# Application of the Precautionary Principle in International Trade: Implications and Legal Perspectives

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**Abbreviations**

**AB**- Appellate Body

**ADI-** Acceptable Daily Intake

**AfCFTA**- Agreement Establishing the African Continental Free Trade Area

**AIA-** Advanced Informed Agreement

**ALOP-** Appropriate Level of Protection

**CAA-**Clean Air Act

**CBD-** Convention on Biological Diversity

**CETA**- Canada-EU Trade Agreement

**CFC**- Chlorofluorocarbons

**CFI**- Court of First Instance

**CITES**- Convention on International Trade in Endangered Species

**CJEU**- Court of Justice of the European Union

**COP-** Conference of Parties

**CPB-** Cartagena Protocol on Biosafety

**CTE-** Committee on Trade and Environment

**DSB-** Dispute Settlement Body

**DSM**- Disputes Settlement Mechanism

**DSU-** Procedures Governing the Settlement of Disputes

**EC-** European Commission

**EEA-** European Environment Agency

**EEZ-** Exclusive Economic Zone

**EIA**- Environmental Impact Assessment

**EMRL-** Extraneous Maximum Residue Limits

**EPA**- Economic Partnership Agreements

**EPA**- Environmental Protection Agency

**ERA-** Environmental Risk Assessment

**EU-** European Union

**FAO-** Food and Agriculture Organization

**GATT**- General Agreement on Trade and Tariffs

**GHG-** Greenhouse Gas Emissions

**GMO-** Genetically Modified Organisms

**GWP-** global warming potential

**HFC**- Hydrofluorocarbons

**ICAO-** International Civil Aviation Organization

**ICJ**- International Court of Justice

**ITLOS-** International Tribunal for the Law of the Sea

**IUCN-** International Union for Conservation of Nature and Natural Resources

**LMO-** Living Modified Organisms

**MEA-** Multilateral Environmental Agreements

**MRL**- Maximum Residue Limits

**NGT-** National Green Tribunals

**ODS**- Substances that Deplete the Ozone Layer

**OECD**-Organization for Economic Cooperation and Development

**RMA-** Resource Management Act

**SAB-** Standing Appellate Body

**SCM**- Subsidies and Countervailing Measures

**SPS-** Sanitary and Phytosanitary Measures

**TBT**- Technical Barriers to Trade

**TFEU-** Treaty on the Functioning of the European Union

**TREM-** Trade- Related Environmental Measures

**TRIPS-** Agreement on Trade-Related Aspects of Intellectual Property

**TTIP**- Transatlantic Trade Investment Partnership

**UNCED-** United Nations Conference on Environment and Development

**UNCLOS-** United Nations Convention on Laws of the Sea

**UNECE-** United Nations Economic Commission for Europe

**UNEP-** United Nations Environmental Program

**UNFCCC**- United Nations Framework Convention on Climate Change

**USMCA-** United States-Mexico-Canada-Agreement

**WHO-** World Health Organization

**WTO**- World Trade Organization

**The Precautionary Principle: A Justified Incursion to International Trade?**

The precautionary principle is perceived by many scholars, lawyers, environmental activists and public officers in different ways and shades. It is one of the several principles international environmental law proffers, either as a solution, or mitigation, or prevention of present and future environmental damage. The principle is founded on the premise that action on issues affecting the environment should be promptly taken, and absence of enough scientific information on the perceived danger should not be an excuse to act in the contrary. Some see it as a valid protective approach against potential irreversible harms even in the absence of a scientific confirmation of the imminent danger. Others see it as an unnecessary and disguised obstruction to innovative development. Over the past two decades, the principle has seen a wider latitude of application beyond the traditional area of environment by different entities. International trade is one major but controverted area that has attracted the application of the principle, albeit with objections.

The argument for and against the principle itself and particularly its application in international trade is directed at its status and its scope of application. International trade being global business activities organized under a multilateral regulatory regime that promotes liberal market ideologies, its interaction with the environment has increased theoretically, but legally nothing much has changed. Though there are trade-environment measures in some international trade related agreements that some experts have interpreted to mean a recognition of the precautionary principle in international trade, no judicial interpretation of those measures has expressly given any credible credence to such recognition. This research extensively examines the dynamics of international trade and legal scientific basis for the different perspectives that raises the claim of applying the precautionary principle to its activities. Several factors contribute to why the precautionary principle remains outside the ambit of international trade. But the major one is the level of interaction between environmental law and international trade law. As Globalization hitches forward, with the oppositions to it; the trade wars between top trading countries and the re-alignments in trade relationships, will the chance for increased interaction between trade and environment be higher or lower? With the intensity of the topic of climate change, will there be any difference in legal interpretations of the precautionary measures that can be deemed to be non-restrictive of trade?

# PART I

# CHAPTER ONE

## 1.0 General Introduction

The increasing presence of unpredictable and uncertain risks, such as climate change and environmental pollution confronting our society, made it imperative for an anticipatory model of protection to be developed to ensure the protection of people and the environment from dangers that are anticipated, unascertained and may or may not be related with human activities. It means instead of preparing for the aftermath of a possible occurrence that is risky or harmful to humans and environment, this anticipatory model of protection recommends that precautionary measures be taken in anticipation of such harmful occurrence. These precautionary measures are what the precautionary principle defines thus: where human exercises may have an annihilating or irreversibly damaging impact on the environment, decision-makers ought to not hold up until there's full logical or scientific confirmation before putting in place protective measures.[1]

Though the precautionary principle can be seen basically as a strategy to grapple with the challenge of scientific uncertainties in the process of assessing or managing risk in line with the simple wisdom of looking before leaping, it is also recognized as an integral principle of sustainability; development that meets the needs of the present without destroying the chances of unborn generations to source their needs for sustenance.[2] The strength or the significance of the precautionary principle varies from weak to strong; whereas its approach of application in different spheres of national or state entities depends on legislative framework and judicial decisions taken on the basis of diverse views, i.e. whether the principle imposes obligation or it guides decision makers on the application of precautionary measures. While its application has no particular procedure or standard that is common to all jurisdictions and sectors, its inclusion in national laws or regulations of different states varies even among the states that have recognized the

[1] See definitions in Sands, Phillips, *Principles of International Environmental Law*. Cambridge University Press, 2003. at 150 and David, Hunter, *et al*. "*International Environmental Law and Policy*" 1998 at 321.

[2] Joel Ticker, *The Precautionary Principle in Sustainable Environmental Management; Dimensions of Sustainable Development*-Volume II, 2009. www.eolss.net Accessed 4-01-2018.

precautionary principle as a treaty law by virtue of their ratification of various treaties where the precautionary principle is included.

## 1.2 Research Questions

This research provides answers to three main questions. The first is: "what are the implications of the precautionary principle on international trade?" International trade strives within the ties created by international legal relationships, but not to the exclusion of individual state conventional trade practice as directed by regulations and laws. Given the scope of international trade law within the legal regime of international law under the dictates of principles of law that nation states subscribe to, examining how a principle of international law that does not have such latitude of uniform standard or procedure in application is applied, if at all to the practice of international trade will provide answers to questions of relevance and practicability of its application in a sector that is dominated by exchange of goods and services rather than the traditional environment-related activities. A peripheral knowledge of international trade begs one to wonder where and how a principle such as the precautionary principle comes in or how practicable is its application, considering the activities involved in trade and the processes that are identified with the precautionary principle. The first task will be to establish the links and then identify relevance, if there is, before examining the implications.

The second research question is: "Is the process of applying the precautionary principle consistent with the regulatory regime of the World Trade Organization (WTO) and the European Union (EU)?" As explained earlier, there are two distinct processes that could precede the application of the precautionary principle; environmental impact assessment and risk assessment.[3].

The Environmental Impact Assessment (EIA) is much more easily related to the precautionary principle because it identifies more with environmental activities specifically and not general to

[3] Woolcock, Stephen, *The precautionary principle in the European Union & its impact on international trade relations*, Centre European Policy Studies, 2002. For more on how the process of risk assessment leads to application of the precautionary principle, see also Chapman, Peter, M Chapman, "Risk assessment and the precautionary principle: A time and a place." *Marine Pollution Bulletin* 38.10 ,1999, 944-947. On the EIA as a process for application of precautionary principle see Gullet Warwick, "Environmental impact assessment and the precautionary principle: Legislating caution in environmental protection." *Australian Journal of Environmental Management* 5.3, 1998, 146-158. Also, Jalava, Kimmo, *et al*., "The precautionary principle and management of uncertainties in EIAs–analysis of waste incineration cases in Finland" *Impact Assessment and Project Appraisal* 31.4 ,2013, 280-290.

every activity. However, that is not to the exclusion of risk assessment which sounds more generic in nature. This second question will examine the WTO regulatory regime overseeing international trade; how consistent it is with the possible application of the EIA and subsequently the precautionary principle. A study into how such assessments have been carried out, if indeed there was any, will assist in understanding the possibility of the WTO accommodating a process of assessment that satisfies the interest of balancing environmental concerns with economic development through trade across board and not just selected trade activities.

Taking into cognizance the non-environmental nature of trade activities and comparing it with the precautionary principle in the EU which applies it beyond environmental activities as it is applied to trade within and between the EU and trade partners, it is noted that the EU views risk assessment as a process that is precautionary on its own. To study if there is consistency or not between the process applied by the WTO and that of the EU, a comparative study of how the precautionary principle functions in both international bodies will be done.

The main thrust of present and future dispute between trade blocs, States that are trading partners and members of the WTO on the application of the precautionary principle is the inconsistency in how the principle is domesticated in national laws which reflects in how individual states enforce the standard of application of the principle in international trade relations. The inconsistencies are not the making of the national entities as it may appear to be, rather it flows from the variations seen in the numerous formulations aiming to give same meaning to the definition of the principle in multilateral environmental agreements.[4]

The third main question this research is structured to answer is: "What is the level of consistency between the precautionary principle and trade obligations specified in multilateral environmental agreements (MEAs) and Economic Partnership Agreements (EPAs)?" Because the principle finds its roots in environmental law, it is not seen to have any element that should accommodate or have regard to rules regulating international trade. However, there are trade activities of international character that requires application of the precautionary principle. The body of rules regulating and

[4] De Sadeleer, Nicolas, Les principes du pollueur-payeur, de prévention et de précaution ,Bruxelles: Bruylant, 1999. at 139-151; D. Vanderzwaag, "The Precautionary Principle in Environmental Law and Policy: Elusive Rhetoric and First Embraces", Journal of Environmental Law and Practice 8, 1998, at 354.

promoting a liberalized global trade environment is subscribed to by same states that are signatories to MEAs. The point of conflict will be identified and an understanding of how the level of inconsistency affects international trade where the precautionary principle is applied will be established.

### 1.3 Scope and Method of Research

This research is qualitative in substance and analytical in approach. An overview study is conducted relating to the legal status of precautionary principle in international law and by extension in international trade law. While the application of the precautionary principle outside environmental law creates a delicate imbalance among environment, consumer health and trade, the objective of this research is not to underplay the criticism of its role outside environmental law. The objective is to identify, analyse and proffer a balanced cautious approach to the imbalances that could impact negatively on the environment and international trade, due to divergent interest and understanding in existing trade relationships as it relates to the application of the precautionary principle. Basically, an understanding of the variations in the direction of the application of the concept of free market, promoted by liberal trade regulations, as different from the general legal perspective of principles of environmental law will need the examining of the 'relativity test'. The test seeks to answer questions arising from the comparative analysis of trade measures that are general under the regime of the WTO with the environmental laws practiced but applied or interpreted within scopes that may be exclusive to supranational and national entities. The pressure point seeking for that balance between satisfaction of free market and the right of WTO Members to practice international trade without ceding their right to implement their municipal environmental laws was rightly described as a 'delicate' task by the Appellate Body of the WTO in the shrimp/turtle dispute.[5]

Though the principle is prominent in many multilateral environmental agreements (MEAs) and domestic laws, its status in international law remains a question that has not been given precise and consensus answer. Every element that should qualify a principle of customary international law is examined and matched with the thread of development that characterises the precautionary

[5] See Appellate Body Report, United States – Import Prohibition of Certain Shrimp and Shrimp Products ("United States – Shrimp"), WT/DS58/AB/R, adopted 6 November 1998, para. 159.

principle. A broad study of the precautionary principle, its origin, features, and evolvement in international law reveals its peculiarity amongst other general principles of law - if it is a principle of law. The conventional perception of precautionary principle being basically operational within environmental law and not 'outside' demands 'principle-orientation' for this research to successfully justify the interaction of the principle with international trade law.[6] Furthermore, there is a comparative illustration of how the precautionary principle is applied in European law in comparison with some selected countries, Canada and the United States of America to be precise, that are parties to trade agreements that could be in conflict with EU law as regards the application of the precautionary principle in trade.

A careful and precise examination of selected trade agreements made in contemplation of environmental measures determines if the basic elements of the precautionary principle were recognized and conditions provided where one or two of its elements are present in a trade-environment measure. For example, the Sanitary and Phytosanitary Measures (SPS) Agreement outlines conditions for measures Members may take in a situation of scientific uncertainty in Articles 2.2, 5.1, 5.2, 5.3, and Article 5.7 of the Agreement. Having noticed that international trade pacts are made on the basis of reciprocal interests while protecting the sanctity of individual national economic interests, this study leaps further into examining and analysing new agreements that have been made by major economic countries with themselves or as a continental economic community. This is with the aim of identifying possible conflicts with municipal laws that concerns environment and consumer health and the implications of such conflicts for parties to the agreements. Two of such agreements are the United States-Mexico-Canada-Agreement (USMCA)[7] and the Agreement Establishing the African Continental Free Trade Area (AfCFTA).[8] The relevance of these two agreements is underscored by the history of trade relationship of the parties to the former and the large coverage of the latter. For USMCA, the three parties have

[6] Hilf, Meinhard, "Power, Rules and Principles – Which Orientation for WTO/GATT Law?" 4 Journal of International Environmental Law, 2001.

[7] The USMCA replaces and repealed the North American Free Trade Agreement (NAFTA), which had created a free trade zone between the three countries back in 1994. The USMCA deals with major changes for automakers, new labour and environmental standards, intellectual property protections; and some digital trade provisions will require ratification by all three countries' legislatures before taking effect.

[8] Agreement Establishing the African Continental Free Trade Area (AfCFTA) was brokered by the African Union with 44 members of its 55 member states signing at Kigali, Rwanda on March 21, 2018. The agreement comes into effect upon ratification by 22 of the signatory member states.

decades of trade history that has seen them dispute over differentiation of standards applied to products traded amongst the three countries at the WTO for reasons related to environment or consumer health concerns. The AfCFTA, a continent-wide endeavour, is regarded as creating the largest single market in the world.

There are judicial decisions and academic contributions to the debate on the status of the precautionary principle, its relevance to WTO law and trade-environment measures applicable to Members of the WTO. Howbeit, to understand the different legal perspectives and possibly produce what can be called a 'balanced caution' approach to the application of the principle in international trade law, it will be impossible to understand legal perspectives that should shape the implication of applying the precautionary principle to international trade without comparing and analysing how the principle is applicable and being applied under three major legal regime that this research have examined; EU law, General Agreement on Trade and Tariffs (GATT), and international environmental law generally. To achieve this, literatures and decided cases that have contributed to the subject matter are reviewed and analysed. Notable amongst the cases reviewed and analysed is the European Community (EC) Beef Growth Hormones Case and the EC Asbestos. This helps in having a normative understanding of the workings of the principle in environment and trade by making a comparative analysis on how the precautionary principle stands in the conventional environmental law to how it functions in EU law and WTO law using the functional method. The analysis includes elements of a comparative law approach. In order to understand if the process of applying the precautionary principle as prescribed by international environmental law is consistent with the regulatory regime of the WTO and the EU, a concise analysis and reconstruction of the concept of precaution in relation to the context within which the principle is applied in WTO and EU law is undertaken.

The EU Law is both private and public law with its private law primarily aimed at regulating the internal market and protecting consumers. On the one hand, the WTO prescribes certain standards for States on how their private laws relate with the collective legal objective that defines the limits of their municipal laws in dictating the form or direction of international trade exchange. On the other hand, it is observed that while the EU law is tailored to integrate with national laws of Members of the EU, the WTO law takes a different course and defines how States could allow or shield their national laws from interacting with it, through subsidiary agreements such as the SPS

Agreement. Identifying the level of inconsistency will determine how the difference in legal systems affects the process of applying the precautionary principle in international trade law and in the process aggregate the cross-legal perspective that shapes the interaction of trade with environment on the one hand and the precautionary principle with international trade law on the other hand.

A case-by-case study and evaluation of disputes in respect of trade-environment measure-application of the precautionary principle that have been brought before the WTO adjudicatory system, at the panel and appellate level is explored. Focus is on the parties, to these disputes, their arguments and defences. How decisions of the adjudicatory body have affected the various parties in their trade relations and volume of trade is examined in order to aggregate the implications of applying the principle to international trade law. Criteria used in selecting cases are:

1. Year(s): The year the decision consultation was brought to the notice of the WTO Dispute Settlement Body (DSB) and the years between when final decision was given and present year. This is important to ensure that the substance of the research is not stale and outdated.
2. Subject: Primarily, I looked out for cases where the application of the precautionary principle in respect to concerns for consumer health and environment is in contention between interested parties at the WTO DSB and Appellate Body (AB). Also, cases where decisions on the status of the precautionary principle is given by the European Union Court of Justice and the International Court of Justice for reference sake.
3. Decision: Cases that have reached final adjudicatory level of the WTO.

Upon examining the key legal issues raised in cases reviewed and scholarly arguments made in the light of WTO's position on the precautionary principle, legal mechanisms that may have sufficed where there is no explicit adoption of the precautionary principle are identified and the rational for the measures adopted subsequently analysed. Particularly, where the main issue for consideration when deciding on the precautionary measure to apply is the level of predictability of event and not the likelihood of an activity becoming hazardous to the environment.

## 1.4 Theoretical Considerations

The precautionary principle has been a victim of controversy for being a product of a concept of precaution that is seen as not to possess the powers that its proponents project it to have. It is also a product of circumstances that are natural in some cases but more of artificial in others. Artificial because such circumstance(s) are triggered by human activities. Expectedly, the opinion of those that initiate and seek to perpetuate activities leading to circumstances that calls for the application of the precautionary principle is that it's an anti-development concept. Cataloguing possible circumstances that could demand for the application of the precautionary principle shows a train-pattern of connectivity that drags one event to an activity: process, then possible scrutiny of process by members of the public and authorities leading to decision -acceptable or unacceptable. Unwittingly, the concept leans more on public knowledge of situations that it is created to address without sparing even established norms that may come in conflict with its rationality. The discussion of precaution remains wrapped around the theory, legality and application of the precautionary principle when it is viewed differently from its 'simple' form. If its legal strings are detached, precaution on its own dictates the next step, provides options for the next potential action, and could even decide to put a halt on a planned move. Just like most general ideas that evolves into an exclusive concept, the challenge of implementation rears its head when the possibility of application to wide range of areas defies legal logics. Not because the concept on its own does not fit in well into the society that it is designed for, rather, because its theoretical foundation may not be purposed for a wide range of sectors.

At its conceptual stage, its weakness can still be understandable within the limitations that can tolerate it, but when it assumes the level of being a 'principle', it is seen to have achieved acceptability that could make its application flow from one sector or area to another without much resistance. The precautionary principle has over the past three decades made a foray into areas that are traditionally novel to its perceived originating concept. However, given its holistic form, questions have been asked if it can be said that the precautionary principle lacks the utilitarian value that should make it respond automatically or be subject to decision making progress of 'to be or not to be'? If yes, would it be correct to say there lies the weakness of the principle? I will say no. This study explains how the precautionary principle derives much of its value from its inclusive and participatory function. Also, the forgoing strengthens the character of the principle

as one that is subjected to the decision-making process that is modelled in line with the formal decision theory.[9]

The formal choice theory can be seen to be a branch of science that gives a more exact and efficient consideration of the formal or unique properties of decision-making scenarios.[10] How does this theory relate to the decision-making process of the precautionary principle? Precaution is not just about the uncertainty of the presence of harm. The element of uncertainty need not tilt towards the argument of what could be the probable result of an action alone. If scientifically, there are no plausible evidence to sustain safety of an activity which on the surface of it looks unsafe, then there could be conclusion of the harmfulness of such activity.

### 1.5 Summary

Given the lack of consensus in the interpretation of the precautionary principle, legal articulation of the principle has been in different shades and forms. Precise terms are avoided in most national laws and international documents, while terminologies are used differently. Even though when comments made by scholars or legal practitioners in reference to the principle appear as if there is an agreed and unified norm guiding the application of the principle,[11] there still exist legal junctions where there are variance in how the principle is applied or enforced across sectors that are traditionally inclined to undergo the qualifying process that could result in the application of the principle. For example, the oil and gas industry have different stages in its production chain. However, different countries in their law regulating the industry, formulate or codify the different stages in ways that is unique to the geophysical features of the area. As development expands and technological innovations are being introduced in the production process, safety and operational guidelines are reviewed which will necessitate formulating new regulations that should include guidelines on how the precautionary principle is applied.

Chapter two of this research examined how the precautionary principle originated from being a national principle of environmental law to its inclusion in international treaties and its present

[9] Steele, Katie, "The precautionary principle: a new approach to public decision-making?" *Law, Probability and Risk* 5.1, 2006: 19-31.
[10] Allen, Glen O., "Formal decision theory and majority rule." Ethics 92.2 (1982): 199-206.
[11] Adams, M. D., "The precautionary principle and the rhetoric behind it." Journal of Risk Research, 5(4), 2002, 301-316.

status in laws of different countries. Having taken into consideration the origin of the precautionary principle as an emerging principle in international law that responds to the effects of the activities of humans on the environment, it is observed that responses to actions that should trigger the application of the precautionary principle differ. Specific mention and examination of the precautionary principle in the environmental laws of the United States (U.S.) is made. Emphasis is on the U.S. because of its non-committal disposition to the precautionary principle as a recognized legal concept within set-laws as regards risk and environmental management despite its positive ideological leanings. Given the fact that the U.S. has over the decades enacted laws that incorporate features of the precautionary principle, it can be said that they subscribe to it. However, the question will be the status they accord it. Review of relevant U.S. statutory and case laws helped in the foregoing regard.

The legal reasoning that founded the principle in Germany, first as a statutory law and then given legal teeth by the Courts is studied. This helped to understand if the progenitor of the principle had the principle restricted to environmental protection or a general application covering environment and then consumer health and safety. The precautionary principle is seen in three different shades, two of which is described in this same chapter: as a process and as a concept. While generally, the principle is regarded first as a concept and then necessarily a process, there is a more concise study into its function as a process with consideration given to risk assessment as part of a procedure that is intricately woven into what qualifies it to be part of decision-making mechanism for the protection of the environment and consumer health. Before concluding the chapter, I undertook a critical study on the argument against the shifting of the burden of proof and the crucial element of "scientific uncertainty".

Chapter three focused more on understanding the status of the precautionary principle. Is it a principle of law, or customary international law or just a principle of international environmental law? Or is it none of the aforementioned, but just an approach requiring no binding obligation from State actors that subscribe to it? The status of the principle determines the scope of its effect on areas that it purports to protect against harm. This study entails analysing the different views of various jurisdictions and decision of court as regards the status of the precautionary principle as a principle of law, an emerging principle or an approach lacking universal consensus.

Chapter four explores the meeting points for environmental and international trade law. Where enough intersections have been established, the challenges and possibilities of enforcing environmental law in international law is studied and then the implication of enforcing environmental law generally on international trade. This chapter is not about the precautionary principle, rather it focuses on regulatory regime of environmental law in its broad sense at the international level. To avoid many complications and enhance clarity, selected bilateral and multilateral trade agreements are examined. Examining the relationship between environmental law and international trade law under GATT and WTO helped in resolving the question of 'relativity' of the precautionary principle to international trade as an area outside the conventional area of basic environmental protection.

The EU is presently leading the way in the application of the precautionary principle. The principle is enshrined in EU law as a fundamental part of its environmental and consumer health protection mechanism. Chapter five is about how the precautionary principle is applied in EU trade law. EU being a supranational body of states, has its internal trade policy and laws which also dictates trade between member states and countries outside the EU. So far, most of the disputes emanating from the enforcement of precautionary principle in international trade at the WTO involves the EU. In the light of the forgoing, it is imperative that selected cases at the WTO where the EU has affirmed its right to enforce the application of the precautionary principle in international trade be reviewed in order to understand the underlying concerns of States that restrict the application of the precautionary principle to environmental related activities alone or that see it as another protectionist barrier under the guise of precaution. For example, is their legal argument influenced by their economic interest?

Chapter six focuses on the implication of the principle on international trade and examines its interaction with international trade law under the auspices of the World Trade Organization. In conclusion, flowing from my findings in the preceding chapters, it explores the consistencies and conflicts between the principle and the rules under the WTO agreements. By looking at the different and possibly similar and intricate values underlying both, I suggest a balanced approach that could help resolve disputes arising from application of precautionary measures in international trade.

## CHAPTER TWO

## 2.0 THE PRECAUTIONARY PRINCIPLE: EVOLUTION AND DISPUTATIONS

The evolution of the precautionary principle can be examined from its emergence to its present. However, to properly evaluate its impact on different sectors, Simon Marr suggests that a sector-by-sector analysis will make it easier to understand how the effect of human activities differs from one sector to another.[12] It is general legal knowledge that international law is made up of rules with unequal degree of force, depending on whether they are documented in international treaties or soft laws. The obvious reason lies in the binding nature of the rules contained in treaties and the otherwise case for norms contained in soft law - at least in most cases. However, the dichotomy between treaties and soft laws is not a strict distinguishing factor in determining international laws with binding rules contained in it. For example, custom as a source of law can form part of a soft law, while principles incorporated into treaties may have 'soft' or guiding characteristics rather than imposing specific obligations. A detailed examination of instruments that codify the precautionary principle reveals that the principle is codified in soft law and in treaties.

The precautionary principle is one of the several principles international environmental law proffers, either as a solution, or mitigation, or prevention of present and future environmental damage. Many proponents of the principle believe one of the bases for the principle is found on the premise that action on issues affecting the environment should be promptly taken, notwithstanding the absence of total scientific certainty, thereby reversing the burden of proof and placing it on the promoters of the activity who claim it is not damaging.[13] The element of 'scientific uncertainty', extrapolates the relationship between the rule of science and the procedures of law. There are scholarly arguments that has formed a web of criticism of the precautionary principle by the scientific world based on the law expecting a level of 'scientific certainty' before safety can be ascertained. Bodansky posits that "the precautionary principle is not neutral towards uncertainty -

[12] Marr, Simon, the precautionary principle in the law of the sea: modern decision making in international law. Vol. 39. Martinus Nijhoff Publishers, 2003.

[13] Elli Louka, International environmental law; Fairness, Effectiveness, and World Order (Cambridge University Press, Cambridge, 2006) at 50. Also see Patricia W.Birmie, Alan E.Boyle, Catherine Redgwell, International Law and the Environment( 3rd Ed, Oxford University Press, Oxford, 2009) at 153. Though the ICJ in the Pulp Mills case disagrees with the notion of the automatic reversal of the burden of proof by the precautionary principle. According to the ICJ, the reversal of the burden of proof depends on how it is articulated and borne out by state practice.

it is biased in favour of safety".[14] Later in the summary of the evolution of the precautionary principle, it is seen that the factor of 'scientific uncertainty' is referenced differently. However, in the Rio Declaration on Environment and Development, 1992 (Rio Declaration), the level of scientific uncertainty is not one of the factors that should trigger the application of the precautionary principle. Rather, it should not be a defence by the promoters of a potentially harmful activity as reason why the precautionary principle should not be applied. The tone of definitions of precautionary principle in various conventions and treaties places the factor of 'scientific certainty' in either positive or negative sense. The presence of uncertainty is not a factor triggering the application of the precautionary principle but a factor that should not preclude the application of the precautionary principle. For example, the presence of contamination or pollution is often made certain by science, the level of certainty notwithstanding. More often, controversy arises where an innovative practice is introduced to a known activity. In such a situation, the conduct of an environmental impact assessment (EIA) or risk assessment will form part of the process of or leading to the application of the precautionary principle.

## 2.1 Emergence and Growth of the Precautionary Principle

The precautionary principle (Vorsorgrgrundsatz) was introduced into the domestic law of Germany in the mid-1970s when the debate for the legislation against air pollution from burning forests was initiated.[15] But its application is now extensive, especially as issues of environmental protection and climate change, continue to be of increasing concern. At the early stage of its introduction, the statutory instruments only made reference to the term Vorsorge, without specific obligations or conditions that should warrant application of measures that are precautionary. It places emphasis on the importance of developing mechanisms for detecting risks to human health and the environment such that precautionary measure will be in place to prevent harm. The German Federal Ministry of Interior in a communication in 1984 explained the meaning of Vorsorge as:

> The principle of precaution commands that the damage done to the natural world (which surrounds us all) should be avoided in advance and in accordance with opportunity and possibility. Vorsorge further means the early detection of danger to health and environment by comprehensive, synchronized (harmonized)

[14] Bodansky, D., The precautionary principle in US environmental law. In: O'Riordan, T., Cameron, J. (Eds.), Interpreting the Precautionary Principle. Earthscan, London, 1994, pp. 203– 228.
[15] Stevens, Mary, "The precautionary principle in the international arena." Int'l & Comp. Envtl. L. 2 (2002): 13.

> research, in particular about cause and effect relationships. It also means acting when conclusively ascertained understanding by science is not yet available. Precautions means to develop, all sectors of the economy, technological processes that significantly reduce environmental burden, especially those brought by the introduction of harmful substances.[16]

The statutory provisions such as article 34(1) of the Unification Treaty of Germany provide for the precautionary principle as a legal tool empowering the government to manage situations of uncertainty and to ensure the state is capable of responding adequately when such situations arise. The principle legitimizes the anticipatory action of State, which is precautionary in order to protect the environment. In incorporating the application of the precautionary principle into the German jurisprudence, various regulations were made to enable its enforcement as an instrument. Some of the instruments are section 5 para. 1 no. 2 of the Federal Emission Control Act (Bundes-Immissionsschutzgesetz), which places the responsibility on the administrators of plants in ensuring precautionary measures are placed against events that may have harmful impacts on the environment and enjoin those living in areas prone to floods to take precautionary actions against destructive consequences.[17]

There are different ways in which the precautionary principle is implemented in German. One of such is the plan approval procedure.[18] The plan approval procedure commences with the applicant forwarding his plan to the consenting authority. It is required that the plan presents drawings and explanations about the project and the plots of land and installations that will be affected. Upon submission of the plan, the consenting authority communicates with other public regulatory agencies who are empowered by law to oversee some related aspects of the project.[19] Concurrently, the plan is published for a month in all municipalities that will be affected by the proposed project. The law allows that within two weeks after the publication, objections to the project can still be forwarded to any of the consenting authorities. Hearings will be organized by the authorities where all parties involved will be heard. Where alteration is made during the process, another assessment and hearing is conducted. This procedure will lead to either the granting of license to the applicant

[16] Federal Ministry of Interior (MBI) Dritter Immissionsschukzbericht 10/1345 (1984, at 53.
[17] Section 5 para. 2 of the Federal Water Act (Wasserhaushaltsgesetz)
[18] Section 72 et seq. of the Administrative Procedure Act (Verwaltungsverfahrensgesetz, VwVfG)
[19] Section 73.2 VwVfG

after weighing all the circumstances by the consenting authority or a rejection in line with the precautionary principle.

German Courts have been adjudicating over matters that bother on the safety and scientific uncertainties regarding projects that members of the public deem to be of high risk, such as the construction and maintenance of nuclear-powered plants. The German Constitutional Court and the Federal Administrative Court have in several Case laws expounded the legal foundations, elements and factors that should trigger the application of the precautionary principle and its justification for interference with activities that impact on the economy.

## 2.2 Legal Reasoning of German Courts

In expounding the concept of Vorsorge, the Federal Court of Appeals for Administrative Law held in the Whyle nuclear reactor case as regards Section 7.2(3) of the Atomic Energy Act:[20]

> Precaution requires consideration of those possibilities of damages which due to a lack of existing scientific knowledge about certain casual relationships cannot be excluded (Besorgnispotential). Precaution further means that the appreciation of such possibilities of damages cannot be made on the basis of experience and existing data, and that theoretical concerns and models need to be taken into account so as to be able to sufficiently and reliably exclude the risks arising from uncertainties and lacunae in scientific understanding. The evaluation should refer to the current level of science and technology (Stand der Wissenschaft und Technik). Uncertainties relating to research and risk assessment must be considered according to the reasons for concern associated with them under sufficiently conservative hypothesis. In this process, the administrative authority charged with granting the authorization should not only rely on dominant theory but should take account of all tenable scientific knowledge.

According to the reasoning of the Court, appropriation of action along the line of necessity and finding its balance with risks that the society accepts as tolerable, should be on the basis of practical reasoning and not abstract theories or speculative deductions that will not produce answers that are definitive. So, while acknowledging the differential factors of each case, German Courts, after an appraisal of the facts before them and the possible price that negligence or ignorance could cost

[20] German Federal Administrative Court Judgement of 19 December 1985, "Whyl",
Federal Administrative Court decisions BVerwGE, 72, 300, at 315. (Official Reporter of the German Federal Administrative Court)

the environment and population, allow the government a leeway to apply precautionary measures. Where there is uncertainty, for example, biotechnology or risk of nuclear exposure, the control of the Federal Court of Appeals for Administrative Law is limited to ascertaining whether the relevant regulatory authorities have considered differing scientific opinions in adopting the disputable risk assessment report.[21]

### 2.3 The Place of the Precautionary Principle in the United States Laws

In the 1970's, the U.S. Government began to enact laws against unsafe levels of exposure to toxic chemicals by making risk assessments mandatory. Risk assessment demands for unavailable information and thus, risk minimization legislation required administrators to make decisions on the frontiers of science under extreme uncertainty. Consequently, the gap between scientific inference and the more rigid legal standard for cause-in-fact has over the course of application or implementation fizzled within the regulatory space. The U.S., preceding the Rio Declaration enacted precautionary regulations and has even had the endorsement of such regulations by the U.S. courts but has not formally recognized the precautionary principle albeit termed an 'approach' as part of its legal system. Being a country that has substantially enacted environmental laws at the national level, such as implicitly incorporate features of the precautionary principle, the U.S. in its practical disposition to national environmental issues has been more precautionary. For example, the United States Court of Appeal for the District of Columbia Circuit in a landmark environmental case involving, in part, a challenge to the Environmental Protection Agency (EPA) Administrator's discretionary authority to act in the face of scientific uncertainty held that forcing the EPA to delay setting the standards until it can "conclusively demonstrate" that effects will be adverse to health is inconsistent with U.S. Federal Clean Air Act's (CAA) precautionary and preventive nature.[22] Section 109 of the CAA which provides for national primary and secondary ambient air quality standards directs the Administrator of the EPA to establish primary standards, "the attainment and maintenance of which in the judgment of the Administrator, based on such

[21] ibid at 316 and also BVerwG, NVwZ 1999, at 1232.

[22] Lead Indus. Association, Inc. v. EPA, 647 F.2d 1130 (D.C. Cir. 1976), cert. denied, 449 U.S. 1042 (1980) Chief Judge J. Skelly Wright, in his written opinion held, "Congress' directive to the Administrator to allow an 'adequate margin of safety' alone plainly refutes any suggestion that the Administrator is only authorized to set primary air quality standards which are designed to protect against health effects that are known to be clearly harmful".

criteria and allowing an adequate margin of safety, are requisite to protect the public health."[23] Beyond establishing primary standards, the EPA Administrator, in consideration of the criteria that qualifies the quality of air and reflecting the most recent scientific innovation, sets secondary standards based on how gaps in available scientific knowledge can affect public health where there is presence of pollutants that the CAA seeks to prevent.

The D.C. Circuit further found the precautionary tone audible in section 211 of the CAA. This section confers on the EPA Administrator the discretion to regulate, control or prohibit the production or sale of any fuel or fuel addictive which causes or contributes to air pollution which may reasonably be anticipated to endanger the public health or welfare.[24] In the opinion of the Court:

> Questions involving the environment are particularly prone to uncertainty. Technological man has altered his world in ways never before experienced or anticipated. The health effects of such alterations are often unknown, sometimes unknowable. While a concerned Congress has passed legislation providing for protection of the public health against gross environmental modifications, the regulators entrusted with the enforcement of such laws have not thereby been endowed with a prescience that removes all doubt from their decision making. Rather, speculation, conflicts in evidence, and theoretical extrapolation typify their every action. Sometimes, of course, relatively certain proof of danger or harm from such modifications can be readily found. But, more commonly, "reasonable medical concerns" and theory long precede certainty. Yet the statutes-and common sense-demand regulatory action to prevent harm, even if the regulator is less than certain that the harm is otherwise inevitable.[25]

In the above case, the EPA made a regulation which places a cap on the amount of tetraethyl lead that can be added to gasoline to 0.5 gpg for all gasoline produced locally or imported. This resulted in a company that manufactures Lead additives to institute a suit that challenged the EPA's regulation. The company argued that the EPA has failed to present any definitive proof backed by sound scientific findings to support its assertion that emissions of lead from gasoline are harmful to humans. In December 1974, the said regulation was struck down by a three-judge panel of the U.S. Court of Appeals for the District of Columbia Circuit by a 2-1 vote. The Court found the evidence adduced by the EPA in support of the regulation to be weak but disagreed with the

[23] 42 U.S.C. S 7401(b)(1)
[24] 42 U.S.C. § 7545(c)(1)(A) (1993)
[25] Ethyl Corp. v. EPA, 541 F.2d 1, 24-25 (D.C. Cir. 1976), cert. denied, 426 U.S. 941 (1976)

Company's argument that a hard proof must be presented before such precautionary regulation can be made. Dissatisfied with the decision, the EPA appealed to the Full Court, which reversed the earlier decision in March 1976 and upheld the Lead standard. In its landmark decision which can be taken as its endorsement of precautionary regulation, the Full Court held that there was sufficient evidence to justify the regulation of Lead additives even in the absence of ascertainable proofs that show how dangerous they are to human health. It is worthy of note that the Full Court recognized the precautionary nature of the CAA's regulatory mandate when it held:[26]

> Where a statute is precautionary in nature, the evidence is difficult to come by, uncertain, or conflicting because it is on the frontiers of scientific knowledge, the regulations designed to protect public health, and the decision that of an expert administrator, we will not demand rigorous step-by-step proof of cause and effect. Such proof may be impossible to obtain if the precautionary purpose of the statute is to be served.

The American federal system may not have incorporated the precautionary principle in clear terms, but its environmental laws have taken after a precautionary character that depicts an integration of a standard which qualifies how prepared government at the different levels are for situations that are undesirable, capable of causing damages that are irreversible or likely to be irreversible. However, the challenge of ideological difference in environmental governance between the conservatives and the liberals has exposed the anathema in the co-opting of assimilative capacities of the environment with the precautionary principle. Even when stringent and ambitious environmental standards are made, the assimilative posture weakens the effectiveness of enforcement. Same posture influenced the negotiation of the U.S. under President George Bush when his administration adopted a so-called "no regrets" position for international environmental agreements, thereby portraying a more pro-economy society. Sands once asserted that the defensive approach of the United States to international environmental regulations will attract increasing opposition by other entities that make up the international community.[27] The stand of the United States influenced the non-binding feature of the Rio declaration and the UNFCCC.

[26] ibid

[27] Sands, Philippe, "The Greening of International Law: Emerging Principles and Rules." Indiana Journal of Global Legal Studies 1, 1994: 293.

A shift from the all-for-economy stands of the United States to more-for-environment by the President Bill Clinton's administration was seen to support a worldwide ban on the ocean dumping of low-level radioactive waste; the then EPA Administrator, Carol Browner, was for a permanent ban due to its comportment with the precautionary principle. This is in deference to the U.S. Department of Defence's opposition to the ban based on lack of scientific certainty of danger.

## 2.4 Finding its Path to International Recognition

Although there are few international agreements that provide for precautionary measures preceding the early 1980s, the recognition of the principle in international law became more pronounced in treaties and soft law starting with its implicit inclusion in the World Charter for Nature of 1982.[28] Principle 11(b) of the Charter specifically states that: [29]

> Activities which might have an impact on nature shall be controlled, and the best available technologies that minimize significant risks to nature or other adverse effects shall be used; in particular: Activities which are likely to pose a significant risk to nature shall be preceded by an exhaustive examination; their proponents shall demonstrate that expected benefits outweigh potential damage to nature, and where potential adverse effects are not fully understood, the activities should not proceed.

The World Charter for Nature was an initiative of developing countries at the 12th General Assembly of the International Union for Conservation of Nature and Natural Resources (IUCN) in 1975 and seeks to protect the world's natural habitat by setting out rules to guide human behaviour in its interaction with our environment.[30] The preamble of the Charter enunciated that long-term benefits that are derived from nature depend on the attitude of humans toward the maintenance of essential life support systems that preserve our ecological processes.[31] This Charter recognizes the fact that biodiversity is constantly endangered through excessive exploitation and habitat destruction by man and demands that excessive exploitation, which is

[28] Adopted 28 October 1982 by United Nation General Assembly Resolution 37/7
[29] ibid
[30] Wood Jr, Harold W., "The United Nations World Charter for Nature: The Developing Nations' Initiative to Establish Protections for the Environment." Ecology LQ 12, 1984, 977.
[31] ibid

likely to cause irreversible harm to nature should be prohibited.[32] The last part of Principle 11(b) of the Charter which provides "….and where potential adverse effects are not fully understood, the activities should not proceed"[33] implicitly raises an obligation of precaution. The presence of uncertainty as a factor underpinning Principle 11(b) clearly shows that precaution is recommended by the Charter, though without the explicit mention of the precautionary principle.

Closely following the World Charter for Nature is the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer (ODS) to the Vienna Convention for the Protection of the Ozone Layer.[34] The Montreal Protocol is an international treaty designed to protect the ozone layer by phasing out the production and use of ozone damaging substances including chlorofluorocarbons (CFCs) which have been scientifically proven to contribute to the depletion of the ozone layer. The preamble to the Protocol explicitly refers to the precautionary principle.[35] In the third paragraph of the text of the preamble to the Montreal Protocol, though the actual measure to be adopted is not precisely mentioned, it acknowledges that action should be taken where there are elements of uncertainty which is one of the factors that justifies the application of the precautionary principle:[36]

> Mindful of their obligation under that Convention to take appropriate measures to protect human health and the environment against adverse effects resulting or likely to result from human activities which modify or are likely to modify the ozone layer.

However, in the seventh paragraph, the precautionary principle was given a precise endorsement:

> Determined to protect the ozone layer by taking precautionary measures to control equitably total global emissions of substances that deplete it, with the ultimate objective of their elimination on the basis of developments in scientific knowledge, taking into account technical and economic considerations and bearing in mind the developmental needs of developing countries.[37]

[32] Rogers, Michael D., "Risk analysis under uncertainty, the Precautionary Principle, and the new EU chemicals strategy" *Regulatory Toxicology and Pharmacology* 37.3 ,2003, 370-381. www.ncbi.nlm.nih.gov/pubmed/12758217. Accessed 18-01-18

[33] Wood Jr, *supra* note 31

[34] Montreal Protocol on Substances that Deplete the Ozone Layer, 1522 UNTS 3; 26 ILM 1550 (1987)

[35] The text did not refer to it as a principle but a "measure".

[36] Montreal Protocol, *supra* note 35

[37] ibid

The science relating to ozone depletion, upon which the application of precautionary measures in the Montreal Protocol is predicated on, was not definite as to extent of ozone depletion when the Protocol was being negotiated by parties, and that uncertainty strengthened the place of the precautionary principle in the Protocol.[38] Interestingly, after the initial framework for the Montreal Protocol was negotiated, it became clearer that the early conclusions about the extent of ozone depletion turned out to be significantly under-estimated.[39] The lack of sufficient and conclusive information on the extent of ozone depletion made the Montreal Protocol achieve universal acceptability as a binding international instrument, with a very flexible regime[40] that allows parties to negotiate measures of implementation based on new developments. The instrument can increase or decrease controls based on how clear scientific outcomes may turn out to be.[41] Also, nations were provided with proof of commercially viable alternatives to CFCs. According to Karen Clark, the flexibility of the Protocol is advantageous because it makes it possible for the agreement to be amended when necessary and allows it to reflect the dynamic conditions that may arise with scientific findings regarding the problem the Protocol is made to confront.[42] This is of utmost importance, bearing in mind that at the time the agreement was concluded the science was not yet conclusive. This informs the provision that the operative period of the allocated control measure should not exceed twelve months from the first day of the seventh month following the date of the entry into force of the Protocol[43]. The short and definite time provided for the application of control

[38] Abdel-Khalik, Jasmine, "Prescriptive Treaties in Global Warming: Applying the Factors Leading to the Montreal Protocol" (2008) at 505-511. Also see Ian Rae, Saving the ozone layer: why the Montreal Protocol worked. The Conversation, available at theconversation.com/saving-the-ozone-layer-why-the-montreal-protocol-worked-9249. Accessed 16-03-18

[39] ibid

[40] See Edith Brown Weiss, Introductory note on the Vienna Convention and the Montreal Protocol, "The ozone agreements are remarkable, in that they are the first to address a long-term problem in which the cause of the damage occurs today, but the effects are not evident for decades. Hence, decisions were taken on the basis of probabilities, since damage had not yet occurred. Since scientific understanding of the problem would change, the agreements needed to be flexible and capable of being adapted to accommodate new scientific assessments. No single country or group of countries could address the problem of ozone depletion alone, so maximum international cooperation was needed". legal.un.org/avl/ha/vcpol/vcpol.html Accessed 18-02-2018.

[41] Green, Bryan A., "Lessons from the Montreal Protocol: Guidance for the next international climate change agreement." *Environmental. Law.* 39, 2009: 253. Also see Articles 2, 3, 5 and 6 of the Montreal Protocol.

[42] See the notes of Karen L. Clark, World-Wide Fund for Nature Int'l, A Montreal Protocol for Pops? An Evaluative Review of the Suitability of the Montreal Protocol as A Model for International Legally Binding Instruments Regarding the Control and Phase-Out of Persistent Organic Pollutants, at II.3, 1996, www.chem.unep.ch/pops/indxhtms/manwg8.html assessed 15-02-17 cited in Green, Bryan A. "Lessons from the Montreal Protocol: Guidance for the next international climate change agreement." *Environmental Law.* 39, 2009, 253.

[43] Montreal Protocol, *supra* note 35

measures shows that the protocol is anticipatory of changes that will make review of control measures necessary.

The most recent amendment of the Montreal Protocol is the Kigali Amendment known as the Amendment to Address Hydrofluorocarbons (HFCs) under the Montreal Protocol, which was adopted by 197 countries on 15 October 2016.[44] HFCs are commonly used alternatives to ODSs but are greenhouse gases which can have high or very high global warming potential[45] . Under the Kigali Amendment, countries committed to cut the production and consumption of HFCs by more than 80 *percent* over the next 30 years. This ambitious precautionary measure is expected to eliminate more than 80 billion metric tons of carbon dioxide equivalent emissions by 2050; avoiding up to 0.5° Celsius warming by the end of the century; while continuing to protect the ozone layer.[46] Also, developed countries will reduce HFC consumption beginning in 2019. In the light of the third and seventh paragraph of the preamble to the Montreal Protocol, and the flexibility provided in its Articles 2, 3, 5 and 6; Article 5 where special consideration was provided for developing countries, the Kigali Amendment added global warming potential (GWPs) values to the Protocol.[47] These values are based on present scientific development regarding how HFCs contribute to global warming. Being that HFCs were alternatives to CFCs in the Vienna Convention, the Montreal Protocol controls their usage, while the Kigali Amendment, as precautionary measure, agreed on the phasing out process of the use of HFCs as a way of reducing global warming.

In the same year as the adoption of the Montreal Protocol, the International Conference on the Protection of the North Sea was held in London (25 November 1987).[48] It was the second of the

[44] Lou Del Bello, "UN agrees historic deal to cut HFC greenhouse gases" (15-10-2016) Climate Home www.climatechangenews.com/2016/10/15/un-agrees-historic-deal-to-cut-hfc-greenhouse-gases/ Accessed 24-04-18.

[45] There still exist uncertainties warming metrics and scientist are still researching into arriving at a convincing conclusion on the level of impact human activities on climate change. See Reisinger, A., M. *et al*., "Uncertainties of global warming metrics: CO2 and CH4," Geophysical. Research. Letters., 37, L14707.

[46] UNEP "The Kigali Amendment to the Montreal Protocol: HFC Phase-down." http://www.unep.org/ozonaction/Portals/105/documents/7809-e-Factsheet_Kigali_Amendment_to_MP.pdf doi:10.1029/2010GL043803 Accessed 18-02-18.

[47] Ibid, at page 6

[48]Second International Conference on the Protection of the North Sea, London, England, Nov. 24-25, 1987 [hereinafter Second North Sea Conference]. Ministers representing Belgium, Denmark, France, the Federal Republic of Germany (FRG), the Netherlands, Norway, Sweden, the United Kingdom (U.K.), and the European Economic

six ministerial North Sea Conferences that produced a Ministerial Declaration endorsing the precautionary principle as incorporated to protect the North Sea from the effects of potentially harmful substances, by controlling the input of harmful substances even without scientific confirmation of a relationship between the damaging effects and the input of the harmful substance.[49]

The precautionary principle has further developed in the area of marine environmental protection. For example, the European Union advocated a notion[50] of the precautionary principle at the 1991 meeting of the parties to the 1972 London Dumping Convention.[51] At the 1991 meeting, the parties agreed that "appropriate measures are taken where there is reason to believe that substances or energy introduced into the marine environment are likely to cause harm, even when there is no conclusive evidence to prove a casual relation between inputs and their effects."[52]

The need for precaution in dealings that concern the handling of oil at all stages or levels that could result in spillage, considering the damage oil pollution can cause to the ecosystem, was recognised in the International Convention on Oil Pollution Preparedness, Response and Cooperation which was concluded in London in 1990 but entered into force on 13 May 1995 with 59 parties.[53] The third preamble of the Convention reiterated the importance of precautionary measures and prevention in avoiding oil pollution in the first instance.[54] Also in 1991, in response to Article 11 of the 1989 Basel Convention[55] which encourages parties to enter into bilateral, multilateral and regional agreements on hazardous waste to help achieve the objectives of the Convention. African

Community (EEC) attended the conference. Second International Conference on the Protection of the North Sea, Ministerial Declaration, at 1 (London, Nov. 1987) [hereinafter London Declaration].

[49] Freestone, David, and Ton Ijlstra, eds., *The North Sea: basic legal documents on regional environmental co-operation*. Vol. 1. Martinus Nijhoff Publishers, 1991,p.3; www.dep.no/md/html/conf/declaration/london.html Accessed 6-02-2018.

[50] Suman, Daniel, "Regulation of Ocean Dumping by the European Economic Community." *Ecology LQ* 18, 1991. 559.

[51] London Dumping Convention, 1046 UNTS 120 / ATS 1985 No 16 / 11 ILM 1294 / UKTS 43 (1976)

[52] London Dumping Convention, 1991, Resolution LDC. 44 (14), Paragraph 1

[53] International Convention on oil pollution preparedness, response and cooperation, 1990 (with annex and procèsverbal of rectification). Concluded at London on 30 November 1990

[54] Preamble, Paragraph 3; 30 ILM, 1991, p. 735

[55] Basel Convention, 1673 UNTS 57/ [1992] ATS 7/ 28 ILM 657 (1989)

states adopted the Bamako Convention,[56] addressing challenges of hazardous waste shipments to African countries by wealthier, industrialized counterparts. The Convention adopted a strict version of the precautionary principle when the parties agreed to prevent "the release into the environment, substances which may cause harm to humans or the environment without waiting for scientific proof regarding such harm."[57] Though the convention recognizes prevention, it is evident that the Convention endorses the precautionary approach by requiring that action be taken in the face of unknown harm, especially with its express reference to presence of scientific uncertainty:[58]

> Each Party shall strive to adopt and implement the preventive, precautionary approach to pollution problems which entails, inter-alia, preventing the release into the environment of substances which may cause harm to humans or the environment without waiting for scientific proof regarding such harm. The Parties shall cooperate with each other in taking the appropriate measures to implement the precautionary principle to pollution prevention through the application of clean production methods, rather than the pursuit of a permissible emissions approach based on assimilative capacity assumptions.

After the resolution requiring contracting parties to the Convention for the Prevention of Marine Pollution by Dumping of Wastes and other Matter (London 1972)[59] to apply the precautionary principle in the implementing of the Convention in 1991, the principle began to attract a wider prominence in other spheres of international environmental law. The precautionary principle found its way beyond the protection of the North Sea to include the North-East Atlantic in the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention 1992).[60] The OSPAR Convention is direct in its endorsement of the precautionary principle and specific in describing circumstances that attract the application of the precautionary principle in relation to marine operations compared in stating that:

> the precautionary principle, by virtue of which preventive measures are to be taken when there are reasonable grounds for concern that substances or energy

[56]Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and the Management of Hazardous Wastes Within Africa, Jan. 30, 1991, OAU/CONF/COOR/ENV/MIN/AFRI/CONV.1(1) Rev.1, reprinted in 30 I.L.M. 773.

[57] ibid

[58] Ibid, Article 4(3) f

[59] Resolution LDC 44/14 on the Application of the Precautionary Approach to Environmental Protection within the Framework of the London Dumping Convention, 30 December 1991.

[60] Skjærseth, Jon Birger, Protecting the Northeast Atlantic: One problem, three institutions. MIT Press, Cambridge, Massachusetts, 2006, p 2.

> introduced, directly or indirectly, into marine environment may bring about hazards to human health, harm living resources and marine ecosystems, damage amenities or interfere with other legitimate uses of the sea, even when there is no conclusive evidence of the causal relationship between inputs and the effects.[61]

The scope of the precautionary principle has expanded to protection of watercourses as seen in the Helsinki Watercourses Convention of March 1992[62] and the Declaration of the Second Multilateral High-Level Conference on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific of 1997.[63]

In the protection of marine environment, most of the treaties adopt a text that places a definite or mandatory obligation on parties, without ambiguities. One of such treaties is the above mentioned 1992 Convention on the Protection and use of Transboundary Watercourse and International Lakes.[64] The Convention requires parties to protect and manage Transboundary waters. In the text of the treaty, the word "shall" was used in directing parties to adopt the precautionary principle where it provides: "The precautionary principle, by virtue of which action to avoid the potential Transboundary impact of the release of hazardous substances shall not be postponed on the ground that scientific research has not fully proved a causal link between those substances, on the one hand, and the potential Transboundary impact, on the other hand."[65] Being signatories to the Convention, parties have committed themselves to the prevention, control and reduction of pollution of water causing or likely to cause Transboundary effects and the precautionary principle is expressly adopted as an appropriate measure to this end. The application of the principle is binding on the parties, but the Convention is open to members of the United Nations Economic Commission for Europe (UNECE) and North American Countries. It means the scope of the application of the precautionary principle in the Helsinki Watercourse Convention is limited to the Europe and North American Regions.

[61] Article 2(2) OSPAR Convention, see http://www.ospar.org/convention/text Accessed 15-12-2017.
[62] Article 2 (5), Helsinki Water Convention, 1936 UNTS 269 31 ILM, 1992, p 1312.
[63] Preamble, paragraph 3, and operative paragraph 2.
[64] ibid
[65] Article 2 (5) (a)

Preceding the Rio Declaration was the worldwide framework for Convention for the Conservation and Wise Use of Forests[66]. An international body of parliamentarians proposed it as a model framework. It endorsed a precautionary approach to forests protection and management.[67] In Article 2(1)(c), it placed the burden of proving that possible harmful activities will not cause serious or irreversible harm to the environment or population on the state in whose territory such activity is planned. Apart from it preceding the Rio Declaration, it really does not have much impact on the development and application of the precautionary principle.

Following the previous successes recorded in the recognition of the precautionary principle at regional and international conferences, which led to its adoption in several international soft law documents, landmark recognition was given to the principle in the protection of the environment in the 1990s. The United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro produced a declaration that has given the precautionary principle a universal recognition in international law and this is found in Principle 15 of the Rio Declaration:[68]

> In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

Principle 15 of the Rio Declaration is the most widely accepted elaboration of the precautionary principle. It places more emphasis on when policy measures can be taken and what should justify such measure. It did not give any specific guidance on the appropriate measure to take. However, it suggests that measures should be cost effective. Thus, it provides states a wide leverage in deciding on policies and measures that are appropriate. Three criteria for the application of the precautionary principle can be drawn from Principle 15 of the Rio Declaration:[69] (1) states are to take precautionary measures within their capabilities; (2) the threshold of serious or irreversible threats must be present; and (3) the measures that the precautionary approach mandates must be cost-effective. A literal understanding of the first criterion may mean that lack of technological

[66] Globe Model Convention 1992
[67] Article 1(d), 2(1)(c), 3(4), and 33(b)
[68] Rio Declaration on Environment and Development, June 14, 1992, 31 I.L.M. 874, 879
[69] Atapattu, Sumudu, Emerging Principles of International Law, brill 2007 at 209

and economic capability is enough excuse for states not to apply the precautionary principle. The common but differentiated responsibilities principle reflects the precautionary principle in respect of the first criterion in Principle 15. Principle 15 also fixed the threshold of activity or degree of environmental damage that should trigger the application of Principle 15 as "serious and irreversible". The threshold of serious and irreversible set by Principle 15 presents it as a weak version of the precautionary principle.[70] It does not mean that unless there is a high degree of environmental damage, precautionary measure cannot be justified. What it does mean is that when the threshold is lower, you can still apply precautionary measure, albeit not under obligation to do so. While what amounts to irreversible damage is not difficult to define, determining the threshold of serious damage is subjective. It also does not mean that states cannot take measures that are not cost effective, but it allows states to not take measure that are effective but are not cost-effective. In spite of its non-binding nature, Principle 15 of the Rio Declaration has strong impact on subsequent treaties some of which have been examined earlier.

Subsequently, several other international legal instruments incorporated the precautionary principle. For example, the preamble of the Convention on Biological Diversity[71], made reference made to the precautionary principle as stated in Principle 15 of the Rio Declaration, though it did not include the 'cost-benefit language' found in principle 15. The Convention on Biological Diversity (CBD) has a wide sphere of the application of the precautionary principle, though it leaves parties with no specific or substantive obligation. It is interesting to note that the CBD does not embody the precautionary principle explicitly, but the language clearly points to the precautionary principle.[72] The Cartagena Protocol on Biosafety (CPB) adopted within the framework of the CBD, is the first international treaty to incorporate the precautionary principle with explicit reference to the Principle 15 of the Rio Declaration.[73] The CPB affirms the

[70] Garnett, Kenisha, and David J. Parsons, "Multi-Case Review of the Application of the Precautionary Principle in European Union Law and Case Law." *Risk Analysis,* 2016.
http://onlinelibrary.wiley.com/doi/10.1111/risa.12633/epdf Accessed 15-02-17.

[71] "Preamble, Paragraph 9 "Noting also that where there is a threat of significant reduction or loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimize such a threat" 31 ILM, 1992, p.818. Zedan, Hamdallah, Convention on Biological Diversity, Development 2, 2005: 3.

[72] The ninth paragraph of its preamble states that "where there is a threat of significant reduction or loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimize such a threat."

[73] The Cartagena Protocol on Biosafety, 2000, entered into force 11 September 2003. bch.cbd.int/protocol/text/. Accessed 20-10-18. See also Article 1 thereof.

precautionary approach articulated in Principle 15 of the Rio Declaration[74] thereby creating a connection with a soft law instrument. But its' endorsement of Principle 15 also means it is on all fours with the wording of Principle 15 using "should" and not "shall", thus giving parties a degree of discretion in applying the precautionary principle. In Article 16 of the CPB, parties are required to impose measures based on risk assessment and as necessary to prevent adverse effects on biological diversity and human health within respective territories. In respect of the implication of the provisions of the CPB on the legal status of the precautionary principle, the precautionary approach in the protocol is binding, at least on the parties to the CPB. However, the CPB does not apply to the Transboundary movement of living modified organisms which are pharmaceuticals for humans that are covered by other international agreements or organizations.[75]

The second major treaty adopted at the Earth Summit in Rio is the United Nations Framework Convention for Climate Change (UNFCCC). The UNFCCC focused on the problem of climate change and the emission of greenhouse gases, which are believed to be the major cause of global warming. Article 3 urges parties to the UNFCCC to include precautionary measures in policies they adopt in mitigating the effect of climate change. While Article 2 of the UNFCCC states its objective, which is to stabilize atmospheric greenhouse gas concentrations at levels that will prevent activities from interfering dangerously with the global climate system, no binding parameter or measure was contained in the convention.[76] However, the convention presented a platform upon which subsequent agreements have been adopted; with the Paris Agreement, adopted in 2015, as the most recent. The UNFCCC is a "framework convention", i.e., it does not itself regulate climate change but only creates a basis for negotiating multilateral solutions.[77] The

[74] ibid, at Preamble
[75] Ibid, Article 5,
[76] Article 4 (2) (b) of the UNFCCC stated that the aim of parties among others is to return individually or jointly to their 1990 levels of anthropogenic emissions of Carbon dioxide and other greenhouse gases not under the control of the Montreal Protocol. But (c) shows that there is no stated methodology (ies) for calculation of how parties will contribute to achieving the emission target set by the treaty. That is left for the Conference of Parties to decide. Lukas Hermwille, Wolfgang Obergassel, Hermann E. Ott, Christiane Beuermann explained that the narrow focus on emission targets on the treaty has made several negotiations of COPs to have been inconclusive or under subscribed. They believe, and I agree with them on this, that the UNFCCC can provide better rules for climate protection activities and its scope should be expanded to improve its impact. See Hermwille, Lukas, *et al*., "UNFCCC Before and After Paris." wupperinst.org/uploads/tx_wupperinst/UNFCCC_Paris_01.pdf. Accessed 9-02-18.
[77] Boyle, Alan, "Climate Change and International Law-A Post-Kyoto Perspective", Environmental Policy and law 42.6, 2012 333-334.

role of the precautionary principle in the UNFCCC and how it affects subsequent agreements can be drawn from the text of Article 3(3) of the UNFCCC:[78]

> The Parties should take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing such measures, taking into account that policies and measures to deal with climate change should be cost-effective so as to ensure global benefits at the lowest possible cost. To achieve this, such policies and measures should take into account different socio-economic contexts, be comprehensive, cover all relevant sources, sinks and reservoirs of greenhouse gases and adaptation, and comprise all economic sectors. Efforts to address climate change may be carried out cooperatively by interested Parties.

The UNFCCC made specific reference to taking precautionary measures in the face of scientific uncertainty. The precautionary principle under the UNFCCC has not been given the necessary or expected attention or even explicit acknowledgement or mentioning in the numerous agreements that have emerged subsequent to the UNFCCC. In furtherance of Articles 4 and 7 of the UNFCCC, over 150 States met, negotiated and agreed to adopt the Kyoto Protocol in 1997. The Kyoto Protocol makes the obligation of limiting the use of fossil fuels under the UNFCCC clearer and specific.[79] Though the text of the Kyoto Protocol did make mention of the precautionary principle, it made reference to Article 3 of the UNFCCC in its preamble as the major guide in the adoption of the Kyoto Protocol.[80] The lack of certainty in predicting global climate change and the quantifying and monetizing of associated biophysical impacts, explains the context within which the international community believes precautionary measures such as negotiated in 1997 during the third conference of parties (COP3) to the UNFCCC, should be adopted in the Kyoto Protocol.

The Kyoto Protocol requires that industrialized countries listed in Annex B limit their emissions of greenhouse gases, especially the CO2 from fossil fuel combustion. Countries in Annex B committed themselves to reduction of greenhouse gas emissions by 5.2% on average below

[78] 31 ILM 849 (1992), 1771 UNTS 107, signed May 9, 1992, entered into force Mar. 21, 1994, www.unfccc.de/,art.3(3). Accessed 22-01-18.
[79] Chen, Ling, "Realizing the Precautionary Principle in Due Diligence." Dalhousie J. Legal Stud. 25, 2016: 1. file://file/UsersD$/dag48/Home/My%20Documents/25DalhousieJLegalStud1.pdf Accessed 04-02-17
[80] Kyoto Protocol to the United Nations Framework Convention on Climate Change, 11 December 1997, 2303 UNTS 148 (Entered into force 16 February 2005), see also Deloso, Elamparo. "The Precautionary Principle: Relevance in International Law and Climate Change." Philippines Law Journal. 80, 2005 642., at page 17.

aggregate 1990 emission levels during the commitment period of 2008-2012.[81] However, the Kyoto Protocol did not come into force until at least 55 Parties to the UNFCCC ratified the Protocol and the industrialized countries among the ratifying Parties accounted for at least 55% of the total 1990 CO2 emissions among the group of countries that have ratified it.[82] As seen in provisions of the Kyoto Protocol, the principle of common problem but differentiated responsibility is included as an approach for the application of the precautionary principle. Unfortunately, opponents of the Kyoto Protocol are more critical of the imbalance in the distribution of the responsibilities without giving cognisance to the fact that the difference in responsibilities is crucial to effectively applying precautionary measures in multilateral environmental agreements (MEA) like the UNFCCC and the Kyoto Protocol.[83] The complexity of issues and the clash of diverse interests in the process of negotiation on climate change is typical of MEAs,[84] but the approach the Kyoto Protocol adopted in pursuing reduction in GHG emissions has suffered lingering opposition by major economies like the United States.[85] The precautionary approach of distributing more emission reduction responsibilities to industrialized developed states by the Kyoto Protocol questions the rationale behind excluding industrialized states like India and China in the lists provided in Annex B. However, the Kyoto Protocol is an agreement that embodies precautionary measures that set a good precedent for subsequent international negotiations.

The most recent agreement by the Conference of Parties at Paris which is known as the "Paris Agreement" appears to have been a breakthrough, especially with China appending her signature to it.[86] However, the Paris Agreement has been severely criticised for failing to satisfy Article 3.3 of the UNFCCC.[87] The precautionary principle was not explicitly mentioned as being applied or

[81] Article 3(1) of the Kyoto Protocol.
[82] The Kyoto Protocol came into force with its ratification by Russia in February 2005.
[83] Alan Boyle, Climate Change and International Law- A Post –Kyoto Perspective- European Policy and Law, 42/6, 2012, 333.
[84] Mintzer, I.M , Leonard, J.A. (Eds) 1994, Negotiating Climate Change: The Inside Story of the Rio Convention. Cambridge University Press.
[85] Jutta Brunnee, The United States and International Environmental Law: Living with an Elephant, European Journal of International Law, 2004, 617.
[86] The United States appended its signature to it too under President Barack Obama's administration, but the Trump Administration has withdrawn its signature. The most recent COP 24 at Katowice produced a framework for the implementation of the Paris Agreement.
[87] Sharma, Anju, "Precaution and post-caution in the Paris Agreement: adaptation, loss and damage and finance", Climate Policy 17.1 (2017): 33-47.

to be applied by the parties. In the proposal of the President of the Conference of Parties (COPs) which was amended to produce the Paris Agreement, the first major challenge identified is the "potentially irreversible threat" climate change poses to human societies and the planet. The language or words used in that paragraph is the closest and only of such in the document that appears to recognize the role the precautionary principle should play.[88] Although, nothing else was mentioned regarding the principle, no reference was made to Article 3.3 of the UNFCCC and the said paragraph in the proposal of the President of the COPs was not included in the final agreement. In my opinion, every subsequent agreement by the COPs as provided by Article 7 of the UNFCCC is part of the climate change regime and the precautionary principle is applicable in the light of Article 3 of the UNFCCC. Moreover, the provisions of the UNFCCC on precautionary principle apart from guiding the collective negotiations, also guides the individual commitments State parties have been entering, including the Paris Agreement.[89]

Other areas covered by the precautionary principle are forest conservation,[90] fisheries,[91] air pollution,[92] and trade in endangered species.[93] Furthermore, the United Nations Conference on Environment and Development held in Rio de Janeiro 1992[94] has been a reference for most instruments that have included the precautionary principle.

Presently, the precautionary principle is found in over 60 multilateral treaties and soft law, covering a myriad of environmental issues ranging from migratory birds to persistent organic

[88] Adoption of the Paris Agreement: Proposal of the President, www.google.co.nz/webhp?sourceid=chrome-instant&ion=1&espv=2&ie=UTF-8# Accessed 14-02-17. Also see Obergassel, Wolfgang, *et al.*, "Phoenix from the Ashes—An Analysis of the Paris Agreement to the United Nations Framework Convention on Climate Change", Wuppertal Institute for Climate, Environment and Energy 1, 2016, 1-54.

[89] Rogelj, Joeri, *et al*., "Paris Agreement climate proposals need a boost to keep warming well below 2 C." *Nature* 534.7609 (2016): 631-639. Also see Rajamani, Lavanya. "The 2015 Paris Agreement: Interplay between Hard, Soft and Non-Obligations", Journal of Environmental Law 28.2 (2016): 337-358. Where Lavanya opined that going by the preceding history of the use of the term "under the Convention" in the Paris Agreement, it suggests that the principle in the UNFCCC apply to the Paris Agreement.

[90] Preamble, paragraph F, General Guidelines for the Conservation of the Biodiversity of European Forests

[91] Article 5, Paragraph (c), Article 6, and Annex II, Agreement for the Implementation of the Provisions of the 1982 UNCLOS Relating to the Conservation and management of Straddling Fish Stocks and Highly Migratory Fish Stocks (New York).

[92] Preamble, Paragraph 7 of Protocol (to the 1979 Convention on Long-Range Transboundary Air Pollution) on Persistent Organic Pollutants (Aarhus).

[93] Resolution 9.24 on Criteria for Amendment of Appendices I and II, Operative Paragraph 2 and 3, and Annex 4, Convention on International Trade in Endangered Species of Wild fauna and Flora (Washington) 1973.

[94] UNCED, supra note 69.

pollutants and from fisheries to climate change, and in many intergovernmental declarations, resolutions and actions.[95] Being a principle that has as many concerns for the future as for the present, several underlining considerations influences how the precautionary principle is viewed and defined. The precautionary principle is not the only principle with concerns related to how the earth can be secure enough for the next generation, so it will be a safer environment than the one we live in presently. There are indeed other principles that have been referenced to in international soft law that recognises the importance of protecting the environment against irreversible harm generally i.e. intergenerational equity. However, the factor of uncertainty is unique to the precautionary principle and that is why its legal status is crucial to how much its application is accepted and enforced. Also, it is pertinent to examine how its development in treaties and soft law regime impact on the status of the precautionary principle in international law. These will be examined in the subsequent chapter.

## 2.5 Precautionary Principle as a Process

The precautionary principle is known to follow the Environmental Impact Assessment. However, it appears difficult to identify the kind of trade activity that could trigger an EIA which could result in the application of the precautionary principle. While it is possible for EIA to be applied in international trade and trade agreements, the EIA is not the exclusive process preceding the application of the precautionary principle. The precautionary principle follows risk assessment too, which is a more prominent process where the activity has minimal contact with the environment, such as trade activities relating to consumer health.

The EIA is a principle of international environmental law that embodies the process of conducting comprehensive assessment of any activity that is likely to impact on the environment in any way.[96]

[95] Trouwborst, Arie, "The Precautionary Principle in General International Law: Combating the Babylonian Confusion", *Review of European Community and International Environmental Law* 16, 2007, 185.

[96] The obligatory scope of the EIA as principle of law can be understood from the origin of its obligatory form and the content of the obligation required. First, looking at the origin or the source from which its obligatory form as a principle of law can be traced to its formal sources, treaty, custom, general principles of law. Treaties that require that EIA be conducted include the Convention on Environmental Impact Assessment in a Transboundary Context ('Espoo Convention') adopted in 1991 as part of the United Nations Economic Commission for Europe (UNECE). This Convention requires State parties to introduce into their domestic law the obligation to conduct an EIA before authorizing certain activities (listed in Appendix I) that may have a 'significant adverse trans-boundary impact. Beside the treaty law, the ICJ in the Pulp Mills case recognized the EIA as having a customary grounding. The Court held that a practice has developed "which in recent years has gained so much acceptance among States that it may now be

According to the United Nations Environmental Program, "EIA is a structured approach for obtaining and evaluating environmental information prior to its use in decision-making in the development process".[97] This information consists, basically, of predictions of how the environment is expected to change if certain alternative actions are implemented and advice on how best to manage environmental changes if one alternative is selected and implemented. Until relatively recently, with a few notable exceptions, EIA focused on proposed physical developments such as highways, power stations, water resource projects and large-scale industrial facilities. Over the past decades, its scope of application is expanding to include activities, plans and other actions which also form part of the development process. In the case of EIA in trade agreements, the OECD Ministerial Council, in 1993 recommended that the "governments should examine or review trade and environmental laws and agreements with potentially significant effects on the other policy area, early in their development to assess the implications for the other policy area and to identify alternative policy options for addressing concerns." Subsequently, Canada, the EU and the United States have made such assessment, which could include the EIA as mandatory for all trade agreements they are signatories to.[98]

## 2.6 Risk Assessment in the Precautionary Principle

considered a requirement under general international law to undertake an environmental impact assessment where there is a risk that the proposed industrial activity may have a significant adverse impact in a Transboundary context, in particular, on a shared resource."(See Pulp Mills on the River Uruguay (*Argentina v. Uruguay*), Judgment, ICJ Reports 2010, p. 14 ('Pulp Mills'), para. 101). The statement of the ICJ raises the discussion on the content of the obligatory practice it recognized which appears to limit the scope of the application of the EIA as a principle of law. The content of the Conventions requiring the application of the EIA and the statement made by the ICJ appear to limit the scope of the EIA to Transboundary context. The question as to the scope has not been judicially beyond the Advisory opinion of the ITLOS Seabed Chamber which noted that the obligation to conduct an EIA also applied beyond a Transboundary context in its statement: "t]he [ICJ]'s reasoning in a Transboundary context may also apply to activities with an impact on the environment in an area beyond the limits of national jurisdiction; and the ICJ's references to 'shared resources' may also apply to resources that are the common heritage of mankind". See Responsibilities and Obligations of States sponsoring Persons and Entities with respect to Activities in the Area, Case No. 17, ITLOS (Seabed Dispute Chamber), Advisory Opinion (1 February 2011) ('Responsibilities in the Area').

[97] UNEP Publication on the EIA, unep.ch/etu/publications/EIA_2ed/EIA_E_top1_body.PDF. Accessed 25-09-2018.

[98] UN Environment and Trade Hub Publication on EIA, www.iisd.org/toolkits/sustainability-toolkit-for-trade-negotiators/6-process/6-2-environmental-impact-assessments-in-trade-agreements/ Accessed 25-09-18.

Risk assessment, being a process to determine the nature and extent of risk is critical for laying the foundations for developing effective regulations that can be effective for disaster risk management. The process of undertaking risk assessment allows for identification, estimation and ranking of risks. This includes potential losses of exposed population, property, services, livelihoods and environment, and assessment of their potential impacts on society.[99] In broad terms, environmental risk assessment (ERA) can be defined as any quantitative or qualitative scientific descriptions of an environmental hazard, the potential adverse effects of exposure, the risks of these effects, events and conditions that may lead to or modify adverse effects, populations or environments that influence or experience adverse effects, and uncertainties with regard to any of these factors. [100] 'Risk' within the context of the precautionary principle is 'potential risk' and not known risk. Where it is a known risk, the prevention principle applies. The essence of precaution draws from the potential constrain that unknown risks places on development.

Risk assessment as a legal tool in environmental decision making process has continued to increase in its application, as demand and requirement for cost -benefit analysis of environmental decisions extends beyond conventional activities associated primarily with the environment.[101] This is evident in the rather trendy incorporation into international trade agreements of consideration for risks associated with agricultural consumer products that are increasingly diverse in its scientific and technological inclination. It has been firmly established as a principal method of resolving potential imbalances that exists because of scientific uncertainties regarding the effects an activity may have on humans and environment while making decisions.[102] As a result of the foregoing, it

[99] Davies, Tim, *et al*., "Towards disaster resilience: A scenario-based approach to co-producing and integrating hazard and risk knowledge", *International journal of disaster risk reduction* 13 (2015): 242-247.

[100] Jones, Roger N., "An environmental risk assessment/management framework for climate change impact assessments." Natural hazards 23.2-3, 2001, 197.

[101] New Zealand, United Kingdom, Australia, the European Union, India and some international instruments like the Cartagena Protocol recognize risk assessment as a legal requirement for environmental decision making, albeit with some qualifications in some cases. For example, United Kingdom makes it mandatory only if an organization has five and above employees.

[102] Konrad Von Moltke, "The Relationship Between Policy, Science, Technology, Economics and Law in the Implementation of the Precautionary Principle" in David Freestone and Ellen Hey (eds) "The Precautionary Principle and International Law: The Challenge of Implementation" (Kluwer International, Hague, 1996) 29 at 99.

has become embedded into environmental decision- making frameworks legislatively incorporated into the law as part of regulatory action.[103]

Parties to international agreements have also recognised the role of risk assessment in the application of the precautionary principle to international trade law. For example, parties to the Cartagena Protocol (CPB) decided that prohibition or restriction of import of Living Modified Organisms (LMO) under the Advanced Informed Agreement (AIA) procedure should not be arbitrary but based on a "risk assessment" conducted in a scientifically sound manner, with the application of certified risk assessment techniques.[104] Also, Article 16(2) of the Biosafety Protocol requires that trade measures based on a risk assessment shall be imposed to the extent necessary to prevent adverse effects. In its own version of what embodies the character of the precautionary principle, it explicitly identifies with international trade activity and clarifies its role and the role of parties in the application of the principle.[105]

The WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) identifies risk assessment as a scientific procedural and methodological tool employed to establish the probability of hazardous effects of a substance or an activity.[106] In the Hormones Case, where the issue of the application of the precautionary principle as it relates to the SPS Agreement was examined, the Appellate Body of the WTO held *inter alia* that application of the precautionary principle has not found explicit expression in Art 5(7) of the SPS Agreement as one

[103] Joe Tickner and Carolyn Raffensperger, "The Precautionary Principle in Action: A Handbook" (1st ed,) Science and Environmental Health Network, Massachusetts, 1999 at 13-14.

[104] See CPB, Article 10 (1), Article 15 and Annex III.

[105] Chamovitz is of the opinion that the drafters of the Biosafety Protocol sought to make this Protocol compatible with the SPS Agreement and that they were successful in this attempt, especially when considering the extent of consistency of Article 16(2) of the Biosafety Protocol with Articles 2(2) and 5(1) of the **SPS** Agreement and Article 10(6) of the Protocol with Article 5(7) of the SPS Agreement. See S Chamovitz, 'The supervision of health and biosafety regulation by World Trade Rules.'
www.netamericas.net/Researchpapers/Documents/Chamovitz/Chamovitz4.doc. Accessed 5-06-18.

[106] Agreement on the Application of Sanitary and Phytosanitary Measures of April 15, 1994, Marrakesh Agreement establishing the World Trade Organization, Annex 1A, Legal Instruments results of the Uruguay Round (1994). Hereinafter referred to as the SPS Agreement. Article 5(7) states that: 'In cases where relevant scientific evidence is insufficient, a Member may provisionally adopt sanitary or phytosanitary measures based on available pertinent information, including that from the relevant international organizations as well as from sanitary or phytosanitary measures applied by other Members. In such circumstances Members shall seek to obtain the additional information necessary for a more objective assessment of risk and review the sanitary or phytosanitary measure accordingly within a reasonable period'.

of the basis that could justify a measure that violates Art 5(1) thereof.[107] However, the WTO Appellate Body agreed in part with the argument of the European Communities when it held that the precautionary principle found reflection in article 5(7), but that the article did not adequately address the relationship of the precautionary principle with the SPS Agreement.[108] In form of advice for subsequent panels, the Appellate Body observed that responsible, representative government usually act within the reasoning of prudence and precaution where risks are irreversible.[109] In this case, the decision of the Appellate Body places strong emphasis on the requirement of risk assessment as the defense of the European Communities failed because they could not show that in arriving at the conclusions that triggered the application of the precautionary principle, they applied a risk assessment.[110]

Due to the right of national governments to set their own level of protection, which can be above existing international standards, and the WTO through the Appellate Body recognizes this right; the Appellate Body deliberately subscribes to a liberal approach towards risk assessment. Given an expanded reasoning of the wordings in Art 5(1) of the SPS Agreement within the context of "risk assessment", the WTO understands beyond the restricted purview of ascertaining risks that can be scientifically ascertainable under conditions that are detailed enough to be controlled. It really recognizes the presence of dangers in human social orders as part of the prevailing threats that human wellbeing is inclined to and the vulnerabilities that go with the unfavorable impacts of living and working in such environment.[111] In summary, the Appellate Body does not want to tolerate the application of the precautionary principle based on a presumptive risk, rather a more deepened science driven notion of risk assessment should justify the consideration, and indeed application of the precautionary principle.

[107] Ibid, Hormones-decision, para 124.
[108] ibid
[109] ibid para 123.
[110] In the *Hormones-Decision,* it was *inter alia* held that the risk assessment must 'sufficiently warrant', 'sufficiently support', 'reasonably warrant', 'reasonably support' or 'rationally support' using the health measure and that there must be an 'objective relationship' or a 'rational relationship' between the risk and the measure. The application of the precautionary principle by the EC was not objected to directly by the Body, but the relationship between the measure applied and the scientific process that led to the conclusion of the EC could not be reconciled rationally under the terms provided in the SPS Agreement.
[111] Ibid, at para 187.

At the risk of a rather too early analysis of the Hormones Case at this stage of this study, I should mention that much debate has been on the lack of standard template for assessing risk associated with production, transportation and consumption of foods derived from GMOs. It is instructive to note that the EC as part of its adoption of the precautionary principle later incorporated risk assessment as part of a compulsory process that should lead to the application of the precautionary principle in its communication to member states.[112] Much of the confusion with argument of the EC against the decision of the Appellate Body is lack of common understanding of the protocol a risk assessment under the SPS Agreement should follow. Upon the adoption of new standards by the Codex Alimentarius Commission (Codex Commission)[113] for assessing risks associated with foods produced by modern biotechnology, specific standards that sets a new baseline for international measures regulating GMOs while playing significant part in the international trade adjudicatory process involving assessing risks associated with GMOs has emerged.[114] Thailand is one of the countries that has adapted the Codex Standards into national practice through the introduction of several guidelines such that prescribe the standard for production, processing, labelling and sale of products and produce derived from GMOs.[115] Thailand also adopt the Codex

[112] Though Article 191(2) of the Treaty on the Functioning of the European Union (TFEU) reads "Union policy on the environment shall aim at a high level of protection taking into account the diversity of situations in various regions of the Union. It shall be based on the precautionary principle and on the principle s that preventive action should be taken, that environmental damage should as a priority be rectified at source and that the polluter shall pay", it did not expressly make reference to or mention of "risk assessment" as part of the process that should lead to the application of the principle. However, in February 2000, the European Commission published a communication on the precautionary principle with the aim of ensuring that regulatory decisions in line with the application of the precautionary principle are in compliance with the WTO/SPS Agreement, especially with the key provisions of the communication including that any invocation of the precautionary principle must be preceded with a risk assessment. Also, Council Directive 2001/1/18/EEC, commonly known as the "Deliberate Release Directive" has notification requirements for parties seeking to move GMOs across borders, both for when the GMO is going to be released into the environment (e.g., seeds) or placed on the market (e.g., commodities)." In addition, the releasing party must also submit an environmental risk assessment (ERA). The ERA should, "in accordance with the precautionary principle," compare the characteristics of the GMO and its non-modified counterpart, using a "scientifically sound and transparent manner based on available scientific and technical data" with the purpose of identifying if there is a need for risk management and if so, the most appropriate methods to be used.

[113] The Codex Alimentarius Commission is an intergovernmental body established by the UN Food and Agriculture Organization and the World Health Organization whose mission is to set international health standards.

[114] Known as the Codex guidelines, Codex Alimentarius Commission, ALINORM 03/41, Twenty-sixth Session, FAO Headquarters, Rome Report at 52 (June 30-July 7, 2003).

[115] TAS 9000 – 2009 : Organic Agriculture Part 1: Guideline for the Production, Processing, labelling and sale of the Produce and Product from Organic Agriculture Available on line at: http://foodsafetyasiapacific.net/ONGOING/OngoingWS/1WS(INC)/presentation/agenda10-9.pdf Accessed 22-01-2020

Standards in the management of application of pesticides by introducing Extraneous Maximum Residue Limits (EMRL) and Maximum Residue Limits (MRL).[116]

## 2.7 Precautionary Principle as a Concept

The concept of precaution has been couched in different ways in binding legal instruments and in soft law. Because a principle serves as a guideline in the application of a law, the description of precaution as it relates to managing risks in protecting the interest of the environment has influence on its status which flows from the recognition it gets from entities and societies that subscribe to it.[117] Nonetheless, the precautionary principle, in several cases creates a specific obligation and is far from simply being a guideline. For example, in the case of the Anti-Dumping Convention, it specifically requires states not to dump materials at sea unless it is proven non-harmful. This a good example of where the principle imposes specific obligation and in addition, clearly reverses the burden of proof.

In international treaties and soft law, it has been referred to as 'precautionary measure,'[118] 'precautionary action',[119] 'precautionary approach',[120] as well as precautionary principle[121] However, the divergent wording of the various formulations in the different treaties and soft law has not eroded the common elements of scientific uncertainty, probable presence of harm and risk. Apart from how the different terms have been used in various instruments, there is also diverse opinion on the precautionary principle being a principle, an approach or a process. It is observed that the difference in opinion depicts the conflict over acceptance of the existence of certain risks endangering the general wellbeing of the public and the environment they live. If stakeholders agree on the existence of a threat, there may not be consensus on the level of threat and acceptable

[116] Codex MRL/EMRL for Pesticides TAS 9003-2004: Pesticide Residues: Extraneous Maximum Residue Limits (MRL) and TAS 9002-2008: Pesticide Residues: Maximum Residue Limits (EMRL).
[117] For instance, the United States of America objected to the Rio Declaration using the term "principle" in the text of the declaration. It preferred "approach" because in its opinion an approach is not binding.
[118] i.e. Convention on the Ban of Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes Within Africa 1991, Article 3(f)-(g), United Nations Framework Convention on Climate Change 1992, Article 3, para 3.
[119] i.e. Convention for the Prevention of Marine Pollution from Land-based Sources (Paris), PARCOM Recommendation 89/1 on the Principle of Precautionary Action, 22.
[120] i.e. Declaration of the UN Conference on Environment and Development, 1992 (Rio de Janerio).
[121] i.e. Convention on the Protection of the Marine Environment of the Baltic Sea Area (Helsinki) 1992, Article 3 (2).

level of risk that constitutes threat to public health and environment.[122] For example, the challenge of climate change has been getting global attention for a long time now, but remains unresolved because even when majority of nations agree that it's a threat, they have failed to accept the specific level of threat and necessary mechanism that should resolve the issue of obligations of parties to combating climate change. It is also about political attitude of entities towards issues relating to risk assessment, regulation of potential threats in the face of inconclusive or uncertain scientific claims. Specifically, the United States has withdrawn from the Paris Agreement because the Donald Trump administration does not believe the issue of climate change is a scientific one. Rather, it believed it's more of an international political discussion that should not deserve the attention of the United States.

The precautionary principle, as primarily expressed in Principle 15 of the Rio Declaration, is referred to in several international instruments, even when it's not explicitly described as precautionary principle.[123] Where the precautionary principle is interpreted as substantive rule, it is seen to impose positive obligation on relevant authorities to act to prevent impending or potential harm to humans and environment, even when the nature and extent of such harm is scientifically uncertain.[124] In the same manner, the classification of strong and weak precautionary principle by Al Gillespie explains that the weak version of the precautionary principle is not substantive in

[122] Two cases are good examples of how different views about what the precautionary principle is reflect the opinion of parties on existence of threat and level of risk: EC Hormones Case between United States, Canada and the European Communities before the WTO arbitration panel over EC measures restricting or prohibiting the import of meat or meat product from the United State due to the use of certain substances in livestock farming which the EC claimed constituted serious threat to public health and negated the EC precautionary principle. See EC Measures Concerning Meat and Meat Products (Hormones), WT/DS26/AB/R, WT/DS48/AB/R, 16 January 1998, Para. 124; the second case is the EC Biotech Case, European Communities — Measures Affecting the Approval and Marketing of Biotech Products — Request for Consultation by the United States, WTO Doc WT/DS291/1. See for more explanation on the application of the precautionary principle in WTO which has led to disputes between EC and several other countries; Laowonsiri, Akawat, "Application of the Precautionary Principle in the SPS Agreement" *Max Planck Yearbook of United Nations Law* 14, 2010, 565-624.

[123] Examples include but not limited to the Convention for the Protection of the Marine Environment of the North-East Atlantic, opened for signature 22 September 1992, 32 ILM 1069, art 2(2)(a) (entered into force 25 March 1998) ('OSPAR Convention') and Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa, opened for signature 29 January 1991, 30 ILM 773, art 4(3)(f) (entered into force 22 April 1998).

[124]Ellis, Jaye, Overexploitation of a valuable resource? New literature on the precautionary principle. *European Journal of International Law* 17.2 (2006): 445-462. http://www.ejil.org/pdfs/17/2/82.pdf Accessed 02-11-19 Also see Diriwaechter, George, "The Precautionary Approach: An Industrial Perspective." *Science in Parliament* 57.4 (2000): 6-7. Also note that this is without prejudice to Principle 15 being expressed in negative terms.

nature and does not shift the burden of proof.[125] His classification implies that the strong version of the precautionary principle represents a substantive rule and shifts the burden of proof. However, a cursory study of how the principle is framed in international treaties and agreements in comparison with how municipal laws included it in their laws will show that the 'strength' of the principle is not wavering from treaty to treaty as it were. Though in the absence of any semblance of consensus in definition, majority of treaties that incorporate the precautionary principle includes the main elements, with a tone that is not passive. However, to the extent of how various municipal laws incorporate the principle - which of course is influenced by economic interest in most cases, Al Gillespie is right. Some countries have the precautionary principle not as laws but as guidelines that may not be binding or justiciable.

## 2.8 Does the Burden of Proof Shift?

According to the traditional standard set by environmental law, the burden of proof lies with the party that is to benefit from any right to environmental protection or the party claiming that a potential activity is harmful.[126] This standard has faced strong criticism as it is reasoned that whoever objects to a potentially harmful activity may not have in his disposal, the scientific and other necessary information needed to defend his objection.[127]

As knowledge about the volatile nature of our environment and its vulnerability to unpredictable, serious and potentially irreversible environmental effects caused by human activities increases, it is widely believed that the precautionary principle has shifted the burden of proof to the proponents of the potentially harmful activities.[128] According to N. D Sadeleer, "Scientific uncertainty is the trigger for the application of precautionary measures, consequent upon which the onus of proof is reversed so that proponents, and not regulators bear the burden of demonstrating that there is no

[125] Gillespie, Alexander, "The precautionary principle in the twenty-first century: a case study of noise pollution in the ocean." *The International Journal of Marine and Coastal Law* 22.1, 2007, 61.
[126] Arie Trouwborst, Precautionary Rights and Duties of States, Leiden Boston, Martinus Nijhoff Publishers, 2006.193
[127] Jones, Judith, and Simon Bronitt, 'The burden and standard of proof in environmental regulation: the precautionary principle in an Australian administrative context,' in Elizabeth Fisher, Judith Jones and Rene von Schomberg (Eds), Implementing the Precautionary Principle: Perspectives and Prospects (Edward Elgar -2006) at 139.
[128] Barney Dickson, 'Fairness and the Costs and Benefits of Precautionary Action', in Rosie Cooney and Barney Dickson (eds), Biodiversity & The Precautionary Principle: Risk and Uncertainty in Conversation and Sustainable Use, London, Earthscan, 2007, 275.

need for regulatory action."[129] Sands has a slightly different opinion on this. He agrees that there is increasing evidence of state practice in support of the reversal of the burden of proof, but still far from what should be allowed to be considered as rule of general application.[130] Birnie, Boyle and Redwell assert that in international law, the party that bears the burden of proof is determined based on the context in which the question arises. Nevertheless, just a few international instruments have incorporated reversing the burden of proof and this is not yet a custom or norm.[131] While some scholars are of the view that there are exceptions where the burden of proof is reversed, i.e., under the High Seas Fishery Treaty, 1994 Bering Sea Pollock Convention, fishing for Aleutian Basin Pollock is expressly forbidden unless it has been ascertained that the total biomass of the stock exceeds a fixed threshold level[132]. Also, the rules banning commercial whaling, that was adopted by the International Whaling Commission in 1982 and the 1994 Revised Management Procedure requires that extreme caution be applied when the ban is ever to be lifted and that the burden of proof in this regard lies with the states advocating a resumption of the commercial exploitation of whales.[133]

The ICJ did not recognize any of the exceptions when it decided the Pulp Mills case, where Argentina accused Uruguay of authorizing construction of a pulp mill that polluted the Uruguay River, violating the countries' treaty regarding the protection of the river.[134] In its argument, Argentina asserted that under the precautionary principle, Uruguay, the defendant, was responsible for proving that the mill would not cause significant harm to the environment.[135] The ICJ rejected Argentina's argument on how the precautionary principle shifts the burden of proof.[136] Without prejudice to the strength or effect of judicial decisions on the burden of proof, in practice the

[129] Nicholas de Sadeleer, Environmental Principles: From Political Slogans to Legal Rules, Susan Leubusher trans, 2002), 203–6.
[130] Sands. supra note 1.
[131] Bernie, *Supra* note 78. Also see the Pulp Mills case (Arg. v. Uru.), Judgment, I 1 (Apr. 20, 2010), available at http://www.icj-cij.org/docket/files/135/15877.pdf. Accessed 15-03-18.
[132] Text of Convention is available on https://www.afsc.noaa.gov/REFM/CBS/convention_description.htm. Accessed 23-02-19.
[133] International Whaling Commission, Revised Management Proceedure, also McIntyre, Owen, and Thomas Mosedale, "The precautionary principle as a norm of customary international law." Journal of Environmental Law. 9, 1997, 227
[134] See Pulp Mills on the River Uruguay (Arg. v. Uru.), Judgment, I 1 (Apr. 20, 2010), available at http://www.icj-cij.org/docket/files/135/15877.pdf. Accessed 18-02-18.
[135] ibid at 160
[136] ibid at 164

shifting of the burden of proof remains at the very heart of the essence of applying the precautionary principle.

From when the precautionary principle began to attract endorsement across the national and international spheres, technology has increased in no small measure, leading to tremendous gains in health and standard of living. Regulatory safeguards have also increased to ensure technological innovations are adjudged safe for humans and environment before allowing such for public use. Yet, some of these technological innovations have caused disastrous consequences for the environment and humans even after been certified safe by authorities responsible for watching out for the safety of the environment and humans from harmful innovations. Questions have been asked if the precautionary principle is not wrong in expecting scientific evidential certainty of safety as a standard for adjudging a development or activity. Amongst the key elements that make up the precautionary principle; threshold of threat required to invoke the principle, strength of the evidence required to avoid the application of the principle and who bears the burden of proof, the strength of the scientific evidence required to avoid the invocation of the principle has generated more discussion as to the extent of the role of science in determining the triggering of the principle.

## 2.9 Answering the Question of "Uncertainty"

Lack of a common understanding of the term "scientific uncertainty" has further polarized discussants on its role as one of the elements of the precautionary principle without arriving at a definite endpoint yet. For scientists, uncertainty is not a challenge but a phenomenal trait that is not strange to scientific process. It is a consensual knowledge amongst scientists that casual inferences cannot arrive at the same pedestal of certainty that could guarantee accurate logical deductions. Without prejudice to the contribution of science to humankind, the increasing awareness of its limitations as regards level of accuracy in anticipating natural or consequential disasters, has contributed to expanded inclusion of the precautionary principle in national and international laws. The interpretation of the element of 'scientific uncertainty' in the precautionary principle has created the wrong impression that the principle demands perfection. Indeed, science has always been expected to provide straight-forward answers to problems it's designed to solve with maximum clarity. However, understanding the limitations of science, particularly the absence of 'certainty' is crucial to forging implementation of the principle. The presence of risk is a strong

factor that attracts the precautionary principle, and risk portends uncertainty in the potential outcome of an event which can be due to insufficient scientific evidence on the likely effect of an activity. The mistake some scholars have made in interpreting 'uncertainty' as they understand it from the definition of the of the precautionary principle in the Rio Declaration is that they take it to mean 'where there is no assured scientific evidence of safety'. In the real sense of the scientific world, there is always a chance for a flaw no matter how minute the gap. The least that scientific world strives to achieve is to minimize the risk in an invention or innovation to the barest level - at least a tolerable minimum, not actually to eliminate risk.

Conceding to a wrong interpretation of "uncertainty" in the Rio Declaration will mean mistaken precaution for prevention. Uncertainty in the context of the precautionary principle, though basically refers to the limitations in knowledge, it could also be as a result of ignorance. It does not matter if insufficient information is as a result of a gap in knowledge or negligence in getting the correct information that could aid a proper assessment in determining threat level. "Uncertainty" as an element of the precautionary principle can be better understood when classified into three different epistemic situations: risk, uncertainty, and ignorance.[137] Risk, as formally defined in probability theory, is where all possible outcomes are known in advance and can be assigned probabilistic values. Uncertainty is where outcomes are relatively clear but adequate evidence for assigning probabilities does not exist. Ignorance is where not only the likelihoods of various outcomes are unknown, but where some of the possible outcomes themselves are unknown.[138]

It is a misunderstanding of the element of 'uncertainty' in the precautionary principle that makes opponents see it as anti-development as it appears to them as demanding scientific certainty of safety absolutely, else the application of the principle will be triggered. Variance in how several notable documents refer to the element of uncertainty further fuels the multiple interpretation of 'uncertain' or lack of 'certainty' as stated in the documents that included the principle. For example, the SPS Agreement refers to cases where scientific evidence is "insufficient",[139] and the

[137] Aaron Holdway, "Reducing Uncertainty The Need to Clarify the Key Elements of the Precautionary Principle", Consilience, No. 1 (2008), pp. 37-51 Available online at https://www.jstor.org/stable/26168164, Accessed: 08-02-19.
[138] Gardiner, S. M., "A core precautionary principle. Journal of Political Philosophy", 14(1), 2006,33-60.
[139] SPS, supra note 107.

UN World Charter for Nature refers to cases where threats are "not fully understood". [140] Should we presume that based on the two references made, the principle demands absolute certainty, or beyond any shade of doubt, or exceeding the balance of probabilities? The Rio Declaration in referring to "lack of certainty" did not consider the fact that it's practically impossible to prove and provide assurance of "absence of harm".[141] It is important to accept that science cannot provide certainty. Definitions that mentioned the "lack of full scientific certainty" impliedly points out the possibility of the existence of environmental scenarios "full scientific certainty" of likely outcomes. Again, "certainty" here should not be misconstrued, rather it should be taken as sufficient scientific information that is reliable enough to make decision after due process of assessment.

## 2.10 From the Misdirection of 'Uncertainty' to Normative Foundations: What is 'Normal'?

The chain of processes that ties the presence of uncertainty to the action of precaution is disputable based on uncertainty not being the element that determines the application of precaution. The foregoing argument is hinged on the presence of a norm that ensures that there is a procedure of assessment before any activity that could affect the environment and health of the people is approved. A typical example in this regard is the EIA which presents itself as most perfect example of a process that precedes a decision to operationalize the precautionary principle. Given the standard under which formal conditions for precaution in a certain situation will vary from the other, level of uncertainty of scientific knowledge on the safety or otherwise of a proposed activity will not be the only consideration decision makers will explore as they ponder over the choice of options before them. Within the context of international trade law which has strong economic consideration as its basis for operation, the contextual elements of 'uncertainty', irreversibility of damage and cost-benefit analysis in the precautionary principle may function differently from how it should function under conventional environmental law.

[140]World Charter for Nature, G.A. Res. 7, 36 U.N. GAOR Supp. (No. 51) at 17, U.N.
Doc. A/51 (1982); 22 ILM 455(1983) [hereinafter cited as Charter for Nature]
[141] Turvey, C. G., & Mojduszka, E. M., (2005), "The precautionary principle and the law of unintended consequences", Food Policy, 30, 145-161

Uncertainty as one of the factors mentioned in the Rio Declaration raises a theoretical query as to sublime context that gives credence, if any, to the notion of scientific 'uncertainty' being such factor that should trigger the application of the precautionary principle. In theory, science may seek to pursue a cause that gives assurance of safety, but science cannot guaranty one hundred percent certainty of safety. It is safer to examine the gap that may exist due to insufficient information that science could not provide which necessarily raises the concern for lack of certainty, and not scientific uncertainty due to fallibility of science. The possibility of precautionary principle conflicting with WTO law raised a flag for negotiators of the Cartagena Protocol to consider the tone of the text of its operative provisions. For a protocol that has specific areas of reference as different from the Rio Declaration that is generally broad and conventional, the Cartagena Protocol was more precise in stating contextually what 'lack of scientific certainty' means; "insufficient relevant scientific information..."[142] The question of how the element of 'scientific uncertainty' functions within the parameters provided by the trade activities that requires assessment to ascertain safety of level of safety in compliance with certain stipulated laws, rules or agreements should explain if the precautionary principle functions in varying degrees - depending on whether environmental or trade activity.

This follows the perception that precautionary principle, though has evolved 'outside' the acreage of environmental law, it is yet to be an established legal status in other branches of law - at least that is the perception of some international jurists. However, without conceding to the foregoing, this study will examine the basis for the functioning of the precautionary principle by analysing the link between environment and trade. Answering the question of how laws regulating the two activities, within the sphere of international law tends to possibly internalize individual legal principles that practitioners of each refer to as unreceptive 'outside' principles that is in conflict with its legal objective will need the understanding of how the international trade theory of comparative advantage suppresses the consideration for environmental externalities that may be associated with the production and consumption of goods.

[142] *CPB*, Articles 10 (6) and 11 (8)

## 2.11 Summary

As of today, the precautionary principle stands enshrined in several national legal regimes, regulating diverse sectors and industries, but more prominent in the protection of the environment and consumer health. Europe has evolved into a community that expressly integrated the principle as part of its jurisprudence upon which secondary legislations relating to environment generally, and specifically, climate change, and conservation and consumer health are built on. As the web of globalization draws more societies into its ideological circle, other factors that naturally evolve with modern development began to identify with areas that were not originally on same legal or even commercial footing. For example, environment and trade. In the same light, the precautionary principle began to make strong presence in areas naturally seen as outside the scope of the principle. Outside European countries practicing law of equity, some other countries have provisions in their laws that have the character of the precautionary principle even though not expressly stated.

Though in most of the Multilateral Environmental Agreements (MEAs) that has incorporated the precautionary principle, it appears as soft obligations or guidelines, a number of them have the principle in operative provision thereby positioning it on a stronger footing than being in just the preamble. For example, the CPB in furtherance of its affirmation of the precautionary principle mandates parties to ensure measures are introduced based on decision making processes such as risk assessment for the protection of biological diversity and health of its population within its territory.[143] The inclusion of the precautionary principle in its operative provision makes the CPB stand out amongst other international conventions.

[143] Ibid, Article 16 of the CPB.

# PART II

## CHAPTER THREE

## 3.0 PRINCIPLE OF LAW OR AN APPROACH?

A principle of law as a legal norm is seen as a basic norm that reflects a widely accepted understanding of how a society should be guided when certain circumstances demand such guidance.[144] Principles that are applied in law serve as a foundation, defining the pathway for enforcing rules made for the protection of the object or entity. The importance of principles leans on a fundamental tripod.[145] First, principles are considered as one of the standards, among others, that permit the assessment of the legitimacy of a law. Second, principles offer assistance within the translation of other rules. Third, principles have the capacity to help with the inadequacy of the law.[146] Principles are the rallying point from which other fundamental norms derive their essence in any legal system. In international law, the term 'general principles of law' is used to refer to a source of law derived from domestic norms and principles within legal systems, e.g., good faith, equity, and estoppel. These are principles that are primarily applied within domestic jurisdictions which according to Articles 38(1)(c) of the Statute of the International Court of Justice are sources of international law, provided they are recognized by civilized nations.[147] On the other hand, there are principles of international law that are exclusive to international law, e.g. principles of consent, reciprocity, equality of states, finality of awards and settlements, freedom of the sea.[148] Generally,

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[144] Daci, Jordan, "Legal Principles, Legal Values and Legal Norms: are they the same or different?" Academicus International Scientific Journal 02 (2010): 109-115. Available online at http://dspace.epoka.edu.al/bitstream/handle/1/1350/Academicus-MMX-2-109-115.pdf?sequence=1 Accessed 21-01-18.

[145] COMEST, U. (2005), "The precautionary principle", World Commission on the Ethics of Scientific Knowledge and Technology (COMEST), United Nations Educational, Scientific and Cultural Organization (UNESCO), Paris, pp.23 Available online http://unesdoc.unesco.org/images/0013/001395/139578e.pdf. Accessed 11-08-18.

[146] Patricia Birnie, Alan Boyle and Catherine Redgwell, International Law and the Environment, (3rd Ed., OUP, 2009), 158-9.

[147] Phillip Sands, Principles of International Environmental Law ( 2nd Ed, Cambridge University Press, Cambridge, 2003) at 150, according to Sand, Article 38 (1) (c), Statute of International Court of Justice is believed to be for the purposes of allowing the ICJ to consider and apply general principles of municipal law. See also Raz, Joseph, "Legal principles and the limits of law", The Yale Law Journal 81.5 (1972): 823-854. "The legitimacy of a principle of law is derived from its recognition as a fundamental legal doctrine and standard that is widely accepted by civilized societies." Also see David, Hunter, Salzman James, and Zaelke Durwood, "International Environmental Law and Policy" (1998) at 321.

[148] Ian Brownlie, Principles of International Law (7th ed, Oxford University Press, Oxford, 2008) at 19.

most of these principles have their origin traced to practice of states, but as international law evolves, fundamental principles of international law began to emerge and establish strong footholds that make any connection with state practice non-existent.[149]

An attempt has been made to define 'general principles of law recognized by civilized nations' within the context of article 38(1)(c) of the Statute of the International Court of Justice with a view to understanding if the definition of general principle of law should be based on an inductive reasoning or on the inherent deductive approach which draws validity of general principle of law from international judicial decisions.[150] What the definition explains is what is acceptable presently as the linguistic interpretation of Article 38(1)(c) of the Statute of the ICJ which refers more to the principles with universal validity and acceptance, i.e., rule of Law and fair hearing. A careful examination of the category of principles that the International Court of Justice recognises as general principles of law reveals that the chances of the precautionary principle emerging as a general principle of law with universal acceptance are slim, because it evolved largely at the international level before being incorporated into domestic systems subsequently. However, there is the possibility of it emerging a principle of customary international law.[151]

Principles generally are defined in context of application and the view of the entity applying it. Almost like doctrines, they are inculcated into laws of states and utilized in order to surmount uncertainties inherent in written laws.[152] The different ways the term "principle" has been accepted conveys diverse meanings, no matter how similar they may seem to be. These meanings can be identified by considering the profession of the person interpreting the term: the scientist; doctrinal use, the judge; jurisprudential use, and the legislator; legislative use.[153]Also, different States place principle on different pedestal of value. To some, it is seen as fundamental value or as an element

[149] Ian Brownlie explaining the initial link between principles of international law with some state practices which have been seen to be generally no longer connected. See Above n 3.
[150] This project was initiated by Professor Rudolf Sclesinger in Cornel Law School, *Research on the General Principles of law Recognized by Civilized Nations, 51 AM.J International. 734 (1957*) cited by Jalet, Frances T. Freeman, "The Quest for the General Principles of Law Recognized by Civilized Nations-A Study" *UcLA L. REv.* 10 (1962): 1041.
[151] Sirinskiene, Agne, "The Status of Precautionary Principle: Moving Towards the Rule of Customary Law." *Jurisprudencija* 4 (2009). Available online http://www.mruni.eu/lt/mokslo_darbai/jurisprudencija/archyvas/dwn.php?id=226667 assessed 23-09-18.
[152] Lang, Winfried, "UN-principles and international environmental law", Max Planck UNYB3 (1999): 157-172.
[153] Alpa, Guido, "General Principles of Law", Annual Survey of International and Comparative Law, Vol. 1, pp. 1-3.

of basic application in the enforcement of state laws. Different systems of government develop and define the principles that guide how they govern their different states. For example, the principle of separation of powers as applied in a presidential system of government is different from how it is applied in a parliamentary system of government. The fact that several countries adopted a particular principle does not make that principle become a general principle of law as defined in Article 38 (1)(c) of the Statute of the ICJ. Indeed, when a principle is recognized, both in domestic and international law, it is likely to trace its origin to the domestic legal system.[154] However, that does not mean that the application of the principle in international law reflects its recognition or adoption by a number of domestic jurisdictions. It will appear that the distinguishing factor between principles in general term and general principles of law referred to in Article 38 of the Statute of the ICJ is the number of those civilized states that have recognized the principles. But according to Peteri, "these principles can be distinguished by their more general content and more comprehensive significance from the enormous mass of positive legal rules".[155]

### 3.1 Precautionary Principle or Approach?

The discourse on the distinction between the precautionary principle and the precautionary approach, if any exists, has pitched those that follow the theoretical and philosophical basis of precaution against those that believe in the practicality of precautionary action. The basis for the argument of those that believe a distinction exists and those that view the terms as meaning the same but just different in terminology used justifiable to the extent of how their interest traverse the different areas that precaution is applied as a concept seeking or already incorporated into the jurisprudence of their individual national legal system. Nonetheless, given that not every precautionary measure is necessary enough to be in 'concrete' form, e.g., as a legal principle, should the semantic expression determine the form of precaution - strong or weak, being applied or the definitive notion that it presents as a general inclusive concept? For example, where a country says the precautionary principle is incorporated in its laws as a regulatory tool for securing environmental sustainability, but the laws referenced never mentioned "precautionary principle"

[154] Gaja, Giorgio, "General principles of law", Max Planck Encyclopedia of Public International Law, Oxford University Press, Oxford 7 (2008).
[155] Peteri, Zoltan, "Questions of Comparative Analysis of the General Principles of Law." *Acta Juridica* 28, 1986. 45.

explicitly but has provisions that express the features of the principle. Understanding the dynamics resolving issue of variation in 'identity' of a concept attached to two different identities that are draped with identical substance can easily be achieved by studying the ideological basis for the concept in its simple form. In the light of the forgoing, discussing 'precaution' as a measure that is useful and practical, given the unsure scientific perception regarding a specific risk should tune the mind of anyone arguing on the alleged distinction between the precautionary principle and the precautionary approach to a full spread-page like view of both sides; one as a 'principled' precaution and the other as a 'pragmatic' precaution. The principle-pragmatic distinction has not swayed much support in its direction, maybe due to reluctance of scholars to acknowledge existence of any form of real dichotomy between the precautionary principle and the precautionary approach beyond what can be described as language preference of international political brokers. [156]

Legal theorists distinguish *principle* from other normative laws by identifying the context within which it is defined in a legal system. According to Dworkin, while rules apply in all or nothing fashion, "a principle states a reason that argues in one direction, but does not necessitate a particular decision".[157] Principles are made to guide the process of decision making on the course of definite considerations that diffuses the conflict between law and systemic norms that are not statutory.[158] Where the precautionary approach is seen as an alternative to the understanding of precaution as a principle, it is regarded as an approach leading to actual decision with no strict obligation required to follow it. Preference for the term 'approach' by some, is based on their perception that 'principle' sound too rigid for a world that is witnessing the rapid development of new technologies that need a flexible regulatory regime. For instance, during the negotiating process for the Biosafety Protocol, the United States and other agricultural exporting countries objected to the term 'precautionary principle' and preferred 'precautionary approach' owing to their interest in new technology like the GMOs[159]. The foregoing also informs the position of the

[156] Shelia Jasanoff, "A living legacy: The precautionary ideal in American law," in Joel A. Tickner, ed., Precaution, Environmental Science, and Preventive Public Policy (Washington, DC: Island Press,2003), pp.227-240.
[157] Dworkin, Ronald, "Taking Rights Seriously", (Cambridge MA: Harvard University Press, 1978).
[158] de Sadeleer, Nicolas Michel, "Comments on the Status of International Law in Three Environmental Principles." Proteçao Internacional Do Meio Ambiente (2013): 35-87.
[159] See the preamble of the Biosafety Protocol; and the argument of the US against the EC referring to the precautionary principle as a principle of customary international law in the Beef Hormones Case before the Appellate Body of the WTO in WTO Doc WT/DS26/AB/R, WT/DS48/AB/R, AB-1997-4 (1998) [43].

United States in the discussions leading to the Rio Declaration, particularly in respect of Principle 15 in opposing the suggestion of delegates of the European Union who preferred to adopt a precautionary principle and not precautionary approach.[160] Primarily, the United States and other opponents of the precautionary principle perceive that the word "principle" will appear to explicitly convey a legally binding specific obligations in international law on states who did not consent to it being an enforceable principle of international law.[161] In addition, the United States in preferring the language of the precautionary approach to that of the precautionary principle views 'approach' to be in fluidity with tools of risk assessment and benefit-cost analysis. As much as I want to avoid perpetuating the divisive perception of scholars and practitioners who hold the view that the principled-pragmatic dichotomy exists only to the extent of how precautionary the European Union is or can be, when compared with the standard of precaution set by the United States,[162] the standard by both sides are not consistent enough individually to make anyone conclude on which adopts a strong or weak form. The United States is not applying a lower standard and threshold than the precautionary principle being applied by the European Union.[163]

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[160] Jeffrey D. Kovar, "A Short Guide to the Rio Declaration", 4 COLO. J. INT'L ENVTL. L. & POL'Y 119, 134 (1993); see also supra notes 48-51 and accompanying text.

[161] Jonathan B. Wiener, "Precaution," in Daniel Bodansky, "Integrated Responsibility Approach to Nano Vaccines in Fish"; Jutta Brunnée, and Ellen Hey, eds., "The Oxford Handbook of farming? A critical appraisal of the UNESCO precautionary International Law" (Oxford: Oxford University Press, 2007), principle," Nano ethics, 5 (2011): 73-86. pp. 598-612.

[162] In debating the perceived difference in standards between the precautionary principle of the EU and the precautionary approach of the US, scholars like Christoforou in presenting his argument along the line of what is known as the "flip-flop hypothesis" mentioned three phases that characterized the history of the regulatory development when comparing the United States with the European thus: "the early phase (up to 1970s), when the regulation of risk on the basis of precaution in the United States was more rigorously applied; the second phase (up to 1990s), when the European Community accomplished tremendous progress in regulating risk to health and the environment and nearly closed the gap with the United States; and the final phase (from the early 1990s to the present), in which more stringent regulation of risk on the basis of precaution has become greater in the European Community than in the United". See Theofanis Christoforou, "The precautionary principle, risk assessment, and the comparative role of science in the European Community, and the US legal system", in Norman J. Vig and Michael G. Faure, eds., "Green Giants? Environmental Policies of the United States and the European Union" (Cambridge: The MIT Press, 2004) p 17. Other scholars like Dovid Vogel share almost same view with Christoforous. See Jonathan B. Wiener and Michael Rogers, "Comparing precaution in the United States and Europe", Journal of Risk Research 5, (4): 317-349, he is quoted on page 319 to be precise. Though other scholars like Wiener and Rogers do not agree with the argument of Christofurous, the arguments on both sides show that the precautionary approach is not inferior to the precautionary principle as the United States being the main promoter of the precautionary approach does not reflect its public perception of the precautionary approach in the high standard set for its application.

[163] The peculiar nature of the United States federal system actually allows disparity of standards and thresholds across states and the federal environmental law. In fact, in some instances the standard in some states is higher than that of the National law until the Supreme Court ruled prohibiting states setting higher standard than those set at the national level. See Lettie McSpadden, "Industry's use of the courts", in Michael E. Kraft and Sheldon Kamieniecki,

When considering international agreements that did not explicitly mention the precautionary principle, the question always arise if the precautionary principle is implied where the substance and elements of the principle is clearly incorporated in the agreement as a precautionary language. Several international agreements fall under this category and many still see them as incorporating the precautionary principle. The WTO Agreement on Sanitary and Phytosanitary Measures (SPS) is a good example of such document. The strength of the argument in support of the principle in such regard has weakened the position of those that ague for the distinction between the precautionary principle and the precautionary approach. The SPS Agreement is, amongst others, made to regulate trade measures that are adopted to counter sanitary and phytosanitary risks by requiring them to be based on science that is verifiable.[164] Article 5(7) of the SPS Agreement which is generally believed to be precautionary in its language states:

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

Examining the language of the above-mentioned Article, the only element that leans towards the precautionary principle is "insufficient scientific evidence". The WTO panel in the *Hormones* case agreed with the argument of the European Communities that the precautionary principle has been incorporated into Article 5(7) of the SPS Agreement. The Appellate Body confirmed this decision when it decided that the precautionary principle found reflection in Article 5(7) of the SPS Agreement.[165] The WTO as a body itself indeed interpret Article 5(7) of the SPS Agreement as reflecting the "precautionary principle" in one of its documents published on its website:

> Member countries are encouraged to use international standards, guidelines and recommendations where they exist. When they do, they are unlikely to be challenged legally in a WTO dispute. However, members may use measures

eds., "Business and Environmental Policy: Corporate Interests in the American Political System" (Cambridge: The MIT Press, 2007), pp. 241-242.

[164] Caroline E. Foster, "Precaution, scientific development and scientific uncertainty under the WTO Agreement on Sanitary and Phytosanitary Measures", RECIEL, 18(1), 2009 p 50.

[165] EC-Hormone, *supra* note 111 and 112.

> which result in higher standards if there is scientific justification. They can also set higher standards based on appropriate assessment of risks so long as the approach is consistent, not arbitrary. And they can to some extent apply the "precautionary principle," a kind of "safety first" approach to deal with scientific uncertainty. Article 5.7 of the SPS Agreement allows temporary "precautionary" measures.[166]

In general terms, the 'precautionary principle' is seen as the philosophical basis of the concept of precautionary approach in its practical application.[167] Whether the term 'precautionary principle' or 'precautionary approach' is used, there is a case of semantic differentiation between both. However, from the standpoint of international law, it is only a matter of substituting one preferable term for the other, depending on choice of articulation of the treaty by its signatories. For example, Principle 15 of the Rio Declaration used the term 'precautionary approach' yet several international treaties that incorporated the 'precautionary principle' make reference to Principle 15 of the Rio Declaration which displaces the argument of a distinction, even though it does not answer the question if the choice of term does diminish the status or legal leaning of either terms in the face of international law.[168] How soft law use the term 'approach' may not help as much in providing a precise definition that is different from how treaties use the same term. For example, Agenda 21 of the United Nations Conference on Environment and Development includes the precautionary approach but describing it in form of a process or procedure that is imperative for the protection of the marine environment and as a substantive rule:[169]

> A precautionary and anticipatory rather than a reactive approach is necessary to prevent the degradation of the marine environment. This requires, inter alia, the adoption of precautionary measures, environmental impact assessments, clean production techniques, recycling, waste audits and *minimization, construction*

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[166] WTO, "Understanding the WTO: The Agreements," 2011, Geneva, Switzerland. Available online at http://www.wto.org/english/thewto_e/whatis_e/agrm4_.htm Accessed 30-03-2019

[167] UNCED, supra note 121.

[168] See Preamble, Article 1 of Biosafety Protocol, Article 1, Convention on Persistent Organic Pollutants of 2001.

[169] Chapter 17, Paragraph 17.21 which provides for the protection of oceans, all kind of seas, including semi-enclosed seas and the coastal areas. It also provides for protection, rational use and development of their living resources; Decision SS. II/4, UN General Assembly, Official Records, 45th Session, Supplement No. 25 (A/45/25), p.26 where the Governing Council of the United Nations Environmental Program endorsed the precautionary approach to minimize or eliminate the generation of hazardous waste. Here the precautionary approach is described in form of a substantive rule, while recommending policies that will be in tandem with its implementation. Comparing the languages used in the two soft laws, the first recommended the precautionary approach for the protection of marine environment while the second recommended policies that will be in line with implementing the precautionary approach. These two soft laws present how the precautionary principle is regarded as a process and where it's regarded as a substantive rule.

> and/or improvement of sewage treatment facilities, quality management criteria for the proper handling of hazardous substances, and a comprehensive approach to damaging impacts from air, land and water. Any management framework must include the improvement of coastal human settlements and the integrated management and development of coastal areas.

In the context above, "precautionary and anticipatory" approach referring to the precautionary principle may not be explicit, but the text shows no substantial difference from what the precautionary principle is known for. The "reactive approach" in the above text can be illustrated by a principle such as the polluter pays principle. The same text further mentioned some measures, techniques or procedures that are required to achieve the prevention of marine environment degradation and then precautionary measure and environmental impact assessment - both recognised principles - are mentioned. The point to note here is that the use of the term 'approach' does not negate the fact that the precautionary principle or the polluter pays principle are referred to in the above text and therefore show no real distinction between precautionary principle and precautionary approach in substance[170]

Within the context of the interpretative function of principles, indeed it provides meaning for rules with consideration for values where ambiguity arises, as there is variance of values across jurisdictions. An approach can lead the way in pointing out an alternative view that could form the basis for a legal process or procedure. The disagreement over addressing a precautionary measure as 'principle' or 'approach' also stems from the variance in how societies regulate risk, depending on the peculiarity or dynamism of their individual markets. Apparently, some societies are more inclined to absorbing risk, while allowing it to interfere with market forces, in contrast with others that adopt a more conservative approach.

### 3.2 A General Principle of Law; Emerging or Established?

Some scholars have argued that the precautionary principle has progressed from its formative stage into a concrete form and is now believed to have crystallized into a general customary rule of international law based on the characteristics that it has possessed over the years of its

[170] See David Freestone and Ellen Hey, The Precautionary principle and International Law (ed) Origins and Development of the Precautionary principle. Vol. 31. Kluwer Law International, 1996.pp 7-8

progression.[171] Nevertheless, some still believe the precautionary principle is still an emerging principle of international law and indeed stands a better position of being recognized as a principle of international law other than a custom.[172]

Treaties, as principal method of creating binding rules of international law, including rules regarding the protection of the environment, contribute to the development of general principles as well as customary international law.[173] The binding nature of treaties makes them have advantage of enforcement on parties that are signatories to them, but with regards to contributing to the development of principles and customary law, treaties influence state practice outside the consenting parties; thereby contributing to the development of customary law in relation to the relevant subject. Since the early '90s, the process of regulating environmental activities and challenges at the regional or international level has often been by way of adopting a framework treaty that sets out primary obligations of parties and includes provisions that envisage subsequent agreements coming under the main treaty.[174] Though some environmental treaties preceding the early '90s implicitly include the precautionary principle,[175] they are a part of body of treaties that give proof to the consciousness of precaution by the parties and could be strong enough to guide us on the status of the precautionary principle, especially when drawing from evidence of state practice by parties.[176] Among the treaties that have included the precautionary principle, some have set a definite standard across respective sectors in risk management and response to potential harm. For example, in the prevention of marine pollution, the London Dumping Convention provides an internationally agreed standard for conduct of states. Also, treaties that include

[171] Sirinskiene, Agne, "The Status of Precautionary Principle: Moving Towards the Rule of Customary Law", Jurisprudencija 4, 2009. www.mruni.eu/upload/iblock/b27/20sirinskiene.pdf. Accessed 11-04-18.

[172]Wang, Runyu, "The precautionary principle in maritime affairs." WMU Journal of Maritime Affairs 10.2, 2011.143-165.

[173] David, Hunter, Salzman James, and Zaelke Durwoo, "International Environmental Law and Policy" (2nd ed, Foundation Press, New York,1998 at 291. Though binding rules are contained in treaties, they possibly contribute to the development of customary international law. An example is the UN law of the Sea Convention, where even before negotiations were concluded, *opinio juris* has developed around norms such as the 200-mile exclusive economic zone extending out from the coastline of each state.

[174] Sands, *supra* note 1 at page 128 citing examples such as the 1985 Vienna Convention, 1989 Basel Convention and the 1992 UNFCCC.

[175] Such as 1968 African Convention, 1971 Ramsar Convention,1972 World Heritage Convention, 1973 CITES, 1979 Berne Convention, 1982 IWC ban on commercial whaling, 1982 UNCLOS, 1985 Vienna Convention.

[176] Weisburd, A. Mark, "The International Court of Justice and the Concept of State Practice" University of Pennsylvania Journal of International Law 31, 2009. 295-330.

provisions, having precautionary character, have used the term "precautionary approach". A good example is the United Nation Convention on the Law of the Sea in Article 206:

> When States have reasonable grounds for believing that planned activities under their jurisdiction or control may cause substantial pollution of or significant and harmful changes to the marine environment, they shall, as far as practicable, assess the potential effects of such activities on the marine environment and shall communicate reports of the results of such assessments in the manner provided in article 205.[177]

To further entrench the precautionary principle as an approach or process that is inclusive alongside other safeguards necessary at sea, the Convention on the Law of the Sea empowers a competent court or tribunal to make such orders that will guide parties in a dispute on precautionary measures that should be in place *lis pendis* the matter before it.[178] Soft law, notwithstanding its non-binding nature, has a very strong influence - if not stronger, on the status of the precautionary principle by virtue of its more open-textured or general content[179] which gives it a wider platform to generate *opinio juris* among states. Also, the precautionary principle in soft law creates an interaction with treaties that adopt the principle on how the principle is applied and how various thresholds are determined. An example of this can found in the role the Rio Declaration, which is a soft law, played in the codification of Article 3 of the UNFCCC. [180] Alan Boyle described the principles in Article 3 of the UNFCCC, which includes the precautionary principle, as 'soft law' in a treaty. [181] However, that cannot be totally true of the UNFCCC as subsequent agreements have been concluded by parties, such as the Kyoto Protocol[182] and the Paris Agreement which provides for specific commitments and obligations for parties to the protocol and agreement respectively,

[177] Article 206, United Nations Convention on the Law of the Sea, 1982 available online at http://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf. Accessed 04-11-18.

[178] See Article 290 (1) of UNCLOS; Separate Opinions of Judge Lang and Judge Treves in the Southern Bluefin Tuna Case.

[179] Boyle, Alan E., "Some reflections on the relationship of treaties and soft law", The international and comparative law quarterly 48.4 (1999): 901-913.

[180] The four principles of intergenerational equity, common but differentiated responsibilities, precautionary measure and sustainable development codified in Article 3 of the UNFCCC were drawn from the Rio Declaration.

[181] He explained in line with the opinion of Late Judge Baxter, who pointed out many years ago that some treaties are soft in the sense that they impose no real obligation on the parties. See Above n 81.

[182] Article 3 of UNFCCC was referred to in the "Berlin Mandate" that negotiated the Kyoto Protocol and in the Preamble of the Protocol. See Decision 1/CP.1, in Report of Conference of the Parties on its 1st Session, UN Doc, FCCC/CP/1995/7/Add.1. see unfccc.int/resource/docs/cop1/07a01.pdf. Accessed 29-01-19.

even though there are divided opinions if these commitments are truly precautionary or not, especially in the light of Article 3 of the UNFCCC.

Determining the status of the precautionary principle in international law means answering the question if it is a legally binding principle in customary international law, or a guiding principle that is only applied when responding to specific situation that puts the environment and humans at risk. As the precautionary principle continues to extend and strengthen its legal footing based on the level of recognition it has garnered so far in treaties and soft law, discussion concerning its legal status in international law continues to generate diverse opinions and academic arguments.

As stated earlier about the different terms used in describing the precautionary principle, different words can also be used to depict acceptance of a principle of law at the international level. Some may choose to use the word "approach" and others may use the word "measure". The different wordings used has made it very difficult to have a unified application of the principle since different definition is accepted differently by different nation-states. [183] Also, the use of different wordings and definitions as regards the principle have made it difficult to determine its status in law by judicial interpretation. This can be seen in the EC Biotech's case,[184] where the United States strongly disagreed with the submission that the precautionary principle has become a rule of international law. In the argument of the U.S., the precautionary principle cannot be considered a general principle or norm of international law because it does not have a single, agreed definition. The United States' perception of precaution is not as a principle of international law, rather as an approach. In the EC Hormones case, Canada submitted that the "precautionary approach" is "an emerging principle of law" which may crystallize in the future into one of the "general principles of law recognized by civilized nations" within the meaning of Article 38(1)(c) of the Statute of the International Court of Justice.[185] However, the precautionary principle, due to how it evolved,

[183] Goklany, Indur M., *The precautionary principle: a critical appraisal of environmental risk assessment*. Cato Institute, 2001. ac.els-cdn.com.ezproxy.canterbury.ac.nz/S0025326X03000912/1-s2.0-S0025326X03000912-main.pdf? _tid=f3e9f156-3bb0-11e7-a494-00000aacb35f&acdnat=1495101865_4fc73b463bff23d6dd929974778dbd15. Accessed 18-04-19.

[184] See Reports of the Panel, European Communities—Measures Affecting the Approval and Marketing of Biotech Products, at 1, WT/DS291/R (U.S.), WT/DS292/R (Can.), WT/DS293/R (Arg.) (Sept. 29, 2006) [hereinafter EC Biotech Reports of the Panel], available at http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds291_e.htm (incorporating the Complaints by the United States, Canada, and Argentina). Accessed 18-04-19.

[185] EC's appellant's submission. Report of the Appellate Body. Doc WT/DS26/AB/RWT/DS48/AB/R, AB-1997-4. 16 January 1998.

cannot fall into the same category of principles being referred to in Article 38(1)(c) of the Statute of the ICJ. As explained earlier, the general principles of law referred to in the Statute of the ICJ are principles that emerged from domestic or municipal jurisdictions. Whereas the precautionary principle largely developed at the international level.

While the sources of international environmental law are not different from that of other international laws, the relationship between the sources of international environmental law and general international law cannot be on the same footing, especially in terms of how principles relate with general international law and international environmental law. This is because the operation of every principle of international environmental law is tied to the sectorial interest of the branch of international law. A good example is the principle of Environmental Impact Assessment (EIA) which is a principle of international environmental law and has crystalized into customary international law.[186] Before it assumed that status, it was regarded mainly as serving the purpose of protecting the interest of environmental protection and not in satisfaction of any international law.

Having taken note of the volume of corpus of environmental treaties that have mentioned the precautionary principle, its inclusion in treaties alone does not give credence to its status in international law in satisfaction of Article 38(1)(a) of the Statute of the ICJ. Being a principle that is prominent in soft law and binding treaties, the frequency and sphere of practice among nation states is another area that can be examined to understand if the acceptance of the principle is in conformance to the treaties binding on parties or in the belief of nation states accepting it as a form of protection irrespective of any treaty regime regulating its application.

The precautionary principle evolved through a process that was more of persuasive than binding especially in the initial international soft laws that explicitly recognised its essence.[187] This can be seen from the words used in describing the principle in the London Declaration and the Rio

[186]Craik, Neil., The international law of environmental impact assessment: process, substance and integration. Vol. 196. Cambridge: Cambridge University Press, 2008.pp 120-126 http://s1.downloadmienphi.net/file/downloadfile4/206/1392209.pdf. Accessed 23-02-19.

[187] With the exception of some binding treaties protecting marine life e.g., Convention on the Protection of the Marine Environment of the Baltic Sea Area (Helsinki), Convention for the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London), Most other and none binding treaties use words that are not mandatory in adopting the precautionary principle. See COMEST, The Precautionary Principle, UNESCO 2005.

Declaration. According to the London Declaration (Second International Conference on the Protection of the North Sea 1987), '…a precautionary approach is necessary which may require action to control inputs of such substances even before a causal link has been established by absolutely clear scientific evidence.'[188] From the foregoing phrase, the qualifying language, 'may require action', depicts an optional action that can be interpreted to put a nation state in a position that allows it use discretion in accepting the viability of the precautionary approach when the need arises. However, even though these international texts with persuasive tone are not seen to have same legal force as treaties and conventions because of lack of binding force, it does not mean they are not legally relevant.[189] Such declarations have the capacity of generating international norms that can translate to state practice in the event of a high degree of acceptability by nation states, which will ordinarily reflect in them including such declarative principles in their national laws.[190] The Universal Declaration of Human Rights is a good example of the foregoing even as it has transformed into a strong and binding international customary law of which grave breaches of its provisions attract international sanctions in most cases.[191]

There is no dispute to the notion that inclusion of precautionary measures in legally binding international treaties places the precautionary principle in a stronger position of emerging a substantive principle in international law and not just a guiding process in international environmental law. However, the notions of precaution are also widely acknowledged in non-binding international documents.[192] The relevance of the wide subscription the principle enjoys in soft law puts it in a good position as a norm of customary international law. Much focus is on its status as principle of customary international law not because parties to binding treaties are not making the numbers needed, but because state practice by those who did not subscribe to the treaties that have incorporated the precautionary principle makes a plausible argument for wider application of the principle as it satisfies the definition and requirements qualifying a norm or

[188] Freestone, D. and Ijistra, T., The North Sea: Basic Legal Documents on Regional Environmental Co-operation, 1991, p.3: < http://www.dep.no/md/html/conf/declaration/london.html. Accessed 27-08-19.
[189] Guzman, Andrew T., "Saving customary international law" (2005). http://scholarship.law.berkeley.edu/cgi/viewcontent.cgi?article=1631&context=facpubs Accessed 12-08-19
[190] Bodansky, Daniel, "Customary (and not so customary) international environmental law." *Indiana Journal of Global Legal Studies*, 1995, 105-119.
[191] Atapattu, Sumudu, and Arie Trouwborst, "Evolution and Status of the Precautionary Principle in International Law." (2002): 1016-1018. Citing Birnie & Boyle, 1995, p.1.
[192] A good overview of Alan, supra note 84 at 122-56 reveals that the mentioning of precaution in international policy documents across several sectors is very broad and the list keeps growing.

principle of customary international law. Customary international law as the primary source of international law,[193] draws a definition from article 38 of the Statute of the International Court of Justice., which defines "international custom" as "evidence of a general practice accepted as law". The Restatement (Third) of Foreign Relations Law of the United States also provides a definition similar to that provided by the Statute of the ICJ. It defines customary international law as emerging from a general and consistent practice of states followed by them from a sense of legal obligation.[194]

Article 38 of the Statute of the International Court of Justice sets out two primary elements necessary to form customary international law: State practice and acceptance of that practice as obligatory in law. In the North Continental Shelf Cases,[195] the ICJ reiterated article 38 when it held that for a customary rule to emerge, it needs the objective element or state practice and a uniform practice that demonstrates a general recognition of the rule of law. Relying on the ICJ definition of customary international law in determining the status of the precautionary principle will involve examining state practice outside the treaty regime. However, reference to existing treaty regime remains sacrosanct because customary international law can also evolve through provisions of treaty regimes in finding better expression of international customary norms. For example, in some cases, treaties refer to rules of customary international law, making such rules relevant to the interpretation of the treaty.[196]

The precautionary principle in international law presently has evolved and developed into prominence through a growing body of treaty practice.[197] But as earlier mentioned, its inclusion in treaty laws is not enough to determine its status in international law. There are three regimes of

[193] Brigitte Stem, Custom at the Heart of International Law, 11 Duke Journal of Comparative & International Law 89, 89, 2001 ("Custom enjoys privileged status in the international order: 'custom is even more central than the treaty'...." (Quoting and translating Paul Reuter, Introduction Au Droit Des Traites 38 (1972)). Available at http://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=1214&context=djcil. Accessed 23-2-18.
[194] See Guzman, Andrew T., "Saving customary international law", 2005, p.123 citing Restatement (Third) of The Foreign Relations Law of The United States, § 102(2), 1987 file:///C:/Users/HP/Desktop/Saving%20Customary%20International%20Law.pdf. Accessed 22-2-19.
[195] North Sea Continental Shelf Cases (*W Germany v. Netherland*; *W Germany v. Denmark*), 1969 ICJ 3, 43-44.
[196] See United States Model Bilateral Investment Treaty, Article II, (April 1994), re- printed in U.N. Conference on Trade and Development, International Investment Instruments: A Compendium, 198, U.N. Doc. UNCTAD/DTC/30(Vol. III) (1996) (stating the signatories will in no case provide investment from their treaty partner "treatment less favourable than that required by [customary] international law").
[197] Woolcock, supra, note 3.

laws from which the precautionary principle can emerge: soft law, treaty law and customary law.[198] Before the precautionary principle was ever mentioned in any treaty, there were soft laws that implicitly included the principle in their texts. While soft law and treaty law have not succeeded in bringing out a definite judicial pronouncement on the status of the precautionary principle at the international level, customary law may be moving faster in appending its approval through widespread state practice. The level of acceptance by nation states can be aggregated by the national laws of states that have included the precautionary principle. For example, in 1992, Australia included the principle in its National Strategy for Ecologically Sustainable Development,[199] while in 1996 the precautionary principle was defined in the Oceans Act of Canada[200] and included in Canada's Environmental Protection Act in 1999.[201] In South Africa, the Environmental Management Act of 1998 implicitly recognises the precautionary principle in section 2(4)(a)(vii) when it provides that: *"... a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions*".[202] Furthermore, the practice of environmental impact assessment is found in the laws of many countries and actually forms the process that informs most decisions on the application of the precautionary principle.[203]

The precautionary principle is recognized in New Zealand and included in its laws, particularly in laws regulating hazardous substances and new organisms, biosecurity and fisheries. However, the context in which it is included is not definitive. There is considerable variation in how the principle is applied and interpreted. Its interpretation takes the form of weak or strong. Where it is expressly defined in a law or regulation, it is seen to be strong. But where it is implicit, it's seen to be weak. The New Zealand's Hazardous Substances and New Organisms Act, 1996[204] (HSNO) applies a precautionary approach and the Biosecurity Act 1993 includes an indirect reference to the

[198] Trouwborst Arie, "The precautionary principle in general international law: Combating the Babylonian confusion", Review of European Community & International Environmental Law 16.2 (2007): 185-195.
[199] Council of Australian Governments. National Strategy for Ecologically Sustainable Development. 1992. Available online at: www.environment.gov.au/about-us/esd/publications/national-esd-strategy. Accessed 18-04-18.
[200] Oceans Act of Canada, Preamble, Available online at: laws-lois.justice.gc.ca/eng/acts/o-2.4/. Accessed 15-03-19.
[201] Canadian Environmental Protection Act, 1999. Para 2(1/a). Available online at: laws-lois.justice.gc.ca/eng/acts/c-15.31/. Accessed 10-03-19.
[202] National Environmental Management Act of South Africa, 1998. Available online at https://www.gov.za/documents/national-environmental-management-act. Accessed 10-03-19.
[203] Freestone, D; Hey, E., "The Precautionary Principle in International Law." (eds.). Kluwer, 1996, p. 71.
[204] Section 7, HSNO Act 1996.

precautionary approach. The Resources Management Act (RMA) of New Zealand has been regarded as implicitly precautionary. But its application is more at the discretion of those that make decisions in respect of activities that come under the regulatory ambit of the RMA. For example, Section 32(2) (c) of the RMA allows the application of the precautionary approach in the development of policy and planning framework. In the absence of a direct reference to the precautionary principle in the RMA, it means that there is no specific direction on how the principle should be applied but that did not diffuse the very essence and character of the RMA which is believed to be precautionary. The Environment Court in *Shirley Primary School v Christchurch City Council* held that the precautionary approach was inherent in the RMA and that to apply the principle separately would lead to double-counting of the need for caution.[205] In as much as the protection of the environment is taken seriously in New Zealand, the application of the precautionary principle as one of the strong principles of environmental law appears to favor its weak form with more reference being made to 'precautionary approach' in Acts[206] and policies.[207] Where, reference is not made explicitly to the precautionary principle as 'precautionary approach', the application of the precautionary principle is inferred from the articulation and character of the law. For example, the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012 of New Zealand (EEZ Act) also recognized the application of the precautionary principle by way of ensuring the Minister take into account any uncertainty or inadequacy in the information available and must act in favor of caution under the 'information principle'.[208] Interestingly, preceding the EEZ Act, the Fisheries Act, 1996 also referred to the 'information principle' which has the articulation and characteristics of the precautionary principle in its weak form. Its form notwithstanding, the Fisheries Act makes well defined statements on how the information principle should guide decision makers under the Fisheries Act which is not different from the tenets of the precautionary principle:[209]

> All persons … under this Act … shall take into account the following information principles: (a) Decisions should be based on the best available information; (b) Decision makers should consider any uncertainty in the

[205] *Shirley Primary School v Christchurch City Council* [1999] NZRMA 66 (EnvC) at 134-135.
[206] HSNO, supra note 205 at Section 7.
[207] Example, Policy 3, New Zealand Coastal Policy Statement 1994.
[208] Section 34 (1)(c) & (2), EEZ Act 2012.
[209] Section 10, Fisheries Act 1996, Also see Marguerite Quin, The Fisheries Act 1996: Context, Purpose and Principles '(1997) 8 Auckland University Law Review 503, 530.

> information available in any case; (c) Decision makers should be cautions when information is uncertain, unreliable, or inadequate; (d) The absence of, or uncertainty in, any information should not be used as a reason for postponing or failing to take any measures to achieve the purpose of this Act.

Notwithstanding the general application of the precautionary principle which is more of having the substance of precaution rather than direct or explicit articulation, the Courts in New Zealand have recognized the application of the principle as part of the corpus of the New Zealand jurisprudence in the various legislations. In *Sea-Tow Ltd v Auckland Regional Council*,[210] the Environment Court stated:

> The Resource Management Act does not expressly prescribe adoption of the precautionary approach. However, the combination of the direction that consent authorities have regard to potential effects on the environment and the inclusion in the meaning of the term effect of any potential effect of any potential effect of low probability which has a high potential impact is precautionary in substance.

In furtherance of the provisions of the RMA in exercising their duty to ensure best practices in the interest of the environment and population, regional councils in New Zealand rely more on requirements for application for resource consent from oil and gas operators in their various rules and plans. In the absence of the precautionary principle being expressly incorporated in the regional/district rules and plans, the requirement for resource consent applicant to provide an assessment of environmental effect is utilized as part of an overall broad precautionary control regime in New Zealand.

Another country that has recognized the precautionary principle as part of customary international law is India. Having accepted its role in sustainable development,[211] India institutionalized the principle statutorily mandating its application under Articles 21, 48A and 51A(g) of the Constitution of India.[212] Kuldip Singh J helped in expounding the essence of the constitutional

[210] Environmental Court A066/06

[211] National Environmental Policy2006; http://www.envfor.nic.in/nep/nep2006.html. Accessed on 5-04-2020.

[212] Article 21 of the Constitution of India states: 'no person shall be deprived of his life or personal liberty except according to procedure established by law'. Article 48A obligates the state to 'protect and improve the environment and to safeguard the forests and wildlife of the country'. Article 51A(g) places a duty on 'every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wildlife and to have compassion for living creatures. See *M C Mehta v Union of India* (2004) 12 SCC 118; *Research Foundation for Science v Union of India* (2005) 13 SCC 186; *Karnataka Industrial Area Development Board v C Kenchappa* (2006) 6 SCC 371; *AP Pollution Control Board I v Professor MV Nayadu* (1999) 2 SCC 718; *AP Pollution Control Board II v Prof MV Nayadu* (2001) 2 SCC 62; *TN Godavarman Thirumalpad v Union of India* (2002) 10 SCC 606; *Tirupur Dyeing Factory Association v Noyal*

provisions and the three conditions that satisfies the application of the principle when he stated in *Vellore Citizen Welfare Forum v Union of India*: [213]

1. State government and statutory authorities must anticipate, prevent and attack the causes of environmental degradation.
2. Where there are threats of serious and irreversible damage, lack of scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation; and
3. The 'onus of proof' is on the actor or developer or industrialist to show the actions are environmentally benign.

In India, the principle has effectively set up procedural structures that places responsibilities on government, its agencies, corporate organizations and private individuals. It also attaches liabilities for not following the laid down procedures or not meeting the requirements outlined in the earlier mentioned case of *Vellore Citizen Welfare Forum v Union of India*. This was strengthened in the case of *A.P. Pollution Control Board v Prof. M. V. Nayudu (Rtd)*.[214] India is one of the few countries in the world, like New Zealand, that has environmental courts known as National Green Tribunals (NGT). The NGT is a creation of a statute; its jurisdiction, powers and procedures are construed and applied according to the provisions of the National Green Tribunal Act, 2010 (NGT Act). The NGT interprets and applies the precautionary principle as mandated by section 20 of the NGT Act.[215] In *Goa Foundation v Union of India*, [216]the Indian Supreme Court declared that: "[t]he applicability of the precautionary principle is a statutory command to the Tribunal while deciding or settling disputes arising out of substantial questions relating to environment. Thus, any violation or even an apprehended violation of this principle would be actionable by any person before the Tribunal. Inaction in the facts and circumstances of a given case could itself be a

*River Ayacutdars Protection* (2009) 9 SCC 737; *MC Mehta v Union of India* (2009) 6 SCC 142; *In re Delhi Transport Department* (1998) 9 SCC 250

[213] AIR 1996 SC 2715: (1996) 5 SCC 647Bench

[214] AIR 1999 SC 812

[215] The National Green Tribunal (NGT) has the statutory jurisdiction to decide cases relating to environmental protection and the conservation of forests and other natural resources (including the enforcement of any legal right relating to the environment) and to give relief and compensation for damages to persons and property. Section 20 of the NGT Act states that 'the Tribunal shall, while passing any order or decision or award, apply the principles of sustainable development, the precautionary principle and the polluter pays principle'.

[216] 2005 (11) SCC 564

violation of the precautionary principle, and therefore bring it within the ambit of jurisdiction of the Tribunal, as defined under the NGT Act 2010."

As a result of national practice, parties at international courts have invoked the precautionary principle while several judicial decisions have been made by domestic courts on the application and status of the precautionary principle. In Australia, in 1993, the case of *Leatch v National Parks and Wildlife Service* was brought before Justice Paul Stein[217] where an objector, in his appeal against the granting of a licence to a council to take and kill endangered fauna from area where road was to be constructed, claimed that the precautionary principle should be applied to refuse the licence because of scientific uncertainty surrounding the effects on endangered fauna resulting from the construction project. Justice Stein in his ruling noted that while the National Parks and Wildlife Act of Australia under which licence was granted did not make any reference to the precautionary principle, caution should be the keystone to the Court's approach. Justice Stein further stressed that the: "...application of the precautionary principle appears to me to be most apt in a situation of a scarcity of scientific knowledge of species population, habitat and impacts. Indeed, one permissible approach is to conclude that the state of knowledge is such that one should not grant a licence to take or kill the species until much more is known…."[218] In the New Zealand High Court case of *Greenpeace v Minister for Fisheries*[219] which was about the total allowable commercial catch for orange roughly set by the New Zealand Minister for Fisheries, Greenpeace applied for judicial review of the Ministerial decision based on how overfishing had endangered its survival. Gallen J, in making reference to the case of *Leatch v National Parks and Wildlife Service* earlier mentioned, recognized that the precautionary approach would also apply in New Zealand even though there is no statutory obligation for the precautionary approach to be adopted under the Fisheries Act.

[217] *Leatch v National Parks and Wildlife Service* (1993) 81 LGERA cited in Jurisprudence on Ecologically Sustainable Development: Paul Stein's Contribution available online at http://www.lec.justice.nsw.gov.au/Documents/preston_jurisprudence%20on%20ecologically%20sustainable%20development.pdf. Accessed 20-02-18.

[218] ibid

[219] Unreported case CP492/93, 27 November 1995 and cited in Stein, Paul, "A cautious application of the precautionary principle." *Environmental Law Review* 2.1 (2000): 1-10. Available online at https://www.cbd.int/doc/articles/2002-/A-00016.pdf. Accessed 16-09-18.

In Germany, the Supreme Administration Court overturned the lower court's decision. It held that the administration is under obligation to check whether radiation from the Krummel nuclear power station stayed within the limits of precaution required by the Atomic Energy Act.[220] However, the mentioned practices at domestic level may not actually satisfy the requirement for assuming the status of customary law. In the opinion of Hohmann, for the purpose of identifying customary law, State practice, as required by the International Court of Justice, may be reduced to diplomatic practice where the following criteria are fulfilled:

1. the values at the basis of the resolutions concerned are shared by all states - and all states see the need to establish the rule quickly.
2. there must be an absence of pre-existing customary law to be displaced; and
3. There should be limited evidence of (external) State practice.[221]

The submission of state parties in international courts is also a reflection of their position on the precautionary principle. The ICJ observed in the Gabcikovo-Nagymaros Project (*Hungary v. Slovakia)* [222] that parties agreed precautionary measures should be taken as regards the project but no consensus on the strategy or modalities to follow or impact on the project. The decision of the ICJ may not explicitly state what the precautionary principle is in international law, but it is obvious from its holding that it leans more on the side of the principle. The fact that the ICJ allowed an opportunity to examine and explain the status of the emerging environmental norm, it observed, is important for the implementation of the bilateral treaty. Furthermore, I believe the act of State taking precaution against Transboundary damage, which is recognized as a norm of customary international law, though underpinned by the principle of preventive action, sets up a valid

[220] The Kernkraftwerk Krummel BverwG 11C 9.95, 21 August 1996, unreported.

[221] McIntyre, Owen, and Thomas Mosedale, "The precautionary principle as a norm of customary international law", *J. Envtl. L.* 9, 1997: 221, citing Hohmann, Precautionary Legal Duties and Principles of Modern International Law, (Graham & Trotman: London, 1994) at 1-5. Hohmann sees the primary role of soft law instruments in the identification of custom as that of 'the solidifying of indicators for a documentation of the *opinio juris*' of States. However, he also points out that 'the establishment of duties of customary law has also occurred through agreements. If indications exist for the formation of *opinio juris*, if an agreement adopts this rule, if the rule can be generalized and if it is contained in a global agreement or in at least two regional agreements of two different regions. Therefore, 'rules of customary law initiated through declarations find their way into agreements and vice versa'.

[222] Gabčikovo-Nagymaros Project (Hungary v. Slovakia). ICJ. Reports, 1997, para 113.

argument in favour of a precautionary action taken outside an express treaty obligation in exercise of State responsibility and State sovereignty.[223]

Also, New Zealand as the applicant in the second–French Underground Nuclear Test case, submitted that before France can carry out underground nuclear tests near a marine environment, it must provide evidence that shows there would not be release of radioactive material into that environment as a result of the test and such evidence must be traced to a risk assessment carried out on account of the precautionary principle.[224] The essence of the precautionary principle was recognized by the ICJ in the Pulp Mills case as an approach that may be necessary in interpreting the 1975 tatutes of the River Uruguay, but definitely applying the principle will not reverse the burden of proof. However, Judge Vinuesa, in his dissenting opinion did not recognize the precautionary principle to have crystallized into customary international law, but "… a rule of law within general international law as it stands today."[225]

State practice also reflects on states that have invoked the precautionary principle as a rule of customary international law in proceedings before the International Tribunal for the Law of the Sea (ITLOS), specifically the Southern Bluefin Tuna Cases that involved New Zealand v Japan and Australia v Japan.[226] New Zealand and Australia brought a case against Japan alleging that it violated several provisions of the Law of the Sea Convention, the 1993 Convention for the Conservation of Southern Bluefin Tuna and customary international law. It was the argument of

[223] In its analysis of Hungary's submission, Owen Mcintyre explained: "Hungary perceives the precautionary principle as a link between what can be described as the principle of cooperation and the principle establishing the responsibility of States not to cause transboundary environmental damage. The former principle, set out in the Lac Lanoux decision, Article 12 of the 1991 ILC Draft Articles on the Law of the Non-Navigational Uses of International Watercourses, and, Article 3 of the Espoo convention, (which Hungary argues represents general international law in relation to dams), requires States proposing measures which may have an appreciable adverse transboundary effect to notify other potentially affected states, to share available technical data and information, and to consult and negotiate with them in good faith. It is however for the State that is being notified to evaluate the possible effects of the planned measures, and to respond to the notifying State with their findings". See McIntyre, Owen, and Thomas Mosedale, "The precautionary principle as a norm of customary international law." *J. Envtl. L.* 9, 1997 221.

[224] French Underground Nuclear Tests (*New Zealand v. France*). www.icj-cij.org/en/case/59. Accessed 11-07-2020.

[225] Pulp Mills Case on the River Uruguay (*Argentina v. Uruguay*). Dissenting Opinion of Judge ad hoc Vinuesa, 13 July 2006. www.icj-cij.org/en/case/135/orders. Accessed 25-11-2018.

[226] Southern Bluefin Tuna Cases (*New Zealand v. Japan; Australia v. Japan*), Provisional Measures, https://www.itlos.org/cases/list-of-cases/case-no-3-4/. Accessed 25-08-19. Whaling in the Antarctic (*Australia v. Japan*: New Zealand intervening) https://www.icj-cij.org/en/case/148 Accessed 25-08-19. Also see, Sirinskiene Agne, "The Status of Precautionary Principle: Moving Towards the Rule of Customary Law." Jurisprudencija 4, 2009.

New Zealand and Australia that when fishing for southern Bluefin tuna, the precautionary principle must be applied by parties. Parties were cautioned by the ITLOS to act with prudence and caution in ensuring that effective conservation measures are taken to prevent serious harm to the stock of southern Bluefin tuna.

Though the status of the precautionary principle cannot be decided by treaty law alone due to the absence of a common definition, it gives a legal premise for state practice.[227] The nexus connecting treaty law and state practice which increases the pace of the precautionary principle emerging as customary international law is better explained in the ITLOS/Case No 17.[228] The Seabed Disputes Chamber observed in the aforementioned case "that the precautionary approach has been incorporated into a growing number of international treaties and instruments, many of which reflect the formulation of Principle 15 of the Rio Declaration". It further observed that "this has initiated a trend towards making this approach part of customary international law". The Chamber referred to the United Nations Convention on Law of the Sea's regulations and the invocation of the precautionary approach by the ICJ in the Pulp Mills case to justify its observations. In the light of the Chamber's findings, it concluded that States must apply a precautionary approach as an integral part of their due diligence obligations in situations where scientific evidence concerning the scope and the potential negative impact of the activity in question is insufficient but where there are plausible indications of potential risks.[229] The conclusion of the Chamber suggests that disregarding such risk, in the light of the forgoing, would constitute a failure to comply with the precautionary approach, and a failure to meet the State's due diligence obligation. Earlier in 1999, ITLOS decided the Bluefin Tuna Case and based part of its decisions on the precautionary

[227] Hickey Jr, James E., and Vern R. Walker, "Refining the precautionary principle in international environmental law. *Va. Environmental. LJ* 14 (1994): 423. The challenge of the how diverse the definition of the precautionary principle is and how it has affected its application and status can also be seen in John M. Macdonald, "Appreciating the Precautionary Principle as an Ethical Evolution in Ocean Management", 26 Ocean Development and International Law. 255, 1995

[228] Responsibilities and Obligations of States Sponsoring Persons and Entities in Respect to Activities in the Area: Advisory Opinion, 132-33, ITLOS Case no 17 (28-11-16) < https://www.itlos.org/cases/list-of-cases/case-no-17/> Accessed 8-03-18.

[229] Anton, Donald K., Robert A. Makgill, and Cymie R. Payne, "Seabed Mining-Advisory Opinion on Responsibility and Liability." Envtl. Pol'y & L. 41, 2011. p 60. https://www.academia.edu/669708/Advisory_Opinion_on_Responsibility_and_Liability_for_International_Seabed_Mining_ITLOS_Case_No._17_International_Environmental_Law_in_the_Seabed_Disputes_Chamber Accessed 8-03-18.

principle invoked by Australia and New Zealand while suing Japan for unilaterally increasing the number of southern Bluefin tuna it caught in violation of the allowable catch granted by a 1993 treaty between the three-member states. ITLOS did not explicitly mention the precautionary principle in its decision. However, in an Advisory Opinion on Case No 17 which was delivered on February 1, 2011, ITLOS declared that the Bluefin Tuna Cases implicitly adopted the precautionary principle:

> The Chamber observes that the precautionary approach has been incorporated into a growing number of international treaties and other instruments, many of which reflect the formulation of Principle 15 of the Rio Declaration. In the view of the Chamber, this has initiated a trend towards making this approach part of customary international law. This trend is clearly reinforced by the inclusion of the precautionary approach in the Regulations and in the "standard clause" contained in Annex 4, section 5.1 of the Sulphides Regulations. So does the following statement in paragraph 164 of the ICJ Judgment in Pulp Mills on the River Uruguay that "a precautionary approach may be relevant in the interpretation and application of the provisions of the Statute" (i.e., the environmental bilateral treaty whose interpretation was the main bone of contention between the parties). This statement may be read in light of article 31, paragraph 3(c), of the Vienna Convention, according to which the interpretation of a treaty should take into account not only the context but "any relevant rules of international law applicable in the relations between the parties.[230]

Also, before the ITLOS, in the MOX Plant Case, Ireland argued that:

> The precautionary principle places the burden on the United Kingdom and failed to demonstrate that no harm would arise from the discharges and other consequences of the operation of the MOX plant, should it proceed, and that this principle might usefully inform the assessment by the Tribunal of the urgency of the measures it is required to take in respect of the operation of the MOX plant.[231]

The United Kingdom, in its response, argued that its practice in respect of the MOX Plant was consistent with a precautionary approach.[232] However, it is interesting to note that Ireland made some significant submissions which the United Kingdom never objected to. These include Ireland's arguments that the precautionary principle is a "rule of general international law amongst

[230] Pulp Mills, supra note 224.
[231] *Ireland v. United Kingdom*, Dec 3,2001, International Tribunal for the Law of Sea, No 10 (Request for Provisional Measures), para 71 available at http:// www.itlos.org/ Accessed 07-05-18.
[232] Ibid. Rejoinder of the UK to case in para 8.34.s

European States" while quoting Article 2(2)(a) of the 1992 OSPAR Convention.[233] Ireland also referred to the recognition of the precautionary principle by UNCLOS[234] and the characterisation of the precautionary principle as having a status of customary international law.[235]

The engagement of states in the practice applying the precautionary principle in conventional procedures that they believe requires its application and its invocation before judicial institutions suggests a frequency that presumes custom. The rapid development of state practice and *opinio juris* in the past two decades is sufficient to accept that the precautionary principle has already crystallized into a general customary rule in tandem with the position of the EU. Despite several submissions by state parties to international courts affirming their position for the precautionary principle, no international adjudicating body has explicitly taken a particular judicial position as regards the legal status of the precautionary principle. The ICJ has not made any pronouncement in any of its rulings that expressly states the status of the precautionary principle. However, there is no rule that provides that only explicit judicial pronouncement from an international judicial body can qualify a rule of customary international law. The present status quo of international judicial decisions on the status of the precautionary principle has an increasing likelihood to change in the very near future if proper legal considerations of the qualifying elements that have been fulfilled by the precautionary principle is made by an international judicial body.

The uncertainty about the status of the precautionary principle revolves largely around the varieties of definitions adopted in different treaties and soft law.[236] There is the division in opinions on the application of the strong or weak version of the principle. There is also the level of acceptance or frequency of the application of the principle outside the field of international environmental law.[237] However, the divergent views notwithstanding, the precautionary principle continues to enjoy

[233] ibid
[234] Ibid, para 6.25
[235] Ibid, para 6.26
[236] Böckenförde, Markus, "The Operationalization of the Precautionary Approach in International Environmental Law Treaties-Enhancement or Facade Ten Years After Rio." Zeitschrift für ausländisches öffentliches Recht und Völkerrecht 63 (2003): 313-331. Available online at http://www.zaoerv.de/63_2003/63_2003_2_a_313_332.pdf; Accessed 04-09-18. Myers, Nancy. "Debating the precautionary principle." Science and Environmental Health Network (2000). Available online at http://wwwsehn. org/ppdebate.html. Accessed 04-09-18.
[237] In the EC Hormones case, the Appellate body noted that while the application of the precautionary principle within the regime of international environmental law is not in doubt, its acceptance in other sphere still awaits definite articulation.

widespread recognition and application. Irrespective of the different words used in defining the precautionary principle, the major denominators, i.e., lack of scientific certainty or evidence and threat of harm remain constant in the treaties and soft laws that includes the precautionary principle. The application of the strong or weak version is determined by the thresholds which are triggering the precautionary principle, nature of the threat and the burden of proving the existence of the threat. While it is accepted that the three factors hardly exist on either side of the divide howbeit coherently, at least, two of the three factors exist in coherent pattern in either the weak or strong form.[238]

Considering the extensive application of the precautionary principle, the form in which it is applied and the obligatory response its articulation demands in treaties, the precautionary principle can easily be presumed to have become part of customary international law. However, before concluding as such, it is better to look beyond the general definition of custom. Principles within a legal regime as different from rules are not as specific in requirements.[239] While a rule of law has specific character and even language of definition, a principle is less rigid in form and character. Ronald Dworkin explained that while rules are held to apply in an all-or-nothing fashion, principles do not dictate a specific requirement nor set out consequences for breaches.[240] Dworkin's theory further explained that while rules are set to be followed on grounds of advancing specific and desired outcomes, principles are followed as a requirement for justice, fairness or some dimension of morality. The precautionary principle has been criticised based on some of the features examined in the foregoing, but does that mean it can't assume same authority as a rule of law like the international rule of customary law? Dworkin gave an answer to this that where there is absence of a legal rule, legal principles are used to fill the lacuna, especially when Judges find themselves in a conundrum. Have judicial bodies ascribed such role to the precautionary principle? Not really and in fact reasons have been given for not recognising the precautionary principle as such. For example, in the EC Hormones case, the WTO Appellate Body ruled that it need not "take a position on the important but abstract question" of the status of the precautionary principle in

[238] Bockenforde, *supra* note 235 on the relative coherence of a weak version of the precautionary principle.
[239] Mead, Stephanie Joan, "The Precautionary Principle: A Discussion of the Principle's Meaning and Status in an Attempt to Further Define and Understand the Principle" *NZJ Envtl. L.* 8, 2004. 137. According to Mead, principle and rule of law differ in character. It points to the fact that the precautionary principle as a concept and having different definitions and approach of implementation is not flawed character wise.
[240] Dworkin, Ronald M., "Social rules and legal theory", The Yale Law Journal 81.5 (1972): 855-890.

general or customary international law. It concurred with the Panel from which the appeal has been made that the precautionary principle did not override the provisions of Articles 5.1 and 5.2 of the SPS Agreement.[241] The Panel did not see how it could reconcile a legal norm such as the precautionary principle with a subsisting treaty. Sands made reference to Articles 31(3)(c) of the 1969 Vienna Convention on the Law of Treaties which the Appellate Body did not refer to.[242] It requires that other rules of international law must be taken into account in the interpretation of a treaty text. Sand believes if the Appellate Body had reasoned the precautionary principle as a norm, alongside the extant provisions of the SPS Agreement, the precautionary principle would have adequately filled the gap of regulating how parties to the GATT reconcile trade interest with public safety.

The precautionary principle has adequately satisfied the requirement of state practice considering the number of MEAs that has included it as well as international declarations.[243] States as parties to the numerous treaties and international declarations, which most have successfully ratified at the national level, have shown enough behaviour that can be seen as *opinio juris*, as regards their sense of obligation to adopt the precautionary principle.[244] The increase in the number of states adopting the precautionary principle may result in more states being aware of how isolated they may present themselves to be in the face of various challenges that have been engaging the attention and discussion of the international community, especially the challenge of climate change.

### 3.3 Summary

The definition of the precautionary principle specifically as stated in Principle 15 of the Rio Declaration presents itself more within the context of the responsibility of government for the protection of the environment and the consequences for doing otherwise. However, going by the scope of the principle, tortious and criminal liability can be incurred by private person(s) where

[241] Sands explains in Sands, Philippe, "Treaty, custom and the cross-fertilization of international law", *Yale Hum. Rts. & Dev. LJ* 1 (1998): 85.
[242] ibid
[243] See tables 5 and 6 in Deloso, Elamparo, "The Precautionary Principle: Relevance in International Law and Climate Change", Phil. LJ 80 (2005): 642.
[244] See ICJ Judgement in Temple of Preah Vihear (*Cambodia v. Thailand*) ICJ Reports 1961:31, available on line at www.icj-cij.org/en/case/45. Accessed 11-07-2020.

the principle is violated. This depends on how the principle is articulated under municipal law. If the definition is anchored on Principle 15 of the Rio Declaration alone, then liability and responsibility will lie solely with the government. In the light of the second operative element in the definition of the principle which is 'the lack of full scientific certainty', two fundamental principles can be identified pointing to the role of the government in ensuring sound administration: (1) that a government authority must give an adequately reasoned justification for its actions; and (2) that it must not take arbitrary action. Irrespective of the terminology used to describe the precautionary action of choice by the government, these fundamentals form part of the normative provision that defines what the precautionary principle stands for.

Considering the variations in the terms used in describing the 'precautionary principle', the terms precautionary principle and precautionary approach seem interchangeable. Irrespective of the variations in terminologies adopted in various international instruments, the substance of the 'principle' presents same meaning in its articulation by the instruments. The WTO Appellate Body in the EC-Beef Hormones case noted in the SAB comments regarding the existence and implications of a precautionary principle also indicate that this principle is not distinct from the already used and recognized precautionary approach to risk management.[245]

The primary requirement for principles to assume the status of customary international law is that they are consistently defined and applied in international treaties and in decisions of international tribunals and the International Court of Justice (ICJ). Customary law establishes binding obligations for states and is developed through State practice: a consistent approach to treaty negotiation and ratification; application in domestic legislation and decisions of domestic courts; and statements by government officials are all evidence of the acceptance of a principle as custom.

[245] Appellate Body Report, European Communities Measure Concerning Meat and Meat Products (Hormones), WT/DS26/AB/R, WT/DS48/AB/R (Jan. 16, 1998) [hereinafter EC Beef Hormones Appellate Body Report] (resolving a complaint against the European Communities concerning the use of certain hormones in their meat products, which violates the SPS Agreement) in para 123-25 discussing the relevance of the precautionary principle to the dispute in this case and concluding that the precautionary principle does not override the provisions of the SPS Agreement Within the EC legal order, the European Court of Justice, Case C-1/00, Commission v. Fr., 2001 E.C.R. 000, 2002 O.J. (C 44) 2, para. 83 (holding that France failed to fulfill its obligations under the EC Treaty by maintaining its ban on British beef) appears to take the same stance: [I]t must be found that express reference to [the precautionary] principle did not alter the account of the latest position as submitted to the [College of Commissioners]. The French Government had for several months been putting forward arguments regarding the obligation to protect public health, scientific uncertainty in the matter and problems connected with risk management. The addition of the label precautionary principle to those arguments added nothing to their content.

Another way in which to understand customary law is *opinio juris*, determining whether States have acted impliedly as though they are bound by the principle, especially when such actions are consistent and not in few isolated situations. Also, evidence that a principle has reached the status of customary law can also be determined by persistent objections from States that refuse to be bound by the practice.[246] So far, the European Union is the entity that has taken the strongest position recognizing the precautionary principle as a customary international law.[247]

While the articulation of the precautionary principle by international judicial bodies will help in giving its status as customary international law rule a global recognition, the absence of such articulation does not by itself negate the status of the precautionary principle. It is believed that in no distant time, a definite international judicial stand will be made.

[246] Dowkins, *Supra* in 158

[247] A study on the precautionary principle in EU law is in chapter 5.

# PART III

## CHAPTER FOUR

## 4.0 ENVIRONMENTAL LAW AND INTERNATIONAL TRADE LAW: WHERE DOES THE PRECAUTIONARY PRINCIPLE STAND?

Environment and trade laws share complementary and mutual ties in order to serve exclusive interests. Within domestic territories, environmental and trade activities exist with very minimal level of exclusivity because most trade activities or operations leading to trade cannot be possible without the environment. As replicated at the international sphere, the complementary relationship between environment and trade has been recognized to be crucial in ensuring sustainable development. As much as trade and environmental treaties or agreements are made to satisfy different objectives, certain conditions and factors dictate the framing of legal processes from the stage of negotiation to ratification of treaties and agreements. Such factors include but not restricted to economic and ecological interest. Interestingly, as mutually twined as trade and environment appears to be, the principles governing each of them are not made to be complimentary of the other. While international trade law, which essentially embodies the WTO/GATT law is basically a branch of public international law,[248] international environmental law is been referred to as 'a new branch of law', a specialized field of law' or an 'emergent autonomous special area' of international law.[249] Without prejudice to the forgoing descriptions of international environmental law, its application is not limited to public international law; it is also applied in private law. A study of its interaction with international trade law further strengthens this assertion by the application of the precautionary principle in international trade law. This chapter examines the scope of environmental law either as interfering in international trade or its inclusion in international trade law means it has as a supervening status in the regulation of international trade activities. The evolving of the precautionary principle, from promoting a precautionary concept that is identified primarily with environmental law to being invoked to

[248] Pauwelyn, Joost, Conflict of Norms in Public International Law: How WTO law relates to other rules of International Law. Vol. 29, Cambridge University Press, 2003.

[249] Daniel Bodansky, *et al*., The Oxford Handbook of International Environmental Law 30, 2007. Also see Bethlehem, Daniel L., et al., eds. The Oxford handbook of international trade law. Oxford Handbooks in Law, 2009.

protect food and health concerns, makes it pertinent for an understanding of interactions between environment and trade.

The expansion in world trade raises questions about the relationship between trade and the environment. Questions of the impact of environment on trade and *vice versa* has also been responded to by activists, operators, investors and academics with responses reflecting more of the positions of interests than reality. Production activities are within a state and regulated by municipal law, but the act of exporting or importing a produce exposes the product to the regulatory beams of international trade law. Even at that, the process of production could involve several sovereign territories hosting corporate entities that have entered into 'a production chain agreement' such that allows different parts of a product to be manufactured in several countries and transported to be assembled in one country. Factors like proximity to source of raw materials, beneficial regulations, multilateral or bilateral trade ties and cost of labour are some that influence Transboundary production. The production of Airbus A380 is an example of such international trade connections that makes it possible for production of parts of a product to go on simultaneously in several countries. If the act of producing goods for international trade will have effects on the environment, will expansion in trade frontiers increase or decrease these effects? Will the effect be on the exporting or importing country or the world generally? Is it the responsibility of individual affected states to respond to the environmental effects or potential effects or also those likely to be affected? These are some of the questions that have attracted ponderings in recent years.

The question of impact of trade on environment first attracted international attention in 1991 when a United States law banning imports of Tuna from Mexico was challenged by the Mexican Government for violating rules of the GATT.[250] The free trade principles under the regime of the GATT precludes countries from restricting imports except in very limited cases where such restriction is for the protection of the health and safety of the population in its territory.[251] The decision of the GATT Dispute Panel on the Tuna/Dolphin case[252] which ruled that the U.S. could

[250] The law, which is known as the United States Marine Mammal Protection Act, prohibited Tuna fishing methods that killed large numbers of dolphins, banning Tuna imports from countries that used such fishing methods. It was the argument of the Mexican government that the U.S. law contravened the rules of the GATT.
[251] General exceptions in Article XX, GATT.
[252] United States-Restrictions on imports of Tuna, 30 ILM 1598 (1992).

not prohibit shrimp imports from countries using fishing methods that killed endangered sea turtles sets a tone for discussion on the implication of international trade on the environment and how environmental law at municipal level apply to international environmental law in successfully challenging international trade laws that give too much leverage to trade over the environment.

The Tuna/dolphin case stimulated the intellectual exploration of legal issues that were identified and mutual understanding of both side of the environmental-international trade laws divide began to create a shift from the previous arcane position to a more open and engaged legal reasoning as scholarly literatures on the subject began to emerge.[253] Though the decision of the GATT Dispute Panel was not adopted by the GATT Council or contracting parties, during the signing of the Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations in Marrakesh in 1994, the GATT contracting parties adopted a ministerial decision that formally established a new Committee on Trade and Environment (CTE) saddled with advising the WTO on appropriate rules needed to promote good understanding between environment and trade activities. Establishment of the CTE remains the major decision that has demonstrated WTO's recognition of the environment as an indispensable factor for international trade.[254] However, answering the question of how much of such recognition by WTO has practically influenced international trade laws made by the body will determine if indeed international environmental laws are seen as counterparts to international trade laws when making rules that should govern trade activities at global, regional, multilateral and bilateral levels. The GATT is the basic instrument that can give the perspective of the WTO on environmental law. If there is a struggle between making international trade agreements to be in legal consonance with environmental law, it could be

[253] United States - Restrictions on Import of Tuna (No 1), *Mexico v United States*, Panel Report, DS21/R, BISD/39S/155. Many literatures on environment and international trade were published in the early 90s. Prominent amongst them are: Steve Charnotvitz, A Taxonomy of Environmental Trade Measures, 6 Georgetown International Environmental Law Review, Vol.6(1), p 1-47 which examined how some free trade incentives like subsidy impacts on the environment; Also, Steve Charnotvitz, Free Trade, Fair Trade, Green Trade: Defogging the Debate, 27 Cornel International Law Journal, 459 (1994); Ernst- Urich Petersman, International Trade Law and Environmental Trade Law, 27 J. World Trade Law, 46 (1993)

[254] According to the WTO, environmental issues are 'horizontal' but not parallel to trade. It shows that the apex trade body recognizes that there are intersections that are crucial to sustainable international trade, albeit they may not make bold and loud acknowledgement of this. See WTO Secretariat, 'Trade and Environment', http://www.wto.org/english/tratop_e/envir_e/envir_e.htm. Accessed 11-04-19.

because the GATT was made without much contemplation of what role environment may play in future trade agreements.

### 4.1 Environmental Law and International Trade Law: Intersections

Trade, under the international legal regime is structured to be liberal in practice for the promotion of economic activities that have indirect effect on the environment. The dependence of one on the other makes it almost impossible to achieve environmental protection without regulating activities linked directly or indirectly to trade. So far, regulatory measures under international trade law is restricted to the point of Transboundary exchange of goods. But for environmental law, apart from actual effect of an activity on the environment, it also regulates activities in anticipation of possible effect of an activity on the environment. It is believed, if trade activities are without resultant effect on the environment, then developing countries would have a better and cleaner environment, which should mean better wellbeing. However, such belief is not completely tenable in a globalized world that is pursuing a much more deregulated global economy. Regulating environmental activities at the municipal jurisdiction takes into cognisance the possible conflict that could arise in determining strict or vicarious liability, charges that could be effluent, and the disparity of standards amongst component states in a federal system like the U.S. But in regulating international trade activities that has established a nexus with environment under an international law regime, consideration is given to found legal framework that oversees international trade activities, and then Multilateral Environmental Agreements, followed by individual municipal laws of States. Consequently, this creates tensions within international trade relationships in the absence of an organized structure under international environmental law as different from the case of the WTO which oversees international trade law. This substantially contributes to the imprecise approach to the application of environmental law principles such as the precautionary principle in international trade. While it is the opinion of some scholars that the WTO as the primary regulator of international trade has strayed beyond its mandate by not only setting the enabling rules for international trade activities, but also dictating environmental protection standards for its members,[255] others have stressed the fact that trade and environment are interconnected. In the same vein, the UN Earth summit concluded that it is now globally accepted that "it is no longer

[255] Doaa Abdel Motaal, Trade and the Environment in the World Trade Organization: Dispelling Misconceptions, 8 Review of European Community and International Environmental Law 330 (1999).

possible to treat ecology and international political economy as separate spheres".[256] Having agreed with the foregoing, it is observed that the legal intersections connecting trade and environment has not been established enough to understand the legal intricacies in disputes arising from increasing restrictive measures being applied by MEAs in achieving environmental standards, even at the risk of being in breach of WTO laws. Two areas of possible intersections will be examined: regulation and dispute resolution.

### 4.1.1 Regulations

The GATT has been and remains the primary legal instrument regulating international trade, while WTO is the leading international institution governing the administration of GATT, and subsidiary agreements made under its auspices. A brief synopsis of the institutional history of GATT will help in understanding the reasoning that berth the imbalance in trade and economic factors against the minor concerns for environment as contained in GATT. The Bretton Woods Conference was convened in 1944 in response to the world economic outlook after the great depression of 1939. The Western Allies that convened the conference produced draft charters for the World Bank and the International Monetary Fund. It was also agreed that there should be a conscious step at reducing international trade barriers; consequently, a multilateral agreement known as GATT was concluded on certain terms that should guarantee certain reduction of obstacles to international trade. The intention of the conveners was subsumed by the agreement for a charter for what would have been known as International Trade Organization (ITO). Albeit, the proposed ITO charter never entered into force, thereby leaving the GATT to stand alone without an institutional structure or frame work to help in ensuring governance of international trade affairs.[257] Consequently, the GATT assumed the role of being the sole regulatory mechanism for international trade.[258] During the preparatory stage for the Bretton Woods Conference, the conveners did not acknowledge any meaningful connection between international trade and environment beyond the preamble. Much of the interest of the drafters of the GATT was in advancing economic growth of nations through

[256] World Commission on Environment and Development, "Our Common Future", Oxford University press, 1987, at p. 27.

[257] The refusal of the United States to join the ITO contributed majorly to its nonexistent. After the world war II, the US was a strategic stimulant for the world economy. See George Bronz, "The International Trade Organization Charter", 62 Harv. L. Rev. 1089, 1949, pp. 1089-1125, at p 1091

[258] John. H. Jackson, "the General Agreement on Tariffs and Trade in United States Domestic Law", 66 Michigan Law Review, 249, 1967, pp. 249-332, at p. 260.

liberalized trade relationships. Reiterating the one-faced posture of the GATT, it has been declared that its unrealistic or unrealisable for an importing country to make its market accessible based on the national environmental laws, regulations, policies or practices of the exporting country.[259]

Though the intentions of the drafters of the GATT was economic interest of nations, the GATT as it is today, being not completely without provisions that provides a leeway for the application of environmental law where trade and environment intersects to produce interactions, have resulted in several disputes amongst nations under the GATT. International trade relations are regulated at different levels: global, region, sub-region, multilateral and bi-lateral. At different levels, the meeting point of environmental law and international trade law differs in areas - where such intersections do exist.

While the GATT prohibits members from enacting laws that limit free trade based on environmental concerns unless under exceptions provided by the GATT, in contrast, the International Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES Agreement) prohibits and restricts trade in these species.[260] However, in the absence of explicit linkages between trade and environment in broad terms, there is a suppressed mention of environment in Article XX of the GATT which provides for general exceptions to the basic rules in the GATT.[261] The exceptions allowed countries to exercise their discretion in applying measures

[259] This was part of the declaration of the GATT Secretariat on Trade and Environment in its report of 1992. Available online: www.ciesin.org/docs/008-082/008-082.html. Accessed 12-07-2020.

[260] See Convention on International Trade in Endangered Species of Wild Fauna and Flora, opened for signature Mar. 3. 1973, 993 U.N.T.S. 243.

[261] Article XX, GATT ( particular reference to paragraph (b)): Subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade, nothing in this Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures: (a)necessary to protect public morals; (b)necessary to protect human, animal or plant life or health; (c)relating to the importations or exportations of gold or silver; (d)necessary to secure compliance with laws or regulations which are not inconsistent with the provisions of this Agreement, including those relating to customs enforcement, the enforcement of monopolies operated under paragraph 4 of Article II and Article XVII, the protection of patents, trademarks and copyrights, and the prevention of deceptive practices; (e)relating to the products of prison labour; (f) imposed for the protection of national treasures of artistic, historic or archaeological value; (g)relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption; (h)undertaken in pursuance of obligations under any intergovernmental commodity agreement which conforms to criteria submitted to the CONTRACTING PARTIES and not disapproved by them or which is itself so submitted and not so disapproved; (i) (j) involving restrictions on exports of domestic materials necessary to ensure essential quantities of such materials to a domestic processing industry during periods when the domestic price of such materials is held below the world price as part of a governmental stabilization plan;

"necessary to protect human, animal or plant life or health", including measures "relating to the conservation of exhaustible natural resources" so long as those measures did not amount to unfair discrimination against foreign products or operate as disguised form of protectionism by way of restriction of trade. Those exceptions did not undergo any legal test for many years. This created a cover for the inadequacies of the GATT in addressing the obvious seclusion of environment from trade. A new chapter of environmentally conscious world trade order opened with the Marrakesh Agreement establishing the World Trade Organization (WTO Agreement) and its annexes in 1994,[262] preceding between 1996-98, when GATT passed through the tunnels of frequent legal debates and disputations on trade-environment. It appears the preamble to the WTO Agreement by explicitly referring to the need for the 'optimal use' of the world's resources in accordance with the objective of sustainable development further fueled a post WTO trade-related environmental measure (TREMs) [263] being adopted by countries, majority of which are developing countries, which, as observed by scholars, increased with the conclusion of several WTO agreements recognizing the trade-environment intersection. Some of such agreements are: Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement)[264] which sets constraints on policies of member-states' relating to food safety (bacterial contaminants, pesticides, inspection and labeling) as well as animal and plant health (phytosanitation), specifically with respect to imported pests and diseases. The SPS Agreement recognizes the sovereign right of member-states

Provided that such restrictions shall not operate to increase the exports of or the protection afforded to such domestic industry, and shall not depart from the provisions of this Agreement relating to non-discrimination; essential to the acquisition or distribution of products in general or local short supply; Provided that any such measures shall be consistent with the principle that all contracting parties are entitled to an equitable share of the international supply of such products, and that any such measures, which are inconsistent with the other provisions of the Agreement shall be discontinued as soon as the conditions giving rise to them have ceased to exist. The Contracting Parties shall review the need for this sub-paragraph not later than 30 June 1960.

[262] An improvement in the preamble to the WTO Agreement from that of GATT recognizes 'allowing for the optimal use of the world's resources in accordance with the objective of sustainable development, seeking both to protect and preserve the environment and to enhance the means for doing so in a manner consistent with their respective needs and concerns at different levels of development'.

[263] Paul Demaret first used the expression of "Trade-Related Environmental Measures" and he explained that "the expression was coined so as to allow the use of the abbreviation TREMs, built on the pattern of TRIPS and TRIMs." See Paul Demaret, TREMs, Multilateralism, Unilateralism and the GATT, in 1 Trade & The Environment: The Search for Balance 52, 52 (James Cameron, et al. ed., 3 rd prtg. 1997). And Lorenzo Schiano di Pepe also uses this name. See Lorenzo Schiano di Pepe, The World Trade Organization and the Protection of the Natural Environment: Recent Trends in the Interpretation of G.A.T.T. Article XX (b) and (g), 10 Transnational Law & Contemporary Problems 271, 277 (2000).

[264] SPS Agreement, supra note 107.

in adopting or enforcing measures necessary for protecting human, animal or plant life or health.[265] There is the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) which it includes exceptions regarding the patent right to inventions by members as they may exclude patentability when there is proof that commercial exploitation may put human, animal, plant life and the environment at risk.[266] The Agreement on Technical Barriers to Trade (TBT Agreement) recognizes the protection of the environment as a lawful objective within the individual rights of member-states.[267] Effective of its provisions and the agreements established under its mandate, the WTO regime enables TREMs to protect resources and the environment, while also ensuring that the environmental protection measures are not used as trade protectionist measures.

The trade agreements that provide for TREMs derive their authority from Article XX of the GATT, depending on the interpretation of the drafters of the GATT. An agreement may not necessarily be creating an exception but be making clarifications that will make protection of environment narrower under the practice of international trade by a country. From the disputes that have been brought before panels over the interpretation of Article XX of the GATT as regards application of environmental measures in trade relationships, the thread of the exception is stretched beyond the limits of the contemplation of the drafters of GATT. For example, Article 2(2) of the TBT Agreement forbids the use of technical regulations, such as environmental measures adopted by national regulation, from becoming an unnecessary obstacle to international trade, which could be the application of the precautionary principle.[268] It provides that a technical regulation shall not be more trade-restrictive than necessary to fulfill a 'legitimate' objective, considering the risks non-fulfilment will create. Considering the 'legitimate objectives' in the provision, it appears to allow a latitude of legal justification for the application of measures that addresses the environmental concerns of countries, for example, the precautionary principle. For the sake of not sounding ambiguous, the TBT Agreement further strengthens the interpretative argument for the precautionary principle as satisfying the conditions therein when it provides that a technical

[265] SPS Agreement, Articles 5.2, 6.2. This agreement is most discussed as it has been interpreted to serve as a guideline to members of GATT/WTO on the application of the precautionary principle in international trade relating to food and plant-based products.
[266] TRIPS Agreement, Article 27.2.
[267] TBT Agreement, Article 2.2
[268] See TJ Schoenbaum, 'International trade and protection of the environment: The continuing search for reconciliation' (1997) 91, The American Journal of International Law 268 at 272ff.

regulation or a standard must be: (a) justified on legitimate objectives such as national security, protection of consumer welfare and the environment; (b) transparent such that opportunity for abuse is kept to the minimum; and (c) non-discrimination between imports and domestic products.[269] Given the variables that accompany features of technical measures that countries adopt to in the course of existing trade relationships, the primary aim will be to ensure the compliance of an agreed measure with the conditions stipulated by the TBT Agreement. So while the TBT Agreement was made to appear to acknowledge the right of each individual government to set environmental protection standards, such standard must be at the level that the organization considers appropriate.[270] In other words, the TBT Agreement accepts the legitimacy of standard of care, protection of public health and environment as may be pursued as part of object of state by member countries as long at the caveats earlier stated are adhered to. For example, a country must apply same environmental standard for all such products, regardless of their source.

Upon identification of subsidization as a potential tool by member states to forge protectionism through discriminatory national trade regulation, the WTO members created the Agreement on Subsidies and Countervailing Measures (SCM) with the purpose of regulating their use of subsidies by member states for products manufactured within a given state.[271] The SCM Agreement designates certain subsidies as "non-actionable", thus making them exemptions to the list of prohibitions. However, pursuant to Article 31 of the SCM Agreement, these non-actionable subsidies expired in 2000.[272] While the non-actionable subsidies were active, those related to environmental concerns were permitted provided the objective is to promote the adaptation of existing facilities to new environmental demands.

Understanding the relevance of TREMs to the legal workings of trade and environment as defined by the laws that dictate their interactions at every junction where they intersect, is constantly under the constraint of multiplicity of meanings or perception amongst countries that employ trade measures or tools for environmental purposes. Some countries see them as environmental

[269] Article 2.2, Agreement on the Technical Barriers to Trade, 1868 U.N.T.S. 120.
[270] TBT Agreement, supra note 268 at preamble.
[271] Agreement on Subsidies and Countervailing Measures, Apr. 15, 1994, Agreement Establishing the World Trade Organization, Annex IA, reprinted in Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations, 33 I.L.M. 1125 (1994).
[272] See Michael J. Trebilcock & Robert Howse, The Regulation of International Trade 269 (3d ed. 2005).

measures that are adopted in satisfaction of obligation to trade agreements and trade regulations without compromising environmental interests.[273] Moreover, whatever appellation any country adopt in describing a TREM, be it a unilateral environmental measure or a measure promoting a legal framework aimed at Greening of Trade, it's more likely to reflect the posture of what TREMs will give to their environment or take from their economy. In China, for example, TREMs are seen in negative light based on China's economy interest. Until recently, TREMs were seen by China as another form of protectionism or technical hindrance to market access under the guise of protecting natural resource, environment and human health.[274]

Besides, non-regulatory international TREMs resulting from MEAs,[275] there are several types of regulatory domestic TREMs available to individual countries that are members/non-members of the GATT/WTO. Amongst them are export prohibitions, import prohibitions, standardization of products and processes, subsidies, taxes and tariffs, sanctions and conditions.[276] Either of the aforementioned, by their designation and definition can be employed by countries in the interest of protecting their environment, depending on how best such measure will be effective while considering possible retaliatory measures or compliance to the WTO Panel by another country against the measure. More often, where there is fractious interaction between parties on the application of environmental measures in a trade relationship, a domestic TREM is much likely at the middle of the dispute. International treaties made to regulate the application of TREMs may not have contemplated the extent to which domestic environmental measures could find a legal passage in advancing or justifying far reaching measures that could indeed appear to be protectionist in character. Such treaties have thrown up more legal arguments against environmental measures by developed countries that negates the economic interest of developing countries that may not be able to adequately meet up with standards demanded by such measures, and also lack the resources to sufficiently pursue a cost effective alternative. For example,

[273] Steve Charnovitz, Trade and the Environment: The Environment vs. Trade Rules: Defogging the Debate, 23 ENVTL. L. 475, 490, 1992.

[274] See Lixin Huang, Lüse Bilei ji Woguo de Yingdui Celüe, Green Trade Barriers and Choices for Our Country, Waixiang Jingji Journal on Export-Oriented Economy, 2000, at 254.

[275] These are not restricted to TREMs recognized by GATT/WTO alone. There are TREMs resulting from MEAs and there are those which are unilaterally enacted by certain GATT/WTO members who agree amongst themselves to enter into special bilateral or multilateral trade treaty or agreement.

[276] James Cameron, Karen Cambell, "Challenging the Boundaries of The DSU through Trade and Environment Disputes in Disputes Resolution in the WTO" (James Cameron & Karen Cambell ed., 1998) 204-220.

considering the limited economic resources and technological capability of developing countries, most oppose the discussion of environmental issues at the WTO.[277]

Countries have a wider latitude of regulatory control over environmental conduct of manufacturers within their individual borders. However, this does not mean a country cannot exert some influence, or indeed even cause major spin in the regulatory direction of another country or countries, especially where such country has a very wide range in imbalance of trade between them and where a country introducing a measure or internal regulation does so from a very strong economic position. The Reformulated Gasoline case is a good example amongst several others where a member of the WTO introduced a regulation that tends to exert pressure on producers outside his territory to conform to a certain environmental standard albeit with different effects on local and foreign producers. Pursuant to the United States Clean Air Act,[278] the U.S. Environmental Protection Agency made certain regulations known as the "Gasoline Rule".[279] These regulations, made specifically to reduce air pollution in the U.S., required that gasoline sold in certain U.S. regions with high levels of air pollution meet a specific pollution standard.[280] Consequently, the "reformulated" gasoline was restricted to certain parts of the U.S. as different from the "conventional" gasoline whose sale was allowed in all other parts of the U.S.[281] The standard set for the conventional gasoline is a pollution standard not different from quality of gasoline sold in 1990 (baseline standard).[282] The aim, *inter alia*, was to prevent blending of residue pollutants removed from reformulated gasoline into conventional gasoline.[283] In furtherance of this goal, a statutory baseline was established in place of the producer specific 1990 baseline and applied to producers not in operation in 1990 and to importers. Not long after the creation of the WTO, Venezuela and Brazil who are major oil producer countries and suppliers to the U.S.

[277] Tephanie Carlsten, Trade and The Environment: The World Trade Organization Millennium Conference in Seattle: The WTO Recognizes a Relationship Between Trade and the Environment and Its Effect on Developing Countries, 1999 Colorado Journal of International Environmental Law and Policy. 33, 43-44, 1999.
[278] Clean Air Act, 42 U.S.C. §§ 7401-7671 (2000). The Clean Air Act sets limits on certain air pollutants, including how much can be in the air anywhere in the United States. The Environmental Protection Agency is the regulating authority charged with enforcing the Act's provisions. Individual states may have more stringent air pollution laws, but they may not have less restrictive standards; see also Clean Air Act Amendments of 1990, Pub. L. No. 101-549, 104 Stat. 2399 (1990).
[279] Panel Report, United States-Standards for Reformulated and Conventional Gasoline, WT/DS2/R (Jan. 29, 1996)
[280] Clean Air Act, 42 U.S.C. § 7545(k) (2) -(3) (2000).
[281] Ibid, at § 7545(m) (3) (6).
[282] Ibid, at § 7545(k) (10) (B).
[283] Gasoline Rule. Supra note 280.

requested the formation of a dispute settlement panel to decide whether U.S. regulations were inconsistent with Article III of the GATT and not covered by the exceptions of Article XX of the GATT and WTO obligations.[284] The bone of contention was the fact that most foreign producers were not eligible for the less strict individual baselines and instead had to rely on the harsher statutory baselines.

In its report, the WTO Panel concluded that the regulations treated importers of gasoline less favorably than domestic producers and were therefore inconsistent with the provisions of Article III of the GATT.[285] While the Panel found that the regulation was not exempted by Article XX (b), (d) and (g) of the GATT, the Appellate Body ruled that the baseline standards fell within the Article XX (g) of the GATT exception but in contravention of the chapeau of Article XX of GATT.[286] It found the measures to be related to the conservation of an exhaustible natural resource (clean air), that they were made in conjunction with restrictions on domestic production or consumption, but that they were an unjustifiable discrimination and a disguised restriction on international trade.

### 4.1.2 Dispute Resolution

The GATT as the primary institution governing the regulation of international trade has provisions for resolution of disputes arising from the exchange of trade activities between members by the Dispute Settlement Body (DSB). Mechanism of the DSB is entrenched within a regulatory regime that seeks to protect the interest of the liberalised market against any form of restriction on international trade. Notwithstanding the narrow interpretation given to Article XX of the GATT, the past three decades of increased awareness and discussion on issues bothering on environment, health and safety has seen members of the WTO applying TREMs under Article XX(a) or (b) of the GATT. Consequent upon this, members whose trade traffic is restricted by the measures applied by States out of concern for environment have been filing complaints before the DSB questioning the legality of the measures applied. Literal reading of Article XX of the GATT purports to place the argument of respondents to complaint brought against TREMs on a legal

[284] See Panel Report, United States-Standards for Reformulated and Conventional Gasoline, WT/DS2/R (Jan. 29, 1996).
[285] Ibid, at para 6.10.
[286] Appellate Body Report, United States-Standards for Reformulated and Conventional Gasoline, 35 I.L.M. 603, 633 (May 20, 1996). The chapeau prohibits the application of an environmental measure in a way that constitutes: 1) arbitrary discrimination; 2) unjustifiable discrimination; or 3) a disguised restriction of international trade.

footing that has the potential of justification as a defence. In contrast, disputes decided so far has resulted in further flipping the page over environmental interest in favour of open market deregulation.

The regulatory regime of the WTO as discussed earlier is underpinned by an ever-evolving dispute resolution mechanism providing the arbitration platform for all agreements under the purview of the WTO. The mechanism plays an extremely important role in resolving issues related to the intersections of environmental protection with market trade in the WTO law. Since the inception of the WTO, disputes involving application of environment-related measures in a trade relationship keeps increasing.[287] The process of dispute resolution commences with a consultation between the parties in dispute.[288] Depending on the outcome of negotiations between the parties, if unsuccessful, a panel is appointed to mediate in the dispute. Following the mediation, the panel forwards a report to the DSB, who adopts the report as the ruling of the DSB unless members of the WTO unanimously override the ruling within 60 days.[289] Parties dissatisfied with the ruling of the DSB can call for an appeal to be heard by three members of the Appellate Body. Only a consensus of the DSB can put aside the decision of the Appellate Body in determining if the environmental interest of a member, which follows the dictates of its national law, is parallel to the collective WTO objective of promoting and safeguarding open market trade or intersects the international trade law, thereby suspending or halting a flow of a particular trade activity. The main legal question brought forward for consideration in all the cases related to the issue is for the dispute resolution panel to determine if trade-environmental measures that resultantly restrict trade is qualified by Article XX of the GATT. So far, the GATT panels, have by their decisions leaned towards restrictive interpretation of the Article XX thereby restraining members in adopting trade measures that are environmentally friendly. The Dolphin/Tuna case clearly expressed the interpretative leanings of the DSB in the case brought by Mexico against the United States. In the said case, the United States imposed a trade embargo pursuant to a tuna fishing policy considered

[287] Droege S., H. van Asselt, K. Das and M, Mehling, (2016), "The Trade System and Climate Action: Ways Forward under the Paris Agreement", Climate Strategies, London. http://climatestrategies.org/wp-content/uploads/2016/10/Trade-and-climate-ways-forward-1.pdf. Accessed 12-05-2019.
[288] Trading into Future: The Introduction to the WTO, at http://www.wto.org/english/thewto_e/whatis-e/tife/dispOe.htm. Accessed 12-05-2019.
[289] The WTO in Brief, at http'//www.wto.org/englishlthewto-e/whatis-e/in brief e/inbr02 e.htm. Accessed 18-01-2019.

to be for the protection of Dolphins (referred as the U.S. Marine Mammal Protection Act of 1972) claiming that it's a protective measure in the interest of the specie and not a trade protectionist measure.[290] The major implication of the embargo is the prohibition of the entry of yellow fin tuna caught with measures that endanger dolphins and yellowfin tuna products. In giving its decision, the DSB struck down the TREM. According to it, the TREM is inconsistent with the provisions of the GATT. The environmental measures that were enforced by the U.S. to protect certain marine mammals is precautionary in approach as they believe except such measure is enforced, there will likely be depletion, if not extinction of some marine mammals. In its decision, the DSB concluded that the trade-environmental measure introduced by the U.S. was against the GATT principles. It further held that it is an anomaly for Article XX (b) to be invoked for a trade-environmental measure that seeks to protect resources not located within the sovereign jurisdiction of the sanctioning state. This narrow interpretation of Article XX(b) sought to achieve two objectives: first, to make the options for trade-environmental measures which could affect the liberality of the international trade regime to be limited; second, to discourage nations from adopting and acting on measures that could be precautionary in the preservation of global common so that more nations will not be attracted to joining the international cooperation for the protection of the environment in the course of trade activities.[291]

The GATT did not specify any threshold that the impact or likely impact of a trade activity could have on the environment that should justify the measure applied by a State. This makes it difficult for the dispute settlement panel to arrive at a balanced decision on the propriety of adopted environmental measure with trade effects. The dispute between United States and Canada over agreed standard regulation for the harvesting of Lobsters better illustrates the effect of disparity in interpretation and understanding of an environmental measure and its effect on trade,[292] Though the dispute was decided by a bi-national panel under the terms of the U.S.- Canada Free Trade Agreement, the GATT law was applied by the panel as specified under the terms of the Free Trade Agreement. Parties to the Free Trade Agreement have individual regulations which prescribes a minimum size for harvested lobsters, this is to ensure lobsters are matured enough to reproduce

[290] United States - Restrictions on Import of Tuna (No 1), *Mexico v United States*, Panel Report, DS21/R, BISD/39S/155
[291] Kenneth A. Oye, "Explaining Cooperation under Anarchy: Hypotheses and Strategies", 38 World Pol. 1 (1985), pp. 1-24, at p. 15.
[292] Lobsters from Canada Final Report of The Panel USA 89-1807-01. Available online at file:///C:/Users/User/Downloads/967c1539-fc36-482d-babf-8337d461b038.pdf. Accessed 28-05-19.

and most likely to have reproduced before they are harvested. However, there is disparity in the size prescribed by regulations of each of the parties. Canada's minimum size was smaller because lobsters in Canadian waters reach reproductive maturity at a smaller size below the U.S. minimum. Consequently, the U.S. banned imports of live Canadian lobsters below the U.S. minimum. Canada made a complaint against the U.S. measure which it saw as unfair trade barrier and unnecessary for the protection of lobster stocks from dangerous depletion. The argument of the United States was that it could not effectively enforce its regulations which was used in implementing its domestic lobster conservation program if foreign lobsters that are not at par with the U.S. minimum size were allowed into the U.S. market, as it is difficult to determine the origin of lobsters. Deciding the case, majority of the bi-national panel did not make an evaluation of the benefit of the conservation program being enforced by the U.S. regulation or weigh the benefit of the program against the disruption in trade between both parties. Instead, it approved of the U.S. regulation as it deemed the U.S. and Canadian lobsters as subject to the same specific requirements. It is altogether not clear if the decision of the panel would have been same had the panel followed strictly the GATT provisions in evaluating the benefit of the U.S. measure against its impact on trade.

Further study into how other adjudicatory bodies have approached disputes arising from enforcing domestic environmental regulation introduced as a measure of checking the impact of trade activities on the environment further shows a departure from what I call 'imbalance' approach of GATT. An example is a case that was decided by the Court of Justice of the European Union (CJEU) in a dispute that occurred within the European Union.[293] In 1981, a Danish regulation was made providing that drinks classified gaseous mineral waters could only be sold in containers that are returnable, defined as containers for which there was a system of collection and refilling under which a large proportion of containers used would be refilled. In addition, the regulation restricted the use of such containers to those approved by the Danish Government. Foreign companies in the industry adjudged these requirements as discriminatory because returning containers for refilling would be much costlier for them than for local producers. Besides, the regulation grants the Danish Government such latitude of control that could make it limit its approval to a few standard bottle

[293] Commission of the European Communities v Kingdom of Denmark. Free movement of goods - Containers for beer and soft drinks. Case 302/86. *European Court Reports 1988 -04607*

shapes, thereby forbidding foreign companies from using distinctive bottles carrying brand recognition. Subsequently, the European Commission brought a complaint against Denmark, asserting the Danish regulation unduly restricted the free movement of goods among EC member countries. The Danish Government argued its measure was justified on the ground that it was strictly to address environmental concerns. With regard to the deposit-and-return system for empty containers, the CJEU agreed with Denmark. It noted that protection of the environment is one of the EC's essential objectives, and therefore may justify certain limitations on the free movement of goods. Regarding the Commission's argument that there were less restrictive options available to the Danish Government, the court found that the trade burden of the Danish requirement for returnable containers was not disproportionate to its environmental benefits.

The following can be deduced from the decision of the CJEU: First its decision reflects balancing of environmental benefits of a regulation against trade practice; second, the CJEU took notice and followed one of the core objectives of the EU which is environmental protection, against the backdrop of a free market which also forms part of the core EU objectives; thirdly, the CJEU, unlike the WTO/DSB leans towards applying the proportionality test in balancing competing objectives of free trade and environmental protection.

Further study of the approach of the WTO adjudicatory bodies, especially the Appellate Body shows that the WTO has not maintained a sustained adversarial posture to TREMs as the interaction of trade and environment intensifies. The decision of the Appellate Body in EC-Asbestos case[294] caused environmentalists to heave a sigh of relief because the decision was pivotal to affirming the right of members to apply trade measures for the sake of protecting the environment. In May 1998, Canada requested consultations with the EC in respect of measures imposed by France, in particular Decree of 24 December 1996, with respect to the prohibition of asbestos and products containing asbestos, including a ban on imports of such goods. Canada alleged that these measures violated Articles 2, 3 and 5 of the SPS Agreement, Article 2 of the TBT Agreement, and Articles III, XI and XIII of the GATT. Canada also alleged nullification and impairment of benefits accruing to it under the various agreements cited. In acceding to the request of Canada for the establishment of a panel, at its meetings in November 1998, the DSB established

[294] WTO Panel Report on European Communities-Measures Affecting Asbestos and Asbestos-Containing Products, WT/DS135/R (Sept. 18, 2000), [Panel Report]at http://www.wto.org. Accessed 01-04-2019.

a panel. In the report of the panel, it found, *inter alia*, that the part of the Decree relating to "exceptions" does fall within the scope of the TBT Agreement and that insofar as it introduces a treatment of these products that is discriminatory under Article III: 4 of the GATT,[295] the Decree is justified as such and in its implementation by the provisions of paragraph (b) and the introductory clause of Article XX of the GATT 1994. The report of the Panel set a new precedent when it found the French ban of asbestos as falling within subsection (b) and meet the requirements of the chapeau of Article XX of the GATT by first determining whether the measure constituted "arbitrary or unjustifiable discrimination" under Article XX. Prior to the *Asbestos* decision, no panel had found any measure as falling within the Article XX exceptions. Not satisfied with some issues of the law covered by the Panel Report and legal interpretations developed by the Panel, Canada notified the DSB of its decision to appeal. The Appellate Body, *inter alia*, ruled that the French Decree, prohibiting asbestos and asbestos-containing products had not been shown to be inconsistent with the European Communities' obligations under the WTO agreements and upheld the Panel's conclusion, under Article XX (b) of the GATT 1994, that the French Decree is "necessary to protect human … life or health". However, the Appellate Body deviated from relying exclusively on Article XX, instead it adopted a judicious view and thus found that the substantive obligations of Article III (4) were not breached.[296]

The Asbestos case established a definitive feature in how trade and environment interact at the points of their intersection which is where TREMs are introduced and enforced or objected to. First, the feature of "threshold" and second the "necessity". The Panel had to determine whether the asbestos ban by France was within the contemplation of Article XX (b) of the GATT by constituting a risk to public health. In establishing the extent or volume of substance that could constitute risk to public health, there should be scientific information that the Panel will find

[295] Article III(4) provides for national treatment on internal taxation and regulation, while subsection (4) specifically addresses where how like products should be treated. It basically frowns at discriminatory measures against "like products" from exporting countries that re produced and allowed within. It was the argument of Canada that the products exported containing asbestos which was banned by France and substitute products made in France were "like products" within the meaning of Article III (4), meaning the French were therefore discriminatory against the Canadian products. The Asbestos Panel agreed with Canada, holding that substitute fibers were "like products" because they had similar end-uses. Furthermore, in addition, the Panel compared asbestos-containing cement with substitute fiber-cement and found those to be "like products"76 and thus held that France also violated Article III:4 with regard to these products.

[296] WTO Appellate Body Report on European Communities-Measures Affecting Asbestos and Asbestos-Containing Products, WT/DS135/AB/R (Mar. 12, 2001), at http://www.wto.org [Appellate Body Report]. Accessed 01-04-2019.

credible enough to either support the claim of the proponent of the ban or the objector to the ban. As expected, because interests of both parties are parallel, expert information presented varied. Canada did not dispute the carcinogenic effects of asbestos, but it argued the absence of direct causal link between chrysotile fibres.[297] Also, the level of risk to humans was argued by Canada to be minimal far below the threshold of danger to humans. At the end of evaluating testimony of experts regarding the dangers to humans exposed to chrysotile fibres, the Asbestos Panel ruled that the EU had shown chrysotile fibres to be dangerous and held a measure prohibiting all chrysotile fibres, including the encapsulated fibres, fell within the policy of subsection (b) of Article XX of the GATT. The conclusions of the Panel and that of the Appellate Body only demonstrated a challenge that pre-existed the Asbestos case and still left it unresolved. There is still no definitive threshold of risk to environment and public health that the WTO has defined as tolerable enough to interfere with free trade. Except in the case of where specific environmental law principle is applied as the basis for the trade restrictive measure introduced, the WTO simply relies on an inquisitorial analysis by its DSB of expert arguments. For example, where a party is arguing on the basis of applying the prevention principle, which means its argument is backed by sufficient scientific information, a higher threshold of risk will definitely be tenable. But where the precautionary principle is adduced in an argument in support of a restrictive measure, threshold still ranges from high to low and not definitive.

In considering the inherent factors in the argument of Canada against the action taken by France, the Panel demonstrated an impressive leaning towards environmental interest while seeking to achieve a balance with free trade objective when it analysed the "necessity" of the ban.[298] In analysing "necessity" as an element, the Panel sought to determine whether a 'less inconsistent' measure was available to France. It went further to seek to determine if a potential alternative measure i.e., "controlled use" was sufficiently effective in the light of France's health policy objectives and whether it constitutes a reasonably available measure.[299] The Panel found several problems associated with "controlled use" which characterized "controlled use" as a health risk even though not fully scientifically proven. While commenting that effective health regulations

[297] ibid
[298] Ibid, at para 8.195
[299] ibid at para 8.208

cannot wait for scientists to agree on all matters,[300] the Panel held that "controlled use" was not an acceptable alternative to France's chosen regulation, thereby affirming that even future measures by members, as long as it passes the "necessity" test stands justified in the light of its analysis of this case.[301] The Panel was unambiguous in making it known that it would not undermine the objective of the measure imposed by France as it relates to public health and environment, even if France's standards were more stringent than the international standards in the area.[302]

In contrast with the asbestos Case, the Cigarettes Case[303] presents a decision that is narrow and free trade-protective without a wider view of the health and environmental elements that could fall within a justifiable measure under Article XX (b) of the GATT. Thailand, citing Section 27 of the Tobacco Act, 1966 prohibited the importation of cigarettes and other tobacco preparations, but authorized the sale of domestic cigarettes; moreover, cigarettes were subject to an excise tax, a business tax and a municipal tax. The U.S. complained that the import restrictions were inconsistent with GATT Article XI:1 and considered that they were justified neither by Article XI:2(c), nor by Article XX(b) of GATT. It also argued that the internal taxes were inconsistent with GATT Article III:2. Thailand argued, *inter alia*, that the import restrictions were justified under Article XX(b) of GATT because the government had adopted measures that could only be effective if cigarette imports were prohibited and because chemicals and other additives contained in U.S. cigarettes might make them more harmful than Thai cigarettes. The Panel found that the import restrictions were inconsistent with Article XI:1 and not justified under Article X1:2(c) of the GATT. Most importantly, the Panel further concluded that the import restrictions were not "necessary" within the meaning of Article XX (b) of the GATT. In other words, the measure applied failed the necessity test.

The two cases posit differently on the qualifications for justifying restrictions that breach the provisions of the GATT. The necessity of any measure that is applied in a trade relationship in the interest of public health and environment is relative and not absolute. Given the impossibility of

[300] The tone of the Panel sounds "precautionary" here.
[301] EC-Asbestos *supra* note 297 at para 8.221. This is very interesting to note when contrasting with EC Hormones case where Panel decided that countries do not have total discretion in determining the levels of acceptable risk.
[302] Ibid, at para 8.210. However, in my opinion this does not confer absolute discretion on members to determine its acceptable level of risk as such will be subjected to scrutiny and analysis if dispute arises.
[303] Thailand – Restrictions on Importation of and Internal Taxes on Cigarettes ("Thailand – Cigarettes"), DS10/R, adopted 7 November 1990.

having a blanket threshold for defining "necessity" that covers all members, it exposes parties to the erroneous use of the Panel's discretion in determining if there is lack of suitable alternative to the restrictive trade measure applied as a fundamental requirement for passing the "necessity" test. For example, an alternative measure the WTO Panel found to be less trade restrictive is advertising control. It was not clear how the Panel arrived at that conclusion. It was also not mentioned whether the Panel arrived at that suggestion based on the result of a research or outcome of similar measure in another jurisdiction. Assuming the Panel had considered a relativity test of effect of an existing or previous measure in one jurisdiction as compared to another, perhaps the Panel would have made a different decision. The Panel ignored the evidence presented by the representative of the World Health Organization (WHO) which suggested an important reason as to why, for Thailand, advertising regulation might not be a reasonably available less-trade-restrictive alternative to an import ban, as multinational tobacco companies had often circumvented national restrictions on advertising. They achieve this by adopting indirect advertising and using universal outlets that can by-pass the regulatory watch of the relevant Thailand agency.[304] A joint study by the WTO and the WHO on trade and public health,[305] while commenting on the imbalance that existing factors that countermands Article XX(b) against Article I implies on the onerous element of 'necessity' as it affects public health and environment, said: "Determining whether a measure is "necessary" involves a process of weighing and balancing a series of factors which include the importance of the interests protected by the measure, its efficacy in pursuing the policies, and its impact on imports and exports. The more vital or important the policies, the easier it would be to accept as "necessary" a measure designed for that purpose."

From the forgoing analysis of the two cases, it can be observed that at the point of intersection, whether regulatory or adjudicatory, the interest of free trade had the upper hand even though the imbalance is not likely to be made obvious nor acknowledged. For example, in the Thailand Cigarettes case, more focus was on the possible breach of the obligation of non-discrimination on the basis of the national origin of the product under Article XI:1 of the GATT. What the Panel did

[304] ibid at para 55

[305] WTO Agreements and Public Health: A joint study by the WHO and the WTO secretariat, World Health Organization and World Trade Organization, Geneva, August 2002.

not give some serious thought, is the likelihood of a measure violating Article I while enjoying justification under Article XX(b) of the GATT.

## 4.2 The Precautionary Principle in International Trade Law

The precautionary principle as a concept remains unmentioned in the WTO regime. However, the absence of explicit mentioning of the principle in WTO agreements does not mean an absolute indifference to the concept of precaution by the WTO. There are certain provisions in the WTO regime that indirectly provides for the application of the precautionary principle by Members. As earlier noted in this study, the precautionary principle in a regime or law can be inferred by the language used and need not be expressly stated. Though the precautionary principle has been identified with international trade law through WTO law and agreements, as with every relationship, there exist areas of conflicts which the DSB has had to adjudicate upon.

Fundamentally, the conflict arises from the seemingly incompatibility of the precautionary principle with the WTO's core objective of an expanded trade liberalization. Furthermore, even when within the framework of international environmental law, measures applied pursuant to the precautionary principle in a Multilateral Environmental Agreement may form part of national laws and couched in a way that confers rights or obligations by way of actions that government of a sovereign state may take in the fulfilment of its environmental protection goals, in WTO law, the same principle does not represent an exception, i.e., an option offered to member states not to implement certain provision or to adjust them accordingly. The right to diverge from WTO agreements using exceptions is controlled by the DSB as soon as a trade dispute arises between two or more member countries.

The precautionary principle finds reflection in international trade law via the GATT, the TBT and the SPS Agreements. Starting with the GATT, the general exceptions earlier mentioned in Article XX of the GATT allow import bans and other deviations from the GATT rules. The exceptions permit Members to take measures to protect human, animal or plant life or health.[306] While these provisions can be seen to lay a foundation for the application of the precautionary principle in international trade, the narrow interpretation of the provisions by trade dispute panels shows that

[306] GATT, *supra* note 260, specifically referring to Article XX (b).

it will be difficult for measures adapted from environmental regulations to satisfy the conditions stipulated in the various decisions. The most prominent amongst the conditions, is passing the "necessity" test.[307] The complexities of environmental challenges being confronted by Members gradually erode the essence of Article XX(b) and Article XX(g) of the GATT within the context of the general obligation of governments to protect their territory and population from obvious and potential dangers. So far, the DSB has sat over two cases where the question on the GATT Agreement and the precautionary principle nexus was raised. Examining the cases, one can easily observe the unsteady disposition of the DSB to the argument of the inherent linkages.

In a case involving India and the U.S. in respect of quantitative restrictions maintained by India on importation of a large number of agricultural, textile and industrial products, the U.S. contended that these quantitative restrictions, including the more than 2,700 agricultural and industrial product tariff lines notified to the WTO, are inconsistent with India's obligations under Articles XI:1 and XVIII:11 of the GATT 1994, Article 4.2 of the Agreement on Agriculture, and Article 3 of the Agreement on Import Licensing Procedures. In its defence, India invoked the precautionary principle with regards to the balance of payments and affirmed that quantitative import restrictions ought to be maintained out of precaution in order to prevent a destabilization of its balance of payments.[308] In support of its argument, India claimed that the precautionary principle is integrated in the GATT Article XVIII.11 through an interpretative note. It is important to note that India not only claimed the right to use a precautionary measure in the usual sense of the term (i.e., a prudent approach), but also in the sense of the precautionary principle.

While rejecting this precautionary principle argumentation made by India, the Panel only provided a technical interpretation pertaining to the GATT's so-called Notes and Supplementary Provisions in the case of the above Article which provides limited rights to developing countries to restrict imports when their balance of payment is jeopardized. The Panel found that the precautionary measures as applied were inconsistent with India's obligations under Articles XI and XVIII11 of GATT 1994, and to the extent that the measures apply to products subject to the Agreement on Agriculture, are inconsistent with Article 4.2 of the Agreement on Agriculture. The Panel also

[307] See the Asbestos Case and the Cigarettes cases, supra note 297.
[308] India-Quantitative Restrictions on the Imports of Agriculture, Textile and Industrial Products 1999, WT/DS90/R, para. 3.189 et 3.207.

found the measures to be nullifying or impairing benefits accruing to the United States under GATT 1994, and the Agreement on Agriculture. Upon appeal against the legal interpretations developed by the Panel, the precautionary principle was implicitly rejected by the Appellate Body's ruling that such measures are justified only in clearly defined circumstances and not when a general possibility of a deterioration of the balance of payments exists as a result of the discontinuation of measures introduced. The DSB added that a precautionary interpretation of the legal text could lead to an open-ended maintenance of such import restrictions because one might nearly always claim that there is a danger of a worsening balance of payments in the future. The fact that the Appellate Body rejected a simple possibility easily leads one to conclude that its reasoning rests on a preventive measure rather than a precautionary approach. The DSB did not take its time to examine the environmental angle to the interest of how the balance of payment dangles, especially when a developing country like India is involved. The result is that precautionary measures applied with the obvious garb of the precautionary principle is interpreted in a narrow sense that reflects an 'outside principle' status in contrast to the GATT standard of economic reasoning that integrates environment within a very limited scope.

The second dispute where the application of the precautionary principle within the context of the GATT was in issue at the Panel and the Appellate Body is the Asbestos case between the European Communities (which represented France at the WTO) and Canada earlier mentioned and analysed.[309] In its submission, Canada recognizes that asbestos is potentially hazardous and did not object to the possibility of applying the precautionary principle in the WTO regime but it considered a complete ban on asbestos as disproportionate while taking into cognisance the legitimate objective of protecting public health. Canada's argument is very clear: if France's position were to be adopted, then every member would have the possibility to completely ban natural resources that may potentially be dangerous rather than using an approach which is based on a responsible risk management strategy that is determined by their utilization. While, neither the Panel nor the Appellate Body took an explicit position on the precautionary principle as invoked by France, it is instructive to note that their ruling provides a mental view of their reasoning on the elementary but integral issue of scientific uncertainty in trade disputes before the DSB. However, it appears to have implicitly created some space for the precautionary principle by

[309] Asbestos supra note 297.

declaring that the acquisition of scientific certainty on all aspects of an issue is not required to justify the exceptions listed in the much-cited Article XX of the GATT.

### 4.2.1 The TBT Agreement

The second WTO Agreement with provision embodying the precautionary principle is the TBT Agreement. The nexus linking the TBT Agreement with the precautionary principle hinges on the requirement that trade-environment measures be the 'least trade restrictive' necessary to meet desired objectives, taking into account the risks that non-fulfilment of those objectives would create. Still hinging on the choice of language used in defining what "necessity" means for regulations that could restrict trade, Article 2(2) of the TBT Agreement requires that technical regulations shall not be more trade-restrictive than necessary to fulfil a legitimate objective, taking into account the risks non-fulfilment will create. [310] While the TBT Agreement basically requires that legislations by Members be based on relevant objective performance-oriented standards developed by recognized international standards bodies and to ensure that regulations and standards are not prepared, adopted or applied with a view to creating unnecessary obstacles to international trade, it concedes to the fact that there will be "necessary" cause to introduce regulations that will legitimately impede trade in the interest of public safety.

Within the context of the TBT Agreement, application of the precautionary principle has so far been ruled on only in one case, EC Sardines.[311] Though in the EC Asbestos case, it was the argument by Canada that the European Commission's ban on the complete life cycles of asbestos products violated the TBT Agreement, the ruling was made, however, based on the GATT Agreement. In EC Sardine case, it was the complaint of Peru that EC Regulation (EEC) 2136/89 prevented Peruvian exporters to continue to use the trade description "sardines" for their products owing to the difference in standard it sets with that of Codex Alimentarius standards (STAN 94-181 rev. 1995). Peru considered the EC Regulation as constituting an unjustifiable barrier to trade, and, hence, in breach of Articles 2 and 12 of the TBT Agreement and Article XI:1 of GATT 1994. In addition, Peru argued that the Regulation is inconsistent with the principle of non-discrimination, and, hence, in breach of Articles I and III of GATT 1994. The EC argued that the

[310] TBT Agreement *supra* note 268.
[311] European Communities — Trade Description of Sardines (EC –Sardines) Panel Report, WT/DS231/18

measures applied were in accordance with the EC Regulation which is a technical regulation within the purview of Article 2- 2:12, but specifically mentioning Articles 2.1, 2.2, and 2.4 of the TBT Agreement. While the Panel found the EC Regulation was a "technical regulation" within the meaning of Annex 1.1, it, however, concluded that the EC Regulation was inconsistent with Article 2.4 of the TBT Agreement. On Appeal, the Appellate Body upheld the findings of the Panel that the EC Regulation is a technical regulation as it fulfilled the three criteria laid down in the Appellate Body report in EC – Asbestos: (i) the document applied to an identifiable product or group of products; (ii) it lays down one or more product characteristics; and (iii) compliance with the product characteristics was mandatory but the standard did not fall within the scope of Article 2.4 of the TBT Agreement.

### 4.2.2 The SPS Agreement

The third and most prominent agreement with the strongest implied reference to the precautionary principle in the WTO regime is the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS), specifically in Article 5(7) which allows a Member to take provisional measures in cases where relevant scientific information is insufficient.[312] As one of the subsidiary laws under the WTO regime, it seeks to achieve a mandate of the WTO to deliver free market amongst members and the sovereign right of States to protect the health of consumers and environment within their territory.[313] The Panel in EC-Hormones, *inter alia*, mentioned two requirement that must be fulfilled for the SPS Agreement to apply: first, the trade restriction must constitute a "sanitary or phytosanitary measure" as defined under the SPS Agreement; and second, the measure may affect international trade, directly or indirectly.[314]

The SPS Agreement qualifies a "sanitary or phytosnanitary measure" (SPS measure) as any measure applied:[315]

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[312] Agreement on the Application of Sanitary and Phytosanitary Measures of April 15, 1994,
Marrakesh Agreement establishing the World Trade Organization, Annex 1A, Legal Instruments results of the Uruguay Round (1994). Hereinafter referred to as the SPS Agreement.

[313] Peter Van Den Bossche, The Law and Policy of the World Trade Organization: Text, Cases and Materials 3 6-37 (2d ed. 2008).

[314] Panel Report, EC Measures Concerning Meat and Meat Products (Hormones), T 8.36, WT/DS26/R/CAN (Aug. 18, 1997).

[315] Annex A, SPS Agreement.

1. to protect animal or plant life or health within the territory of the Member from risks arising from the entry, establishment or spread of pests, diseases, disease-carrying organisms or disease-causing organisms.
2. to protect human or animal life or health within the territory of the Member from risks arising from additives, contaminants, toxins or disease-causing organisms in foods, beverages or feedstuffs.
3. to protect human life or health within the territory of the Member from risks arising from diseases carried by animals, plants or products thereof, or from the entry, establishment or spread of pests; or
4. to prevent or limit other damage within the Territory of the Member from the entry, establishment or spread of pests.

Furthermore, Sanitary or phytosanitary measures are in form of relevant laws, decrees, regulations, requirements and procedures including, inter alia, end product criteria; processes and production methods; testing, inspection, certification and approval procedures; quarantine treatments including relevant requirements associated with the transport of animals or plants, or with the materials necessary for their survival during transport; provisions on relevant statistical methods, sampling procedures and methods of risk assessment; and packaging and labelling requirements directly related to food safety.[316]

The SPS Agreement's reception for the precautionary principle is seen in its Article 5.7 allowing the adoption and maintenance of SPS measures that are interim in nature and intent. However, this is subject to the four requirements: (i) the provisional measures must be adopted on the basis of "available pertinent information"; (ii) adoption of interim measures is allowed in such cases where "relevant scientific evidence is insufficient" to conduct a risk assessment; (iii) the Member maintaining the interim measures shall "seek to obtain the additional information necessary for a more objective assessment of risk"; and (iv) furthermore, such Member maintaining the interim measures shall review the measures "within a reasonable period of time". The disposition of the SPS Agreement to interim measures in cases where scientific evidence is insufficient in order to avert a long-term or irreversible damage to human health and plant and environment generally

[316] ibid

presents a semblance of the "better safe than sorry" wisdom of the precautionary principle underpinning the elements of "uncertainty and irreversibility".[317]

### 4.3 Scope of the Precautionary Principle in the SPS Agreement.

The expression of the precautionary principle in Article 5.7 of the SPS Agreement though restricted within the purview of the four conditions required for its application, the scope of the precautionary principle in the SPS Agreement is not constrained within the ambit of Article 5.7. In the absence of direct reference to the precautionary principle in other provisions of the SPS Agreement, there still exist reflections of the principle in other provisions of the SPS Agreement. The Appellate Body aptly asserted this in the EC-Hormones case, where it states:

> We agree, at the same time, with the EC that there is no need to assume that Article 5.7 exhausts the relevance of a precautionary principle. It is reflected also in the sixth paragraph of the preamble and in Article 3.3…

The operational purview of the SPS Agreement in relation to the application of the precautionary principle revolves around the provisions of the SPS Agreement, the international standards recognized by the SPS Agreement and the decisions of WTO/DSB which are examined and analysed subsequently.

### 4.4 The Precautionary Principle and the Provisions of the SPS Agreement

Talking of the provisions of the SPS Agreement, Article 5.7 takes the lead while other provisions give specific expressions directed at the qualifications of the measures that the SPS Agreement purposed to regulate. Within the circles of international trade deliberations, Article 5.7 of the SPS Agreement is seen as creating a possible arrow slit in a wall for measures which are not applied to deter real risks.[318] Also, critical stakeholders in trade and environment have been sceptical as to the scope of Article 5.7 of the SPS Agreement in relation to the range of precautionary measures that can be applied under its purview. This raises more concern considering the "provisional" tone of the Article which seems, by all accounts, to be confined to transient dangers and the

[317] Jiangyuan, F.; Blennerhassett, J., "Is Article 5.7 of the SPS Agreement an Application of the Precautionary Principle?" Front. Law China 2015, 10, 268–294.
[318] See, e.g., Senator John Ashcroft of Missouri in his letter of 19 April 2000, available at http://www.insidetrade.com. Accessed 24-10-19.

ramifications of the arrangement on measures identified with items where long-term risks are in question, e.g., biotechnological products.

A summary of the four requirements earlier mentioned and herein analysed subsequently will help in understanding the configuration of the restrictive scope of Article 5.7 of the SPS Agreement and provide a better understanding of how the provision *vis-a-vis* inherent decisions of the WTO/DSB is affecting international trade of products under the regulatory purview of the SPS Agreement.

### 4.4.1 Insufficient Relevant Scientific Evidence

Starting with the requirement of situation where there is "insufficient relevant scientific evidence", there has been somewhat confusion as it was being interpreted directly to apply to situation of "scientific uncertainty" being one of the cardinal elements of the precautionary principle under international environmental law. The Appellate Body in addressing the requirement of "sufficient scientific evidence" in Japan – Agricultural Products case noted that the ordinary meaning of the word "sufficient" is "of a quantity, extent, or scope adequate to a certain purpose or object".[319] It deduced that "sufficiency" is a relational concept that cannot be strictly defined within a regulatory breadth. It further identified "sufficiency", as specifically requiring the existence of a sufficient or adequate relationship between two elements, *in casu*, between the SPS measure and the scientific evidence provided or available.

In a related case, the Appellate Body, in Japan- Measures Affecting the Importation of Apples case in interpreting Article 5.7 of the SPS Agreement clarified that the requirement is not applied in situation of "scientific uncertainty" rather where "scientific evidence is insufficient".[320] The interpretation presents a more restrictive scope for the application of precautionary measure. In the light of this, the Appellate Body asserted that the two phrases are distinct, and one cannot substitute the other. It further explicated that insufficiency should not exclude a "case where the available evidence is more than minimal in quantity but has not led to a reliable or conclusive results."[321] This ultimately revolves around the practicability of the scientific information that is available as

[319] Appellate Body Report, Japan – Agricultural Products, Doc. WT/DS76/AB/R. paras. 73 to 84
[320] Appellate Body Report, Japan- Measures Affecting the Importation of Apples, Doc. WT/DS245/AB/R, para-181.
[321] Ibid

every Member has scientific community that will split in opinions. Therefore, reliability and conclusiveness of scientific evidence becomes a germane factor where interest of trade and environment or health are placed on same scale.

### 4.4.2 Based on Available Pertinent Information

On the second requirement which states that measure should be based on "available pertinent information", there is no WTO case that has helped in expounding the essence of the phrase. In the absence of any adjudicatory interpretation of the phrase or word within the phrase, an option available is to use the method of literal interpretation by referring to the provision of the rules on treaty interpretation as contained in the Vienna Convention on the Law of Treaties. Article 31.1 of the Vienna Convention provides that "a treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose". Flowing from the forgoing, the question to ask is what constitutes a pertinent information such that it's worthy of the action of the Member States? According to the Oxford English Dictionary,[322] "pertinent" means "pertaining or relating to the matter at hand; relevant; to the point; apposite". The Merriam-Webster Dictionary [323]defined the term as "having a clear decisive relevance to the matter in hand". In the light of the definitions, the relativity of information at the disposal of a Member state will depend on the situation that demands for the measures taken at that material time.

However, is there difference between "available pertinent information" and "relevant scientific information"? As regards this, Winickoff observed that the first sentence of Article 5.7 of the SPS Agreement clearly differentiates "pertinent" information from "relevant" scientific information in terms of the spectrum of its application.[324] While the latter has an extensive range of application within the context applicable, the latter is substantially specific. These implies that where a scientific information is needed to justify or rebut the application of a measure as allowed under the SPS Agreement but could not be produced, an available pertinent information cannot suffice

[322] Oxford English Dictionary online at: https://www.oxfordlearnersdictionaries.com/definition/american_english/pertinent. Accessed 21-08-18

[323] Merriam-Webster Dictionary online at: https://www.merriam-webster.com/dictionary/pertinent. Accessed 21-08-18

[324] D. Winkoff, S. Jasanpff *et al*., "Adjudicating the GM Food Wars: Science, Risk, and Democracy in World Trade Law", Yale Journal of Int'l L. 30, 2005, 81 et seq. (83).

except there is substantial scientific basis or elements therein. For example, in Japan – Agricultural Products case, in reference to plant health, the Appellate Body affirmed the earlier finding of the Panel that "some data –taken from several individual studies – possibly hinting at relevant varietal differences are not enough, if such evidence does not make the actual causal link between the differences in the test results and the absence of varietal difference".[325] In this instance, the available evidence lacks scientific proofs such that is strong enough to support the assertion that the varying responses are due to varietal differences, as the cause could also be attributed to series of other factors not related to varietal differences.[326] Its noteworthy that the Panel drew attention to the lack of precise studies on this subject, which it said a deliberate and specific research would not have been difficult to conduct. In the said case, the opinion of one of the experts was strongly relied on and it states thus:

> The argument put forth by Japan for requiring varietal trials are not based on scientific data. They are supported by a few experimental data in which varietal difference exists, in terms of LD50, among a lot of other data in which it does not. These observations lead them to suspect all existing varieties and even more so those of the future, in which, in their eyes, genetic engineering and biotechnology might well create even greater differences. This is not based on any scientific data.[327]

However, an available pertinent information need not be scientific for the purpose for which it's needed. For example, information on how an activity has affected the social life of people somewhere else can form the basis for the objection to a similar activity until proper environmental impact assessment has been conducted. No matter the availability or lack of scientific evidence, pertinent information will rightly guide in determining the appropriate precautionary measure and justification for the choice settled for. For example, public opinion on how measures to be introduced will affect them or how lack of it has affected them.

### 4.4.3 Duty to Obtain Necessary Additional information

Having gathered available pertinent information, on which the application of precautionary measures relies, a Member State is required to seek additional information which "must be

[325] Panel Report, Japan – Agricultural Products, para. 8. 24 and 8. 42.
[326] Ibid., para. 8. 39
[327] Panel Report, Japan – Agricultural Products, para. 8. 36.

germane to the conduct of a more objective risk assessment".[328] Additional information does not necessarily mean new information that was not discovered before the pertinent information was provided. Most importantly, the additional information should not stand alone, rather it must be an addition to the existing information. Additional information can be in the form of acquiring information from existing data base, technical submissions from experts and excerpts from scientific research.

However, it is not mandatory that Member States must achieve or produce a particular result. As long as deliberate effort is made to obtain the additional information, it is assumed that they have complied with Article 5.7 of the SPS Agreement. The downside of this provision is that due to the absence of specific performance rating of Members, the likelihood of abuse of that ambiguity is high. Consequently, in fulfilling the requirement of obtaining additional information, Member States must follow the principle of good faith as no compliance mechanism is in place to monitor them. Most importantly, the Appellate Body has stated that non-compliance with this requirement results in a mandatory repeal of the precautionary measure.[329]

### 4.4.4 Review within Reasonable Period of Time

Having agreed that precautionary measures are interim, Member States are required to review the measure they have adopted within reasonable time in order to understand how the measure have affected the course of what it was applied to and be able to have a timely knowledge of any new information. Such review will be in form of a self-evaluation which may result in a decision to repeal or sustain the measures. What constitutes "reasonable period of time" in this context? The Appellate Body, in the Japan-Agricultural Products case,[330] explained that such period had to be established on a case-by-case basis, depending on the peculiar circumstances of each case. Such circumstances could include how easy or difficult it is to obtain additional information needed for the review and the features of the precautionary measure under review.

[328] Japan-Agricultural at para 92
[329] Appellate Body Report, Japan – Measures Affecting Agricultural Products ("Japan – Agricultural Products"), WT/DS76/AB/R, adopted 19 March 1999, para. 84
[330] Ibid

In contrast with the exceptions embodied in GATT, the disciplines in the SPS Agreement are more stringent and precise, thereby leaving few chances for ambiguity. Seven disciplines can be distinguished in the SPS Agreement as forming the context of the application of the exemption provided for in article 5(7) of the SPS Agreement.[331]

#### 4.4.4.1 The Science Test: Article 2.2 of the SPS Agreement

There is no specific definition for the "science test" in the SPS Agreement. However, this can be drawn mainly from its Article 2.2 that states that *"*governments shall ensure that any sanitary or phytosanitary measure is applied only to the extent necessary to protect human, animal or plant life or health, is based on scientific principles, and is not maintained without enough scientific evidence."

The element of 'necessity' and 'sufficient scientific' evidence still sounds ambiguous and creates a leeway albeit through mostly sloppy arguments in challenging the normative factors that should naturally legitimize the application of the precautionary principle. Putting it into context, the peculiarity of cases even within a territory varies and the measure to be applied also will be subject to the severity, risk level and available information *per* time. In cases earlier analysed in the preceding Chapter, the dispute settlement panels did not arrive at what is 'necessary' within the context of the particular cases. Rather, they sought to determine if there was an alternative measure in determining if the measure applied is necessary or not. On the requirement of sufficient science, against the backdrop of several interpretations of the element of 'scientific uncertainty', what constitutes sufficient science remains subjective argument. As science keeps evolving within the realm of available resources and knowledge of the subject under study, arriving at a reliable paradigm in determining what constitutes enough science will remain a challenge.

#### 4.4.4.2 Risk Assessment: Articles 5.1, 5.3, Annex A4 of the SPS Agreement

[331] Werner Scholtz, "The Precautionary Principle and International Trade: Conflict or Reconciliation?", Paper presented at the IUCN World Summit 2002: Environmental Law Foundations for Sustainable Development conference hosted at the University of Natal, Pietermaritzburg on 19 August 2002. Also see Laowonsiri, Akawat. "Application of the Precautionary Principle in the SPS Agreement." Max Planck Yearbook of United Nations Law Online 14.1 (2010): 563-623.

The second discipline is the requirement for a risk assessment.[332] The assessment technique has been developed by relevant international organizations who subscribe to it as a standard. This requirement is underscored by the three WTO disputes that have extensively examined its relevance.[333] Where the necessary risk assessment is conducted and reported, measures applied for the protection of health must be based on the risk assessment.[334] Article 5 of the SPS Agreement further expatiates on the factors to be considered while conducting a risk assessment.[335] For example, Members shall take into account available scientific evidence; relevant inspection, sampling and testing methods; prevalence of specific diseases or pests; existence of pest or disease free areas; relevant ecological and environmental conditions; and quarantine or other treatment. It further requires that, in the risk assessment, a country shall take into account as relevant economic factors the potential damage in terms of loss of production or sales in the event of entry or spread of a pest or disease and the costs of control or eradication in the territory of the importing country.[336]

While it is not clear what 'based on test' meant, in the EC-Hormones decision, it was *inter alia* held that the risk assessment must 'sufficiently warrant', 'sufficiently support', 'reasonably warrant', 'reasonably support' or 'rationally support' using the health measure and that there must be an 'objective relationship' or a 'rational relationship' between the risk and the measure.[337] The Panel reiterated this requirement when it tied the sufficiency of scientific evidence that could justify safeguard measures by a State to the findings of a risk assessment in the EC-Biotech case. On 13 May 2003, the United States requested consultations with the EC concerning certain measures taken by the EC and its member States affecting imports of agricultural and food imports from the United States. Regarding EC-level measures, the United States asserted that the moratorium applied by the EC since October 1998 on the approval of biotech products restricted imports of agricultural and food products from the United States. According to the United States,

[332] Article 5(1), SPS Agreement.
[333] See EC Measures Concerning Meat and Meat Products (Hormones) (US)AB-1997-4 WT/DS26/AB/R, WT/DS48/AB/R (the Hormones- decision) (Canada), Australia Measures Affecting Importation of Salmon AB-1998-5 WT/DS18/AB/R (the Salmon-decision) and Japan Measures Affecting Agricultural Products AB-1998-8 WT/DS76/AB/R (the Agricultural Products-decision).
[334] EC-Hormones, ibid
[335] See ibid 2 and 3
[336] See Article 5.3, SPS Agreement
[337] Appellate Body Report, European Communities – Hormones, para. 101

the measures at issue appeared to be inconsistent with the EC's obligations under Articles 2, 5, 7 and 8, and Annexes B and C of the SPS Agreement; Articles I, III, X and XI of the GATT 1994; Article 4 of the Agriculture Agreement; and Articles 2 and 5 of the TBT Agreement. While the Panel did not find the EC to have acted inconsistently with its obligations under the provisions raised, it held that the European Communities acted inconsistently with its obligations under Articles 5.1 and 2.2 of the SPS Agreement with regard to all of the safeguard measures at issue, because these measures were not based on risk assessments satisfying the definition of the SPS Agreement and hence could be presumed to be maintained without sufficient scientific evidence.[338]

#### 4.4.4.3 Regulatory Consistency: Article 5.5 of the SPS Agreement

The requirement of national regulatory consistency forms the third principle.[339] It states that a government shall avoid arbitrary or unjustifiable distinctions in the levels it considers to be appropriate in different situations, if such distinctions result in discrimination or disguised restriction on international trade. For example, where a Member is particularly strict in regulating the risks from one product, while being tolerant of similar risks in other cases, this can be an indication of protectionism. Distinguishing the elements to violation of Article 5(5) of the SPS Agreement, the defendant government must be seeking different levels of health protection in comparable situations or the government's level of protection compared to what is necessary must be arbitrary and unjustified or the health measures substantiating the differential factors must result in discrimination. This discipline also requires governments to ensure that their sanitary and phytosanitary measures are not more trade-restrictive than required to achieve their appropriate level of protection.

#### 4.4.4.4 Transparency: Article 7 and Annex B of the SPS Agreement

This discipline as explained in the Salmon and Agricultural Products case[340] makes it an obligation for governments to determine and reveal their level of protection to the WTO panels in compliance with SPS rules. Also, Article 7 of the SPS Agreement provides that Members shall notify changes

[338] European Communities — Measures Affecting the Approval and Marketing of Biotech Products WT/DS291/R, WT/DS292/R, WT/DS293/R, para-7.1393.
[339] See Article 5(5), SPS Agreement.
[340] ibid

in their sanitary or phytosanitary measures and shall provide information on their sanitary or phytosanitary measures in accordance with the provisions of Annex B.[341] In Korea-Radionuclides (Japan) case,[342] the Panel found that Korea failed to comply with its transparency obligations under Article 7 and Annex B of the SPS Agreement with respect to the publication of all the measures and the duties of its SPS Enquiry Point.[343] The Panel held that it behoved on Korea to share if and why its own scientific evidence justifies measures restricting products that Japan had scientifically adjudged to be safe for it to be seen that its import ban and additional testing requirements were not inconsistent with the provisions of the SPS Agreement relative to discrimination (Article 2.3 of the SPS Agreement), or more trade restrictive than required (Article 5.6 of the SPS Agreement).

#### 4.4.4.5 Inspection, Control and Certification: Article 8, Annex C of the SPS Agreement

The SPS Agreement provides for timely conclusion of procedures that involve the control, inspection and certification. As regulations are made or amended, specifications of products are changed subsequently to the dictates of control and inspection procedure in order to meet certification requirement.[344] This is to ensure that information required are only for what is necessary for control procedures. Also, it is to ensure Members do not use undue delays in the control process to frustrate other Members.[345]

#### 4.4.4.6 Adaptation to Regional Conditions: Article 6 of the SPS Agreement

It is expected of Members to integrate SPS measures to the features of the country their product is destined for and where product is coming from.[346] It can be seen thus that Article 6 of the SPS Agreement complements the obligation to carry out a risk assessment, which means, even where hazard exists in certain pieces of a trading part, this does not legitimize setting a sweeping import restriction on all items.

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[341] Annex B of the SPS Agreement essentially requires the publication of SPS regulations, the establishment of national enquiry points, and notification of new measures that are not substantially the same like international standards.
[342] Korea – Import Bans, And Testing and Certification Requirements for Radionuclides WT/DS495/R
[343] Ibid, para 7.476
[344] SPS Agreement, Annex C 1(h)
[345] SPS Agreement, Annex C 1(c)
[346] Article 6, SPS Agreement

#### 4.4.4.7 The Necessity Test: Article 5.6 of the SPS Agreement

Under Article XX of the GATT, the necessity test is crucial for the assessment of health and environmental measures. Though Article 5.6 of the SPS Agreement did not make mention of the term "necessary", reading it alongside its accompanying footnote[347] shows that where an alternative measure is reasonably available, upon conducting economic and technical evaluation, the SPS measure in question will be deemed more trade restrictive than required hence in violation of the SPS Agreement.

## 4.5 International Standards Recognized by the SPS Agreement

Outside the WTO regime, there exist international agreements that set standards, guidelines or recommendations that Member States are signatory to. The SPS Agreement is made with the understanding of recognizing the standards set by these other international instruments Members subscribe to. In the light of this, the Preamble to the SPS Agreement has allowed the harmonized form of sanitary and phytosanitary measures to be applied in the trade exchange between Members. However, measures should follow international standards, guidelines and recommendations developed by the relevant international organizations, including the *Codex Alimentarius* Commission, the International Office of Epizootics, and the International Plant Protection Convention.[348]

Furthermore, Article 3.3 of the SPS Agreement provides Members with the leeway to apply SPS measures they believe could produce a higher level of sanitary or phytosanitary protection than measures based on the relevant international standards where they find it appropriate and in line with relevant provisions of paragraphs 1 through 8 of Article 5 of the SPS Agreement. The SPS Agreement adopted two distinct approach to harmonization. Article 3.1 of the SPS Agreement applies a "stick effect" by obliging Members to base their SPS measures on international standards, guidelines or recommendations where they exist except as otherwise provided for in Article 3.3 of the SPS Agreement. In contrast, Article 3.2 of the SPS Agreement puts to use a "carrot effect". It

[347] The footnote provides: "For purposes of paragraphs 6 of Article, a measure is not more trade restrictive than required unless there is another measure, reasonably available taking in to account technical and economic feasibility, that achieves the level of sanitary or phytosanitary protection and is significantly less restrictive to trade''.

[348] SPS Agreement, Preamble, 6th paragraph

provides that SPS measures which conform to international standards, guidelines or recommendations be presumed to be consistent with relevant provisions of the SPS Agreement and of the GATT 1994. Two major international agreements are examined and analysed to understand how the precautionary principle functions within the scope of the SPS Agreement in consonance with or otherwise with their provisions and standard: Codex Alimentarius Commission Standards for Food Created with Modern Biotechnology and the Cartagena Protocol on Biosafety.

### 4.5.1 The Cartagena Protocol on Biosafety (CPB)

Being the first binding international agreement dealing with modern biotechnology, the Cartagena Protocol on Biosafety (the "Cartagena Protocol" or "CPB") was adopted in January 2000 under the umbrella of the Biodiversity Convention.[349] The CPB gives specific attention to how GMOs (referred to as "living modified organisms" (LMOs) under the CPB) are moved across borders.[350] The Advance Informed Agreement (the "AIA") procedure forms the very nucleus of the CPB as it is modelled to conform to the Prior Informed Consent (the "PIC") procedures being applied in controlling Transboundary trade in hazardous materials.[351] In the process of discussing the terms and provisions of the CPB, especially how the AIA procedure will affect international trade in crops, there were fears that exporters of agricultural products will find it extremely difficult to fulfil the notification and prior approval requirement for trade in bulk commodities. In response to these concerns, LMOs that have been discovered to be consumables as food or feed, or will be further processed, are exempted from the AIA procedure.[352]

The CPB prescribes certain measures in its adoption of the precautionary principle to be applied to importation of LMOs. Its Article 11(8) states:

[349] See page 25 for a brief summary of the CPB and its adoption of the precautionary principle. For an overview of the negotiations, see Schweizer, Gareth W., "The Negotiation of the Cartagena Protocol on Biosafety", 6 Envtl. Law 577 (2000) and Redick, Thomas P./Reavey, William A./Michels, Dirk, "Private Legal Mechanisms for Regulating the Risks of Genetically Modified Organisms: An Alternative Path within the Biosafety Protocol, 4 Envtl. Law. 1, pp. 1-77.
[350] CPB, Article 4
[351] The PIC procedure works in such a way that exporter is required to provide comprehensive details about his export, which will then lead to him been granted consent in form of an import permit before shipment.
[352] CBP, Article 7(2)

> Lack of certainty due to insufficient relevant scientific information and knowledge regarding the extent of potential adverse effects of living modified organism on the conservation and sustainable use of biological diversity in the Party of import, taking also into account risk to human health, shall not prevent the party from taking a decision, as appropriate, with regard to the import of living modified organism intended for direct use as food or feed, or processing in order to avoid and minimize such potential adverse effects.

The above provision confers on a signatory the right to prohibit the importation of LMOs even when it has not been established that such organisms have caused any specific harm. This is seen as stronger version of the precautionary principle when compared with the weak version in the SPS Agreement, specifically in reference to paragraph 6 of the preamble, Articles 3.3 and 5.7 of the SPS Agreement whose combined effect implies that precaution should be applied to the import of GMOs, but certain scientific parameters must be satisfied, i.e., risk assessment.

The specific articulation of the precautionary principle by the CPB is not only seen to be a stronger version of the precautionary principle, but also in the light of a strict version as different from the general version laid down in principle 15 of the Rio Declaration. Reason being that it does not have a threshold requirement of "threats of serious or irreversible damage" and "cost-effective measures". It did not sound as though it's promoting or adopting the precautionary principle as a novel legal concept, rather it specifically affirmed the right of a Member State to precaution. However, Members don't have unfettered rights to adopt any form of precautionary measures they deem fit. They are edged by the obligation the CPB requires of them to ensure parties of import review the measures applied upon the request of an exporting country who may have a new scientific evidence to dislodge the subsisting claim.[353]

The SPS Agreement acceding to relative or higher standards of precaution as may be set by the CPB does not mean that both share same objective alone without any conflict. However, because the focus is on the scope of the precautionary principle in the SPS Agreement and how international standards defines the ambit of the applicability of the principle under the Harmonization provision of the Agreement, the similarities and shared objectives will be examined.

[353] CPB, Article 12 (2) and (3).

The compatibility of the CPB and the SPS Agreement is demonstrated by their shared objectives as observed in their decision-making procedures under the contemporary international regulatory mechanism. Three major similarities in both instruments justifiably allow the harmonization of their standards: risk assessment, risk management, and application of the precautionary principle on Transboundary movement of LMOs.

#### 4.5.1.1 Risk Assessment.

Risk assessment in both instruments is based on scientific evidence sourced using risk assessment techniques. First, both require there should be transparency in conducting risk assessment such that will enable importing and exporting Member States have access to all necessary information, thereby guarding against veiled protectionism. [354] Second, both have provisions for risk assessment and risk management. Third, there is little or no difference in the methodology of risk assessment referred to in Annex III of the CPB and the risk assessment that is required under the SPS Agreement that refers to the Codex Alimentarius Principle and Guidelines on food produced through biotechnology. Fourth, both follow the same traditional process of conducting risk assessment. Finally, lack of sufficient scientific evidence, will not deter Member states from making decisions regarding the introduction of LMOs based on the precautionary principle.

#### 4.5.1.2 Risk Management

Both instruments recognize risk-management as a decision-making process that must be based on risk-assessment that precedes the application of the precautionary principle. Second, they recognize that when there is uncertainty in the result produced by the risk-assessment, a Member State can justify its prohibition of import of LMOs. Third, none of them has its own risk-management mechanism, rather they refer to techniques incorporated by international organizations such as the guidelines stipulated by the Codex Alimentarius and Commission's Principles for the Risk Analysis of Foods Derived from Modern Biotechnology.[355]

[354] Article7, the SPS Agreement

[355] Carmen, G.G., (2007) "Genetically modified organisms and justice: the international environmental justice implications of biotechnology", Geo. Int'l EnvtlL. Rev., Vol.19, p. 600.

#### 4.5.1.3 Application of the Precautionary Principle in Transboundary Transportation of LMOs.

While both instruments recognize the precautionary principle as embodying measures that can justifiably disrupt or impose a blockade on Transboundary trade of LMOs, application of the precautionary principle by both is based on objective scientific criteria which requires scientific assessment that incorporates the process of risk assessment and risk management. Though the provisions of the SPS Agreement are clearer in making it known that the one of its main objective is to guard against Member State using the principle to pursue a protectionist agenda, both include provisions that ensure that the justification to apply the principle will not be used by importing Member states to enforce protectionism. Also, both instruments regard the precautionary principle as involving measures that are temporary and not perpetual. This means such measures are subject to reviews at periodic intervals. Where the process of assessment punctures the earlier claim as incorrect, the precautionary measures taken will be rescinded.

### 4.5.2 The Codex Alimentarius Commission

Codex Alimentarius Commission is a standard-setting body, strategically related to WTO law, but under the Food and Agriculture Organization (FAO) and the World Health Organization (WHO).[356] Its main objectives are to ensure the protection of the health of consumers and promote fair practices in food trade.[357] These objectives are achieved by the establishment of harmonized international food safety standards called the “Codex standards” by the joint FAO/WHO Food Standards Program. The standards are published in the Standards Collection (the "Codex Alimentarius") and issued to all Member States. However, they are not binding on individual Member State unless it has notified its acceptance to the Commission. The Codex Commission is specifically listed in the SPS Agreement as a "relevant international organization" thereby regarding it a source for international standards recognized by the SPS Agreement as providing

[356] Codex was founded in 1963 and as of today has 188 members with its base in Rome.
[357] Statutes of the Codex Alimentarius Commission, http://www.fao.org/WAICENT/FAOINFO...OMIC/ESN/codex/Manual/statutes.htm Accessed 22 -08- 2019.

equivalent protection with other listed international standards.[358] Therefore, the Codex guidelines for biotechnology represent a baseline for risk assessment of GMOs under the SPS Agreement.

The initial position of the Codex standards was devoid of the precautionary principle.[359] Rather, the standards leaned towards measures that founded based on "sound science" without any precise definition or parameters in determining what "sound science" means within the context of the objectives of the Codex standards. Certain standards were adopted to satisfy the pertinent need that should process how Member states should assess the safety of the use of growth hormones despite the presence of scientific uncertainty.[360] It was seen that the "preventive" posture of the standards will not be able to address wavering nature of risk, so a Committee on General Principles was put together to examine working principles for risk analysis that will take into consideration the role of the precautionary principle in protecting the health of consumers by ensuring trade in foods that come under the purview of the Codex standard follow fair and firm practices. [361]

Following the 26th session of the Codex Alimentarius Commission held in Rome in July 2003, four standards for assessing the risks to consumers from foods derived from GMOs were adopted by the Commission:[362] First, the Draft Principles for the Risk Analysis of Foods Derived from Modem Biotechnology; second, the Draft Guideline for the Conduct of Food Safety Assessment of Foods Derived from Recombinant-DNA Plants; third, the Draft Guideline for the Conduct of Food Safety Assessment of Recombinant-DNA Microorganisms; and finally, the Proposed Draft Annex on Possible Allergenicity Assessment. In all, the core of the new Codex guidelines which makes it clearly distinct from the old Codex guidelines is the Draft Principles for the Risk Analysis of Food Derived from Modern Biotechnology (Codex guidelines). It requires a risk assessment, risk management, risk communication, information exchange and review mechanism.[363] The risk assessment should be done on a case-by-case basis and focus only on risks to human health and

[358] Article 3.2 SPS Agreement.
[359] See Report of the 14 Session of the Codex Alimentarius Committee on General Principles 19-23 April 1999, ALINORM 99/33A paras. 27-34.
[360] Adopted at the 21st Session based on secret majority voting, where 33 delegates approving the standard, 29 opposing them and 7 delegates abstaining from the vote, See ALINORM 95/37, 8 July 1995.
[361] Report of the Fifteenth Session of the Codex Committee on General Principles, Paris, France, 10-14 April 2000, ALINORM 01/33. The draft contained in Annex III to the Report is still at step 3 of the standard setting process.
[362] Ghisleri, Lucia Roda, et al. "Risk analysis and GM foods: Scientific risk assessment." EFFL 4 (2009): 235.
[363] Codex Alimentarius Commission, Report of the Third Session of the Codex Ad Hoc Intergovernmental Task Force on Foods Derived from Biotechnology, app. II, ALINORM 03/34 (June 30-July 5, 2003).

wellbeing. The guidelines present itself not just as a collection of agreed standards but as a procedural framework stating the process Member states must follow in keeping with the Codex standards. For example, even in the absence of the definition of risk, the guidelines proffer procedure for assessing risk.

Though the precautionary principle is not explicitly mentioned, experts and scholars are of the opinion that the principle can be read into the new Codex guidelines. For example, the new Codex guidelines requires that risk management measures taken in response to risk assessment be "proportional to the risk assessment."[364] Adopted measures in response to the risk assessment may come in form of including labeling requirements or restricting marketing approvals.[365] Also, different measures which achieve the same level of protection should be considered equivalent even when applied to different cases under review.[366] Furthermore, the guidelines also require risk managers to apply "appropriate measures" to manage uncertainties identified in the report of the risk assessment.[367] In conducting risk assessment, the guideline require assessors to take into account all available data and information generated from different scientific testing procedure in line with the inclination of the Codex Commission to "sound science". The above language is not convincing enough on the disposition of the Codex guidelines to the precautionary principle. The section on risk management presents a clearer expression of the precautionary concept. Paragraph 18 states "risk managers should take into account the uncertainties identified in the risk assessment and implement appropriate measures to manage these uncertainties."[368] In contemplation of emerging scientific information, the guidelines also require that safety assessment be reviewed by incorporating new scientific information into risk analysis and "risk management measures adapted accordingly."[369]

An understanding of the forgoing gives a strong idea of how the Codex guidelines allow the application of precautionary measures when there is insufficient, or lack of scientific information and risk is substantially substantiated.

[364] Ibid
[365] Ibid
[366] Ibid
[367] Ibid
[368] Ibid
[369] Ibid

## 4.6 Cases Decided by the WTO/DSB

The WTO/DSB has received several cases brought before it in relation to how the precautionary principle functions in the SPS Agreement in particular and the international trade in general. While some have been concluded, others are either ongoing or at consultation level. The cases reflect concerns in relation to public health, conservation, and plant protection. Three cases that have contributed mainly to formulating the present understanding of the precautionary principle in relation to international trade are analysed here with reference to more recently decided cases. Though, unlike the main three cases that were decided over a decade ago, the recent cases mentioned in my analysis of the main cases are not particularly about the application of the precautionary principle in international trade. However, some parties mentioned the application of the principle in support of their arguments.

### 4.6.1 European Communities – Measures Concerning Meat and Meat Products (Hormones)

On 26 January 1996, the United States[370] requested consultations with the European Communities claiming that measures taken by the EC under the Council Directive Prohibiting the Use in Livestock Farming of Certain Substances Having a Hormonal Action[371] restricted or prohibited imports of meat and meat products from the United States, and were apparently inconsistent with Articles III or XI of the GATT 1994, Articles 2, 3 and 5 of the SPS Agreement, Article 2 of the TBT Agreement and Article 4 of the Agreement on Agriculture. Later in May of same year, Canada joined the United State in objecting to the measure adopted by the EC.[372] After consultation, two panels were formed and found that the measure taken by the EC is inconsistent with Articles 5.1, 5.5, 3.1 and 3.3 of the SPS Agreement.

[370] EC — Hormones (USA) WT/DS26/R/USA

[371] See Council Directive 88/146/EEC of 7 March 1988 prohibiting the use in livestock farming of certain substances having a hormonal action, OJ No L 70 of 16. 3. 1988, pp. 16-18. As re-enacted by Directive 96/22/EC146 (the "Hormones Directive") Council Directive 96/22/EC of 29 April 1996 concerning the prohibition on the use in stock farming of certain substances having a hormonal or thyrostatic action and of beta-agonists, and repealing Directives 81/602/EEC, 88/146/EEC and 88/299/EEC, OJ No L 125 of 23. 5. 1996, pp. 3-9.

[372] EC — Hormones (Canada) WT/DS48/27

#### 4.6.1.1 Facts of the Case

Hormones are chemical messengers that are secreted directly into the blood, which carries them to organs and tissues of the body to exert their functions.[373] There are Hormones that aide the development of the body. There have been concerns as to how farmers apply some growth developing Hormones in animals in order to increase beef production. Though there exists the generally accepted understanding of the possibility of intake of this hormone to cause cancer hormone receptive tissues, there is yet to be scientifically confirmed answer to the question of the so-called acceptable daily intake level (ADI) which is believed to be safe for use if applied in conformity with a good husbandry practice.[374] The Codex Alimentarius Commission on its part advised that the use of growth hormones must be within the range of an ADI for humans for it to qualify as safe and in line with good husbandry practice.[375] The U.S. determines an ADI based on the incremental level for natural hormone residues applied for body tissues development purposes and amounts to 1% of the daily production of hormones by prepubertal boys.[376] The European Communities in disagreement with the claims of the United States maintained that no acceptable daily intake levels can be rightly appropriated. The EC insisted that it took a precautionary approach as none of the scientific reports it presented provided any safety that is convincing enough and beyond doubt that the meat of hormone-treated animals was safe for human consumption.[377]

#### 4.6.1.2 Panel Report

In rejecting the defence of the EC, the Panel stated that the Precautionary Principle cannot prevail over the requirements of Articles 5(1) and 5(2) of the SPS Agreement on risk assessment.[378] The panel found that the EC ban on imports of meat and meat products from cattle treated with any of

[373] Hormone Health Network available online at: https://www.hormone.org/your-health-and-hormones/glands-and-hormones-a-to-z. Accessed 23-07-19

[374] See Jeong, Sang-Hee, *et al*., "Risk assessment of growth hormones and antimicrobial residues in meat." Toxicological research 26.4 (2010): 301-313.

[375] An ADI is "an estimate by JECFA of the amount of a veterinary drug, expressed on a body weight basis, that can be ingested daily over a lifetime without appreciable health risks", see Joint FAO/WHO Expert Committee on Food Additives ("JECFA"), Codex Alimentarius, Vol. 3 – 1995, Section 1, pp. 7, 12 and 14 (the "JECFA Report")

[376] Nachman, Keeve E., and Tyler JS Smith, "Hormone use in food animal production: assessing potential dietary exposures and breast cancer risk", Current environmental health reports 2.1 (2015): 1-14.

[377] EC-Hormones Panel Report, paras 4.16 & 4.52.

[378] EC-Hormones Panel Report, p 8.157.

the six specific hormones for growth promotion purposes was inconsistent with Articles 3.1, 5.1 and 5.5 of the SPS Agreement.[379] However, the Panel made the first categorical statement regarding the precautionary principle when it stated that "*to the extent that this principle could be considered as part of customary international law and be used to interpret Articles 5.1 and 5.2 on the assessment of risks as a customary rule of interpretation of public international law*".[380] The EC appealed the decision of the panel.

#### 4.6.1.3 Appellate Body Report

The Appellate Body (AB) consolidated this appeal with the EC-Hormones (Canada) case.[381] It rejected the Panel's interpretation of Article 3.1 of the SPS Agreement and held that the requirement that SPS measures be "based on" international standards, guidelines or recommendations is not strict enough as to demand conformity with such standards. Also, it modified the interpretation of Article 5.1 of the SPS Agreement when it adopted an expanded definition of risk and risk assessment. The AB applied the "rational relationship" test in interpreting the requirement that a measure under the SPS Agreement be based on a risk assessment.[382] The Appellate Body found that the European Hormones Directive was not based on a risk assessment, as the finding in respect of adverse health effects of control problems, including the opinions provided by one of the experts that advised the Panel were not "specific" enough to prove that beef treated with hormones in keeping to a good husbandry practice would cause risks.[383]

Also, in reversing the finding regarding the violation of Article 5.5 of the SPS Agreement by the Hormones Directive, the Appellate Body noted: (i) the evidence showed that there were genuine anxieties concerning the safety of the hormones; (ii) the necessity for harmonizing measures was part of the effort to establish a common internal market for beef; and (iii) the Panel's finding was not supported by the "architecture and structure" of the measures.[384] The Appellate Body rejected

[379] Panel Report, European Communities – Hormones, paras. 8.91 (US) and paras. 8. 94 ff. (CAN).
[380] Ibid, para 8.157
[381] European Communities – Measures Affecting Meat and Meat Products (Hormones), ("European Communities – Hormones"), WT/DS48/R/CAN, adopted as modified by the Appellate Body, 13 February 1998.
[382] ibid at paras. 188-209.
[383] ibid
[384] Ibid, paras. 211-246.

the Panel's interpretation that Article 3.3 is the exception to Articles 3.1 and 3.2 of the SPS Agreement assimilated together and found that Articles 3.1, 3.2 and 3.3 of the SPS Agreement apply together, each addressing a separate situation. Accordingly, it reversed the Panel's finding that the burden of proof for the violation under Article 3.3 of the SPS Agreement, as a provision providing the exception, shifts to the responding party. On the question of the burden of proof, the Appellate Body stated that the burden of proof rests on the complainant, who has to make a *prima facie* case of what he claims is true, before it shifts to the respondent to rebut the claims of the complainant.[385]

### 4.6.2 Australia-Salmon

#### 4.6.2.1 Facts of the Case

This dispute arose from a measure applied by Australia when it purportedly identified disease agents traced to Canadian salmon which prompted the prohibition of fresh chilled or frozen salmon from being imported from Canada.[386] Australia claimed Canadian salmon could introduce 24 exotic disease agents with negative consequences for the health of wild and cultured Australian salmon but with no fears for Human health. Canada alleged that the prohibition is inconsistent with Articles XI and XIII of the GATT 1994, and also inconsistent with the SPS Agreement following which it requested the establishment of a panel.

#### 4.6.2.2 Panel Report

The Panel found the Australian heat-treatment measure a violation of the requirement on risk assessment[387], therefore in breach of Article 5.1 of the SPS Agreement and by implication, therefore, of the general obligations of Article 2.2 of the SPS Agreement. The Panel reiterated the three requirements laid down previously by the Appellate Body that are essential to constitute a "risk assessment" and noted that for a measure to be "based on" a risk assessment there needs to be a "rational relationship" between the measure and the risk assessment, and that none of the experts consulted by the Panel could find any justification in Australia's risk assessment measure

[385] Ibid, para. 104.
[386] Panel Report, Australia - Measures Affecting Importation of Salmon, WT/DSi8/R (June 12, 1998)
[387] Ibid, para 9.1 & 8.59

for the requirement that salmon be "consumer-ready". On the premise of the aforementioned rationale, the Panel found the import prohibition to be inconsistent with Articles 2.2 and 5.1 of the SPS Agreement but not in violation of Article 5.5 as it found that although Australia was adopting different levels of protection to different, but sufficiently comparable, situations, the different treatment was scientifically justified, and not arbitrary or unjustifiable and the different treatment was thus not a disguised restriction on international trade.

#### 4.6.2.3 Appellate Body Report

The Appellate Body in expounding Article 5.1 of the SPS Agreement made clarifications as regards the requirements for a risk assessment for measures protecting animal health.[388] It stressed that "some evaluation of the likelihood or probability" of risk is not enough, 'the 'risk' evaluated in a risk assessment must be an 'ascertainable risk''; theoretical uncertainty is not the kind of risk which, under Article 5.1 of the SPS Agreement, is to be assessed.[389] As regards Article 5.5 of the SPS Agreement, the Appellate Body upheld the Panel's finding that the import prohibition violated Article 5.5 (and, by implication Article 2.3) of the SPS Agreement as "arbitrary or unjustifiable" levels of protection were applied to several different yet comparable situations so as to result in "discrimination or a disguised restriction" (i.e. more strict restriction) on imports of salmon, compared to imports of other fish and fish products.

The Appellate Body for the first time qualified the necessity test under Article 5.6 of the SPS Agreement in the Australia – Salmon case. However, The Appellate Body reversed the Panel's finding that the heat-treatment violated Article 5.6 of the SPS Agreement by being "more trade-restrictive than required", because heat treatment was the wrong measure. The Appellate Body, however, could not complete the Panel's analysis of this issue under Article 5.6 of the SPS Agreement due to insufficient facts on the record. In this regard, the Appellate Body said that it would complete the Panel's analysis in a situation like this "*to the extent possible on the basis of the factual findings of the Panel and/or of undisputed facts in the Panel record*". It is believed the Appellate Body took this position because the Panel had examined the heat treatment requirement

[388] Appellate Body Report, Australia – Measures Affecting Importation of Salmon ("Australia – Salmon"), WT/DS18/AB/R, adopted 6 November 1998, paras. 119-138.
[389] Ibid, para 124

instead of the import prohibition. The Appellate Body was stuck and could not complete its legal analysis of the application of the necessity test.

### 4.6.3 Japan – Agricultural Products

#### 4.6.3.1 Facts of the case

The Japan–Agricultural Products[390] is the first case that involves Article 5.7 of the SPS Agreement. The main trigger of this dispute is the prohibition of the importation of eight agricultural products originating from the U.S., including apples and peaches as a measure against the transmission of a pest known as codling moth.[391] However, Japan attached conditions for lifting the ban which included an alternative quarantine treatment that matches with the level of protection Japan has instituted to be put in place by the exporting country. Also, the condition attached placed the burden of proving the level of the safety of such quarantine treatment on the exporter and specified a "varietal testing" requirement, i.e., efficacy of quarantine treatment must be proven for each additional varieties of that product.[392] Japan expressly incorporated the Precautionary Principle in its submissions to the Appellate Body. It argued that the requirement of a "causal link" between the test results and the agricultural varieties denied the application of the Precautionary Principle.[393] Furthermore, it urged the panel to consider the varietal testing requirement as being in conformity with the Precautionary Principle.[394]

The U.S. in its complaint claimed the Japanese varietal testing requirement is unfair and amounts to an unjustified barrier to open trade relationship in consonance with the WTO law.[395] The US claimed it had, since the 1970s, undertaken extensive research which has produced treatments that have been proven to be effective and meet the Japanese quarantine conditions. It made reference to the test results generated from seven varieties of apples, nine varieties of cherries, four varieties

[390] Panel Report, Japan – Measures Affecting Agricultural Products ("Japan– Agricultural Products"), WT/DS76/R, adopted as modified by the Appellate Body Report on 19 March 1999, paras. 2.1-2.8
[391] Law No. 151 of 1950, enacted 4 May 1950, as last amended in 1996 preceding this case.
[392] Experimental Guidelines for Cultivar Comparison Test on Insect Mortality – Fumigation"
[393] Appellate Body Report, Japan- Agricultural Products, para 9
[394] Ibid, para 81
[395] Panel Report, Japan – Agricultural Products, para. 3.1

of walnuts and ten varieties of nectarines, which it claimed, never produced a different result from one variety to another.

In its response, Japan, failed to provide example of where an agricultural exporting country had had to modify a treatment for killing codling moth among varieties of the same product. It further said the burden of proving that variety does not matter is on the U.S. as it should not bear the huge cost of conducting additional testing for each variety which it also find time consuming, especially if it was to keep up with the obligation to continuously review whenever additional information becomes available in respect of the introduction of a pest.[396] Furthermore, Japan claimed that some dose-mortality test had presented different responses to the fumigation by varieties of nectarines.[397] The U.S. in asserting its claim, argued, that assuming there were hundred varieties in one product category, a treatment based on selective tests of any variety would have to be presumed to be effective for the other ninety-nine varieties. In addition, every information on the products at that material have been developed and put out, possibly through rapidly advancing biotechnology.[398] Subsequently, a group of scientific experts consulted by the Panel pursuant to Article II of the SPS Agreement, presented report that favours the argument of the United States in that "even though in theory, there may be relevant varietal differences – to date there is no sufficient evidence in support of the varietal testing requirement.[399] Although the data provided by Japan was on same footing with the hypothesis that varietal differences had effects on the quarantine efficacy, it failed to present any scientific evidence that supported the claim that the differences in responses of different varieties to the same fumigation treatment were due to varietal differences.

#### 4.6.3.2 Panel Report

The Panel first examined the general obligation under Article 2.2 of the SPS Agreement which restrains a Member from applying a sanitary or phytosanitary measure without enough scientific

[396] Panel Report, Japan – Agricultural Products, para. 4.27
[397] Ibid, para. 4.46
[398] Ibid, para. 4.72 and 4. 73
[399] Panel Report, Japan – Agricultural Products, para. 8. 35

evidence. It found that Japan acted in violation of Articles 2.2, which was not justified under Article 5.7, and that it also acted inconsistently with Articles 5.6 and 7 of the SPS Agreement.[400]

#### 4.6.3.3 Appellate Body Report

The Appellate Body in affirming the finding of the Panel that the measure was maintained without sufficient scientific evidence, interpreted Article 2.2 by using the same "rational relationship" test as developed under Article 5.1 of the SPS Agreement.[401] In reaction to Japan's invoking Article 5.7 of the SPS Agreement, the Appellate Body further held that the right to take a provisional measure is a "qualified exemption".[402] It further affirmed that the Japanese measure did not fulfil the requirements set out under Article 5.7, because the Japanese government had violated the procedural obligation to "seek to obtain additional information" and to "review the measure within a reasonable period of time".[403] In conclusion, The Appellate Body upheld the findings of the Panel notwithstanding Japan's comprehensive risk assessment. Also, in respect of the Precautionary Principle, the Appellate Body noted Japan's argument and, in response, reiterated the ruling in EC-Hormones that the Precautionary Principle is not a justification for a measure that runs contrary to the requirements of the SPS Agreement.[404]

### 4.6.4 Analysis of the Three Cases

The three cases x-ray the interaction of the SPS Agreement with the GATT and other international standards with which the members subscribe to conform. Though its interaction with the GATT as it concerns the place of the precautionary principle is somewhat suppressed in tone, it no doubt brings to fore the reasoning of members in agreeing on the SPS Agreement to define measures that appear to exceed the measures in Article XX(b) of the GATT. Members have the right to determine their own level of protection but must keep to the obligations imposed by the SPS Agreement, which includes the harmonization requirement, the science test, a necessity test, and obligations to ensure regulatory consistency and transparency. It is observed that the fault line that cuts across

[400] Ibid, para 8.40-8.43
[401] Appellate Body Report, Japan – Measures Affecting Agricultural Products ("Japan – Agricultural Products"), WT/DS76/AB/R, adopted 19 March 1999, para. 84
[402] Ibid, para. 80
[403] Ibid, paras. 86-94
[404] Ibid, para 81

the three cases flows from the violation of the consistency, risk assessment, and necessity test requirements. Of the six, the most talked about which also serves as a standard bearer for most of the other obligations is the risk assessment requirement based on the science test. In all the three decisions, the measures were found to be in violation of Articles 2.2 and 5.1 of the SPS Agreement, because no sufficient scientific evidence existed to justify the measures applied, or the Member had not carried out a risk assessment--at least going by the standard or requirement of the SPS Agreement.

The SPS Agreement in Articles 2.2, 5.1, 5.2, 5.3, in order to guard against imposing of measures by members based on speculative and unfounded assessment method, entrenched obligation of a risk assessment to be based on science test. The Appellate Body in the EC-Hormones held that the precautionary principle is relevant to the application of these provisions by directing Panels to "bear in mind", when applying these provisions, that "responsible, representative governments commonly act from perspectives of prudence and precaution where risks of irreversible" exist though without undermining the 'rational relationship test', e.g. life-terminating damage to human health are concerned.[405] It stated further, that the risk to be evaluated under Article 5.1 of the SPS Agreement "*is not only risk ascertainable in a science laboratory operating under strictly controlled conditions, but also risk in human societies as they actually exist, in other words, the actual potential for adverse effects on human health in the real world where people live,work and die*".[406] In Japan – Agricultural Products case, the Appellate Body also interpreted the obligation under Article 5.1 to mean Members are required to specifically and systematically assess the risk,[407] not merely making "some evaluation" and reference to "uncertain elements".[408] Furthermore, it places strong emphasis on the "quality and quantity" of the scientific evidence while cautioning that "an overly broad interpretation of that obligation would render Article 5.7 of the SPS Agreement meaningless". [409]

It is observed that at the time the three disputes were determined, the interpretation of the implication of Article 5.7 of the SPS Agreement on the measures that follow the character of the

[405] Panel Report, EC-Hormones, para 124
[406] Ibid, para 187
[407] Ibid, Para 198-200, see also Appellate Body Report, Japan – Agricultural Products, Para 77
[408] See Appellate Body Report, Australia-Measures at supra note396 at Para 128.
[409] ibid

precautionary principle was still within the examination of its compatibility with the requirements of international standards recognized by the WTO. The place of the precautionary principle within the context of the WTO and its mandate was also tacitly left unspecified even though it was never rejected as being unrelated to international trade. The Panel in EC-Hormones case stated that the precautionary principle cannot override the requirements of Articles 5.1 and 5.2 of the SPS Agreement on the requirement of risk assessment but noted that the precautionary principle is assimilated into the provisions of the SPS Agreement, particularly Article 5.7.[410] Also, with specific reference to when the Panel in EC-Biotech ruled that "Annex C (r) (a) does not preclude the application of a prudent and precautionary approach to identifying, assessing, and managing of risks to human health and environment arising from GMOs" and that it allows Members to take reasonable time to determine with adequate confidence whether its SPS requirements are fulfilled, the principle has been tossed between the folds of legal interests and free market crusaders.[411]

However, the Panel in the Korea-Radionuclide identified three germane issues in relation to the interpretation of Article 5.7 of the SPS Agreement that furthers draws the conundrum surrounding the application of the precautionary principle in international trade closer to achieving clearer judicial articulation: burden of proof, insufficient scientific evidence, and review of the measure. Even though the Appellate Body muted the decision of the Panel as regards the noncompliance with the requirements of Article 5.7 of the SPS Agreement for procedural reasons, the analysis of the Panel is noteworthy for scholarship.[412] On the burden of proof, the Panel ruled that Korea who invoked Article 5.7 had the burden of proving that it was in compliance with the provisions of the SPS Agreement. The Panel claimed its decisions is on all fours with the panel decision in EC-Approval and Marketing of Biotech Products case, which established that the onus is on the complaining party to show proofs that the disputed SPS measures were indeed inconsistent with at least one of the four requirements set forth in Article 5.7 of the SPS Agreement. As regards if there was sufficient scientific evidence to conduct a risk assessment, the panel attempted to provide a clarification that will settle the question of quantifying the qualification of evidence for fulfilling the requirement of "risk assessment".[413] While the panel agreed with Korea that scientific evidence

[410] EC-Hormones Panel Report, para 8.157
[411] EC-Biotech Panel Report paras 7.1522-7.1523.
[412] Appellate Body Report, Korea-Radionuclides, para 6.5(a)
[413] Ibid, Panel Report para 7.90

regarding the extent of existing contamination was insufficient, it did not allow the argument that insufficient scientific evidence precludes risk assessment.[414] Regarding the importance of uncertainty as it relates to the amount and range of different contaminants that should warrant a risk assessment of food product, the experts invited by the panel unanimously submitted a finding that stated that uncertainties about the total amounts of continued release to the environment could not prevent a sound risk assessment to levels of contamination in foods.[415] The Panel subscribing to the findings of the experts further strengthens the argument on the jurisdiction of the WTO over consumer products and not the environment. The Panel noted that the SPS measure applied by Korea was to protect food products and not environment therefore the risk of food exposure should be assessed and not the environment.[416]

The three obligations under review create the underlying elements that Members leverage on when applying measures that are in tandem with the precautionary principle. For example, the Appellate Body did not preclude the EC from introducing precautionary regulatory measures in the interest of its people. However, the main condition for such measure to be seen to attach the kind of risk that justifies it is that a full risk assessment be conducted in fulfilment of the requirement of the SPS Agreement.[417] The Appellate Body went further to state that it is not only risk ascertainable in a science laboratory operating under strictly controlled conditions, but also risk in human societies as they actually exist; in other words, the actual potential for adverse effects on human health in the real world where people live and work and die.[418] The interpretation of "risk assessment" as provided in Article 5.1 of the SPS Agreement by the Appellate Body helps in distinguishing it from "risk management". The feature of scientific examination in risk assessment goes beyond the exercise of policy making that defines "risk management" when it explained in the EC – Hormones decision that the risk assessment must 'sufficiently warrant', 'sufficiently support', 'reasonably warrant', 'reasonably support' or 'rationally support' using the health measure and that there must be an 'objective relationship' or a 'rational relationship' between the risk and the measure. The same requirement of "risk assessment" in Article 5.1 of the SPS Agreement made the Panel reject Russia's argument in the Russia-Pigs case where Russia claimed

[414] Ibid, Panel Report para 7.89
[415] Ibid, paras 7.92-7.93
[416] Ibid, para 7.93
[417] Article 5.1, SPS Agreement.
[418] Para 187, Report of the Appellate Body in EC – Hormones

that it had acted based on "precaution" under Article 5.7 of the SPS Agreement. This provision states that where "relevant scientific evidence is insufficient, a Member may provisionally adopt "SPS measures based on available pertinent information". The Panel's decision reiterated its position on risk assessment as not an optional requirement that can be substituted for another requirement in the SPS Agreement.

Farther from the "discrimination-exception" criteria applied for Article XX(b) measures in the GATT, the SPS Agreement has provided Members the leeway to distil its requirements such as allowing each member to adopt its own level of protection that it deems appropriate. The caveat here is that whatever measure adopted must not be inconsistent with the obligations under the of the SPS Agreement.[419] The Appellate Body in Korea Radionuclides case expounded on this when it recognised the right of a Member to set its appropriate level of protection (ALOP) as a legitimate "objective" with an SPS measure as the instrument designated to help attain or implement the set objective.[420] This further explains the requirement that the ALOP of Members may not be in quantitative terms, vague or equivocation as to render the application of the SPS agreement impossible. In determining inconsistency as expounded in the cases earlier examined, the measure must be conforming with international standard; it must satisfy the science test; measure adapts to regional condition; transparency in the process leading to final adoption of measure. All constitute conditional precedents for consistency with the WTO law to be satisfied.

### 4.7 Conflicts in application of Precautionary Principle in International Trade

The precautionary principle found its basis in environmental law before evolving to become part of a process that could have economic implications on the parties that promote or oppose it. Therefore, it's expected that interactions of the principle with other legal instruments that it has evolved to relate with will be frosty on some edges. Since every legal rule sets its course of action on the premise of breach or omission, it is important to identify the specific areas that will be fractious in the process of the precautionary principle interacting with international trade law. For example, the variance in possible approaches to scientific uncertainty in determining the right

[419] Specifically, the harmonization requirement, the science test, a necessity test, and obligations to ensure regulatory consistency and transparency.

[420] Russia-Pigs (EU) Russian Federation — Measures on the Importation of Live Pigs, Pork and Other Pig Products from the European Union WT/DS475/24, para 5.93

course of action to be taken by governments have resulted to several conflicts with international trade laws under the WTO regime. The disputes concerning the use of hormones in beef production and the introduction of genetically modified crops remain most notable amongst others. The foundation of the conflict is founded on the different rules that governs how to decide the course of action under environmental law and how same rule can be applied to factors that should give rise to the introduction of precautionary measures under international trade law. Understanding the disparity in the factors and the rules are important as the rules applied and decision on a course of action will impact on the substantive outcome of the decision-making process. However, it is important to understand that differences in the rules applied help in identifying the different approaches to resolving a single problem associated with the precautionary measure applied, as well as the political and administrative culture of the jurisdiction that informs the adoption of the specific precautionary measures. For example, even with inclusion or recognition of the SPS Agreement in the Agreement Establishing the African Continental Free Trade Area (AfCFTA),[421] its application will not follow the same course as that of its application in EU law. There will be difficulty harmonizing identified differences, not because there are objections to the scientific arguments that give rise to the practice of applying precautionary measures, but because of the differences in how things are done across jurisdictions.

The EC-Hormones case highlights a rather pessimistic outlook of the extent to which the concept of the precautionary principle can find expression in international trade law going by the WTO rules. The Appellate Body in deciding the case stated that the precautionary principle may be regarded by some as a general principle of customary international law but that this appears less clear to them and noted that outside the field of international environmental law it still awaits authoritative formulation.[422] The precautionary principle as interpreted in the SPS Agreement is narrow and not intended to be applied in such a broad sense that will give Member States the advantage of having a number of options of precautionary measures that fits into the circumstances that is peculiar to their jurisdiction. This implies that any interpretation that steps outside the legal reasoning of the SPS Agreement or WTO rules will not be legally tenable unless the precautionary principle is established as a principle of customary international law or considered by a WTO

[421] Article 21, Agreement Establishing the African Continental Free Trade Area

[422] European Communities – Measures Concerning Meat and Meat Products WT/DS26/AB/R and WT/DS48/AB/R, 13 February 1998 (Appellate Body Report).

dispute resolution panel in the resolving of an international trade dispute.[423] Even when the forgoing is achieved, proving precautionary principle as a customary international law would not mean the interpretation of the principle in relation to the SPS and TBT Agreements is effectively on same legal footing. There also remains the question of compatibility between WTO rules and the rules of MEAs, even if they are intended to be mutually supportive and not conflict with one another. The reason being that, given the variance in the scope of MEAs, very few are related to trade.

Another critical issue that concerns the implications of WTO rules for MEAs is based on precautionary approaches adopted by MEAs i.e. the biosafety protocol and the Convention on Persistent Organic Pollutants. Actually, the concerns are currently more of political than legal. The controversy surrounding proposals from the U.S., Canada and Japan that a biotechnology working group be established within the WTO is a demonstration that it's more about the political whims of influential members and not about how they disagree with the precautionary approach adopted being linked with the WTO rules.[424] As regards the proposal, the fear of some is that this could transfer negotiations on genetically modified organisms from the biosafety protocol to the WTO, thus empowering the WTO to decide on the appropriateness of the precautionary measures instituted by members. As expected, more issues are brewing from the insistence of countries exporting genetically modified crops that WTO rules should take precedence over any biosafety protocol. It gives great concern to many that this poses a threat to progress in clarifying the relationship between the WTO and multilateral environmental agreements.

## 4.8 Summary

In the light of conflicting obligations and perceived imbalance in the allocation of responsibilities arising from MEAs and WTO, especially where the MEAs stipulate obligations that require adoption of measures that could restrict international trade, the precautionary principle can be viewed as countering rigid WTO rules that have not explicitly conceded to environmental concerns that should result in measures that are trade restrictive. This cannot be entirely seen as a deliberate

[423] Kogan, Lawrence A., "*Looking behind the curtain: The growth of trade barriers that ignore sound science*." National Foreign Trade Council, 2003.

[424] Institute for Agricultural and Trade Policy, "Canada Calls for WTO Working Party on Biotechnology" online at www.iatp.org/news/canada-calls-for-wto-working-party-on-biotechnology. Accessed 21-08-20.

omission in the WTO rules as the rules were established primarily to accommodate free and fair trade and not environmental protection. They are created to achieve specific objectives that are fundamentally outside the purview of international trade law. Assuming there is any thread of link between an MEA and WTO rules, it is hardly seen for the working or application of MEAs to sync with WTO rules.

The intersection of the precautionary principle under MEA with international trade under WTO rules occurs in three main ways:

1. When international trade law has an impact on municipal regulation and whether balance can be established between trade and precautionary principle or how prepared is the WTO through its dispute resolution panels to look into national regulatory mechanism and accord deference to the choice of regulatory approaches of Member States.

2. Through the connection between WTO rules and general principles of international law, as to what extent the WTO rules and dispute settlement should take the precautionary principle into account on the basis that it has become a general principle of international law; and

3. With regard to the burden of proof applied in WTO dispute settlement, as in how to ensure that WTO rules do not encourage exporting countries not to gather scientific evidence of risks associated with their exports or that trade is favoured at the expense scientific assessment.[425]

Another important factor that has contributed to the conflict between the precautionary principle and the WTO rules is the decision-making process in the face of scientific uncertainty. For example, at the time the GATT rules were written in the 1940s, scientific uncertainty was not part of policy discussion or consideration. Given the core considerations during the negotiations that produced the GATT at that time, impact of scientific uncertainty could not have been thought of at that time for the present or the future. Article XX of the GATT appears to have considered

[425] Halina Ward "Science and Precaution in the Trading System" (2002) Seminar Note www.iisd.org Accessed 22-09-2019.

external regulatory factors outside international trade law that could impact on WTO trade regime. But it was not crafted to achieve any form of balance between trade and other external regulatory objectives in the presence of uncertainty.

Just like the 'common but differentiated' principle in international environmental law, there is the principle of 'special and differential treatment' in the WTO Agreements to address specific constraints faced by developing countries with the aim of achieving a fair balance with the ease of trade that developed countries enjoy.[426] However, this principle in a way also conflicts with the incorporation of the precautionary principle into the WTO rules. In line with one of the main objectives of the WTO, which is ensuring free trade and integration of developing and least-developed countries into the multilateral trading system, Member States are encouraged to accord favourable treatment, special preferences and extended market access. An environmental measure adopted on the basis of a principle which has the possibility of restricting trade and reducing the benefit to these countries is seen as an opposition to the very fundamentals of the WTO.

[426] Doha Ministerial Declaration WT/MIN(01)/DEC/1 (2001), Paragraph 44

## CHAPTER FIVE

## 5.0 APPLICATION OF THE PRECAUTIONARY PRINCIPLE IN EU TRADE LAW

The precautionary principle, as one of the fundamental principles of the European Union (EU) in relation to environment, health and food safety is described as a cautious approach to managing risk and potential threats to humans, environment, animal, or plant.[427] It practically developed from the domestic level in Germany and Sweden. Before it was included as a fundamental principle for the protection of environment and public health in the Treaty on the Functioning of the European Union (TFEU), the European community had included precautionary measures in policies, directives and regulations.[428] The principle, though expressed in the TFEU or Maastricht Treaty as one of the guiding tenets of EU policy, it lacks specific EU definition.[429] Its incorporation by the 1992 Maastricht Treaty enhanced its status constitutionally under the EU law. The EU, being a supranational organization that is founded on principles of good governance and protection of rights, recognizes the precautionary principle to be akin to the fundamental principle of the protection of the wellbeing of the population, species and environment. It is worthy of note that

[427] Communication from the Commission on the precautionary principle / COM/2000/0001 final / see EUR-Lex Access to EU law at http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52000DC0001 Accessed 20-04-19

[428] For policies, directives and regulations that include the adoption of the precautionary principle as an approach before its inclusion in the TFEU, see generally The First Environmental Action Programme (1973-1976) (EAP I) in Declaration of the Council of the European Communities and of the Representatives of the Governments of the Member States, meeting in the Council on the Programme of action of the European Communities on the Environment, OJ 1973, C112/1; The Brundtland Report also prescribed precautionary approach for gene technology development and nuclear power; Dublin Declaration on the Environmental Imperative of 1990, Bulletin EC 6-1990, Conclusions of the Presidency, Point 1.14 and Annex II; Directive 70/534/EEC of 23 November 1970 concerning additives in feeding-stuffs, OJ 1970 L270,p.1; Directive 75/319/EEC of 20 May 1975 on the approximation of provisions laid down by Law, Regulation or Administrative Action relating to proprietary medicinal products, OJ 1975 L 147,p.13; Directive 75/442/EEC of 15 July 1975 on waste, OJ 1975 L 194,p.39; Directive 79/831/EEC of 18 September 1979, amending Directive 67/548/EEC on the Approximation of the Laws, Regulations and Administrative Provisions of the Member States relating to the Classification, Packaging and Labelling of Dangerous Substances, OJ 1979 L259,p.10; Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds, OJ 1979 L 103, p.1; Council Decision 80/732 Concerning CFCs in the Environment mentioned precaution explicitly in its text. All of the above-mentioned policies and directives though did not mention precaution explicitly, they adopt same approach or process.

[429] See paragraph 3 of the Communication from the Commission on the precautionary principle / COM/2000/0001. "The precautionary principle is not defined in the Treaty, which prescribes it only once - to protect the environment. But in practice, its scope is much wider, and specifically where preliminary objective scientific evaluation, indicates that there are reasonable grounds for concern that the potentially dangerous effects on the environment, human, animal or plant health may be inconsistent with the high level of protection chosen for the Community". Also see Khoury, Alexandros. "Is it time for an EU definition of the precautionary principle?" *King's Law Journal* 21.1, 2010, 133-143. Jiang, Patrick. "A Uniform Precautionary Principle Under EU Law." *Peking U. Transnational Law Review.* 2, 2014, 490.

the precautionary principle was incorporated by the Maastricht Treaty in the same year that the Rio Declaration was made. This shows that the EU was the first to statutorily respond to the Rio Declaration. However, the Maastricht Treaty expanded the scope of the principle to cover areas of health and safety – not just about the environment.

The EU, through the European Commission, ensures there are necessary laws for the protection of the environment in such areas as air and water pollution, waste management, climate change, and energy production and provision.[430] The European Commission's Communication on the precautionary principle issued in 2000, provides a general guidance for the application of the principle; thereby leaving its implementation at the mercy of bureaucratic discretion. The European Commission admitted that precaution is "an eminently political decision".[431] However, certain doctrines governing the application of the principle were set out by the European Commission[432] to be that (i) precaution must not be used for corrupt purposes and (ii) precautionary decisions must follow general principles of EU law-making.

Directives issued by the European Commission relating to the application of the principle remain guided by the above stated doctrines. The wide scope which the application of the principle covers under EU law makes it vulnerable to abuse and this is why the doctrine is stated to be imperative in ensuring that decisions are always matched with the doctrines just to be sure bounds are not outstepped in the process of application. In addition to the doctrines, the European Commission's Communication further stated that in the application of the precautionary principle, measures should be, *inter alia*:[433]

1. proportional to the chosen level of protection.
2. non-discriminatory in their application.
3. consistent with similar measures already taken.
4. based on an examination of the potential benefits and costs of action or lack of action (including, where appropriate and feasible, an economic cost/benefit analysis);
5. subject to review, in the light of new scientific data; and

[430] Article 11 and 191to 193 of TFEU
[431] Commission Communication, supra note 427
[432] Jiang, Patrick, "Uniform Precautionary Principle under EU Law", A. Peking U. Transnat'l L. Rev. 2, 2014, 490. http://stl.pku.edu.cn/wp-content/uploads/2014/04/5Patrick.pdf. Accessed 09-02-17.
[433] EU Communication, supra note 427

6. Capable of assigning responsibility for producing the scientific evidence necessary for a more comprehensive risk assessment.

The application of the precautionary principle in the EU has evolved beyond the initial primary interest of protecting the environment to the protection of public health. It can be rightly said that the benefits that come with scientific discoveries and technological development has consciously raised concerns for safety of processes, procedures and consumption. Before the Communication was issued, there was the Fifth Action Programme for the Environment and Sustainable Development which states that policy choices of the European Community should not merely be based on environmental costs and benefits but also on the need for precautionary measures.[434]The EU, with the consciousness of the vulnerability of societies to hazards, published two reports through the European Environment Agency (EEA) in 2001 and 2013,[435] presenting several cases that involved hazards where lessons were learnt rather late despite early warnings. The reports show that where precautionary steps are taken and timely, disasters can be averted.

## 5.1 Status of the Precautionary Principle in the EU Law

Before any dispute arising from the EU application of the precautionary principle was brought before the Court of Justice of the European Union (CJEU), the precautionary principle was just a principle provided for in the Maastricht Treaty with no explanation of its legal significance or status. This ambiguity makes the precautionary principle in the EU law sound like a policy statement rather than a law. The European Commission's Communication on the application of the principle did not define its status either. As a result of this gap, without any judicial body interpreting or expounding the law on the status of the principle, inference or speculative reasoning was applied in defining what the principle is and what it is not. The CJEU came to the rescue, at least for the EU, when it defined the precautionary principle as a general principle of Community law requiring the competent authorities to take appropriate measures to prevent specific potential risks to public health, safety and the environment, by giving precedence to the requirements related to the protection of those interests over economic interests.[436]

[434] Commission Proposal for a Council Resolution on a Community Programme of Policy and Action in Relation to the Environment and Sustainable Development, COM (92)23/I final at 3.
[435] Late lessons from early warnings: the precautionary principle 1896-2000 and Late lessons from early warnings: science, precaution, innovation, European Environment Agency, 2001 and 2013.
[436] *Artegodan v. Commission* CJEU judgment in the case of 26 November 2002 (T-74/00), paragraph 184.

The precautionary principle, though a general principle of law in the European Union law, apart from its statutory description as a general principle in the TFEU and the judicial definition provided by the CJEU still lacks a definite statutory definition.[437] The Communication of the Commission did not help in that regard either, thereby leaving that *lacuna* for institutions within the EU to fill up. Indeed, the CJEU, in several of its decisions on the precautionary principle, has provided descriptions and procedures for applying the principle. For instance, the CJEU has identified the threshold of risk that should trigger the application of the principle; as such, that is not a pure hypothetical risk, and cannot be such that should be founded on mere suppositions that is not yet scientifically verified.[438] The CJEU has also ruled that assessment must produce scientific data that can be relied upon at any time.[439] While the TFEU provides for a high level of protection based on the principles it adopted, the CJEU said it does not have to be the highest technically possible.[440] The CJEU and the CFI also extended and confirmed that the scope of the application of the precautionary principle is wider beyond protecting the environment alone; rather it extends to public health.[441]

Unlike outside the EU or in the general international community where the debate about the status of the precautionary principle revolves more around it being a rule of customary international law,

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[437]Jiang, Patrick, "A Uniform Precautionary Principle Under EU Law", Peking U. Transnat'l L. Rev. 2 (2014): 490. Also see Cheyne, Ilona, "The precautionary principle in EC and WTO Law: Searching for a common understanding." Environmental Law Review 8.4 (2006): 257-277.

[438] Monsanto Agricoltura Italia SpA and Others v Presidenza del Consiglio dei Ministri and Others Case C-236/01 ECR I-08105, para.106 http://curia.europa.eu/juris/showPdf.jsf?docid=71432&doclang=en the court held: If the twofold objective of Regulation No 258/97, namely ensuring the functioning of the internal market in novel foods and protecting public health against the risks to which those foods may give rise, is not to be adversely affected, protective measures adopted under the safeguard clause may not properly be based on a purely hypothetical approach to risk, founded on mere suppositions which are not yet scientifically verified (see to that effect, as regards a non-harmonised field, the judgment of the EFTA Court in Case E-3/00 *EFTA Surveillance Authority* v *Norway*, EFTA Court Reports 2000-2001, p. 73, paragraphs 36 to 38). Accessed 22-04-2019.

[439] ibid

[440] Safety Hi-Tech Sri v S. & T. Sri, Case C-284/95 1998 ECR I-4301, para 49, 152 http://curia.europa.eu/juris/showPdf.jsf;jsessionid=9ea7d0f130deecef04de90f1472fb31df5cef6e2e692.e34KaxiLc3eQc40LaxqMbN4NchyKe0?text=&docid=100618&pageIndex=0&doclang=EN&mode=req&dir=&occ=first&part=1&cid=5297 Accessed 18-06-2019

[441] Artegodan's Case, supra note 431 at Para 133 where it held: As regards the precautionary principle, it is to be observed (see paragraph 110 of the present judgment) that the safeguard clause provided in Article 12 of Regulation No 258/97 gives specific expression to that principle and that the principle must therefore, where relevant, be an integral part of the decision-making process leading to the adoption of any measure for the protection of human health based on Articles 12 and 13 of that regulation. Moreover, that principle must also be taken into account where relevant under the normal procedure, *inter alia* for the purpose of deciding whether, in the light of the conclusions concerning the assessment of risk, placing on the market may be authorized without any danger for the consumer.

the EU enshrined the precautionary principle in its laws, enforces its application by Member-States and defends its status as a general principle of law before international judicial panels.[442] Besides it being enshrined in the Treaty on the Functioning of the European Union, some Member-States have incorporated the precautionary principle in their national legislation. France incorporated the precautionary principle in its Constitution in 2005.[443] Sweden has made it a guiding principle of its environmental and public health policies by including it in the Swedish Environment Code in 1999.[444] Some EU countries such as Belgium and the Netherlands have relied on the EU law in invoking the precautionary principle. [445]

## 5.2 Ambiguous or Shaded Sphere of Application?

The scope of the precautionary principle in the EU was not set within any definite bounds in the TFEU. It will not be out of place to presume that the drafters of the EC Treaty took into consideration the rapid development the world is experiencing with greater potential of more complex innovations that innovators will be churning out year in-year out, with their adverse effects left to regulators and consumers to debate and decide what or which endangers them or engenders the benefit they derive from them. I believe this explains the rationale behind not restricting the application of the precautionary principle to the protection of the environment alone. But, the environment takes the front row in the concerns of the EC. Article 11 of the TFEU provides that:[446]

> Environmental protection requirements must be integrated into the definition and implementation of the union's policies and activities, in particular with a view to promoting sustainable development.

The above stated provision can be interpreted to mean that every policy of the EU must be tailored to be inclusive of environmental interest of the community. This provision makes the protection of the environment to be a focal point in every law and policy of the EU and thus expands the scope of the precautionary principle beyond the traditional interest of protecting just the

[442] ibid
[443] Charter for the environment http://www.conseil-constitutionnel.fr/conseil-constitutionnel/english/constitution/charter-for-the-environment.103658.html. Accessed 18-06-2018.
[444] See Swedish Environment Code online at http://www.swedishepa.se/Guidance/Laws-and-regulations/The-Swedish-Environmental-Code/. Accessed 18-06-2018.
[445] Commission v Belgium, (1993) 1 CMLR 365, *Commission v Netherlands* C-41/02.
[446] TFEU, see online at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A12012E%2FTXT Accessed 18-06-2018.

environment. The scope of the precautionary principle has contributed to the shaping of public health, trade and other sectors in the EU because the EU explains it in a wider context. The EU, as part of its measure in the protection of marine resources within the region, has made regulations[447] and laws[448] for conservation and protection against exploitation of marine resources within the region. Consciously, the context within which the EU explains its political decision to apply the precautionary principle across all critical sectors of the European Economic Community inevitably raised dust of issues that questions the status and influence of the precautionary principle from outside the EU. This can be seen from the disputes against the EC at judicial bodies in the WTO.

The precautionary principle can be applied in two ways in the EU. First, it can be applied by the EU institutions as a basis for legislation in harmonised areas. Second, individual Member States can use the precautionary principle as a shield against the free movement of products in non-harmonized areas under Article 36 of the TFEU.[449] Due to the general language adopted in the TFEU on the recognition of the precautionary principle, and the guidelines provided by the Communication on the implementation of precautionary principle, it is difficult to apply the precautionary principle without specific directives in relation to areas covered by the EU environmental law and policy. Though, in comparison with regulations on public health, especially food safety, few EU regulations specifically mention the precautionary principle. However, majority of the Directives and regulations on environmental protection presently follow a precautionary approach.

Considering the human activities and the likely consequence, the EU regulations and laws on environment favour a proactive approach. There are actions that are not within the purview of the

[447] Regulation, Council, "No 2371/2002 of 20 December 2002 on the conservation and sustainable exploitation of fisheries resources under the Common Fisheries Policy." OJ L 358.31.12 (2002): 2002. However, it has been repealed by Regulation, E. C., "No. 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC." Official Journal of the European Union. L 354 (2013): 22-61.

[448] Regulation, E. C., "No. 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC." Official Journal of the European Union. L 354 (2013): 22-61.

[449] Zander, Joakim, The application of the precautionary principle in practice: comparative dimensions. (Cambridge University Press, 2010).at 78. See Fisher, Elizabeth. "Precaution, precaution everywhere: developing a common understanding of the precautionary principle in the European Community." *Maastricht J. Eur. & Comp. L.* 9 ,2002, 24 -26

precautionary principle exclusively but are precautionary in the process of implementation. The environmental impact assessment (EIA) Directive is one of such regulations that are precautionary in approach.[450] The EIA Directive requires the promoter of a project, whether industrial, agricultural or infrastructural development, to provide detailed information on the possible consequences for air, water, soil, noise, wild animals and their habitats. Paragraphs 3 and 4 of Article 6[451] of the Habitat Directive[452] provides for procedural and substantive conditions that explains the decision-making process that should lead to the permitting or declining of activities that might be harmful to areas designated as protected zones. In the light of the provisions of paragraph 3 which subjects every activity that is likely to have significant effect on the protected habitat to appropriate assessment of the likely impact, the outcome of the assessment will determine if the competent authority will approve of the project or not. With the provision of paragraph 3, it appears to foresee that where there are uncertainties about the effect of the project on the protected area, the project will not be allowed. From the foregoing, the requirement of the precautionary principle seems to have been met in Article 6 of the Habitat Directive. However, this instance is a far-reaching example of the application of the precautionary principle in the Habitat Directive as where there is doubt as to the harmfulness of a project, the competent authority must decide in *dubio pro natura* and the project must not proceed.[453]

[450] Directive 2011/92 last amended by Directive 2014/52.

[451] Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.

If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest.

[452] Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. See http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:31992L0043 Accessed 29-03-18.

[453] Backes, Chris W., and Jonathan M. Verschuuren, "The precautionary principle in international, European, and Dutch wildlife law." *Colo. J. Int'l Envtl. L. & Pol'y* 9, 1998, 63.

The EIA process, as provided in Article 6(3) of the Habitat Directive which provides for a specific procedure of environmental impact assessment of plans or project that are likely to have effect on conservation sites,[454] has also been interpreted by the CJEU as integrating the precautionary principle.[455] In the light of its analysis of the provision of the Habitat Directive *vis-à-vis* the precautionary principle, the CJEU further explained the implication of Article 6(3) of the Habitat Directive that 'where doubt remains as to the absence of adverse effect on the integrity of the site", the Habitat Directive, in accordance with the precautionary principle, requires the appropriate authority to decline issuing the authorization.[456] These are some of the EU directives that may not mention the precautionary principle explicitly or make reference to applying precautionary measures, but in process or approach, the precautionary principle is integrated.

The strength of the application of the precautionary principle in the EU defines the threshold of uncertainty, seriousness of potential harm or damage and irreversibility of risks. While the constitutional provision for the application of the precautionary principle underscores the importance of the principle to the Community, it does not mean there is a consistent standard of requirement across the various EU Directives and regulations. For instance, the level of assessment in some Directives and regulations is so high that it prepares the process in anticipation of a situation where the precautionary principle will need to step in. An example of such regulation is Directive 2001/18[457] which establishes a prior approval mechanism for the deliberate release of Genetically Modified Organism (GMOs) into the environment. The initial assessment process involves consulting member states and reaching a consensus before a GMO and its allied products are released into the environment. The Directive 2001/18 stipulates that the assessment process will also not be consistent across all cases so that it will have the leverage of monitoring the different effects and potential risk that the release of GMOs pose to human health and the

[454] Nicolas de Sadeleer provided a comprehensive description of the procedure in de Sadeleer, Nicolas Michel. "Habitats Conservation in EC Law: From Nature Sanctuaries to Ecological Networks." (2005). 5 Yearbook of European Environmental Law 215-252.

[455] Waddenzee Case C-127/02, see paragraph 44 where the court ruled that Article 6 (3) implies that since the EIA regime assesses plans and projects that are likely to affect a conservation site, the conductor of the assessment must be able to identify or detect, according to the precautionary principle, damages that are yet to be ascertained.

[456] ibid para 57.

[457] EC. Directive 2001/18/EC of the European Parliament and of the Council of 12 March 2001 on the deliberate release into the environment of genetically modified organisms and repealing Council Directive 90/220/EEC-Commission Declaration. Official Journal of the European Communities, 2001; L106(17/04/2001):1-39.

environment.[458] Once the monitoring process reveals potential threat to human health and the environment, the basis for challenging such release as a precautionary measure is established.[459] This model of applying precautionary principle adopted by the Directive 2001/18 places the burden of proof on the proponent of a GMO to show that its release will not cause any harm to human health and the environment.[460] This process shows the strength of how the precautionary principle is interpreted in this instance, considering the fact that the authorities have sufficient information on the activity being challenged, based on the prior monitoring process, yet the burden of proving safety still lies with the proponent. Directive 2001/18 shows that the precautionary principle applies where there is more than zero risk and when there is lack of evidence of harmful impact, at least as at the time the Directive 2001/18 was issued.[461]

In furtherance to the literal interpretation of Directive 2001/18/EC on the threshold of uncertainty and the lack of evidence of harmful effect required to trigger the application of the precautionary principle, the CJEU, Court of First Instance and the European Free Trade Association Court have expounded in different cases that a preventative measure cannot properly be based on a merely hypothetical consideration of the risk, founded on mere conjecture that has not been scientifically verified. It is interesting to note that one of the instances where judicial decision has shown clarity on the forgoing issues, especially on the issue of threshold of risk, predates the year the Directive2001/18 was issued. In *Pfizer v. European Commission*, EC Regulation 2821/98 banned the use of four antibiotics as additives in animal foodstuffs on the grounds that there was a risk of increasing resistance to the antibiotics in animals and that such resistance could be transmitted to humans through consumption. Pfizer, the sole manufacturer of the antibiotic sought to challenge the regulation primarily on the ground that there had been an unlawful application of the precautionary principle. Pfizer argued that a scientific assessment of risk is condition precedent to the application of the precautionary principle and the conclusion or presumption upon which the Commission triggered the application of the precautionary principle lacks proper assessment and undermines a higher standard of proof than what is accepted by the Commission. The Court of

[458] Paragraph 18, of the Directive 2001/18/EC, "It is necessary to establish harmonised procedures and criteria for the case-by-case evaluation of the potential risks arising from the deliberate release of GMOs into the environment."
[459] Ibid, Paragraph 8 makes it mandatory that the precautionary principle be taken into account when implementing the Directive.
[460] Garnett, Kenisha, and David J. Parsons, "Multi-case review of the application of the precautionary principle in European Union law and case law." Risk Analysis 37.3 (2017): 502-516.
[461] Stuart Bell, Donald McGillivary, Environmental Law, 7th ed, Oxford University Press, Oxford, 2008) pp 69.

First Instance, disagreeing with Pfizer, ruled that while application of the precautionary principle cannot be based on hypothetical risk alone, it is acceptable where there is a risk even though the risk is not conclusively ascertained, as a zero risk does not exist.[462]

In the protection of marine resources in the EU, the Maritime Strategy Framework Directive (Maritime Directive) was issued in 2008 as one of two instruments adopted to offer a comprehensive and integrated approach to the protection of all European coasts and marine waters.[463] The Maritime Directive explicitly directs Member states to be guided by the precautionary principle in implementing programmes of measures in the protection of their marine resources by stating that "Member States should then establish and implement programmes of measures which are designed to achieve or maintain good environmental status in the waters concerned, while accommodating existing Community and international requirements and the needs of the marine region or sub-region concerned. Those measures should be devised based on the precautionary principle…"[464] Its process of implementation has similarity with that of the earlier Directives reviewed. Emphasis is placed on prior scientific analysis and assessment of marine waters by member states in order to identify the unique characteristics of each of the marine regions. Again, the suggestion that implementation will be a case-by-case basis is evident in the provision of the Maritime Directive, which also satisfies the earlier argument that there is no blanket standard set by any of the EU statutes or regulations for the application of the precautionary principle by Member states.[465]

However, just as the process of application of the precautionary principle differs based on different sectors and situations, the standard of proof set out for invoking the precautionary principle varies from weak to strong. Standard of proof may be high or low while strength of application may be

[462] *Pfizer Animal Health SA v Council of the European Union* (2002) Case T-13/99, ECR II-3305 http://curia.europa.eu/juris/showPdf.jsf?docid=104172&doclang=EN. Accessed 15-06-19. Similar decision on the determination of the threshold of risk through assessment was given by the court in Case T-70/99; *Alpharma v Council* (2002) ECR II-3495.

[463] Directive 2008/56/EC of The European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive) http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:164:0019:0040:EN:PDF. Accessed 15-06-19.

[464] Ibid, Paragraph 27

[465] Ibid, Paragraph 11

weak or strong.[466] The Marine Directive is an example of an EU Directive with a low standard of proof considering its provision in Paragraph 11:

> Each Member State should therefore develop a marine strategy for its marine waters which, while being specific to its own waters, reflects the overall perspective of the marine region or sub-region concerned. Marine strategies should culminate in the execution of programmes of measures designed to achieve or maintain good environmental status. However, Member States should not be required to take specific steps where there is no significant risk to the marine environment, or where the costs would be disproportionate taking account of the risks to the marine environment, provided that any decision not to take action is properly justified.

A strong application of the precautionary principle is expected of members with a low standard of proof. Even the cost benefit proportion that Members should consider in deciding the application of the precautionary principle gives them such a wide leverage for a high-risk sector such as the Marine sector. However, the standard of proof in the Maritime Directive is in contrast with some other EU regulations that require high standard of proof and where firm scientific evidence, a weighting of costs and benefits, and other considerations that are crucial for the effectives of measures to be applied. For example, in Directive 2013/30[467] on offshore safety regulations provides that *"operators are expected to reduce the risk of a major accident as low as reasonably practical, to the point where the cost of further risk reduction would be grossly disproportionate to the benefits of such reduction*." An assessment of the "appropriateness" of action through consideration of the effectiveness, costs, and benefits of measures to achieve the desired level of precaution is implicit within the Directive 2013/30.[468]

### 5.3 Summary

The EU has a strong consumer protection system which forms a general basis for regulating what is eaten or traded for consumption within the EU. Beyond price regulation and protection against exploitation by monopoly of big establishments, the protection mechanism of the EU also ensures

[466] Garnet, *supra* note 460 at pp 9 where tabular analysis of strength of application of the precautionary principle in EU law is examined.
[467] Directive 2013/30/EU of The European Parliament and of The Council of 12 June 2013 on safety of offshore oil and gas operations and amending Directive 2004/35/EC, http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:178:0066:0106:en:PDF. Accessed 18-05-19.
[468] ibid

the quality of what the people consume conforms to the safe standard set by the relevant institutions within the EU bureaucracy.

In the year 1975, the EU initiated an initial program for consumer protection through the Council Resolution 14. The program evolved rapidly and expanded in coverage bringing under it product safety, digital market, financial services, food safety and labelling, energy, travel and transport. The internal market objective and how it stands with national or public interest faced a landmark test with the Cassis de Dijon case where German liquor importer was refused permission to import 'cassis de dijon' liquor into Germany from France, as 'cassis de dijon' would violate German law requiring fruit liquors to contain a minimum alcohol volume of 25%.[469] The query was if Article 34 TFEU which provides that *"quantitative restrictions on imports and all measures having equivalent effect shall be prohibited between Member States*" has been breached. The CJEU found that under the principle of mutual recognition, a product lawfully marketable in one Member State (France) should be freely marketable in another Member State (Germany). Having enacted a measure within the scope of Article 34 TFEU, the CJEU found that such a measure could no longer be justified only under Article 36 TFEU (an exhaustive list of grounds). However, the CJEU introduced the concept of 'overriding reasons of public interest' (ORPIs) – grounds of justification to act in addition to the Article 36 grounds of the TFEU. The CJEU introduced in this case "*necessary in order to satisfy mandatory requirements relating in particular to the effectiveness of fiscal supervision, the protection of public health, the fairness of commercial transactions and the defence of the consumer*." This decision further provides clarity on the legal leaning of the EU in respect of factors that can trigger the restriction of trade by a member State of the Community, of which such restrictive measure can be taken as applying the precautionary principle.

[469] Cassis de Dijon [1979] Case 120/78

# CHAPTER SIX

## 6.0 IMPLICATIONS OF THE INCONSISTENCIES IN THE APPLCATION OF THE PRECAUTIONARY PRINCIPLE IN INTERNATIONAL TRADE LAW.

This chapter examines the distinctive functional features of the precautionary principle in the EU law and its passive tone in WTO law in comparison with how international environmental law qualifies the principle to function. There is a comparative study on how the principle is applied in the three legal regimes to understand the possible areas of alignment and gaps that form the basis for past, present and potential international trade disputes.

Furthermore, it is observed that more bilateral and multilateral trade blocs are being formed or restructured to pursue collective international trade objectives. It is important to understand how the individual legal positions of the parties to such trade or economic blocs, as regards the application of the precautionary principle to environmental protection and consumer health protection are likely to affect or presently affecting the implementation of the agreements by the parties. The implication of the precautionary principle on international trade between states is better understood by first identifying the inherent inconsistencies in legal perspectives of states, trade organizations and trade blocs on the application of the precautionary principle in international trade. Much of the divergence in perspective is between the WTO and the EU. Because both set different standards for the different interests they are established to protect, there are conflicts on how they apply their individual precautionary standards. Since the EU applies the precautionary principle as part of its statutory standards, it is expected that there will be imbalance with the standards of other countries with whom they enter into Economic Partnership Agreements. This chapter analyzes the implications of such imbalances, particularly as they affect developing countries.

### 6.1 Conflicts between the WTO and EU Law

The fundamentals that stress the institutional essence of the WTO and the EU have been explored distinctively and the two major end points can be identified in relation to both organizations: market liberalization for the WTO and market integration for the EU. A common feature which characterizes such organizations is regulations. However, another distinction which also reflects the core objectives of each of the two organizations is the regulatory approach they adopt. The

WTO adopts a multilateral regulatory approach to achieving its objective of engendering liberal market cooperation amongst its members while at the same time pursuing an agenda of attaining regulatory heterogeneity in the national trade laws of its members. In the case of the EU, the statutory approach ensures member states subscribe to the treaty, regulations directives, and communications of the EU in their trade relationships with countries outside the EU. However, the EU allows its policies - which often provide the pathway to secondary legislations, to be open to contestations. This in essence makes the EU to be democratic in the process of standardization and application through judicial and administrative procedure. In contrast, the WTO takes an unwavering stand in deference to 'outside' international standards that contests propriety of its own defined standards. As seen in the Shrimp/Turtle case, its adjudicatory bodies take into consideration the primary objective of the WTO in deciding fairness of the case of a member applying measures under a multilateral environmental agreement.

The structural approach of both organizations distinctively sets courses that projects towards undermining the autonomy of states to make trade regulations and create trade relationships in line with national regulations. The forgoing can be seen in similar provisions contained in the WTO Agreement and the EU Treaty. Specifically, Article 34 (former Article 28, TEC) of the TFEU prohibits quantitative restrictions on imports and all measures having equivalent effect by any of the member-states.[470] Similarly, the WTO prohibits trade restrictions by members that are discriminatory or appears to promote protectionism in Articles XI, I and III of the GATT. Article III of the GATT provides:

> The products of the territory of any contracting party imported into the territory of any other contracting party shall be accorded treatment no less favorable than that accorded to like products of national origin in respect of all laws, regulations and requirements affecting their internal sale, offering for sale, purchase, transportation, distribution or use. The provisions of this paragraph shall not prevent the application of differential internal transportation charges which are based exclusively on the economic operation of the means of transport and not on the nationality of the product.

[470] The CJEU interpreted this provision as "all trading rules enacted by member states which are capable of hindering, directly or indirectly, actually or potentially, community trade" between Member States. See Judgment of the Court of 11 July 1974. Procureur du Roi v Benoît and Gustave Dassonville. Reference for a preliminary ruling: Tribunal de première instance de Bruxelles - Belgium. Case 8-74. ; European Court Reports 1974 -00837.

However, while the WTO structures its regulatory course with a focus on forging existing and new market relationship through deregulation mechanism, the EU builds its structure around objectives that merge competitive markets with social interest responsibilities. For example, though the EU remains a vibrant energy market even for operators in the energy sector outside the territory of the EU/EEA, it has set an agenda that presents a strategic long-term vision for a prosperous, modern, competitive and climate-neutral economy by 2050.[471] According to the communication of the EU, the EU Climate-Action agenda strategy places Europe ahead of others in the pursuit of climate neutrality with its plan to invest in sustainable technological solutions, empowering citizens, and aligning action in key areas such as industrial policy, finance, and research, while ensuring social fairness for a just energy transition.[472]

In respect of how standardization of market integration is achieved by the EU, the policy coordination instruments of the EU play the main role of first harmonizing legislations that are related to the areas for regulation, in this case trade and environment. Though it is generally thought that the EU understands diversity as a prominent factor and thus pursue policy coordination approach to harmonization of national standards that seek to reconcile the economic objective of market integration with regulatory diversity of members. In real terms, the best the EU has been able to achieve is the adoption of an EU social strategies and joint social plans which are implemented by the Open Method of Coordination (OMC)[473] The OMC is a soft instrument that is being applied to ensuring best global practice in advancing standards at the national levels within the EU through the coordination of Ministers.

On the part of the WTO, it is not concerned primarily with standardization of process or products of international trade. Article 20 of the GATT allows governments to act on trade in order to protect human, animal or plant life or health, provided they do not discriminate or use this as disguised protectionism. Nevertheless, as earlier discussed in chapter four, it recognizes international standards set by 'outside' international agreements members subscribe to and national standards

[471] EU Climate Action, 2050 long term strategy. https://ec.europa.eu/clima/policies/strategies/2050_en. Accessed 30/01/2020.
[472] i*bid*
[473] It was agreed under the OMC that it should be applied to areas outside economic and trade integration policies. But recently some analysts are calling for the expansion of the method to Fiscal planning. See Renaud Thillaye, Coordination in place of integration? Economic governance in a non-federal EU, Working Paper no 32 www.wifo.ac.at/bibliothek/archiv/36247/WWWforEurope_WP_032.pdf. Accessed 20-06-20.

that members set and its adjudicatory body recognized after contestation. Whereas the WTO TBT Agreement recognizes the sovereign right of its member to use international standards in making trade related regulations, it also determines how the standards are compatible with its mandate and how such standards are applied. This has been a cause of tensions between members, especially between the EU members and other members of the WTO. The conflict here is between how the EU sets and enforces its environmental standards and the extent to which the WTO TBT tolerates international standards by members in coordinating the equilibrium that its perceived "flexibility" seek to achieve between the interest of maintaining a liberal market and the public interest of protecting consumer health and the environment. The preamble of the TBT Agreement recognizes the right of government to take measures that are necessary in achieving their national policy objective. However, the WTO is not in a position to question or object to the diverse approach member states adopt in their application of international standards set by MEAs and other trade related agreements outside the WTO.

Unlike the EU that has adopted the approach of harmonization, the WTO has to contend with the different disputations because it was never part of its mandate to manage the diverse kinds of exigencies that could compel national governments to restrict some aspect of liberal international trade exchange they subscribe to as members of the WTO. Examples of disputes that have exposed the hole in the standardization approach of the WTO can be seen in these three disputes involving the EU. First, in a trade dispute that concerns application of international grading standard for olive oil, the United States and European Union challenged one another on measures applied which each believe apparently deviated from international standards for grading.[474] At the heart of the dispute was the applicability of International Olive Council (IOC) olive oil grading standards (specifically for fatty acid composition) to an olive oil standard being set by the Codex Alimentarius Commission (CODEX). It was the argument of the United States that while the measure the European Union was applying was in accordance with the IOC standards, it did not recognize the IOC standard to be an internationally recognized standard-setting body, since IOC standards reflected the interests of European and Mediterranean countries (IOC grading standard reflected input exclusively from its members in European and Mediterranean countries). Conversely, the European Union accused the United States measure of diverging from the CODEX standards.

[474] United States – Olive Oil (G/TBT/N/USA/395); EC - Marketing Standards for Olive Oil (G/TBT/N/EEC/226).

Second, a number of Members, including China, Japan, Korea and the European Union raised concerns as regards U.S. regulation for the transportation of lithium batteries by air.[475] They complained that the United States set more restrictive transportation packaging requirements, which is beyond those laid out in international standards set by the International Civil Aviation Organization (ICAO). The United States did not argue on the issue of not following ICAO standards; indeed, the U.S. agreed that the measure was designed to achieve a higher level of protection which is precautionary in character against the specific risk of lithium batteries catching fire when transported by air. The United States argued that the ICAO standard setting process was procedurally flawed, since it did not take account of all relevant scientific information, and thus lead to a standard that was deficient from a technical perspective. Furthermore, it cited the non-fulfillment of the consensus requirement by the ICAO as a standard of the TBT Committee Decision on principles for developing international standards (decisions in the ICAO are taken by voting).

Third, the European Union raised an objection to a Mexican draft standard for glazed pottery, ceramics and porcelain,[476] which stipulated more stringent lead and cadmium limits than those laid down in the relevant international ISO standards (ISO 6486-1/2). Specifically, the European Union was concerned that Mexican authorities would no longer accept test results accompanying EU ceramic tableware conducted in compliance with these ISO standards. Mexico explained that while its draft standard was partially based on the ISO standards, it deviated in certain aspects due to a greater level of health protection required by Mexico, and due to the circumstances of Mexico as a developing country. This action by Mexico was also precautionary in character as a developing country has a higher health risk as a developing country that lacks the kind of medical infrastructure that will be needed to respond to any exigencies that may arise.

The above three cases are illustrative of the conflicts that arise as a result of following standards that are harmonized under EU regulatory system related to trade or international standards recognized by the EU and international standards members of the WTO adopted and recognized as such by the WTO. The uniqueness of the EU's harmonizing legislation approach and how it relates with the member states is such that the international standards Members subscribe to

[475] United States – Hazardous Materials: Transportation of Lithium Batteries (G/TBT/N/USA/518)
[476] Mexico – Standard for Glazed Pottery Ware, Glazed Ceramic Ware and Porcelain Ware. Draft Mexican Official Standard PROY-NOM-231-SSA1-2015.

outside the EU reflect the proportional freedom they enjoy under the free movement rules. I use the word "proportional" owing to the fact that CJEU recognized the freedom of movement as a qualified one with respect to goods because the standard approved for environmental protection remains an "imperative requirement" which may place a constrain on the effect of Article 28 (ex-Article 30) EC and subject to the principle of proportionality. [477] The application of the precautionary principle falls under such environmental standards that, though principle of law in the EU law, the flexibility offered by the EU system allows the member states to apply it proportionally. The WTO appears to model its system as though such flexibility exists amongst his members. Conflict arises where the interpretation of the international standard by the WTO adjudicatory body is different from that of the EU.

Questions of why conflicts exist in the interpretation of international standards by the EU and the WTO has been outlaid in the form of examining the legal perception of both bodies and their approaches. The two bodies are both free-market oriented, but the EU has shown a more willing attitude through its organs, including the CJEU to allow international instruments formulating international environmental standards such as the precautionary principle remain part of international trade regulatory mechanism or regime. In contrast, the WTO through its Appellate Body has shown a shaded unwillingness to grant international standards the recognition that will strengthen the members democratizing their mechanism of upholding such standards. Even in the alternates to international standards such as Multilateral Environmental Agreements that WTO members are signatories to, the Appellate Body has not been direct in providing clarity on the status of the obligation such MEA impose on parties. It can be argued by some that the WTO has allowed international agreements that set up international standards by mentioning the SPS Agreement. Also, it can be said that Article 3.3 SPS Agreement allows members to introduce measures which could be precautionary, resulting in a higher level of protection than could be achieved by measures based on international standards, provided there is a scientific justification, or because of the level of protection a Member sees as being appropriate, in accordance with Article 5 of the SPS Agreement. Indeed, the provision of Article 3 of SPS Agreement appears to bring the WTO close to the harmonization approach of the EU. But the interpretation of the

[477] See the cases of *Gianni Bettati v Safety Hi-Tech* Srl [1998] Case C-341/94 ECR II-4355, for recognition that environmental protection is a mandatory requirement recognized by EU law; *Commission v Denmark* [1998] Case 302/86, ECR 4607.

Appellate Body looked beyond the text of the SPS Agreement, instead it considered the object and intent of the SPS Agreement in in its holistic form. This is evident in the decision of the Appellate Body in the EC Hormones case where the Appellate Body identified and described Article 3 of the SPS Agreement in broad terms as having the primary "purpose of promoting the harmonization of the SPS measures of Members on as wide a basis as possible, while recognizing and safeguarding, at the same time, the right and duties of Members to protect the life and health of their people…."[478]

The precautionary principle being part of the standardization mechanism that has influenced regulation of international trade by the WTO and the EU has struggled to find the right balance between the free market objectives of both organizations and environmental protection measures objectives of the EU basically because of the intractability of finding common ground in the different mandates of the two bodies. From what is seen in the study of the precautionary principle in the EU and its application in relation to international trade under the WTO, the confusion lies in the legal reasoning that forms the basis for its application in the EU and the lack of a definite correlative legal reasoning that forms the premise for application of the principle in international trade. This intractability will continue to exist until the broad leverage of interpretation of the applicability of the principle by the CJEU and the Appellate Body of the WTO is streamlined more along the borders of rational legal interpretation and scientific reasoning. This is important considering the fact that the CJEU has identified two stages that must be followed when making decisions in situations that should require the application of the precautionary principle.[479] First, choosing the level of protection it considers acceptable, in the light of not just scientific evidence but other social, political or other factors, and second, risk assessment that must be made by the Community institution before it decides what measures are necessary in order to achieve the level of protection it has chosen. Of the two, only one is subject to strict technical analysis. The first one is open to political options that political bureaucrats may find appropriate at their own discretion. It further strengthens the suspicious disposition of the WTO to the application of the precautionary principle to international trade. Expectedly, the applicability of the principle in the EU will continue to be strengthened because it is being practiced on tested course that have experienced substantial judicial interpretations.

[478] Appellate Body, EC-Hormones, para. 165
[479], Pfizer v Council [2002] Case T13/99, ECR II- 03305

## 6.2 Implications of the EU Precautionary Principle on International Trade Agreements

International trade has assumed a dimension that goes beyond the affiliations of nations under the regulatory watch of the WTO alone. Besides the regional trade blocs such as the European Union and Economic Community of West African States (ECOWAS), the practice of multilateralism and bilateralism in international trade relations has given rise to countries coming together to form new multilateral and bilateral trade relations through Economic Partnership Agreements (EPA) or Free Trade Agreements (FTA) which are brokered without direct WTO moderation. These agreements in most cases cover trade, economy and investment and not political, social or security association. Conceptualization and implementation of these EPAs and FTAs are associated with several challenges such as conflicts of standards, conflicts of trade laws, choice of dispute settlement mechanism and dynamism of national politics. At the center of all the aforementioned is the interest to protect regulatory sovereignty.

There are three main types of EU trade agreements:[480]

1. Customs unions aim to eliminate customs duties in bilateral trade and establish a joint customs tariff for foreign importers.

2. Association Agreements, Stabilization Agreements, (Deep and Comprehensive) Free Trade Agreements and Economic Partnership Agreements aim to remove or reduce customs tariffs in bilateral trade.

3. Partnership and Cooperation Agreements aim to provide a general framework for bilateral economic relations and leave customs tariffs as they are.

The EU has about 39 trade agreements in place and several others still being negotiated.[481] With the uniqueness of the EU as the largest free trade market in the world with peculiar legal structure and status as a supranational organization, it is placed in a position that pitches its high environmental, consumer health and safety standards against the standards and regulations of other countries with whom it shares partnership and trade agreements. Consequently, the precautionary principle being a principle of law in the EU law; interpreted and applied in areas beyond

[480] European Commission, Negotiations and Agreements https://ec.europa.eu/trade/policy/countries-and-regions/negotiations-and-agreements/. Accessed 04/02/2020.
[481] Ibid, this is as at 5 November 2019.

environment, will remain a source of tension within parties to trade agreements involving the EU as long as the EU maintains its strict stand on the application of the principle. Even where in agreements parties subscribe to the status, there will be difference in the level and area of application. For example, the variance in approaches, interpretation and application of the principle across the Atlantic is one of the issues hindering the progress of the negotiation of the Transatlantic Trade and Investment Partnership (TTIP) between the European Union and the United States. To further illustrate the forgoing, the EU, in following its EU Regulation (EC) No 1107/2009 imposed a partial restriction of the use of a class of chemicals known as the neonicotinoid insecticides (Neonics). Neonics are a class of systemic insecticides (taken up by all parts of the plants to which they are applied), which attack the central nervous systems of plant eating with fatal effect, but with none of the environmental persistence or high mammalian toxicity associated with the previous pyrethrin, pyrethroid, organophosphate and organochlorine alternatives.[482] Council Directive 91/444/EEC and Commission Directive 2010/12/EU initially allowed certain substances listed in Annex 1 of the former as "Active Substances Authorized for Incorporation in Plant Protection Products," while by secondary legislation the later added a number of Neonics to this Annex thereby permitting their use in plant products in the European Union. The restrictions were made following a report of EU Commission through the European Food Safety Authority which reviewed the evidence on the effect of Neonics on bee colonies.[483] Article 1(4) of the EU Regulation (EC) No 1107/2009 which introduced the restrictions explicitly stated that it's based on the precautionary principle:

> The provisions of this Regulation are underpinned by the precautionary principle in order to ensure that active substances or products placed on the market do not adversely affect human or animal health or the environment. In particular, Member States shall not be prevented from applying the precautionary principle where there is scientific uncertainty as to the risks with regard to human or animal health or the environment posed by the plant protection products to be authorized in their territory.

[482] Going by the description of the United State Agency. See United States Agency for Toxic Substances and Disease Registry, https://www.atsdr. cdc.gov/phs/phs.asp?id=785&tid=153 (pyrethrins and pyrethroids), http://www.atsdr. cdc.gov/substances/toxchemicallisting.asp?sysid=39 (organophosphates) and http:// www.atsdr.cdc.gov/PHS/PHS.asp?id=353&tid=62 (organochlorines). Accessed 04/02/2020.

[483] Statement on the Findings in Recent Studies Investigating Sub-lethal Effects in Bees of Some Neonicotinoids in Consideration of the Uses Currently Authorised in Europe, 10EFSAJ.2752 (2012) See online at https://www.efsa.europa.eu/en/efsajournal/pub/2752. Accessed 04/02/2020.

Except the United Sates accepts and adopt the scientific information that led to the restriction, American companies producing the restricted chemicals will bring a claim of failure to accord fair and equitable treatment against the EU under the term of the TTIP draft investment protection section.[484] It should be noted however that the TTIP is presently not making any progress in negotiations due to the stand of the present U.S. Administration. This is an illustration of what could be the implication of the precautionary principle as applied by the EU on many other international trade agreements the EU is implementing or negotiating.

The EU in some other specific trade agreements has ensured that it remains free to apply the precautionary principle. For example, in the EU-Japan Economic Partnership Agreement, which is a Free Trade Agreement, the right of the EU to apply the precautionary principle is ensured through:[485]

1. A statement to this effect in the Trade and Sustainable Development Chapter, with regard to environment and labour;
2. References to the right to regulate and to the principles underlying the regulatory regime of each party. This means that the parties fully preserve their right to regulate for public policy purposes, including public health, safety or the environment, or
3. General exceptions that allow the parties to take measures to protect human, animal, and plant life or health or the environment.

### 6.3 Concerns for Developing Countries: Justified or Not?

A general understanding of standards across Member states that are part of an MEA naturally represents the consensual disposition of individual members that ratifies such MEA. However, the course of implementation is bound to reveal the gaps in capacity, tenacity, and sustainability of the standard agreed on in relation to the perceptive and real situation of each Member state. The precautionary principle has given many developing countries cause to be concerned on several fronts that bothers on how its application can threaten their economic development, increase

[484] See EU Commission, TTIP draft text, http://trade.ec.europa.eu/doclib/docs/2015/september/tradoc_153807.pdf Accessed 04/02/2020.
[485] The Precautionary Principle in the EU-Japan Trade Agreement. See online at trade.ec.europa.eu/doclib/docs/2017/july/tradoc_155718.pdf Accessed 04-02-2020.

development and transaction costs, and rationalize expenditures at the expense of environmental protection. There has been no common understanding as regards the extent to which governments can unilaterally apply standards that are precautionary in approach in the protection of environment and health of consumers, especially when such measure interferes with international trade. Developing countries that trade in export of plant and animal products are having a difficult time accessing markets of developed countries that are applying the precautionary principle due to the high safety standard requirement for processing and packaging - especially the EU. For example, in 2016 the EU banned 26 Nigerian food products on health and safety grounds, which proved extremely convenient for EU farmers and processed food manufacturers.[486] Developing countries that have their fishing industry as a major export produce and serviced by subsistence, artisanal and commercial operators too are in a very disadvantage position as a result of the application of the precautionary principle to management of fisheries. This is because, even if these countries recognize the need for the application of precautionary measures to curb over-exploitation, they lack necessary legal and institutional capacity and cannot afford the cost of the scientific innovation that can adequately fill them into a position that is acceptable for developed countries.[487] Also, these countries are not able to pursue their complaints under the DSU in a way that will guarantee a fair decision, considering the enormous resources at the disposal of the developed countries they are standing up to.[488]

Despite the genuine concerns of developing countries, the application of the precautionary principle can be likened to a two-way traffic; one going in its direction for its benefit and the other going against its interest. It could help them assert their own precautionary measures in the face of what they perceive to be potential health and environment hazard. For example, the GMO technology is still viewed with suspicion by some developing countries who do not trust the technology to be safe for their people. This was evident in the response of some African countries – including Malawi, Mozambique, Zambia and Zimbabwe – to the intervention of the international community when some countries donated maize derived from GM seeds in the wake of the 2002

[486] Keith Boyfield, Turbo-charging the Nigerian economy (Part 1), iea, available online at https://iea.org.uk/turbo-charging-the-nigerian-economy-part-1/. Accessed 07-04-20.

[487] Lim Tung, Odile Juliette, "Rethinking the Regulation of Environment Impact Assessment and Precaution in Mauritius." *Journal of African Law*, vol. 61, no. 2, 2017, pp. 227–251., doi:10.1017/S0021855317000110.

[488] Understanding on Rules and Procedures Governing the Settlement of Disputes, Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations, Apr. 15, 1994, Legal Instruments. Results of The Uruguay Round vol. 31, 33 I.L.M. 112 (1994), Annex 2 [hereinafter DSU].

and 2004 famines.[489] Considering the growing penetration of the biotechnology in the economy of developed countries, the attendant trade implications of its rejection by majority of developing countries have not been gauged in other to find an internationally accepted approach to achieve proportionality in precautionary measures applied.

The configuration of the precautionary principle in the SPS Agreement leaves a lot of room for interpretative manipulation that benefits developed countries applying the principle. For example, Article 5.7 of the SPS Agreement used the term "pertinent information" without any definitive qualification of what information can be pertinent enough to justify the precautionary measure a member can apply. There is no judicial interpretation either of the term in the light of thresholds that should warrant the precautionary principle. This allows members to take actions based on information that they produced and can defend. The only factor that can work for the advantage of developing countries in the event of a developed country using the seemingly wide discretion created by the vagueness of the terms in Article 5.7 of the SPS Agreement is the fact that the application of the precautionary principle to internal trade is subject to international trade rules of principle of good faith, the transparency requirement, and necessity test, as non-compliance with these rules makes the precautionary measure applied lack any legal backing. This will particularly be challenging for African countries now that the AfCFTA has taken effect and African countries will be seeking to take advantage of the European market as part of the EPAs they have signed with the EU. The EU has an organized standard which may be very difficult for African countries to comply with for them to fairly participate in bilateral trade. Where the EU decides to invoke the precautionary principle in the event of an incident that the EU adjudges to border on consumer health and safety, African countries may be helpless even at the WTO. The case may not be different with Mexico as the developing country in the USMCA it has with the United States and Canada. Whereas Canada and the United States have the capacity and mechanism to use the provisions of the SPS Agreement in genuine and less genuine circumstances, same cannot be said of Mexico.

[489]Calestous Juma, "Science and Technology: The New Age of Biodiplomacy", Georgetown Journal of International Affairs, Winter/Spring 2005, page 109.

## 6.4 Final Analysis and Conclusion

This thesis has described the origin, examined the level of recognition and analyzed the relationship between the precautionary principle and international trade. The following paragraphs are general summation of my analysis of the implication of the principle on international trade.

As international trade in the twenty–first century struggles to find a balance between globalization and multilateral traditionalism under the regulatory auspices of the WTO, the undefined standard of precautionary measure that states can apply leaves international trade within the precinct of protectionist tendencies. The direction of the global economy is becoming more concentrated on multilateral trade relations such as either embolden national regulations or allow concessions that weakens standards that are generally accepted depending on the objectives of the parties. The importance of the precautionary principle to environmental protection and consumer health has not been disputed by parties that have had reasons to oppose measures applied on its basis at the WTO. However, the common questions have been its applicability to decisions relating to trade and the varying degree of standards that should justify its application. The EU, being the world's largest free market, recognizes the precautionary principle as a principle of law and applies it strictly in its internal and external trade relations. This further gravitates the argument of the sustainability of WTO anti protectionist mandate towards the legal reasoning of proponents and opponents of the precautionary principle.

The EC-Hormones case provides a further projection of the precautionary principle beyond environmental protection. The expanded scope of the principle presents a view of how much effect the principle will have on international trade relationships. It has triggered an implicit tension between free international trade and protection of the environment such that the WTO is being subjected to assume jurisdiction over issues regarding environmental interest of members.[490] This has set off a circle of legal disputes that could continue to come before the WTO in different

[490] The primary Jurisdiction of the WTO dispute settlement mechanism DSM as prescribed by Article 23 of the DSU is to resolve disputes arising from the violations of the agreements covered by the WTO. Also, Article 3.8 provides that the jurisdiction of the WTO-DSM is compulsory and quasi-automatic, i.e. when bringing a claim to the WTO-DSM, the challenging Member in a dispute is not required to prove any specific economic or legal interest in that dispute, or evidence of any negative trade impacts caused by the challenged measure. See Gabrielle Marceau, The primacy of the WTO dispute settlement system available online at http://www.qil-qdi.org/the-primacy-of-the-wto-dispute-settlement-system/. Accessed 28/02/2020.

shades. It shows that the increasing prominence of the precautionary principle will surely result in more members applying it to situations that the WTO may not have traditionally envisage. This is particularly so as the multilateral trading system as embodied in the WTO opens the international trade market to products and services that members agree to exchange in commercial transactions. The implication is that there are no restrictions to how science can influence the relationship between trade and environment and no restriction to the nature of products that could be introduced into the market. The forgoing will always pitch the flip side of the precautionary principle against the liberal goals of international trade. The WTO will often find itself in a position where it struggles to ensure the essence of liberal trade system is not eroded by what could be justifiable trade-environment measures applied by members until there is a clear legal understanding that defines the relationship between the precautionary principle and international trade. Until a definitive place for the precautionary principle in international trade is determined, there will be suspicion of it being used to promote protectionist agenda and indeed it will remain open to abuse.

It is observed in the EC-Hormones case that the WTO panel adopted a pragmatic disposition to interpreting the disciplines under the SPS measures Members can impose on international trade. Upon appeal, the Appellate Body opted for a restrictive interpretation of the disciplines but recognized the right of Members to impose SPS measures upon fulfilling the requirements stated by the Panel. This discretion granted Members by the Appellate Body contributes to the complications in international trade by not proffering only measures that are scientifically balanced with likely effect assuming the measures are not taken. Even with the presence of the risk assessment requirement as stated by the Panel and emphasized by the Appellate Body, objectivity has a very slim space in the process with the extent of leverage the Member imposing the measure has over the other Members that stand restricted by the measure imposed. It is same wide latitude of discretion that is causing the misinterpretation of the Appellate Body on the application of the precautionary principle by Members as if it is an integral principle of law formulated to be inclusive of international trade. The main link connected to international trade that could relate to the precautionary principle is consumer health protection. It is on the forgoing premise that the Appellate Body, though acknowledged the plausible interpretative role of the precautionary principle in understanding the SPS Agreement under Article 31.3(c) of the Vienna Convention in the absence of its specific formulation or articulation in any of the trade related agreements under the WTO, it did not subscribe to its extended latitude of application beyond environmental law as

contained in Principle 15 of the Rio Declaration. Even with the carefulness of parties at the WTO/DSB not referring to the precautionary principle in the light of the Principle 15 Rio Declaration as primarily a principle of international law, the Appellate Body in the EC-Hormones case still objected to using the precautionary principle as a substantive norm for regulating international trade.

The implication of the interpretative context of associating the precautionary principle with international trade further exposes international trade to danger of a myriad of disputes arising from Members who read the application of the principle into the provisions of the GATT and the SPS Agreements to justify measures that could be pursuing protectionism. For example, in the case involving India and the United States, India cited the precautionary principle with reference to the balance of payments in trade between the two countries.[491] In an extreme interpretative application of the precautionary principle, India asserted that the quantitative import restrictions imposed by it is a precautionary measure in order to prevent a destabilization of its balance of payments. In its claim, India argued that the precautionary principle is integrated in GATT Article XVIII.11 through an interpretative note. It further hinged its argument in line with the submission of the Appellate Body's decision in the EC-Hormones case. In rejecting the argument on the interpretative context of the precautionary principle, the Panel restricted itself to providing a technical interpretation in reference to the GATT Agreement's Notes and Supplementary Provisions in the case of Article XVIII.11 which offers some rights to developing countries to restrict imports when their balance of payment is dangerously against their economic well-being. Consequently, the Appellate Body rejected the application of the precautionary principle as interpreted by India as it ruled that such precautionary measures can only be justified in circumstance that are specifically defined and not a general possibility of a deterioration of the balance of payments in the absence of the suggested measures. This is a classic example of how the precautionary principle can be abused in the absence of a clear articulation of its relationship with international trade regulation.

The WTO Panels and Appellate Body do not follow strictly the precedential approach and this factor contributes to its interpretation of the precautionary principle in the SPS Agreement. This is

[491] Inde-Restrictions quantitatives à l'importation de produits agricoles, textiles et industriels, rapport du Groupe spécial, 6 avril 1999, WT/DS90/R, para. 3.189 et 3.207.

evident in the disparity in interpretation provided in the SPS disputes.[492] For example, the Appellate Body in EC-Hormones case suggests recognizing the precautionary response of governments to situations that appear to be life threatening to be natural and so not necessarily one that is prompted only or majorly by the recognition of the precautionary principle when it held that "responsible, representative governments commonly act from perspectives of prudence and precaution where risks of irreversible, e.g., life-terminating, damage to human health are concerned".[493] On one hand, this presents as a latitude of leverage for Members to institutionalize the precautionary principle into individual national systems. On the other hand, it gives an intonation of "nothing new about this" but void of definite operational roles in the field of international trade law. The Panel in *US/Canada-Continued Suspension*[494] continued the disparity trend in its interpretation of the precautionary principle when it held that the condition to "make relevant, previously sufficient, evidence now insufficient" was that "there must be a critical mass of new evidence and/or information that calls into question the fundamental precepts of previous knowledge and evidence".[495] However, the Appellate Body found the interpretation of the Panel too inflexible and requiring quantitative qualifications that supports a "paradigm shift"[496]. This trend exhibits a non-definitive precedential interpretation of the relationship of Members' rights to introduce measures that their national law deems necessary for public interest and their obligations under the WTO law, especially considering the requirements identified in Article 5.7 of the SPS Agreement. The implication of the forgoing in the positive sense is that it allows the WTO/DSB the flexibility to be amenable to developing situations that will further cause parties to come before it with new scientific and legal reasoning that could help in distilling the present quantitative interpretation of the SPS Agreement as regards the application of the precautionary principle in international trade. The negative effect could be an unfair and very disproportionate advantage of developed countries over developing countries when there is a dispute that requires

[492]Wagner, M., "Law Talk v. Science Talk: The Languages of Law and Science in WTO Proceedings", Fordham Int. Law J. 2011, 35, 151–200.
[493] EC-Hormones Appellate Body Report para 124.
[494] WTO Panel Report. United States—Continued Suspension of Obligations in the EC—Hormones Dispute [US—Continued Suspension]; WT/DS320/R, adopted 31 March 2008; World Trade Organization: Geneva, Switzerland, 2008.
[495] Ibid, para 7.648.
[496] WTO Appellate Body Report. United States—Continued Suspension of Obligations in the EC—Hormones Dispute [US—Continued Suspension]; WT/DS320/AB/R, adopted 16 October 2008; World Trade Organization: Geneva, Switzerland, 2008 para 703

a higher degree of technical evidential process to justify or dislodge an earlier position of the Panel or the Appellate Body.

International trade under the WTO did not and cannot shut out the application of environmental law principles even if it has not made explicit statement on how it relates with any of the principles. The 1994 Ministerial Decision of Trade and Environment which created the WTO's Committee on Trade and Environment (CTE) laid the foundation for the linking of principles of environmental law to international trade. According to the WTO, though environmental requirements can impede trade when used as an excuse for protectionism, the remedy is not to weaken environmental standards but to set appropriate standards and enable exporters to meet them.[497] An understanding of the stated position of the WTO does not reflect the acceptance of environmental standards as they are but standards the WTO find appropriate or amenable to its objectives of liberal trade. In apparent defense of its position on the above, the WTO made reference to Principle 11 of the Rio Declaration which states that "environmental standards, objectives and priorities do need to reflect the particular environmental and developmental context to which they apply".[498] The WTO, in its opinion further explained that the implication of granting a blanket application of environmental standards is that standards applied by some countries could be inappropriate to them. They could cause unwarranted economic and social cost to others, particularly developing countries, by hindering exports. Small and medium sized enterprises (SMEs) are especially vulnerable.[499] While the position of the WTO is understandable, it could also be a veiled opposition to the application of standards that sets-off the application of precautionary measures that are in the interest of the environment and consumer health. The SPS Agreement and the TBT Agreement exist to address the issue of standards. The developments over the past two decades have proven that WTO Members have been able to exercise their right to apply measures that they deemed satisfactory of international standards they subscribe to and fulfil the purpose of protecting their environment and health of consumers. Their resolve has further been strengthened by the decision of the Panel in the Russia-Pig (EU) dispute where the basis for restrictive measure imposed on non-treated products from Latvia was questioned by the EU. The Panel found that the ban on non-treated

[497] WTO, Ministerial Decision of Trade and Environment https://www.wto.org/english/tratop_e/envir_e/envir_req_e.htm Accessed 18-05-20
[498] ibid
[499] ibid

products from Latvia is "based on" the relevant international standards and is thus consistent with Article 3.1 of the SPS Agreement.[500]

At the time, the three disputes where the precautionary principle was mentioned were decided, it appears the WTO/DSB was succeeding in treating principles derived from multilateral environmental agreements as principles outside the purview of international trade. Also, there were less prospects of a sustained consideration for environmental interests and how the factors that connect consumer protection mechanisms can be evenly balanced with mandate of market access of products. The EC-Biotech case opened a vista of scientific arguments that specifically address the ecological interest of the environment. For example, in examining the Long-term ecological effects in environmentally sensitive areas of Austria in the aforementioned case as the objective mentioned for prohibiting the placing of T25 maize[501] on the market, Austria included secondary ecological effects which the Panel understood to refer to indirect environmental effects which might be caused by the cultivation of T25 maize. Austria argued that GM plants might crowd out or eliminate other plants, due to a potential competitive advantage, invasiveness or persistence, thus affecting the genetic diversity of the remaining plant populations and putting at risk the survival of certain plant species. The Panel found:

> that to the extent a measure seeks to avoid adverse effects of GMOs on the environment other than adverse effects on animal or plant life or health, including on geochemical processes, such a measure can be considered to be covered by Annex A (1) (d), inasmuch as it can be viewed as a measure which is applied to prevent or limit "other damage" from the entry, establishment or spread of "pests". As noted earlier, the GMOs themselves or cross-breeds of GM plants might qualify as the relevant pests, or other plants or animals might become pests as a result of the release of GMOs into the environment. Furthermore, we said that to the extent that a measure is applied to avoid adverse effects arising from the management techniques associated with GMOs other than damage to the life or health of animals or plants, that measure can be

[500] Russia-Pigs (EU) Russian Federation — Measures on the Importation of Live Pigs, Pork and Other Pig Products from the European Union WT/DS475/24 Para 7.1040

[501] The maize line T25 was genetically engineered to express tolerance to glufosinate ammonium, the active ingredient in phosphinothricin herbicides (Basta®, Rely®, Finale®, and Liberty®). Glufosinate chemically resembles the amino acid glutamate and acts to inhibit an enzyme, called glutamine synthetase, which is involved in the synthesis of glutamine. Essentially, glufosinate acts enough like glutamate, the molecule used by glutamine synthetase to make glutamine, that it blocks the enzyme's usual activity. Glutamine synthetase is also involved in ammonia detoxification. The action of glufosinate results in reduced glutamine levels and a corresponding increase in concentrations of ammonia in plant tissues, leading to cell membrane disruption and cessation of photosynthesis resulting in plant withering and death. See online Biosafety Clearing House http://bch.cbd.int/database/record.shtml?documentid=14767. Accessed 20-06-20

> considered as a measure applied to prevent or limit "other damage" resulting indirectly from the entry, establishment or spread of weeds qua "pests".[502] In view of the above findings, we consider that Austria's safeguard measure on T25 maize, to the extent it is applied to avoid potential long-term ecological effects of the release into the environment of T25 maize, falls within the scope of Annex A(1)(a) and (d) of the SPS Agreement.[503]

This ruling by the Panel opened another entry point for further debate on the extent to which ecological concerns for the environment can validly interfere with international trade operations. Also, it means the movement towards full integration of the environment into international trade considerations and negotiations is happening in no distant future as more members that are party to multilateral environmental agreements will be encouraged to be more pragmatic in determining trade objectives and its implications on the environment. Environment in this sense will no longer be limited to "measures to conserve exhaustible natural resources".[504] The SPS Agreement being a "multilateral framework of rules that regulates the development, adoption, and enforcement of SPS measures in order to minimize their negative trade effects"[505]was never made to strengthen consumer protection mechanisms, rather its main objective is to ensure that free market would not be at the receiving end of conservative consumer protection laws which can and may not be veiled protectionism.

However, the Covid-19 crises have further exposed the vulnerability of trade to situations that defies human intervention. The EU is presently talking of a green recovery strategy known as the "Green Deal", that is expected to accelerate the phasing out of reliance on fossil fuel for energy provision.[506] At this stage, the world should be talking about the level of resilience of the

[502] EC-Biotech Panel Report para 7.2583

[503] Ibid para 7.2584

[504] Article XX (g) of the GATT relating to conservation of exhaustible natural resources has been interpreted by the Panel in *United States - Restrictions on Imports of Tuna* to be the part of environment that the WTO law recognizes to have capability of influencing trade decision but can be invoked only with a three step approach: first, the questioned policy must fall within the range of measures to conserve exhaustible natural resources; second, it must be "relating to" the conservation of exhaustible natural resources and made "effective in conjunction with restriction on domestic production or consumption"; third, the chapeau of Article XX must be complied with. Clean air in *US-Gasoline Panel Report*, Sea turtles in *US Shrimp AB Report* and herring in *Panel Report, Canada - Measures Affecting Exports of Unprocessed Herring and Salmon* are examples of "exhaustible natural resources" recognized by the WTO under Article XX (g).

[505] Lukasz Gruszczynski, "Regulating Health and Environmental Risks Under WTO Law: A Critical Analysis Of The SPS Agreement" 30-31 (2010) (Citing National Research Council, Committee On Risk Assessment Of Hazardous Air Pollutants Commission On Life Sciences, Science And Judgment In Risk Assessment 161 (1994)).

[506] See online Europe's moment: Repair and prepare for the next generation ec.europa.eu/commission/presscorner/detail/en/ip_20_940. Accessed 27-07-2020.

environment to activities promoting international trade and not the interference of environment with international trade. The EU has been known to lead in promoting the interest of the environment even though it is a community founded on the premise of free-market ideology. The Global South that comprises of emerging economies and heavily dependent economies will be divided on what stand to take in the post-Covid recovery economy unless more western countries integrate the "greening" of their economic recovery plan with a new international trade order. Hopefully, the leadership change in the WTO, which is happening amid the Covid-19 crises will stimulate the needed reforms that will gravitate international trade order towards a more environmental driven international trade regime.

Members bringing disputes before the WTO/DSB have been consciously pushing beyond the mandate of the Jurisdiction of the WTO to decide cases that were not supposed to come before it or issues that should not be raised within a valid dispute and expecting settlement approach that is also outside the objectives of the DSB. For example, the EU Members are approaching the WTO with the character of the CJEU. They expect the WTO to balance the interest of trade with that of the environment. "Balancing" suggests that equal weight is given. With a court of general jurisdiction such as that of the CJEU, one can find evidence to support such a picture. However, there is no evidence of that with the WTO system. As a trade organization, the WTO and its Dispute Settlement Bodies are concerned with balancing trade from one state with trade from another state, not with balancing environment with trade. The environment can only matter in such a system as it is seen as part of trade, and that rarely benefits the environment *per se*. The remit of the CJEU, ICJ and WTO are distinctive. Even with the recognition of the interactions of the environment with trade by the WTO, there is no express jurisdiction of the WTO over disputes that are related to the environment. The only link open to members to bring the interest of the environment to WTO is in Article 23 of the Procedures Governing the Settlement of Disputes (DSU) which provides that the WTO-DSM has exclusive jurisdiction to resolve disputes arising from the violations of the WTO covered agreements. It is based on the "covered agreements" that "measures" under the SPS Agreement are argued or disputed in the WTO-DSB. With some decisions of the Panel in the EC-Biotech case, the engagement of the interest of the environment in the WTO will continue to increase as members keep coming before it to exercise their sovereign right to protect the interest of the health of the people and the environment notwithstanding its narrow jurisdiction.

In all the cases that have been reviewed, satisfying the scientific requirement has been the common flaw that parties have been seen to be unable to move past the standard that the WTO Panels have demanded for in scrutinizing the performance of the requirement of risk assessment. The strict stand of the SPS Agreement dictates what risk assessment procedure is acceptable to the WTO in deference to the parity in scientific capacity, standards and national directives on procedures that are set independent of international agreements. Though the WTO through the SPS Agreement appears to be integrating trade-science narrative of the free market objective, however, it is negating the autonomy of the Member-states which they should enjoy fully in the interest of higher stakes including consumer health and environment protection. Scientific obligation should not be in blanket form. Interpretation of the scientific requirement should be on a case-by-case basis and not following precedential interpretation. This is very important on the premise that sufficiency of scientific evidence is bound to vary from case to case with several factors like capacity, timelines, and maybe, biomedical safety determining access to information that is needed for scientific analysis. Putting into context how the functionality of Article 2.2 of the SPS Agreement which provides that there should be 'sufficient scientific evidence' for precautionary measures to be allowed to be applied by States, the science –trade tension, which will definitely remain for a long while is consistent with the position of the WTO system which contradicts itself when it allows for States to set appropriate level of protection (ALOP) and at the same time has the mechanism to determine when such level of protection has no sufficient scientific justification.[507]

The WTO concept of free trade and the EU free market ideology are distinctive when understood based on contrasting values placed on three important subjects that cannot be precluded from being connected with trade by the two organizations: consumer health, environment and market. For the WTO, market liberalization is an objective that should be protected by collective conservative approach. However, national regulatory activism which has radically created the entry point for the application of the precautionary principle to international trade is not denouncing the advantage of the global outlook of the WTO system but taking extraneous actions in asserting national autonomy when legalizing precautionary measures that are protective of human health and the environment.

[507] Korea Radionuclides, Appellate Body Report, para 5.22.

While the sincerity of the purpose of each State that imposes trade restriction on precautionary grounds cannot be questioned successfully without going through dispute settlement mechanism, indeed the decisions of States can be driven by a passive protectionism motive. Is the application of the precautionary principle the only cause of action States can hang on to in their claim to protect consumer health and environment? The answer is 'no'. But it will continue to be mentioned for as long as the WTO exist. However, the express recognition of the principle by the WTO is very unlikely and the application of it to international trade by States will not serve any form of comparative advantage to a free market that is still struggling to be equitable.

The implication of applying the precautionary principle in international trade will mean a fragmentation of free market ideology along the lines of blocs that want international trade regulation to be more scientific and less legal driven while still pursuing a common economic cause. The draft Transatlantic Trade and Investment Partnership (TTIP) and the Comprehensive Economic and Trade Agreement (CETA) present themselves as good examples of how the sentiments of parties as regards the application of the precautionary principle can affect international trade in negative sense. Both agreements are envisaged to operate within the legal regime of the WTO and its agreements which include the SPS Agreement. The parties to the agreements being the USA, the EU and Canada have had disputes at the WTO where the EU asserted its right to apply the precautionary principle as a principle of law and failed in convincing the WTO. In these agreements, the EU also failed in including provisions that recognize the precautionary principle. Assuming the agreements become operational as it is and there arises dispute that makes it necessary for the EU to invoke the precautionary principle as an unconditional EU law, it will affect a trade relationship that is worth hundreds of billions of dollars thus capable of affecting the global economy. If the EU decides not to invoke the precautionary principle against any of the parties in contravention of its own law, other member States that the same law has affected its trade exchange with EU will file a claim with the WTO and the same circle we have seen in EC-Hormones case and other cases will start all over again.

The notion of precaution remains opaque because it is non-definitive in international trade law. Even where case law has helped in stating the four requirements that States must fulfil as seen from Article 5.7 of the SPS Agreement to justify restriction of trade on the ground of precautionary measures, the cumulative nature of the requirement put developing countries and some developed

countries at a disadvantage. A substitute principle that will address the vagueness of the precautionary principle as it relates to international trade should be formulated or the precautionary principle should be expressly recognized but with a different application approach that is precise and most importantly based on a 'balanced caution approach' that will:

1. take into consideration the differing capacity of States to access or generate sufficient scientific evidence.
2. provide for scientific requirements based on risk assessment that is based on aggregation of possible consequence and not cumulative fulfilments of conditions a presently prescribed in the SPS Agreement; and
3. proffer an accepted level of protection of States which should reflect the development level and technological capacity of States for the sake of fairness and equality and should be in line with a proportionality test.

The WTO is presently struggling to grapple with the present fast evolving practice of international trade which is driven by new alignments and technology. These two factors edges the WTO into a position where its relevance is being questioned. It appears as if the interaction between trade and environment will continue to wane under the present structure. But with a proper reforming of the organization to reflect present global realities where a pandemic can ground the global economy and where climate change and sustainable development remain amongst the most discussed issues in the world, integrating environment into its reform process will reposition the organization beneficially.

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