneously ensures, by reviewing the implementation process of the TBT Agreement annually, that no specific law or provision affects trade<sup>199</sup>.

With the formulation of appropriate global market-based policies which state a price for GHG emissions and fulfill the climate change objectives in important policy areas like energy, transport, agriculture and other measures to enhance technological innovation, GHG emissions can be reduced to comparatively lower costs<sup>200</sup>. To comply with the TBT committee's discussions on technical regulations related to climate change such as standard specification, product requirements, permissible limits of emission and energy consumption, techniques such as product labeling or systems to check standard conformity are being adopted.<sup>201</sup>

For environmental and health concerns, it is normal for member states to adopt measures to limit the sale or ban the import of items that are not energy-efficient or to prohibit the use of certain GHGs in product contents<sup>202</sup>. The Government bans and restrictions that remove or reduce the trade opportunities are imposed after considering the availability of reasonable alternatives and also factors such as technical feasibility and cost-effectiveness<sup>203</sup>. Problems arise when such regulations, without complying with the national treatment principle, are formulated in such a manner as to favor domestic industries and prevent the foreign take-over of markets<sup>204</sup>.

The Japanese Ministry of Transport proposed a fuel efficiency standard that reduced the tax rate of Japanese vehicles with small engine size and high fuel efficiency to control

---

<sup>198</sup> World Trade Organization, "Technical Barriers to Trade",

[https://www.wto.org/english/tratop\\_e/tbt\\_e/tbt\\_e.htm](https://www.wto.org/english/tratop_e/tbt_e/tbt_e.htm), Accessed on August 15, 2021

<sup>199</sup> *Id.* (Regulations discussed by the committee include the fuel economy standards, eco-design requirements.)

<sup>200</sup> Richard Baron and Justine Garrett, "Trade and Environment Interactions: Governance Issues", Background paper for the 35th Round Table on Sustainable Development, OECD, 28-29 June 2017

<sup>201</sup> World Trade Organization, Trade and Climate Change, WTO UNEP Report 2009,

[https://www.wto.org/english/res\\_e/booksp\\_e/trade\\_climate\\_change\\_e.pdf](https://www.wto.org/english/res_e/booksp_e/trade_climate_change_e.pdf), pg 21

<sup>202</sup> *Id.*

<sup>203</sup> ZhongXiang Zhang and Lucas Assuncao, "Domestic Climate policies and WTO", East-West Centers Working Papers, Environment Series, No 51, pg 9, February 2002

<sup>204</sup> *Id.*

Carbon dioxide emissions to meet its Kyoto commitments. The EU had a comparative advantage on exports of their medium-range and luxury cars to the Japanese market and the proposed standards would ruin their market. So EU officials were prepared to challenge the standards in WTO<sup>205</sup>. Japan notified the TBT Committee and justified its intention to introduce new energy efficiency standards for passenger cars as a means of promoting energy efficiency in order to cope with rising energy consumption and climate change concerns<sup>206</sup>.

Regulations may be authorized under the TBT Agreement if they are deemed to satisfy legitimate goals such as national security needs, the prohibition of deceptive activities, the “protection of human health or safety, animal or plant life or health, or the environment”<sup>207</sup>. The ultimate legitimate objective of any climate change measure should be the protection of the environment, and the TBT committee reviews such measures taken by countries and checks whether they are in harmonization with the trade or whether they unnecessarily obstruct international trade<sup>208</sup>.

The TBT Agreement urges WTO members to establish international standards in order to achieve consistency and harmonization in technological climate policies such as technical rules, standards, and conformity assessment procedures and to prevent them from acting as a trade barrier since the difference in norms among the nations raise the cost of information and make exports difficult<sup>209</sup>.

Fish trade export is an area where technical regulations and standards are used extensively and the strict food-safety regulations adopted by different countries often create obstacles in its trade, especially for exporters of fishery products from developing countries<sup>210</sup>. Therefore, the TBT Agreement seeks to find a balance between the trade-

---

<sup>205</sup> International Centre for Trade and Sustainable Development, Bridges Weekly Trade News Digest, Vol. 3, 18 January 1999

<sup>206</sup> WTO TBT Notification G/TBT/Notif.99.3, 11 January 1999.

<sup>207</sup> Article 2.2 TBT Agreement

<sup>208</sup> Ludivine Tamiotti, Robert The and Ors, “Trade and Climate Change”, Report by the United Nations Environment Program and the World Trade Organization, pg 126, 2009

<sup>209</sup> *Id.*

<sup>210</sup> Peter Greenhalgh, “Trade Issues Background Paper: Sanitary and Phyto-Sanitary (SPS) Measures and Technical Barriers to Trade (TBT)”, Policy Research – Implications of Liberalization of Fish Trade for Developing Countries, Food and Agriculture Organization (FAO) of the United Nations, Rome, July 2004

facilitating elements of standards and their potential to distort trade by guaranteeing that such restrictions do not obstruct international trade by favoring its domestic industry.<sup>211</sup>

Eco-labeling is a form of environmental labeling based on a “life-cycle analysis of environmental effects of products” comprising the process and production-related obligations, which helps a consumer in identifying an environmentally friendly product to its alternative in the same category to support him in attaining the Kyoto targets<sup>212</sup>. Such a certification might act as a barrier to trade because the chances are likely that the country establishing the scheme might favor domestic industries by leaving out similar or competing products of foreign industries<sup>213</sup>.

The industries in developing countries often find the labeling schemes related to climate change difficult to comply with since their lack of carbon-efficient technologies prevent their products from getting certified for labels in the developed countries<sup>214</sup>. Exporters from developing countries, especially those who export perishable goods, are discouraged because of the delay in and the expensive nature of acquiring a foreign certification to use a particular label<sup>215</sup>.

### **3.6 COMMITTEE ON TRADE AND ENVIRONMENT**

The WTO established the Committee on Trade and Environment (CTE) to follow up on the link between policies of trade and environment and to recommend the WTO in modifying its rules, if necessary, after taking into account various environmental factors<sup>216</sup>. The CTE recognizes the importance of “enhancing the mutual supportiveness of trade and environment and the reduction or elimination of tariffs and NTBs on environmental goods and services” for mitigating climate change.<sup>217</sup> The committee seeks

---

<sup>211</sup> *Id.*

<sup>212</sup> Global Eco-labeling Network (Gen) “Information Paper: Introduction To Eco-labeling”, July 2004, <https://globalecolabelling.net/assets/Uploads/intro-to-ecolabelling.pdf>, Accessed on August 15, 2021

<sup>213</sup> *Id.*

<sup>214</sup> A. E. Appleton, “Private climate change standards and labeling schemes under the WTO Agreement on Technical Barriers to Trade”, *International Trade Regulation and the Mitigation of Climate Change*, pg 134, 2019, doi:10.1017/cbo9780511757396.008

<sup>215</sup> *Id.*

<sup>216</sup> Gary Clyde Hufbauer and Jisun Kim, “The World Trade Organization and Climate Change: Challenges and Options”, Working Paper Series 9, pg 3, Peterson Institute for International Economics, 2009

<sup>217</sup> *Id.*



to make trade an effective instrument of sustainable development through its structure, content, timetable and mechanisms.<sup>218</sup>

The CTE, along with its observers such as ITC, OECD and UNCTAD, acts as a forum which has accepted the contemporary tendency of countries to join and act together to formulate specific and harmonized legal protection considering the impact of trade on the environment and vice-versa<sup>219</sup>. Hence the scope of matters under CTE has widened to include a series of “climate and renewable energy technologies and low-carbon solutions for transportation and buildings”<sup>220</sup>.

Market access requirements, also known as Process and Production Methods (PPM), in the form of technical measures and information requirements have become a concern for developing countries<sup>221</sup>. Though its intent is to differentiate goods based on the magnitude of the environmental impact it causes in the production or consumption stage, rich countries might embrace it as “green protectionism” to block their exports<sup>222</sup>.

A series of trade and related environmental disputes ruled by the WTO till date have provided an idea as to how such climate policy disputes would be resolved in the future. These disputes were not claims challenging the environmental objectives taken by the governments concerned but regarding the discriminatory or unnecessarily trade-restrictive policies<sup>223</sup>. In the 1984 Tuna–Dolphin case<sup>224</sup> WTO had suggested that a country cannot frame trade policies that focused on PPMs and not the product of another country. But there was a significant shift in WTO’s ruling when it came to the landmark shrimp– turtle

---

<sup>218</sup> Jennifer Schultz, “*The GATT/WTO Committee on Trade and the Environment-Toward Environmental Reform*”, *The American Journal of International Law*, Vol. 89, April 1995 No. 2, Cambridge University Press <https://www.jstor.org/stable/2204216>

<sup>219</sup> A. C. Vieira, “*The WTO and the Paris Agreement: A Dialogue on Climate Change Mitigation*”, *Beijing Law Review*, Vol 11, April 2020

<sup>220</sup> *Supranote* 214

<sup>221</sup> Maria Victoria Lottici and Carlos Galperin, “*Green Trade Protectionism: An Analysis of Three New Issues that Affect Developing Countries*”, *Chinese Journal of Urban and Environmental Studies* Vol. 2, No. 2, World Scientific Publishing Company, 2014

<sup>222</sup> *Id.*

<sup>223</sup> The Economist Intelligence Unit, “*Climate Change and Trade Agreements: Friends or Foes*”, International chamber of commerce, <https://iccwbo.org/content/uploads/sites/3/2019/03/icc-report-trade-and-climate-change.pdf>, 2019, Accessed on August 16, 2021

<sup>224</sup> Appellate Body Report, United States – Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products, WT/DS381/AB/R, adopted on 16 May 2012

case<sup>225</sup> in 1997 when it approved an import ban of the US, stating that it fell under the general exceptions of GATT (Article XX). WTO adopted a stand that countries will be allowed to adopt trade-restricting measures based on PPMs in third countries if they can justify it on the basis of protecting an “exhaustible natural resource”<sup>226</sup>.

The CTE agreed to begin negotiations on specific issues related to trade and environment at the 2001 Doha Conference, which would be discussed in special sessions known as Committee on Trade and Environment Special Session (CTESS)<sup>227</sup>. These special sessions of the CTE focused on certain issues like negotiating the relationship between the WTO multilateral treaties and treaties of other regimes, market access for environmental goods and services and especially issues related to trade and climate change<sup>228</sup>.

The committee has coined the term dialogue of sources or dialogue of regimes which is the simultaneous, harmonious and coordinated coexistence of legal sources<sup>229</sup>. In 2018, the UN Environment and the CTE decided to launch a new dialogue on “promoting innovative ways of using trade to generate greater opportunities to strengthen our economies and our environments at the same time.”<sup>230</sup> As part of fostering this connection, stakeholders from various sectors were urged to share ideas, highlight successful experiences, and enhance knowledge of how trade might more effectively assist in bringing about equitable and sustainable development<sup>231</sup>.

If multilateral actions are taken by the combined effort of CTE, WTO and the Paris Agreement, countries with climate-friendly policies will be able to trade their products in an open market without the fear of losing competitiveness<sup>232</sup>. Countries whose economies

---

<sup>225</sup> Appellate Body Report, United States – Import Prohibition of Certain Shrimp and Shrimp Products, WT/DS58/AB/R, adopted 6 November 1998, DSR 1998:VII, 2755 WT/DS58/23

<sup>226</sup> *Supranote 223*

<sup>227</sup> World Trade Organization, “Trade and Environment”, [https://www.wto.org/english/tratop\\_e/envir\\_e/envir\\_e.htm](https://www.wto.org/english/tratop_e/envir_e/envir_e.htm)

<sup>228</sup> *Supranote 218*

<sup>229</sup> *Supranote 219*

<sup>230</sup> WTO and UN Environment, “Making trade work for the environment, prosperity and resilience”, [https://www.wto.org/english/res\\_e/publications\\_e/unereport2018\\_e.pdf](https://www.wto.org/english/res_e/publications_e/unereport2018_e.pdf), Accessed on August 16, 2021

<sup>231</sup> *Id.*

<sup>232</sup> James Bacchus, “Global Rules for Mutually Supportive and Reinforcing Trade and Climate Regimes”, Expert Group on Measures to Address Climate Change and the Trade System, Policy Options Paper,

are largely dependent on fossil fuels or other similar dependencies might find this “multilateral action towards support for NDC combined with multilateral negotiations on trade rules” as one of the best ways to deal with the issue of decreasing competitiveness<sup>233</sup>.

Removing trade barriers is one of the main objectives of WTO, however, through discussions in CTE, sustainable development objectives like moving from fossil fuels to renewables are met. The discussions to conciliate trade and climate change at the global and regional level have impacted industries and trade policies mostly when regional policies posed as trade barriers in the disguised form of environmental protection<sup>234</sup>.

Thus, when international economic organizations incorporate discussions relating to the consolidation of trade and climate change policies in multilateral trade negotiations, they are in fact, avoiding disputes that might arise between the WTO members in the future<sup>235</sup>. Climate change has had a tremendous physical impact on developing countries. However, the economic impact can be minimized and controlled with proper implementation and balance of climate change mitigation policies and trade measures at the regional and global levels. When countries are given the autonomy to enact climate regulations, they must not frame them in ways that are favorable solely to them.

---

International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum, pg 7, 2016

<sup>233</sup> *Id.*

<sup>234</sup> Rob Dellink, Hyunjeong Hwang, Elisa Lanzi and Jean Chateau, “International Trade Consequences of climate change” OECD Trade and Environment Working Papers, 2017, pg 51,

<https://dx.doi.org/10.1787/9f446180-en>, 2017

<sup>235</sup> *Id.*

**CHAPTER 4**  
**PROTECTION OF INDIAN SEAFOOD EXPORT AFFECTED BY CLIMATE**  
**CHANGE MEASURES**

**4.1 INTRODUCTION**

Despite market concerns caused by the Covid-19 pandemic outbreak, “India exported 11, 49, 341 Metric Tons of seafood valued US dollar 5.96 billion, or Rupees 43,717 crore, during the fiscal year 2020-21”<sup>236</sup>. India’s export mainly consists of marine products like frozen shrimp, frozen fish, frozen cuttlefish/squid, frozen lobster, live items, chilled items, dried items, shells, and others<sup>237</sup>.

However, this fishing industry is also a major contributor to climate change since the boats and ships used for fishing and transportation in the ocean leaves behind a heavy amount of carbon dioxide due to the burning of diesel fuel<sup>238</sup>. Other short-lived pollutants like sulphur oxides which have a cooling effect and black carbon, which has a warming effect, are also emitted by the boats.<sup>239</sup> The physical processes and features of the oceans are being profoundly altered by the increasing temperatures and carbon resulting in ocean warming, acidification, de-oxygenation, and catastrophic events like marine heatwaves. These changes have already had an impact on coastal and marine species and ecosystems<sup>240</sup>. Since 1950, the oxygen content of the ocean has declined by 2%, resulting

---

<sup>236</sup> Marine Products Export Development Authority, <https://mpeda.gov.in/>, accessed on September 28, 2021

<sup>237</sup> *Id.*

<sup>238</sup> Eric Hand, “Cleaner fuels for fishing boats could backfire on the climate”, Science Magazine, February 2016, doi:10.1126/science.aae0324

<sup>239</sup> *Id.*

<sup>240</sup> International Union for Conservation of Nature, “Addressing Ocean and Climate Issues Across Relevant Multilateral Environmental Agreements”, Policy Briefs, pg 2 [https://www.iucn.org/sites/dev/files/content/documents/policybrief\\_climatechangeandmultilateralagreements.pdf](https://www.iucn.org/sites/dev/files/content/documents/policybrief_climatechangeandmultilateralagreements.pdf), 2020, Accessed on August 13, 2021

in almost 500 dead or low-oxygen zones, where low oxygen levels are putting marine life under duress<sup>241</sup>.

The improvement process in reducing emissions during the fishing process is under challenge because of a lack of regulation regarding the design and standard of boats.<sup>242</sup> As a consequence, the technical regulations and standards for fish trade imposed by countries are difficult to be met by India and could lead to obstacles in trade. Food safety has received remarkable attention in recent years, as consumers have become more conscious of the necessity of healthy food from both an economic and health standpoint and has resulted in the development of various regulations on food trade at the international level<sup>243</sup>. To ensure the quality and safety of imported seafood, several nations have enacted strict laws and restrictions.<sup>244</sup>

Central Marine Fisheries Research Institute of India conducts extensive research on India's fisheries sector and their timely and accurate information prepares the fisheries sector in taking necessary action to reduce the impact of climate change in the marine ecosystem<sup>245</sup>. Marine Products Exports Development Authority (MPEDA) is a statutory body in India that focuses on promoting the export of marine products and has the authority to adopt measures to address the challenges faced by the seafood industry<sup>246</sup>.

The body has opposed Illegal Unreported and Unregulated (IUU) fishing and acknowledged that traceability is an important criterion for sustaining the exports and market access and hence it devised an online enrolment system that generates a unique identification number for every farmer so that the product can be easily traced back to its originator if a banned or unwanted substance is present<sup>247</sup>. It has become necessary for

---

<sup>241</sup>*Id.*

<sup>242</sup>*Id.*

<sup>243</sup> P. Shinoj, B. Ganesh Kumar, P.K. Joshi and K.K. Datta, "Export of India's Fish and Fishery Products: Analyzing the Changing Pattern/Composition and Underlying Causes", Indian Journal of Agriculture and Economics, Vol. 64, No. 4, December 2009

<sup>244</sup>*Id.*

<sup>245</sup> Shyam.S.Salim and Harsha Elizabeth James "Climate Change Challenges on Indian marine fisheries sector", Ministry of Environment, Forest and Climate Change, 2018, pg 264

<sup>246</sup> MPEDA Newsletter, Vol 7, No 10, January 2020, [http://mpeda.gov.in/wp-content/uploads/2021/02/MNL-Jan-2020-English\\_compressed-1.pdf](http://mpeda.gov.in/wp-content/uploads/2021/02/MNL-Jan-2020-English_compressed-1.pdf), accessed on September 30, 2021

<sup>247</sup>*Id.*

the country to update or revise each step of the whole export process (from the catch till the reach) since the importing countries may reject the consignment stating non-compliance with safety and quality standards to meet their climate change mitigation targets as per the Paris Agreement.

Border carbon tax or border carbon adjustment is a climate change mitigation measure whereby countries introduce product climate standards to be compulsorily met by the imported products depending upon the level of carbon dioxide emissions related to the method of production of the product and its transportation to the importing market<sup>248</sup>. When countries impose carbon taxes, transportation services companies can be expected to raise the charges for freight transport and such increased freight transportation costs would have a strike at the import and export quantities of developing countries, especially those remote countries which are far from the major world markets<sup>249</sup>.

The physical impacts of climate change and more than that the cross-border impact of domestic and other countries' response measures, policies, actions and programs geared towards mitigating climate change undertaken by the parties to the UNFCCC, Kyoto Protocol and Paris Agreement has affected the export profiles of the developing countries.<sup>250</sup>

The domestic response measures are taken by a country, for instance, a national carbon tax or the elimination of national subsidies for fossil fuels to mitigate climate change will affect the producers and consumers economically, i.e., the cost of production of a product which relies on fossil fuel input will increase and the consumers' income will decline due to the higher relative cost<sup>251</sup>. This affects the competitiveness of the exports of such products and would reduce the imports due to lesser consumer demand.<sup>252</sup> Therefore, such measures directly affect the trade of the implementing country and could indirectly

---

<sup>248</sup>Condon M and Ignaciuk A, "*Border Carbon Adjustment and International Trade: A Literature Review*", SSRN Electronic Journal, 2013

<sup>249</sup>*Id.*

<sup>250</sup>United Nations, "Trade and Environment Review 2021: Trade-climate readiness for developing countries", UNCTAD, UN Publications, 2021.

<sup>251</sup>*Supranote 238*

<sup>252</sup>*Id.*

affect the trade of other countries irrespective of their implementation of similar measures.

## **4.2 PROTECTION OF INDIAN SEAFOOD TRADE UNDER WTO**

### **4.2.1 THE NON-DISCRIMINATION PRINCIPLE**

The objective of WTO is generally the reduction of different kinds of trade barriers or it can be termed as the "principle of trade liberalization," and several principles were formulated in furtherance of this objective<sup>253</sup>. A main agreement of the WTO is the GATT and among its trade principles, the most significant is the principle of non-discrimination of goods treated in trade among countries; that is, it prohibits the discrimination between like products on the basis the country of origin of such products<sup>254</sup>.

Various climate change measures adopted by countries are likely to violate a rule of non-discrimination, the "Most Favored Nation treatment" under Article I, since such measures are set in motion by the country of origin of the products<sup>255</sup>. As per the most-favored-nation principle, Article I of the GATT states that if any advantage is given by a contracting party to a product of another country, then that same advantage must be extended unconditionally to a like product of all other contracting parties<sup>256</sup>.

Another concept through which the rule of non-discrimination is approached in WTO is national treatment, which states that "imported products be provided no less favorable treatment as "like" domestic products," that is, whatever rights are extended to the national industry must be extended to the industries coming from other nations as well, except when restrictions are placed on physical characteristics or market competitiveness of the products<sup>257</sup>. The concept of national treatment mostly relates to internal measures, such as a GHG-related tax or an energy-efficiency requirement on specific items, and it

---

<sup>253</sup> Steve Charnovitz, "The World Trade Organization in 2020", Journal of International Law & International Relations Vol. 1, pg 168, 2015

<sup>254</sup> Christoph Schwew, "The WTO and Recent Developments in World Trade", Vol 3 ACTA Societatis Martensis, Pg 192, (2007-2008)

<sup>255</sup> UNCTAD, "Training module of the WTO agreement on Sanitary and Phytosanitary measures", [https://unctad.org/en/Docs/ditctncd20043\\_en.pdf](https://unctad.org/en/Docs/ditctncd20043_en.pdf), November 2005, accessed on August 28, 2021

<sup>256</sup> GATT, Article 1

<sup>257</sup> GATT, Article 3

requires an importing state not to impose internal taxes on imported goods that are higher than those imposed on similar local goods<sup>258</sup>.

The Appellate Body has expressly refrained from defining the exact scope of the word ‘like’, and hence the “likeness” of products has always been an issue when it comes to national treatment<sup>259</sup>. The end-uses of products in a particular market, customer's tastes and preferences, the product's characteristics, nature and quality, tariff division, and the presence of competitive relationships between goods in the marketplace are among the most important variables that determine likeness<sup>260</sup>.

Though WTO is mainly a forum for conducting “trade negotiations among its members concerning their multilateral trade relations in matters dealt with under the agreements and a forum for further negotiations concerning their multilateral trade relations”, it has gained popularity from the benefits it grants to its members<sup>261</sup>. “The MFN tariffs and the complementary principles” ensures stability in the trading conditions among the members and the WTO obligations protect the national economies through its obligations to make trade policies more transparent and predictable<sup>262</sup>.

Therefore the principle of transparency ensures that the trade rules are clear, public, and legally certain and stable, so that international traders may predict the market conditions, enhance the export and import perspectives and attract foreign direct investment, which is complementary to international trade<sup>263</sup>.

#### **4.2.2 GATT EXCEPTIONS**

There are certain situations in which the members of WTO can evade the strict compliance of GATT rules<sup>264</sup>. Members may take policy actions that are essential to safeguard human, animal, or plant life or health or that are related to the protection of

---

<sup>258</sup> GATT, Article 3, para 2

<sup>259</sup> Appellate Body Report, European Communities — Measures Affecting Asbestos and Asbestos-Containing Products WT/DS135/AB/R, (adopted March 12, 2001)

<sup>260</sup> Organization of American States [OAS] Panel Report, Japan — Customs Duties, Taxes and Labeling Practices on Imported Wines and Alcoholic Beverages, L/6216–34S/83 (adopted on Oct. 13, 1987)

<sup>261</sup> *Supranote* 238

<sup>262</sup> *Id.*

<sup>263</sup> *Id.*

<sup>264</sup> GATT, Article XX



finite natural resources in order to protect the environment. Regulatory measures must neither be arbitrary nor be unjust discrimination between nations with similar conditions or a cloaked limitation on international trade in order to be justified under the exceptions<sup>265</sup>.

Before qualifying a measure under the exceptions, the Appellate Body of WTO

- “Checks the availability of lesser discriminatory courses of action,
- Ensures that before imposing the trade restriction, the regulating country made every effort in good faith to negotiate with all the affected trading partners, even if no agreement was reached.
- Ensures that the factors examined in designing restrictions on foreign products is the same as in designing restrictions on domestic products and
- Checks whether the regulation takes into account different conditions in trading partner countries and when necessary, maintain some flexibility given such differences”<sup>266</sup>.

In the famous US-Shrimp case<sup>267</sup>, the WTO Appellate Body held that the ban imposed by the USA on countries including India on the basis of the method of harvesting the shrimp, which is a process-based measure, was an illegal ban under the GATT Agreement<sup>268</sup>. Only after further negotiations, the WTO upheld the measure as qualified under the General Exception of Article XX of GATT, which allows countries to take actions and formulate policies for the protection of natural resources<sup>269</sup>. WTO has been making every effort to promote international trade and solve trade disputes.<sup>270</sup>

---

<sup>265</sup> Patrick Low and Gabrielle Marceau, “The Interface between the Trade and Climate Change Regimes: Scoping the Issues”, WTO publications, January 2011

<sup>266</sup> Appellate Body Report, United States–Standards for Reformulated and Conventional Gasoline, WT/DS2/AB/R, 36

<sup>267</sup> Appellate Body Report, United States–Import Prohibition of Certain Shrimp and Shrimp Products: Recourse to Article 21.5 of the DSU by Malaysia, AB-2001-4, WT/DS58/AB/R, 63, 80-81

<sup>268</sup> *Id.*

<sup>269</sup> WTO, “WTO rules and environmental policies: GATT exceptions”, [https://www.wto.org/english/tratop\\_e/envir\\_e/envt\\_rules\\_exceptions\\_e.htm](https://www.wto.org/english/tratop_e/envir_e/envt_rules_exceptions_e.htm), Accessed on August 20, 2021

<sup>270</sup> Jing Ma and Yuduo Lu, “Free Trade or Protection: A Literature Review on Trade Barriers”, Research in World Economy Vol. 2, No. 1; April 2011, doi:10.5430/rwe.v2n1p69, Accessed on August 20, 2021.

Therefore the US-Shrimp ruling is a landmark case which made it very particular and clear that the environmental measures formulated by countries on the basis of differences in the processes or production method of a product can be WTO-compliant under the general exceptions clause, only if such measures are applied in a flexible, transparent and procedurally fair manner in good faith and after taking efforts for negotiations and cooperation with the exporting states that might be affected.<sup>271</sup>

#### **4.2.3 TBT AND SPS AGREEMENTS**

When trading goods, countries use certain trade measures in order to protect the environment, human and animal life and to prevent transmission of diseases under the WTO's two international agreements- the Technical Barriers to Trade (TBT) Agreement and the Sanitary and Phytosanitary (SPS) Agreement<sup>272</sup>. Through these agreements, WTO ensures that requirements such as quality, labeling and methods of analysis applied to internationally traded goods do not mislead the consumer or result in discrimination, favoring the domestic producers or goods of different origins.<sup>273</sup>

With the development of Hazard Analysis Critical Control Point (HACCP), a "management system in which food safety is addressed through the analysis and control of biological, chemical, and physical hazards from raw material production, procurement and handling, to manufacturing, distribution and consumption of the finished product," high costs can be imposed from the perspective of the developing country supplier<sup>274</sup>.

Concerns predominantly arise in the form of mitigation and enhancement measures since SPS measures are not likely to be relaxed<sup>275</sup>. TBTs are most common when it comes to specification and labeling. While the latter may help to promote sustainable fishing practices, it does so at the expense of producers. Eco-labeling, for example, is voluntary,

---

<sup>271</sup>*Id.*

<sup>272</sup>*Supranote 258*

<sup>273</sup>Bostock T, Greenhalgh P and Kleih, U, "Policy Research – Implications of Liberalization of Fish Trade for Developing Countries: Synthesis Report". Chatham, UK: Natural Resources Institute, 2004

<sup>274</sup> United States Food and Drug Administration, "HACCP Principles & Application Guidelines", <https://www.fda.gov/food/hazard-analysis-critical-control-point-haccp/haccp-principles-application-guidelines>, December 2017, Accessed on August 24, 2021

<sup>275</sup>*Supranote 271*

and there is room for negotiation for developing-country suppliers who want to engage.<sup>276</sup>

The SPS Agreement basically acknowledges that nations have the authority to determine the necessary measure of protection to preserve human, animal, and plant life and health within their own lands to safeguard against hazards to food safety, animal health and welfare, and plant health<sup>277</sup>. However, the measures taken to achieve this must be proportionate and scientifically sound and should not result in unnecessary discrimination between countries where similar conditions prevail<sup>278</sup>.

When countries adopt measures that conform to international standards or when no standard exists, differences might occur due to the variances in the level of protection adopted by a country.<sup>279</sup> The SPS Agreement obliges the parties not to frame and apply measures in such a way that it appears to be a disguised restriction on international trade or an unjustified trade barrier. In defining the appropriate levels of SPS measures, the Agreement emphasizes the significance of risk assessment and the need for transparency in the creation and execution of policies, as well as the acceptance of international standards<sup>280</sup>.

The Export (Quality Control and Inspection) Act 1963 was enacted by India to develop its exports through quality management and inspection of commodities to be exported<sup>281</sup>. The standard specification relates to the standard norms which have been set up by the government in consonance with the various organizations, with the view to attain conformity in exports as well as to comply with the obligations mentioned under the Sanitary and Phyto-sanitary Agreement<sup>282</sup>.

---

<sup>276</sup>ManasviKamat and ManojKamat, “*Implications of the WTO on Indian Marine Industry, Issues and Policy Perspectives*”, Munich Personal RePEc Archive, December 2007, pg 9

<sup>277</sup>*Id.*

<sup>278</sup> Food and Agricultural Organization of UN, “Export of fish and fish products from India Non-tariff measures”, Globefish Insight, Issue 2, Rome 2021

<sup>279</sup>*Id.*

<sup>280</sup>*Supranote 248*

<sup>281</sup> India Filings, The Export (quality control and inspection) Act 1963, <https://www.indiafilings.com/learn/export-quality-control-and-inspection-act/>, accessed on august 25, 2021

<sup>282</sup>RohinKaul, “*WTO Agreement On The Application Of Sanitary And Phytosanitary Measures And The Indian Experience*”, Indian Law Institute (ILI) Law Review, vol 78, Winter Issue, pg 84, 2016

What the TBT Agreement basically aims is to maintain a balance between the trade-facilitating aspects of standards and the obligating countries' potential to distort trade<sup>283</sup>. Technical regulations and standards, including packaging, marking, and labeling requirements, as well as procedures for assessing conformity with technical regulations and standards, should not obstruct international trade by favoring domestic producers or goods of different origins.<sup>284</sup>

The regulations and standards which “discriminate between domestic products and foreign products that are alike and between ‘like products’ from different WTO Members” against the national treatment principle and the most favored nation principle are prohibited by the rules of the TBT Agreement, including its Code of Good Practice for the Preparation, Adoption and Application of Standards<sup>285</sup>. For instance, when environmental trade measures are enacted by distinguishing the products based on their production or processing methods (PPMs) and if it’s in no way influencing the physical characteristics of the products, then it is deemed to be a violation of these obligations.<sup>286</sup>

#### **4.2.4 SUBSIDIES**

Under the Agreement on Subsidies and Countervailing Measures (SCM), a subsidy is defined as a financial contribution or benefit conferred by a government to its domestic industries<sup>287</sup>. The ability of Annex 1 nations to fulfill their national emissions objectives depends on their ability to substitute fuels and innovate technical solutions in the face of global climate change while clean technologies, on the other hand, are capital and knowledge demanding, and renewable technologies are not yet cost-competitive with traditional technology<sup>288</sup>.

---

<sup>283</sup> Peter Greenhalgh, “Implications of Liberalization of Fish Trade for Developing Countries Trade Issues, Background Paper: Sanitary and Phyto-Sanitary (SPS) Measures and Technical Barriers to Trade (TBT)”, Project PR 26109, July 2004

<sup>284</sup> *Id.*

<sup>285</sup> Carolyn Deere, “Eco-Labeling And Sustainable Fisheries” IUCN - The World Conservation Union and United Nations Food and Agriculture Organization (FAO) pg 15, 1999

<sup>286</sup> *Id.*

<sup>287</sup> WTO, “Agreement on Subsidies and Countervailing Measures (the Subsidies Agreement)”, [https://www.wto.org/english/tratop\\_e/scm\\_e/subs\\_e.htm](https://www.wto.org/english/tratop_e/scm_e/subs_e.htm), accessed on May 15, 2021

<sup>288</sup> ZhongXiang Zhang and Lucas Assuncao, “ Domestic Climate policies and WTO”, East-West Centers Working Papers, Environment Series, No 51, pg 9, February 2002

As a result, Annex 1 governments are most likely to utilize one or more of the aforementioned subsidy methods, or a combination of them, to promote energy preservation, renewable energy consumption, and/or higher uptake of low-carbon technology and if producers are encouraged to take environmentally beneficial actions, such subsidies contribute positively to the environment<sup>289</sup>. It is feasible that, by providing domestic industries with subsidy incentives, governments would seek to promote industrial development while also reducing current and future greenhouse gas emissions<sup>290</sup>.

However, subsidies can be questioned if found to be in violation of WTO rules in certain circumstances<sup>291</sup>. For instance, if the industry in which the subsidies are implemented is extensively open to international trade, the subsidies might be challenged under WTO rules. A situation when subsidies have a harmful impact on the environment is that when energy and transport subsidies are largely deemed to distort trade, and in most cases to cause environmental degradation and in such a case, the first step in reducing carbon emissions should be to reform energy and transportation subsidies and get the prices appropriate to reflect their production costs and environmental externalities<sup>292</sup>.

The developed countries claimed before the WTO that billion dollars of fisheries subsidies create trade distortions in the world fish market like overfishing and depletion, and should therefore scrap subsidies for fishermen<sup>293</sup>. Though India is willing to accept this agreement, she has raised her voice to ensure that such an agreement will maintain a balance between current and future fishing needs of developing countries and to keep in mind the special and differential treatment (S&DT) and developmental needs<sup>294</sup>. India needs a suitable and productive special and differential treatment (S&DT) just as it is provided in the guiding principles of the Marrakesh Agreement and limiting it just to the

---

<sup>289</sup>*Id.*

<sup>290</sup>*Id.*

<sup>291</sup> Richard Baron and Justine Garrett, "Trade and Environment Interactions: Governance Issues", OECD, Background paper for the 35th Round Table on Sustainable Development, pg 19, 28-29 June 2017

<sup>292</sup>*Id.*

<sup>293</sup> AsitRanjan Mishra, "India opposes fisheries deal at WTO", <https://www.livemint.com/news/india/india-opposes-fisheries-deal-at-wto-11626351567634.html>, July 2021, accessed on August 28, 2021

<sup>294</sup>*Id.*

poor and artisanal fishermen only is inappropriate and not acceptable<sup>295</sup>. When negotiations take place with respect to fisheries subsidies, two things can be verified; the extent of the legitimacy of WTO as a multinational negotiating platform and the capability of the international trading system to respond and resolve common global issues<sup>296</sup>.

#### **4.3 EFFECT OF CLIMATE CHANGE MEASURES OF OTHER COUNTRIES ON INDIAN SEAFOOD EXPORT**

The Paris Agreement, the international agreement on climate change, has created certain legally binding obligations upon the parties to frame continuous planning processes for climate action based on national circumstances and the Nationally Determined Contributions<sup>297</sup>. Since they provide a considerable amount of flexibility to parties to formulate processes that are domestic rather than globally determined specific targets, the “trade versus environment” question will definitely arise<sup>298</sup>. Parties to the agreement may incorporate such measures in an existing legal framework or propose new legislation to reduce GHG emissions and while framing such policies, the parties have to be conscious of their trade commitments and ensure that it does not obstruct free trade<sup>299</sup>.

USA, European Union and China are the three major importers of Indian seafood, with the major export item being frozen shrimp, followed by frozen fish.<sup>300</sup> As a consequence of the physical effects of climate change, private traders who carry out the domestic fish marketing system in India faces problems in fish marketing like high perishability, cost of storage and transportation and zero guarantees of quality and quantity of the product<sup>301</sup>.

---

<sup>295</sup> *Id.*

<sup>296</sup> WTO, “WTO members edge closer to fisheries subsidies agreement“, [https://www.wto.org/english/news\\_e/news21\\_e/fish\\_15jul21\\_e.htm](https://www.wto.org/english/news_e/news21_e/fish_15jul21_e.htm), July 2021

<sup>297</sup> Di Leva, Charles E. and Shi, Xiaoxin "The Paris Agreement and the International Trade Regime: Considerations for Harmonization," Sustainable Development Law & Policy, Vol. 17, Issue 1, 2017, <http://digitalcommons.wcl.american.edu/sdlp/vol17/iss1/4>

<sup>298</sup> *Id.*

<sup>299</sup> *Id.*

<sup>300</sup> Shenoy Karun, “India exports 11,49,341 tons of seafood during FY21”, Times Of India, June 5, 2021 <https://timesofindia.indiatimes.com/business/india-business/india-exports-1149341-tonnes-of-seafood-during-fy21/articleshow/83259081.cms>, Accessed on August 19, 2021

<sup>301</sup> Ravindranath K, “Development of Strategies for Domestic Marketing of Fish and Fishery Products”, National Workshop, College of Fisheries Science, Nellore, 2008, pg 43.

Though the Indian seafood industry is a heavy export earner, problems like “economic shortcoming, technical constraints, institutional limitation, trade restrictions and marketing lacunae” stand in the way of its development.<sup>302</sup> Farmed shrimp production in China, anti-dumping duties of the USA, changing quality standards of the European Union have all complicated the seafood export industry of India.<sup>303</sup>

#### **4.3.1 MEASURES ADOPTED BY USA**

With respect to fish and fishery products, the USA has made the largest number of rejections for products from India on account of food safety and other violations under the United States Food and Drug Administration (USFDA)<sup>304</sup>. Being one of the world’s largest producers and major importers of fishery products, ensuring the safety of seafood is of particular concern to the United States, and “the risks associated with domestic and imported products motivated the introduction of a mandatory Hazard Analysis Critical Control Points (HACCP) approach to food safety regulation in seafood processing in 1997”<sup>305</sup>.

The Food and Drug Administration (FDA) has incorporated a number of measures with respect to the import of seafood such as “direct FDA inspections of foreign processing facilities, inspections of seafood importers, assessment of Foreign Supplier Verification Programs and foreign country control programs and other relevant information from foreign Competent Authorities and FDA overseas offices” and India were one of the first of such countries where FDA had directly operated.<sup>306</sup>

It was stated in the NDC of USA that it would incorporate climate change mitigation measures through already existing regulatory authorities<sup>307</sup>. Through the Seafood Import

---

<sup>302</sup>Supranote 243

<sup>303</sup>Id.

<sup>304</sup>VeenaRenjini K K, “Quantifying the Effect of Non-Tariff Measures and Food Safety Standards on India’s Fish and Fishery Products’ Exports”, The Institute for Social and Economic Change, Working paper 375, 2016, pg 8

<sup>305</sup> Sven M. Anders and Julie A. Caswell, “Standards As Barriers Versus Standards As Catalysts: Assessing The Impact Of HACCP Implementation On U.S. Seafood Imports” American Journal of Agriculture and Economics, Vol 91, issue 2, May 2009

<sup>306</sup>Supranote 264

<sup>307</sup> NDC registry Interim, United States’ NDC, <https://www4.unfccc.int/sites/NDCStaging/Pages/All.aspx>, accessed on July 2021

Monitoring Program (SIMP) created by NOAA/NMFS (National Oceanic and Atmospheric Administration/National Marine Fisheries Service), requirements for imports of certain seafood products to prevent illegal, unreported and unregulated, and/or misrepresented seafood from entering the U.S. commerce are reported and recorded.<sup>308</sup>

The Seafood Import Monitoring Program is “a risk-based traceability program” which requires a seafood importer to provide all relevant information beginning from “the point of harvest to the point of entry into US commerce”<sup>309</sup>. The program is a TBT measure and not directly associated with food safety since it requires “consignments of thirteen imported fish and fish products identified as vulnerable to illegal, unreported and unregulated fishing or fish fraud to be accompanied by a catch certificate identifying the catching vessel”.<sup>310</sup>

The USA can implement such measures for legitimate objectives, but the compliance cost of Indian exporters has increased since it mandates the production of documentary evidence for each container and it is the small exporters who find it a cumbersome process. Such a measure was implemented during the administration of Trump and is a kind of a non-tariff barrier that discourages imports and favors domestic producers. However, the Indian exporters are gearing up to comply with the Seafood Import Monitoring Program (SIMP) regulations on shrimp by the USA.<sup>311</sup>

In 2017, the USA mandated that fish and fish products from many species of catfish can be exported to the USA only if they are produced in an establishment listed with the US Food Safety and Inspection Service (FSIS) under the US Department of Agriculture<sup>312</sup>. In order to be listed, the exporting country must produce documents showing a similar fish

---

<sup>308</sup> MPEDA, “Market Specific Import Requirements Of Major Markets – USA”, June 2021, [https://mpeda.gov.in/exporters/?page\\_id=2159](https://mpeda.gov.in/exporters/?page_id=2159), accessed on August 15, 2021

<sup>309</sup> *Id.*

<sup>310</sup> NOAA, “Seafood Import Monitoring program”, July 2021, <https://www.fisheries.noaa.gov/international/seafood-import-monitoring-program>, accessed on August 20, 2021

<sup>311</sup> Nirmalya Behra, “Exporters gear up to comply with SIMP regulations on shrimp by US”, Business Standard, December 21, 2018, [https://www.business-standard.com/article/economy-policy/exporters-gear-up-to-comply-with-simp-regulations-on-shrimp-by-us-118122100688\\_1.html](https://www.business-standard.com/article/economy-policy/exporters-gear-up-to-comply-with-simp-regulations-on-shrimp-by-us-118122100688_1.html), Accessed on August 25 2021.

<sup>312</sup> US Government Accountability Office, “Imported Seafood Safety: FDA and USDA Could Strengthen Efforts to Prevent Unsafe Drug Residues”, <https://www.gao.gov/products/gao-17-443>, October 2017



inspection system as that of the US and must comply with its labeling requirements, sanitation performance standards, HACCP requirements, product sampling and testing requirements, etc.<sup>313</sup> Only China, Thailand and Vietnam currently comply with these requirements. The USA is not an importer of catfish from India and it can be because of the rigidity and inflexibility in its application. India is only a developing country and adhering to such sophisticated requirements demands time and economic resources.

In order to prevent the killing of sea turtles and marine mammals for commercial fisheries, the National Oceanic and Atmospheric Administration, USA, seeks strict adherence to norms laid out in their Marine Mammal Protection Act by the seafood exporting countries since the role played by them is huge with respect to the maintenance of the marine ecosystem<sup>314</sup>. For the export of fish and fish products, a five-year exemption period beginning from January 1, 2017, has been given by the US to countries to assess “marine mammal stocks, estimate by-catch and its limits, and reducing total by-catch” for formulating regulatory mechanisms.<sup>315</sup>

Regarding an import prohibition of certain shrimp and shrimp products, India, along with few other countries, challenged a U.S. regulation which imposed a ban on shrimp exports to the USA “for not using appropriate measures to reduce turtle mortality by the trawlers,” alleging that it constituted unreasonable discrimination between member countries where identical circumstances existed.<sup>316</sup> Since the regulation granted concessions to exporters from the Caribbean and not to fishers from the complainant countries, the Appellate Body found it to be rigid, inflexible and an “unjustifiable and arbitrary discrimination.”<sup>317</sup> US failed to consider whether the regulations that are almost the same and equally applicable to the U.S. vessels are appropriate for the other shrimp

---

<sup>313</sup>*Id.*

<sup>314</sup> Outlook News Scroll, "Indian scientists have started deep sea research to assess marine mammal population" , <https://www.outlookindia.com/newscroll/indian-scientists-have-started-deep-sea-research-to-assess-marine-mammal-population/2035592>, February 2021

<sup>315</sup>*Id.*

<sup>316</sup>*Supranote 265*

<sup>317</sup>*Supranote 297*

exporting countries to adopt.<sup>318</sup> Therefore such a TBT measure had a serious impact on Indian small-scale fishers since it reduced their access to traditional fishing grounds.

The Appellate Body found that the United States had failed to conduct negotiations with all the affected trading partners before imposing trade restrictions and before placing the ban, it ignored the fact that the time period required by countries to develop or transfer the required Turtle Excluder Device (TED) technology is different<sup>319</sup>. Later, on fulfilling its obligation to negotiate, the Appellate Body found the measure to be qualified under the General Exception of Article XX, which allows for the protection of natural resources<sup>320</sup>.

Therefore, the shrimp-turtle case illustrates the role of markets in environmental conservation and how the trade interests of the USA used environmental concerns to supplement their agenda, affecting the minimal living needs of the poor<sup>321</sup>. Environment, livelihoods, trade and government policies are interrelated, and this case has highlighted the need for more integrated approaches to such issues<sup>322</sup>.

#### **4.3.2 MEASURES ADOPTED BY EU**

“In 2020-21, the European Union accounted for a share of 13.80% in USD of \$5.96 billion seafood exports from India”<sup>323</sup>. The certification of a competent authority in an exporting nation that, despite meeting international standards, it implements EU-similar rules is the most distinguishing characteristic of the European Union regulatory framework<sup>324</sup>. The exporting country must compulsorily have a EU accredited competent authority (Export Inspection Council of India), which inspects and validates factories or storage facilities and which is entrusted with the duty to harmonize national regulatory

---

<sup>318</sup> *Id.*

<sup>319</sup> *Supranote* 171

<sup>320</sup> *Supranote* 264

<sup>321</sup> Venkatesh Salagrama and Thaddeus Koriya, “Sustainability Impact Assessment Of Proposed WTO Negotiations: The Fisheries Sector Case Study: India” Integrated Coastal Management, Study on Sustainability Impact Assessment (SIA) of WTO Negotiations, Fisheries Sector, April 2006

<sup>322</sup> *Id.*

<sup>323</sup> MPEDA, “India exports 11,49,341 MT of seafood during 2020-21”, Press release June 2021

<sup>324</sup> UNCTAD, “Fishery Exports And The Economic Development Of Least Developed Countries: Bangladesh, Cambodia, The Comoros, Mozambique, Myanmar and Uganda”, pg 8, [https://unctad.org/system/files/official-document/aldc2017d2\\_en.pdf](https://unctad.org/system/files/official-document/aldc2017d2_en.pdf), 2017

laws with those of the European Union, ensuring that operators at all stages of the value chain produce fish under a framework having safety and hygiene legislation that is equivalent to that of the European Union<sup>325</sup>.

To ensure the safety of food, the EU has set boundaries to regulate the import of seafood<sup>326</sup>. When issues such as mislabeling, fraud, and other illegal practices increased, the number of requirements with which an exporter's product must comply to be able to enter the European market also increased.<sup>327</sup> Indian exporters are facing rejections from the EU, its major shrimp market, due to the presence of antibiotics like Nitrofurans, metabolites, and chloramphenicol<sup>328</sup>. Similarly, India is not on the import list of shellfish in the EU because of the specific control conditions. The burning of fossil fuels increases the nutrient content in oceans and depletes the oxygen resulting in an algae bloom<sup>329</sup>. Certain marine algae can poison the shellfish and make it unfit for approval by the EU's competent authority<sup>330</sup>.

India's MPEDA has urged the EU not to impose a ban or blacklist a particular seafood exporter right away after finding issues with just one consignment because it would affect the whole seafood industry, the Indian exporter as well as the importers and consumers in the EU<sup>331</sup>. The issue of a warning and adequate time to make up the discrepancies is necessary before delisting a company since such unjust instant blacklisting tamper with the reputation of the exporter built over the years and put in risk the huge investments made by the stakeholders and the livelihood of many farmers<sup>332</sup>.

---

<sup>325</sup> *Id.*

<sup>326</sup> CBI Ministry of foreign affairs, "What requirements must fish and seafood comply with to be allowed on the European market?", <https://www.cbi.eu/market-information/fish-seafood/what-requirements-should-your-product-comply>, March 2021, Accessed on August 25, 2021

<sup>327</sup> *Id.*

<sup>328</sup> Nirmalya Behera, "Indian Seafood Export", Business Standard, August 2017, [https://www.business-standard.com/article/economy-policy/indian-seafood-exporters-may-go-under-scanner-in-eu-exports-to-be-impacted-117080400802\\_1.html](https://www.business-standard.com/article/economy-policy/indian-seafood-exporters-may-go-under-scanner-in-eu-exports-to-be-impacted-117080400802_1.html), accessed on August 26 2020

<sup>329</sup> Doreetha. B. Foushee, "Algae Blooms in Oceans", Water Encyclopedia, <http://www.waterencyclopedia.com/A-Bi/Algal-Blooms-in-the-Ocean.html>

<sup>330</sup> UNCTAD, "Export of fish and fish products from India Non-tariff measures", Globefish insight, Issue 2, pg 17, Food and Agriculture Organization of the United Nations Rome, 2021

<sup>331</sup> *Supranote 271*

<sup>332</sup> 21<sup>st</sup> India International Seafood Show 2018, "Warn before blacklisting seafood exporters, India asks EU", [https://mpeda.gov.in/wp-content/uploads/2020/11/IISS2018\\_EU-IndiaDialogue\\_Eng\\_Jan29.pdf](https://mpeda.gov.in/wp-content/uploads/2020/11/IISS2018_EU-IndiaDialogue_Eng_Jan29.pdf), accessed on August 26, 2020

When the European Commission (EC) unveiled its new European Green Deal on December 11, 2019, it proposed to expand European emissions trading to the marine sector as well<sup>333</sup>. Even though EC did not specify a timeline, it is anticipated to be effective from 2020, and the incorporation of shipping in the EU Emissions Trading System (EU-ETS) could have a number of “legal, technical, practical, and political ramifications for the EU and its Member States, the global maritime transport sector's efficiency, and, most notably, the authority of the industry's global regulator, the International Maritime Organization (IMO)”<sup>334</sup>. If this proposal is intended as a revenue-raising practice rather than a measure to reduce emissions from international shipping, then there might be an increase in the political tensions between the EU and other countries and might even end up in trade disputes.<sup>335</sup>

In furtherance of the Paris Agreement, the EU aims to be carbon neutral by 2050 and for that, it has proposed a “carbon border adjustment mechanism” (CBAM) in its ‘Green Deal’ which will impose a border charge on imported products that emit carbon more than like products made in the EU under tougher emissions standards<sup>336</sup>. But such a measure is against the “UN principle of Common But Differentiated Responsibilities and Respective Capabilities (CBDR–RC), which acknowledges that richer countries have a responsibility of providing financial and technological assistance to developing and vulnerable countries to fight climate change”<sup>337</sup>.

Even though the EU claims that its proposal is in line with its WTO obligations, India and China have put forth its concern that CBAM might disrupt the global trading system

---

<sup>333</sup> The Economic Times, “EU’s green push targets shipping emissions”, <https://m.economictimes.com/industry/renewables/european-unions-green-push-targets-shipping-emissions/articleshow/82715102.cms>, May 2021

<sup>334</sup> Dr. Edmund Hughes, “Implications of application of the EU Emissions Trading System (ETS) to international shipping, and potential benefits of alternative Market-Based Measures (MBMs)”, European Community Ship-owners’ Associations (ECSA), International Chamber of Shipping (ICS) pg 4, July 2020

<sup>335</sup> *Id.*

<sup>336</sup> James Bacchus, “Striking a balance on climate change and global trade”, The Hill, <https://thehill.com/opinion/energy-environment/563680-striking-a-balance-on-climate-change-and-global-trade>, July 19, 2021, accessed on August 20, 2021

<sup>337</sup> *Id.*

by imposing unfair discrimination on their products which are exported to Europe<sup>338</sup>. This measure impacts the seafood export because when seafood is transported through ships that use heavy fuel oil emitting lots of carbon, its price in the foreign market increases, thereby reducing the demand<sup>339</sup>. Similarly, the transportation of food products through boats, which use fossil fuel, is another cause for an increase in greenhouse gas emissions. Since food mileage has a serious impact on the environment, importers are choosing other available food purchasing options so that their food need not travel miles to reach their territory<sup>340</sup>.

---

<sup>338</sup> AmitiSen , “India expresses concern over EU’s Green Deal, possible carbon taxes”, Business Line, The Hindu, <https://www.thehindubusinessline.com/economy/india-expresses-concern-over-eus-green-deal-possible-carbon-taxes/article33127033.ece>, November 18, 2020

<sup>339</sup> The shipping sector is responsible for emitting 940 million tons of carbon per year, or about 2.5% of the global total, according to the European Commission, as most ships continue to use heavy fuel oil, one of the most polluting fuels.

<sup>340</sup> The Conscious Club, “ Food and Transportation”, <https://www.theconsciouschallenge.org/ecologicalfootprintbibleoverview/food-transportation>, May 2019, accessed on August 26 2021

## **CHAPTER 5**

### **CONCLUSION AND RECOMMENDATIONS**

#### **5.1 CONCLUSION**

IPCC's sixth assessment report has confirmed that climate change has become a 'code red' for humanity<sup>341</sup>. The UNFCCC, the Kyoto Protocol, and the Paris Agreement have guided the countries with their principles and mandates to regulate climate change internationally and to frame mitigation measures accordingly. Incorporating climate change mitigation measures in international trade agreements can contribute immensely to resolving or at least reducing the climate issues.

Discussions or negotiations on framing global trade or climate rules should not be treated as separate watersheds because both need to be consistent and supportive of each other. Therefore, maximizing trade to combat climate issues through WTO rules and related trade agreements can definitely lead to positive outcomes. However, the negotiators should be able to foresee probable trade conflicts and the framers should be cautious enough to avoid all sorts of legal contradictions between the WTO rules and national and international climate change mitigation measures<sup>342</sup>.

Though WTO does not explicitly provide for a climate-related trade agreement, it has, through its various negotiations and committees, furthered that objective. Preservation and protection of the environment is the foundation upon which climate change measures are built; that is, one step in protecting the environment is one step in fighting against climate change. Therefore, WTO, through its negotiations on EGA, intended that its members trade only environment-friendly goods, and through MEA negotiations, its members wanted to ensure that environment agreements between countries will not be trade-restrictive. The CTE identifies environment-harming trade rules, like the use of

---

<sup>341</sup>Matt McGrath, "Climate change: IPCC report is 'code red for humanity'", BBC News, August 2021, <https://www.bbc.com/news/science-environment-58130705>, accessed on September 1, 2021

<sup>342</sup>Carolyn Deere Birkbeck and John W H Denton, "We need a better alignment between climate and trade. Here's a roadmap", World Economic Forum, January 2020, <https://www.weforum.org/agenda/2020/01/how-can-we-align-climate-and-trade/>, accessed on September 1, 2021

fossil fuels, and gives recommendations to WTO to modify its trade rules, like to shift to renewable resources.

The committee on TBT ensures that technical barriers like labeling, product standards, energy emission level, etc. of products, imposed in the name of climate change measures do not favor protectionism and hinder free trade. In order to provide a suitable stand to all the member states, which consist of three classes, developed, developing, and least developed nations, the agreements have very specifically dealt with the needs of every nation and to compulsorily follow its terms in regulating domestic norms. It has bought in the spirit of assistance and corporation among the nations in the field of trade and also has put in efforts to develop an adequate system of communication among them.

The developed countries have drafted their food standards according to the domestic markets, their suitability, and above all, have looked into improving food quality standards and expansion of the markets. The changed economic scenario symbolized by the establishment of the WTO holds great potential for the Indian fisheries sector. The inefficiencies which are coming in the way of the development of a vibrant food industry can be tackled with an integrated response of food manufacturers and the government. The elimination of (as envisaged through the SPS and TBT agreement) unfair trade barriers can be eliminated, thereby providing opportunities for India to continue and flourish as a major seafood exporting nation.

Countries like India, whose fisheries trading significantly contribute to its GDP, are politically and economically affected by climate change. An increase in the Earth's temperature has unequivocally warmed up the oceans and caused alterations in the fish stock, its availability and trading capacity since fishes are likely to migrate to the cooler side of the ocean which might be under the jurisdiction of another country<sup>343</sup>. Similarly, the burning of fossil fuels which is the main emitter of Carbon dioxide, acidifies the ocean and deteriorates the quality of the marine species, thereby making it unfit for

---

<sup>343</sup> James Bacchus, "What Is a Climate Response Measure? Breaking the Trade Taboo in Confronting Climate Change", Centre for International Governance Innovation, CIGI Papers No: 220, 2019

trading. Therefore some countries might show an increase in their marine fisheries production while for some, it decreases.<sup>344</sup>

To comply with the Paris agreement, countries in their NDCs have incorporated in the climate change mitigation measures certain standards and requirements that indirectly affect the free flow of trade. Countries have the right to frame such measures; however, WTO, as a watchdog, ensures that such measures do not violate any trade rules, except for those that come under the general exceptions. India is only a developing country, and it requires time, technical knowledge, and economic benefits to meet the standard and quality requirements laid down by its major seafood importers. But whenever the seafood exporters have faced discrimination at the hands of other countries' climate measures, the WTO has offered legal protection in the form of 'mandatory negotiations before the imposition of the ban, extended timelines, and transparent and clear requirements',<sup>345</sup>.

When other countries create their own import bans, carbon border taxes or other mechanisms whereby the goods from India are compared with that of its own and if it is not saved by GATT Article XX exceptions, WTO, through its basic GATT principles, protects the Indian exporters. Though countries have the freedom to formulate health provisions, standards and regulations for the products imported, the TBT and SPS agreements make it mandatory that such measures should be transparent and predictable and should not be a means for formulating protectionist measures and creating unnecessary barriers to trade.

Fighting climate change is what matters the most now, and for that, India has to bear with few international trade impacts on its exports, just those which do not outrightly discriminate its products and so evidently contradict the basic trade rules. Since WTO has not exactly laid down a category of climate-friendly trade measures, determining if there was a violation of WTO rules or agreements depends upon the facts and situations of every case arising before it. However, through research and development, improved standards, quality, technical regulations, and policies are being put forward by MPEDA

---

<sup>344</sup>*Id. at*

<sup>345</sup>*Supranote297 at 7*



and CMFRI to get India ready to comply with the climate-friendly trade rules of other countries.

## **5.2 RECOMMENDATIONS**

To accomplish trade development and climate change goals at the same time, a multilateral agreement on the framework for climate change in terms of targets and consistent price is required. Several reactions have surfaced in the name of reduced competitiveness as a result of needing to achieve greater energy, technological, and environmental criteria in the name of decreasing GHG or carbon miles, which might be too expensive for poor nations to meet. Following are a few recommendations and suggestions for India's seafood industry as well as other countries to build the apt climate change responses that go hand in hand with international trade.

### **1. CONSIDER THE GRIEVANCES OF SMALL SCALE SEAFOOD EXPORTERS**

Small scale seafood exporters are already struggling with low income and unless they are educated and made aware of the impact of poor fishing methods and obsolete processing, preserving and transporting methods, they will suffer loss and it indirectly affects the GDP. Their fishing activities and maintenance of product quality should be controlled and monitored properly so that they will not be left out of the international trading market. The climate change measures adopted domestically as well by other countries prescribe the adoption of high-technology fishing gear and other modern and efficient equipment, which cannot be afforded by the small-scale exporters. Therefore, compared to other exporters, they must be given additional time and economic benefits to get accustomed to these ultra-modern mechanisms.

### **2. MORE RELIANCE ON PRODUCT DIVERSIFICATION**

For a developing country like India, which is facing increased pressure from foreign markets to comply with its tougher norms, product diversification would be a logical alternative. Since climate change has reduced the stock of fish, the catch levels have gone down. Shrimp is India's major seafood export item, and hence without giving further

pressure to one particular species, focus must be shifted to others and adequate support and promotion must be given for its export. Export quality concerns are also a huge challenge before the Indian exporters. So, individuals or group of exporters with sound business capacity can, with the support of public authorities, use their fishing related skills to improve eco-tourism or develop more healthcare products from seafood which would gain equally from that of export and hence employment can be maintained. But fishing cannot be totally excluded, so simultaneously new and advanced techniques for fishing and stock management must be developed by making financial and other banking activities more feasible and accessible.

### **3. NEED FOR SUBSIDIES WITH GUIDELINES**

The marine industry, especially the small-scale fishermen affected by climate change, needs subsidies that Government provides to compete with other foreign traders for economic prosperity and it is through seafood export, the country generates a good percentage of foreign currency that it uses to fund certain unavoidable imports. The stakeholders of seafood exports have been taking advantage of the subsidies by overfishing and creating artificial profit through illegal, unreported and unregulated (IUU) fishing. Also, the amount of subsidies provided by other countries to its fishermen is much more than what Indian fishermen receive.

India is affected by both domestic and external factors; however, scrapping the harmful subsidies as a whole would also bring negative impacts. A solution to this can be in the form of proper assessment, that is, monitory and regulatory mechanism whereby the persons who receive the subsidies have to mandatorily report how all it has been utilized. Allocation of subsidies should be made with respect to the size of the vessel used, the energy consumed, etc. so that the subsidy would reach only in the hands of the intended and to those who properly adhere to all the government regulations on this behalf.

#### **4. INDIAN CLIMATE POLICIES SHOULD ADJUST TO THE INTERNATIONAL TRADE REGIME**

WTO protects the Indian seafood exporters only when discriminatory or trade-restrictive climate change measures are adopted by other countries. Otherwise, every country has the freedom and right to develop climate change mitigation policies. Therefore, if India could frame new rules or incorporate within the already existing regulations, rules and measures to adjust with the international trade regime, then gradually India can withstand the negative impacts of developed countries' mitigation measures.

The National Action Plan and its eight missions have to be properly implemented and for that, trade policies and related agreements can be modified. Policies should be framed in such a way that there is coordination between different sectors, and it becomes the responsibility of the government to educate and provide time limit exceptions to the base level employees and provide facilities for infrastructural developments.<sup>346</sup>

#### **5. ADOPT WTO COMPLIANT PRODUCT LABELING METHODS**

When countries formulate climate change measures, they adopt certain labeling standards to ensure that the products that enter their country are causing lesser harm to the environment. But such labeling schemes should be within the WTO rules and so countries must frame them with reasonable flexibility. If the effectiveness of products is of a comparable nature, then production method criteria should not be stringent. When labeling methods become WTO compliant, there will be a balance between the environmental protection need and the trading partners' administrative and other expenses. Developed countries should cooperate with the developing countries and give them sufficient time and technical assistance to cope with their measures. The cooperative attitude of countries add to the WTO compliant measures because it can strike off their fear of protectionist measures and increase the country's confidence that it could still play a major role in the trade market.<sup>347</sup>

---

<sup>346</sup>Supranote 278

<sup>347</sup>Nathalie Bernasconi, Osterwalder and Johannes Norpoth, "Is World Trade Law a barrier to saving our climate", Friends of the Earth Europe and the Center for International Environmental Law, September

## **6. PROVIDE TRANSPARENCY IN QUALITY CONTROL**

Transparency is essential for the smooth flow of trade. Timely communication of the climate change measures and their related changes in the quality of export items can avoid confusion and rejection of consignments. Uncertainty is a trade barrier that affects the global supply chain and leads to disputes between trading partners. The exporters will face a huge loss in terms of time and money when their consignments get rejected at the last moment. Indian exporters have faced many problems because of the SPS measures of other countries, mostly because of the lack of knowledge regarding the quality control measures. It is the duty of the public authorities to ensure that quality standards are properly communicated to every stakeholder.

## **7. PROPER ASSESSMENT OF IMPACT OF DOMESTIC CLIMATE CHANGE MEASURES ON INTERNATIONAL TRADE**

Within the WTO framework, it would be very efficient if the Trade Policy Review Body assessed the impact of climate change measures of countries on the trade potential of other countries. This would prevent the trading partners from raising disputes at WTO because at an early stage itself the affected country will get a clarification as to whether such a measure has violated the basic trade norms and principles of WTO. A legal line or proper guidance through a consensus between parties to UNFCCC and WTO members is necessary to determine whether a climate change measure affecting trade is lawful or not. As long as such guidance is not provided by the climate or trade negotiators, the DSB of WTO will have to decide it on a case-to-case basis<sup>348</sup>.

## **8. ADOPTION OF WTO CLIMATE WAIVER**

WTO permits its members to waive their obligations under any trade agreement lawfully under 'exceptional circumstances. Without a waiver, a particular measure might violate any WTO law. Since the need to stabilize climate change can be considered as an exceptional circumstance, countries must come forward together to frame a WTO climate

---

2009, [https://www.ciel.org/Publications/ClimateTradeReport\\_foee-ciel\\_sep09.pdf](https://www.ciel.org/Publications/ClimateTradeReport_foee-ciel_sep09.pdf), Accessed on August 31 2021

<sup>348</sup>James Bacchus, "Global Rules for Mutually Supportive and Reinforcing Trade and Climate Regimes", E15 Expert Group on Measures to Address Climate Change and the Trade System – Policy Options Paper, International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum, 2016

waiver. Since WTO decisions are based on consensus, this waiver would be more of a political rather than a legal challenge. When a climate waiver is framed, countries can adopt climate change mitigation measures without the fear of violating rules, and the countries to be affected such a measure can prepare accordingly without the fear of it being a protectionist measure. With proper reasons and justifications, a country seeking a WTO waiver can work towards achieving sustainable development goals<sup>349</sup>.

---

<sup>349</sup> James Bacchus, “The Case for a WTO Climate Waiver”, Special report of Centre for International Governance Innovation, CIGI online, 2017  
<https://www.cigionline.org/sites/default/files/documents/NEWEST%20Climate%20Waiver%20-%20Bacchus.pdf>, accessed on September 3, 2021

## **BIBLIOGRAPHY**

### **BOOKS**

- DIANA TUSSIE AND CINTIAQUILICONI, “INTERNATIONAL DEVELOPMENT”, The WTO and Development, Chapter 48, Oxford Publications, pg 18, February 2014
- ERIC PAGLIA AND CHARLES PARKER, “GUARDIANS OF PUBLIC VALUE”, The Intergovernmental Panel on Climate Change: Guardian of Climate Science, Palgrave Macmillan and Cham Publishers, November 2020, pg 301, [https://link.springer.com/content/pdf/10.1007%2F978-3-030-51701-4\\_12.pdf](https://link.springer.com/content/pdf/10.1007%2F978-3-030-51701-4_12.pdf), Accessed on 27 September 2021
- FELIX AND POPYRAKIS, “AN INTRODUCTION TO CLIMATE CHANGE ECONOMICS AND POLICY”, 2<sup>nd</sup>ed, Routedledge textbooks in agricultural and environmental economics, 2016.

### **JOURNALS**

- A.C. Vieira, “*The WTO and the Paris Agreement: A Dialogue on Climate Change Mitigation*”, Beijing Law Review, Vol 11, April 2020
- Andrew Green, “*Climate Change, Regulatory Policy and the WTO: How Constraining Are Trade Rules*” Journal of International Economic Law, Vol 8 pg 143, 2005.
- Charles E. Di and LevaXiaoxin Shi, “*The Paris Agreement and the International Trade Regime: Considerations for Harmonization*“, Sustainable Development Law & Policy, Vol 17, issue 1, Article 4, 2017
- ChristophBohringer and Carsten Vogt, “*Economic and Environmental Impacts of the Kyoto Protocol*” The Canadian Journal of Economics Vol. 36, No. 2 (May, 2003), pg 475
- ChristophSchwew, “*The WTO and Recent Developments in World Trade*”, Vol 3 ACTA SocietatisMartensis, Pg 192, (2007-2008)
- ChristophSchwew, “*The WTO and Recent Developments in World Trade*”, ActaSocietatisMartensis, Vol 3, 2018, pg 191.
- Christophe Bene and Hannah Norbury, “*Contribution of Fisheries and Aquaculture to Food Security and Poverty Reduction: Assessing the Current Evidence*”World Development Journal, Vol. 79, pp. 181, 2016
- Condon M and Ignaciuk A, “*Border Carbon Adjustment and International Trade: A Literature Review*”, SSRN Electronic Journal, 2013
- D E Fisher, “*The Statutory Relevance of Greenhouse Gas Emissions in Environmental Regulation*”, Environmental and Planning Law Journal, Vol 24, May 2007, pg 210.

- Di Leva, Charles E. and Shi, Xiaoxin "*The Paris Agreement and the International Trade Regime: Considerations for Harmonization*," Sustainable Development Law & Policy, Vol. 17, Issue 1 , 2017, <http://digitalcommons.wcl.american.edu/sdlp/vol17/iss1/4>
- Dr. Amrit Patel, "*Climate Change & Agriculture In India- Effective Implementation Of National Mission For Sustainable Agriculture*" International Journal of Research - Granthaalayah, Vol. 4, No. 11, 2016, pg 63
- Duncan French and LavanyaRajamani, "*Climate Change and International Environmental Law: Musings on a Journey to Somewhere*", Journal of Environmental Law , Vol. 25, No. 3, 2013, pg 440 Oxford University Press <https://www.jstor.org/stable/10.2307/26168494>
- Emily Boyd, Lisa Schipper, "*The Marrakech Accord—At the Crossroad to Ratification*", Journal of Environment and Development, vol 11, June 2002, pg 184.
- Henning Rodhe, Robert Charlson and Elisabeth Crawford, "*Svante Arrhenius and the Greenhouse Effect*" Ambio, Vol. 26, No. 1, February 1997, pg 2, Springer(Royal Swedish Academy of Sciences) <http://www.jstor.org/stable/4314542>, Accessed on 21 September 2021
- Irshad, Muhammad Saqib and Ors, "*The Role of Charismatic World Trade Organization and the expansion of Free International Trade*", International Journal of Management Science and Business Administration, Vol 2, February 2016, pg 20
- Jacqueline Peel, "Climate Change Law: The Emergence of a New Legal Discipline", Melbourne University law review, Vol 32, Issue 3, pg 925, March 2012
- Jennifer Schultz, "*The GATT/WTO Committee on Trade and the Environment-Toward Environmental Reform*", The American Journal of International Law, Vol. 89, April 1995 No. 2, Cambridge University Press <https://www.jstor.org/stable/2204216>
- Jing Ma and Yuduo Lu, "*Free Trade or Protection: A Literature Review on Trade Barriers*", Research in World Economy Vol. 2, No. 1; April 2011, doi:10.5430/rwe.v2n1p69, Accessed on August 20, 2021.
- Jonathan Kuyper, "*Evolution of the UNFCCC*", Annual review of the Environment and the Resources, Annual Reviews, Vol 43, October 2018, pg 345.
- LavanyaRajamani, "*The changing fortunes of differential treatment in the evolution of international environmental law*", Royal Institute of International Affairs 1944, Vol. 88, No. 3, May 2012, pg 617, Oxford University Press, <https://www.jstor.org/stable/23255553>, accessed on August 14 2021
- Louise Fornier, "*Compliance mechanism under the Kyoto Protocol*", Research Gate, pg 3, May 2017, [https://www.researchgate.net/publication/316635610\\_Compliance\\_Mechanisms\\_under\\_the\\_Kyoto\\_Protocol\\_Lessons\\_for\\_Paris](https://www.researchgate.net/publication/316635610_Compliance_Mechanisms_under_the_Kyoto_Protocol_Lessons_for_Paris), accessed on May 24, 2021
- ManasviKamat and ManojKamat, "*Implications of the WTO on Indian Marine Industry, Issues and Policy Perspectives*", Munich Personal RePEc Archive, December 2007, pg 9

- Maria Victoria Lottici and Carlos Galperin, “*Green Trade Protectionism: An Analysis of Three New Issues that Affect Developing Countries*”, Chinese Journal of Urban and Environmental Studies Vol. 2, No. 2, World Scientific Publishing Company, 2014
- Parul Kumar and AbhayarajNaik, “*India's domestic climate policy is fragmented and lacks clarity*”, Economic and Political Weekly, Vol. 54, Issue No. 7, 16 February 2019
- Perrez, Franz Xaver, “*The Mutual Supportiveness of Trade and Environment.*” Proceedings of the Annual Meeting (American Society of International Law), vol 100, 2006, pg 27, JSTOR, [www.jstor.org/stable/25660052](http://www.jstor.org/stable/25660052). Accessed on 13 August 2021.
- PrathibaGiri, “*Implications Of Foreign Trade Policy (2015-2020) In Boosting India’s Exports: A Boost To Make In India Initiative*” International Journal of Science, Technology and Management, Vol 6, issue 6, pg 323, June 2017
- Rashmi G, “*The role of International Trade in the Global Economy & Its Effects On Economic Growth*”, IJSET - International Journal of Innovative Science, Engineering & Technology, Vol. 2 Issue 7, July 2015, pg 460
- RohinKaul, “*WTO Agreement On The Application Of Sanitary And Phytosanitary Measures And The Indian Experience*”, Indian Law Institute (ILI) Law Review , vol 78, Winter Issue, pg 84, 2016
- RuchiBadola, Syed AinulHussain and Ors, “*Assessing the effectiveness of policies in sustaining and promoting ecosystem services in the Indian Himalayas*”, International Journal of Biodiversity Science, Ecosystem Services & Management, Vol 11, Issue 3, 2015, pg 218
- S. Arrhenius, “*On the influence of carbonic acid in the air upon the temperature of the ground*”, The London, Edinburgh and Dublin Philosophical Magazine and Journal of Science, Vol 41, 1896, pg 237.
- Steve Charnovitz, “*The World Trade Organization in 2020*”, Journal of International Law & International Relations Vol. 1, pg 168, 2015
- Sven M. Anders and Julie A. Caswell, “*Standards As Barriers Versus Standards As Catalysts: Assessing The Impact Of HACCP Implementation On U.S. Seafood Imports*” American Journal of Agriculture and Economics, Vol 91, issue 2, May 2009

### **INTERNATIONAL DOCUMENTS**

- Arthur E. Appleton, “Technical barriers to Trade”, UNCTAD, pg 3  
[https://unctad.org/system/files/official-document/edmmisc232add22\\_en.pdf](https://unctad.org/system/files/official-document/edmmisc232add22_en.pdf), 2003
- Carolyn Deere, “Eco-Labeling And Sustainable Fisheries” IUCN - The World Conservation Union and United Nations Food and Agriculture Organization (FAO) pg 15, 1999
- Craig VanGrasstek, “The History and Future of the World Trade Organization”, WTO Publications, pg 43, 2013



- Deepesh Patel, “What does the IPCC climate change report mean for trade?” World Economic Forum, August 12, 2021, <https://www.weforum.org/agenda/2021/08/ipcc-climate-change-trade-report/>, Accessed on September 23, 2021
- Economist Intelligence Unit, “Climate Change and Trade Agreements: Friends or Foes”, International chamber of commerce, <https://iccwbo.org/content/uploads/sites/3/2019/03/icc-report-trade-and-climate-change.pdf>, 2019, Accessed on August 16, 2021
- Food and Agricultural Organization of UN, “Export of fish and fish products from India Non-tariff measures”, Globefish Insight, Issue 2, Rome 2021
- IPCC Secretariat, “Understanding Climate Change, 22 years of IPCC Assessment”, November 2010, pg 3, [https://www.ipcc.ch/site/assets/uploads/2018/04/ipcc-brochure\\_understanding.pdf](https://www.ipcc.ch/site/assets/uploads/2018/04/ipcc-brochure_understanding.pdf), Accessed on August 12, 2021
- Jaime De Melo, “Implications Of Negotiation Failures On Environmental Goods And Services At The Doha Round For Global Trade Governance”, WTO Public Forum, September 26, 2020, [https://www.wto.org/english/forums\\_e/public\\_forum12\\_e/session41demelofordi\\_e.pdf](https://www.wto.org/english/forums_e/public_forum12_e/session41demelofordi_e.pdf), accessed on July 26, 2021
- LudivineTamiotti, Robert The and Ors, “Trade and Climate Change”, Report by the United Nations Environment Program and the World Trade Organization, pg 126, 2009
- Nathalie Bernasconi, Osterwalder and Johannes Norpoth, “Is World Trade Law a barrier to saving our climate”, Friends of the Earth Europe and the Center for International Environmental Law, September 2009, [https://www.ciel.org/Publications/ClimateTradeReport\\_foee-ciel\\_sep09.pdf](https://www.ciel.org/Publications/ClimateTradeReport_foee-ciel_sep09.pdf), Accessed on August 11 2021
- Patrick Low and Gabrielle Marceau, “The Interface between the Trade and Climate Change Regimes: Scoping the Issues”, WTO publications, January 2011
- Peter Greenhalgh , “Trade Issues Background Paper: Sanitary and Phyto-Sanitary (SPS) Measures and Technical Barriers to Trade (TBT)”, Policy Research – Implications of Liberalization of Fish Trade for Developing Countries, Food and Agriculture Organization (FAO) of the United Nations, Rome, July 2004
- UNCTAD, “Fishery Exports And The Economic Development Of Least Developed Countries: Bangladesh, Cambodia, The Comoros, Mozambique, Myanmar and Uganda”, pg 8, [https://unctad.org/system/files/official-document/aldc2017d2\\_en.pdf](https://unctad.org/system/files/official-document/aldc2017d2_en.pdf), 2017
- UNCTAD, “Training module of the WTO agreement on Sanitary and Phytosanitary measures”, [https://unctad.org/en/Docs/ditctncd20043\\_en.pdf](https://unctad.org/en/Docs/ditctncd20043_en.pdf), November 2005, accessed on August 28, 2021
- United Nations, “International Classification of Non-Tariff Measures”, UNCTAD, 2015, pg 15, [https://unctad.org/system/files/official-document/ditctab20122\\_en.pdf](https://unctad.org/system/files/official-document/ditctab20122_en.pdf)
- United Nations, “Trade and Environment Review 2021: Trade-climate readiness for developing countries”, UNCTAD, UN Publications, 2021

- World Trade Organization, Trade and Climate Change, WTO UNEP Report 2009, [https://www.wto.org/english/res\\_e/booksp\\_e/trade\\_climate\\_change\\_e.pdf](https://www.wto.org/english/res_e/booksp_e/trade_climate_change_e.pdf), pg 21
- WTO and UN Environment, “Making trade work for the environment, prosperity and resilience”, [https://www.wto.org/english/res\\_e/publications\\_e/unereport2018\\_e.pdf](https://www.wto.org/english/res_e/publications_e/unereport2018_e.pdf), Accessed on August 16, 2021
- WTO Annual Report 2011, pg 4

## **REPORTS**

- 21<sup>st</sup> India International Seafood Show 2018, “Warn before blacklisting seafood exporters, India asks EU”, [https://mpeda.gov.in/wp-content/uploads/2020/11/IISS2018\\_EU-IndiaDialogue\\_Eng\\_Jan29.pdf](https://mpeda.gov.in/wp-content/uploads/2020/11/IISS2018_EU-IndiaDialogue_Eng_Jan29.pdf), accessed on August 26, 2020
- Aaron Cosbey, Soledad Aguilar, Melanie Ashton and Stefano Ponte, “Environmental Goods and Services Negotiations at the WTO: Lessons from multilateral environmental agreements and eco-labels for breaking the impasse”, IISD, Trade, Investment and Climate change series, pg 1, March 2010
- Andrei Marcu and Wijnand Stoefs, “The Role of Response Measures in Ensuring the Sustainable Transition to a Low-GHG Economy”, International Centre for Trade and Sustainable Development, January 2017, pg 10.
- Araya and Monica, “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”, International Centre for Trade and Sustainable Development (ICTSD), December 2016
- Arundathi Pandey, “What India can teach the world about sustainability”, World Economic Forum, 2 October 2017, <https://www.weforum.org/agenda/2017/10/what-india-can-teach-the-world-about-sustainability/>, Accessed on September 21, 2021
- Ben Lilliston, “The Climate Cost of Free Trade, How the TPP and trade deals undermine the Paris climate agreement”, Institute for Agriculture and Trade Policy (IATP), pg 3, September 2016
- Dr Edmund Hughes, “Implications of application of the EU Emissions Trading System (ETS) to international shipping, and potential benefits of alternative Market-Based Measures (MBMs)”, European Community Ship-owners’ Associations (ECSA), International Chamber of Shipping (ICS) pg 4, July 2020
- Henk Harmsen, “Effectiveness of UNFCCC in addressing climate change”, Technical Report, Wangari Maathai Institute for Peace and Environmental Studies, pg 6, March 2018.
- Jackie Dawson and Jean E. Holloway, “Treatment of International Economic Trade in Intergovernmental Panel on Climate Change (IPCC) Reports”, Springer, Current Climate Change Reports 6(11), December 2020.

- James Bacchus, “Global Rules for Mutually Supportive and Reinforcing Trade and Climate Regimes”, Expert Group on Measures to Address Climate Change and the Trade System, Policy Options Paper, International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum, pg 7.
- James Bacchus, “The Case for a WTO Climate Waiver”, Special report of Centre for International Governance Innovation, CIGI online, 2017
- James Bacchus, “What Is a Climate Response Measure? Breaking the Trade Taboo in Confronting Climate Change”, Centre for International Governance Innovation, CIGI Papers No: 220, 2019
- Jane A Legget, “The United Nations Framework Convention on Climate Change, the Kyoto Protocol, and the Paris Agreement: A Summary”, Congressional Research Service Report, January 29, 2020, pg 2
- Patricia Espinosa, “The Paris Agreement, a Strategy for the Longer Term”, World Resource Institute, Long term climate strategies, <https://www.wri.org/climate/expert-perspective/paris-agreement-strategy-longer-term>, Accessed on September 23, 2021
- Sunita Narain, Prodipto Ghosh and Ors, “Climate Change Perspectives From India”, UNDP India, 2009, pg 4
- Vijeta Rattani, “Coping with Climate Change: An Analysis of India’s National Action Plan on Climate Change”, Centre for Science and Environment, Vol 1, 2018

## **STATUTES**

- Agreement on Technical Barriers to Trade
- Agreement on the Application of Sanitary and Phytosanitary Measures
- Environmental Goods Agreement
- General Agreement on Tariffs And Trade
- Kyoto Protocol
- Multilateral Environment Agreement
- Paris Agreement
- The Export (quality control and inspection) Act, 1963
- United Nations Framework Convention on Climate Change

## **WORKING PAPERS**

- Gary Clyde Hufbauer and Jisun Kim, “The World Trade Organization and Climate Change: Challenges and Options”, Working Paper Series 9, pg 3, Peterson Institute for International Economics, 2009
- Iturregui, Patricia and Ors, “Liberalization of Environmental Goods & Services and Climate Change”, ECONSTER, HWWA Discussion Paper, No. 335, pg 1, Hamburg Institute of International Economics (HWWA), Hamburg 2005.

- Jaime de Melo and Jean-Marc Solleder, “The role of an Environmental Goods Agreement in the quest to improve the regime complex for climate change”, Foundation for studies and Research on International Development (FERDI), Working Paper on Developmental Policies, pg 4, September 2019
- Joy Kategekwa, “Empty promises. What happened to ‘development’ in the WTO’s Doha Round?” Oxfam Briefing Paper, pg 23, 16 July 2009
- Patricia M. Goff, “The Environmental Goods Agreement A Piece Of The Puzzle”, CIGI Papers, No. 72 June 2015
- Richard Baron and Justine Garrett, “Trade and Environment Interactions: Governance Issues”, Background paper for the 35th Round Table on Sustainable Development, OECD, 28-29 June 2017
- Rob Dellink and Hyunjeong Hwang, “International Trade Consequences of Climate Change”, OECD Trade and Environment working papers, pg 23 2017, <https://dx.doi.org/10.1787/9f446180-en>
- Rob Dellink, Hyunjeong Hwang, Elisa Lanzi and Jean Chateau, “International Trade Consequences of climate change” OECD Trade and Environment Working Papers, 2017, pg 51, <https://dx.doi.org/10.1787/9f446180-en>, 2017
- S. Nazrul Islam and John Winkel, “Climate Change and Social Inequality”, Department of Economic & Social Affairs, DSEA working paper No 152, pg 4, October 2017, [https://www.un.org/esa/desa/papers/2017/wp152\\_2017.pdf](https://www.un.org/esa/desa/papers/2017/wp152_2017.pdf), Accessed on July 10, 2021
- VeenaRenjini K K, “Quantifying the Effect of Non-Tariff Measures and Food Safety Standards on India’s Fish and Fishery Products’ Exports”, The Institute for Social and Economic Change, Working paper 375, 2016, pg 8
- ZhongXiang Zhang and Lucas Assuncao, “ Domestic Climate policies and WTO”, East-West Centers Working Papers, Environment Series, No 51, pg 9, February 2002
- ZhongXiang Zhang and Lucas Assuncao, “ Domestic Climate policies and WTO”, East-West Centers Working Papers, Environment Series, No 51, pg 9, February 2002

### **INTERNET SOURCES**

- Adrian Henry, “How trade policies can support global efforts to curb climate change”, The Conversation, July 28, 2017, <https://theconversation.com/how-trade-policies-can-support-global-efforts-to-curb-climate-change-81029>, Accessed on September 21 2021
- Carolyn Deere Birkbeck and John W H Denton, “We need a better alignment between climate and trade. Here’s a roadmap”, World Economic Forum, January 2020, <https://www.weforum.org/agenda/2020/01/how-can-we-align-climate-and-trade/>, accessed on September 1, 2021
- CBI Ministry of foreign affairs, “What requirements must fish and seafood comply with to be allowed on the European market?”, <https://www.cbi.eu/market-information/fish->

seafood/what-requirements-should-your-product-comply, March 2021, Accessed on August 25, 2021

- Eric Sundquist and Robert Burruss, “Carbon Sequestration to Mitigate Climate Change”, USGS Science for a changing world, <https://pubs.usgs.gov/fs/2008/3097/pdf/CarbonFS.pdf>, accessed on August 14 2021
- India Filings, The Export (quality control and inspection) Act 1963, <https://www.indiafilings.com/learn/export-quality-control-and-inspection-act/>, accessed on August 25, 2021
- Jenny Bates, “Multilateral Environmental Agreements and the World Trade Organization”, Background, <https://www.tcd.ie/Economics/staff/amthrews/FoodCourse/LectureTopics/FoodSafety/MEAs%20and%20the%20WTO.htm>, October 1999
- Marine Products Export Development Authority, <https://mpeda.gov.in/>, accessed on September 28, 2021
- MPEDA, “Market Specific Import Requirements Of Major Markets – USA”, June 2021, [https://mpeda.gov.in/exporters/?page\\_id=2159](https://mpeda.gov.in/exporters/?page_id=2159), accessed on August 15, 2021
- NDC registry Interim, United States’ NDC, <https://www4.unfccc.int/sites/NDCStaging/Pages/All.aspx>, accessed on July 2021
- NOAA, “Seafood Import Monitoring program”, July 2021 <https://www.fisheries.noaa.gov/international/seafood-import-monitoring-program>
- Priyankari Alexander, “What are MEAs”, South Asia Cooperative Environment Program (SACEP), <http://www.sacep.org/pdf/News-Letter/Top-Stories/2016/June/2016-06-15/Multilateral-environmental-agreements.pdf>, June 2016
- The Conscious Club, “Food and Transportation”, <https://www.theconsciouschallenge.org/ecologicalfootprintbibleoverview/food-transportation>, May 2019, accessed on August 26 2021
- The Energy and Resources Institute, “India’s NDC, Key Messages”, Discussion paper , November 2018, <https://www.teriin.org/sites/default/files/2018-12/India%27s%20NDCs%20Key%20Messages.pdf>,
- UK NAEI - National Atmospheric Emissions Inventory, “UNFCCC”, June 8 2021, <https://naei.beis.gov.uk/about/why-we-estimate?view=unfccc>, accessed on September 21, 2021
- UN Climate Change, “ Introduction to Mitigation”, <https://unfccc.int/topics/mitigation/the-big-picture/introduction-to-mitigation>, Accessed on July 12, 2021
- UN Climate Change, “ The Doha Climate Gateway”, <https://unfccc.int/process/conferences/the-big-picture/milestones/the-doha-climate-gateway>, accessed on August 11, 2021

- UN Climate Change, “What is UNFCCC”, <https://unfccc.int/process-and-meetings/the-convention/what-is-the-united-nations-framework-convention-on-climate-change>, Accessed on September 10, 2021
- UN climate Change,” The Paris Agreement”, <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>, Accessed on September 25, 2021
- UNFCCC, “Uniting on Climate, A guide to the Climate Change Convention and the Kyoto Protocol”, [https://unfccc.int/files/essential\\_background/background\\_publications\\_htmlpdf/application/pdf/pub\\_07\\_uniting\\_on\\_climate\\_en.pdf](https://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/pub_07_uniting_on_climate_en.pdf), Accessed on September 21, 2021
- United States Food and Drug Administration, “HACCP Principles & Application Guidelines”, <https://www.fda.gov/food/hazard-analysis-critical-control-point-haccp/haccp-principles-application-guidelines>, December 2017, Accessed on August 24, 2021
- US Government Accountability Office, “ Imported Seafood Safety: FDA and USDA Could Strengthen Efforts to Prevent Unsafe Drug Residues”, <https://www.gao.gov/products/gao-17-443>, October 2017
- World Trade Organization, “ The Doha Round”, [https://www.wto.org/english/tratop\\_e/dda\\_e/dda\\_e.htm](https://www.wto.org/english/tratop_e/dda_e/dda_e.htm), Accessed on July 25, 2021
- WTO, “Agreement on Subsidies and Countervailing Measures (the Subsidies Agreement)”, [https://www.wto.org/english/tratop\\_e/scm\\_e/subs\\_e.htm](https://www.wto.org/english/tratop_e/scm_e/subs_e.htm), accessed on May 15, 2021
- WTO, “Marakkesh agreement establishing WTO”, WTO legal texts - Marrakesh agreement
- WTO, “WTO rules and environmental policies: GATT exceptions”, [https://www.wto.org/english/tratop\\_e/envir\\_e/envt\\_rules\\_exceptions\\_e.htm](https://www.wto.org/english/tratop_e/envir_e/envt_rules_exceptions_e.htm), Accessed on August 20, 2021
- WTO, ”The Uruguay Round” , Understanding the WTO - The Uruguay Round


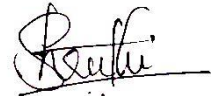
## APPENDIX

### THE NATIONAL UNIVERSITY OF ADVANCED LEGAL STUDIES Kalamassery, Kochi – 683 503, Kerala, India

#### CERTIFICATE ON PLAGIARISM CHECK

1.	Name of the Candidate	Ms. A. Shruthi
2.	Title of thesis/dissertation	WTO Framework and Climate Change Mitigation Measures - Legal Impact on Indian Seafood Exports
3.	Name of the supervisor	Dr. Anil R. Nair
4.	Similar content (%) identified	1%
5.	Acceptable maximum limit (%)	10%
6.	Software used	OURGINAL (URKUND)
7.	Date of verification	11 October 2021

*\*Report on plagiarism check, specifying included/excluded items with % of similarity to be attached in the Appendix*

Checked By (with name, designation & signature)	Dr. Anil R. Nair, Associate Professor	
Name and Signature of the Candidate	Ms. A. Shruthi	
Name & Signature of the Supervisor	Dr. Anil R. Nair, Associate Professor	